THE UNIVERSITY OF HULL

Factors Influencing Secondary School Students' Decisions to Enter Higher Education: Implications for Higher Education Capacity in the Sultanate of Oman

Being a Thesis submitted for the Degree of Doctor of Philosophy in the University of Hull

By

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Author's declaration

CERTIFICATE OF ORGINALITY

This is to certify that I am responsible for the work submitted in this thesis, that the original work is my own except as specified in acknowledgment or footnotes, and that neither the thesis nor the original work contained therein has been previously submitted to any institution for a higher degree.

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2005

ABSTRACT

The major goal of this study is to investigate the factors influencing Omani secondary school students' decisions to enter higher education, and the implications of such decisions for higher education provision.

A number of economic, sociological, psychological, demographic and institutional variables, derived from previous literature and from analysis of labour market conditions in Oman, were incorporated in the conceptual framework guiding the research.

A questionnaire, developed to suit the Omani context, was distributed to cluster samples of final-year public secondary school students, stratified by gender and specialisation, in 6 educational regions (N= 1950, valid returns= 1830). These were followed by semi-structured interviews with 42 volunteer students and telephone interviews with 4 decision-makers in the Ministry of Education, to discuss emergent issues. Government and non-government documents and statistics on higher education capacity and labour market demand were analysed.

Of the factors, Human Capital Theory appears to be the most influential factor on students' decisions. Students' self confidence in their ability, parents' and family influence, and students' own attitudes and perception towards higher education followed. External factors of the labour market and school were considered less influential and friends least. Moreover, students' specific motivation was shaped and largely determined by the characteristics of the Omani work environment. Mediating effects of gender, specialisation and region were discovered.

Current capacity of higher education does not meet either students' aspirations or the labour market demand. However, inequities in capacity, combined with the traditional Omani disdain for certain types of work, complicate the issue. Resolving the problem, therefore, requires not only expansion of higher education capacity, but also adjustment and redirection of demand. Additionally, adjusting educational demand will necessitate addressing disparities in salaries and employment conditions between the public and private sectors.

Theoretical and policy implications are highlighted and specific recommendations address the latter.

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Last but not least, I would like to cordially thank my family and friends for their constant emotional support during my study in the UK.

DEDICATION

I wish to dedicate this thesis to all my family members, especially to the spirit of my father and to my beloved mother for her love and continuous prayers.

My sincere and very special expression of appreciation is extended to my own small family. To my wife, Zahra, without whose dedication in attending to our children's needs, in my absence, and her encouragement, full support, patience, and gentle care along the way, it would not have been possible for me to reach this achievement. To my daughters, the three angels Ghaida, Salma, and Shahad: their patience, understanding, and support have allowed me to maintain my perspective of the world and realize what is truly important. This study has genuinely been a family endeavour.

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GLOSSARY OF ABBREVIATIONS AND DEFINITION OF TERMS

2020 Vision:	A comprehensive 25-year plan (1995-2020) for the economic and social development of Oman.
B.Sc:	Bachelor of Sciences
EME:	Electronic and Mechanical Engineering
GCC:	Gulf Co-operation Council
GNVQ:	General National Vocational Qualification
HE:	Higher Education
HND:	Higher National Diploma
ICT:	Information and Communication Technology
OECD:	Organisation for Economic Co-operation and Development
Omanisation:	Employment of Omani Nationals
OND:	Oman National Diploma
Public institution:	State or governmental institutions
RO:	Rial Omani
SQU:	Sultan Qaboos University
UAE:	United Arab Emirates
UK:	United Kingdom
UNESCO:	United Nations Educational, Scientific and Cultural Organization
USA:	United States of America

CHAPTER ONE
INTRODUCTION

1.1 Introduction

The demand for higher education and the diversity of forms in which it is provided are greater than ever, as people increasingly recognise its importance for socio-cultural and economic development.

The UNESCO (1998:21) World Conference on Higher Education summarized the role of higher education as follows:

> *"The core missions of higher education - to educate, to train, to undertake research and, in particular, to contribute to the sustainable development and improvement of society as a whole"*

The emphasis on the importance of higher education in cultivating individuals to become leaders of change in the developing world has been reflected over the past decade in an intensive focus on the need for human and financial resources to search for solutions through better governance and newer, cost-effective strategies. Most countries, especially developing countries, see higher education as an increasingly important pathway to enhance economic performance by maximising the potential of their human resources, e.g. a highly qualified labour force.

> *"Today, more than ever before in human history, the wealth — or poverty - of nations depends on the quality of higher education. Those with a larger repertoire of skills and a greater capacity for learning can look forward to lifetimes of unprecedented economic fulfillment. But in the coming decades the poorly educated face little better than the dreary prospects of lives of quiet desperation"*
> Malcolm Gillis, President of Rice University, 12 February 1999, (cited in UNESCO, 2002, P.2).

In line with this thinking, human resources development is one of the most important dimensions of Oman's development strategy. The Sultanate of Oman has attempted to promote qualitative and quantitative development in all the fields of education: general, higher and technical education, and vocational training, to prepare the society for this century, in which science and knowledge are the cornerstones of development.

His Majesty Sultan Qaboos, Sultan of Oman, in his speech at the Convening of the Council of Oman on 4 November 2002 emphasized the importance of human resources and their role in developing the country. He said:

> *"We have always affirmed, on various occasions, that the human being is the ultimate goal of development, and its instrument and means at the same time. The more effective this instrument, the more capable it becomes of achieving the targeted development. Thus we always call for the development of human resources, their scientific capabilities, technical skills and technological expertise in order to meet society's urgent requirements and needs, and to provide opportunities for those resources to contribute fully to the blessed renaissance witnessed by Oman in all walks of life"* (Oman News Agency, 2002)

In this respect Oman, like many other countries, places great importance on higher education. The definition of higher education varies from country to country according to the goals, strategies and requirements of the socioeconomic development in each country. Oman, however, adopts the UNESCO definition of Higher Education as promulgated in the International Declaration of Education issued as a culmination of UNESCO's conference held between the 5th and 9th October, 1998. According to the above declaration, Higher Education includes:

> *"All types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments, that are approved as institutions of higher education by the competent state authorities"* UNESCO (1998:19).

Due to the scope and pace of change worldwide, society has become increasingly knowledge-based. This applies equally to the current situation within the Sultanate of Oman. Higher education and research now must act as essential components of cultural and socio-economic development of individuals, communities and nations. These in turn confront higher education itself with formidable challenges and the need for radical changes.

It is the dilemma of how best to develop Oman's higher education system to meet the needs of the country and its people in the coming years that provides the impetus for this study of the factors that influence secondary school students' decisions to enter higher education. The rationale for the study is explained in the next section.

1.2 Background and Rationale of the Study

The past four decades have been a period of increased socio-economic stratification and greater difference in educational opportunity within countries, including the most developed and wealthiest nations. The problem facing all is that without adequate higher education and research institutions, no country can ensure genuine endogenous and sustainable development. In particular, developing countries cannot reduce the gap separating them from the industrially developed ones without appropriate higher education provision (UNESCO, 1998). There may also be a conflict of interest between a narrow academic tradition of learning and the increasing need to select for administrative and professional positions. This is the situation Oman is facing during its ongoing rapid development.

In the present century, higher education is witnessing a tremendous development because of its key role in social development. According to Li (1998), during the last three decades, higher education has been the fastest growing sector of the education system in most countries. Between 1965 to 1990, enrolment ratios in higher education in many countries increased rapidly, from 1% to 9% in North Africa, from 7% to 21% in Latin America, and from 8% to 17% in East Asia.

At the UNESCO conference on the world vision and action plan for higher education for the twenty-first century, held in Paris, October 1998, the achievements and problems of recent years were reported thus:

> *"Everywhere higher education is faced with great challenges and difficulties related to financing, equity of conditions of access into and during the course of students, improvement . . . employability of graduates and equitable access to the benefits of international co-operation. . . The second half of this century will go down in the history of higher education as the period of its most spectacular expansion: an over six-fold increase in student enrolments worldwide, from 13 million in 1960 to 82 million in 1995. But it is also the period which has seen the gap between industrial development and the developing countries with regard to access and resources for higher education"* (UNESCO, 1998, p. 19)

Higher education in the Arab world, however, is relatively new. Moreover, it is characterized by low, although steadily increasing, enrolment of secondary school students, ranging (for every 100,000) from 3,000 in Sudan, Mauritania, and to 33,000 in Lebanon, according to Issan and Battah (1999).

According to UNESCO (1998a), the enrolment in higher education in Oman is still lower than in some Arab countries which are at the same level of development as Oman. Statistics revealed that the number of students enrolled in higher education in Oman was 433 per 100,000 inhabitants, compared to, for example, 1,459 in Qatar, 1,530 in Saudi Arabia, and 2,543 in Jordan.

Nevertheless, it has been noticed in the last six years that the number of secondary school graduates in Oman has increased dramatically. For instance, in 1998 there were 20,886 secondary school graduates, whereas this number had increased sharply by 2003 to 41,573 secondary school graduates (Ministry of Higher Education, 2004). In other words, the number of secondary school graduates has doubled.

Several reasons can be suggested for the increased demand for higher education: demographic factors, change in employment policy, and rising demand for access, as explained in the following paragraphs.

1.2.1 Demography

The increasing demand for higher education varies according to the rate of population growth around the world and Oman is no exception to this trend. Because of the increase in child birth and a lowering of infant mortality, there has been rapid growth in the Omani population and hence, an increase in demand for access at each level of the education hierarchy. If this trend continues over the next 20 years, higher education capacity must be expanded to meet the needs of the society of Oman. As each generation of Omani citizens reaches the relevant level of education, opportunities for them to compete in the global economy must be available if Oman is to become a global competitor and a global contributor to the overall world economy.

1.2.2 Employment policy shifts

Another factor contributing to increase in demand for higher education is a shift in employment policy in recent years. Because of the rapid changes in financial and economic circumstances within Oman over the past 30 years, i.e. changing from a nomadic tribal culture to a world economy, the speed of development has outstripped the pace of educational development. By its nature, education must take its course from 6 years of age to 18/19 years of age. Each citizen must go through this process, regardless of how rapidly the economy develops. So until the two strands become more balanced, outside assistance is required. Oman, therefore, has relied heavily upon other

countries to provide the expertise and experience needed to develop, sustain and encourage economic growth. As a result, non-Omani citizens account for 19.6% of employees in the government sector, and the vast majority (89.3%) of employees in the private sector, according to the Statistical Year Book (2003) issued by the Ministry of National Economy in Oman.

But now, there is a wide perception among government and people that it is time for Omani citizens to take control of the labour market. As Kazem (1992:118) emphasizes:

> *"While it is frequently said that universities and higher education institutes have three main functions: teaching, research and community service, it is worth emphasizing that a major role of an Arab university is to help the community to define for itself the concept of development and to speed up modernization in a dynamic way. Such a broad objective requires us to: build up agreed criteria for a concept of relevant development, in an academic surrounding interacting with the popular base; actively stimulate and guide societal interaction to make the community more open yet more stable; stimulate and guide societal movement in a way that would narrow the gaps between the educated and the masses; prepare specialists with a strong sense of social responsibility"*

In order for this to be possible, it is essential that appropriate and relevant workforce preparation is made available within the educational system of Oman.

The desire for Omani citizens to take over full control and to depend on themselves implies the need for a clear vision and well organized strategy to expand higher education capacity to meet the social and economic demand of the society. Otherwise, Oman's future will be adversely affected and its competitiveness within global markets will be jeopardized. It is increasingly recognized that to develop Omani citizens with relevant expertise in all academic disciplines requires a full comprehensive natural progression through an established education system, culminating in a fully comprehensive higher education provision available to those who achieve appropriate and relevant academic qualifications.

1.2.3 Rising demand for access to higher education

In an increasingly knowledge-driven society, more and more people are seeking education for a better future, as they believe that education is the key to good jobs and a higher standard of living. This view is consistent with human capital theory, which will

be discussed further in a later chapter. As a result, there is a steady rise in demand for places in universities and colleges in Oman.

This increased demand for access, however, is creating problems for the higher education sector in Oman. With more than half of the population (55%) in Oman under 19 years of age (Ministry of National Economy, 2004) and more than 40,000 students graduating every year from secondary school (Ministry of Higher Education, 2004), higher education capacity is not keeping pace with the growth in numbers of secondary school graduates.

The intake capacity of state higher education in Oman was only 12,477 students for the academic year 2002/2003; that is, only about one-third of the number of secondary school graduates in the same year. As a result, 29,096 students out of the initial cohort of 41,573 would have no chance of access to higher education within Oman (Ministry of Higher Education, 2004).

In a study to examine the cost effectiveness of education in Oman, the World Bank (2000:14), highlighted the same problem:

> *"A major challenge facing the higher education system is the mushrooming number of secondary school graduates who are facing difficulties in finding a place in higher education"*

As a result of the imbalance between supply and demand, higher education in Oman has become highly competitive resulting in the application of a strict admissions policy. However, the admission system is, in fact, one of the major difficulties facing higher education in Oman, particularly public institutions, which receive applications far in excess of their capacity. Each institution specifies its own admission criteria, in terms of marks required in the secondary school final year examinations. Omani citizens can apply to any public education institution for which they have achieved the required marks. Usually, however, because demand exceeds the places available, an applicant will in practice need higher grades than the stated criterion, in order to be accepted.

This situation, as Al Ramadhani (2003) points out, has a number of undesirable consequences. One is the large number of students forced to register for courses that are not of their choosing, since only those who obtain very high marks in the secondary school certificate can select their preferred subject of study. As a consequence of this

policy, some students change their disciplines at a later stage during their course of study, when they have the opportunity to do so. Others struggle with their courses and are put on academic probation, which may delay their graduation or even result in withdrawal or expulsion without achieving any higher education qualification. Such a situation is not cost or time effective.

Al Ramadhani (2003:195) also noted that the existing strict admission policy has particular disadvantages for female students, who tend to gain higher marks than males in secondary school, so that eligible female applicants outnumber males. He explains that:

> *"An increasing proportion of registered female students compared with male students have prompted the government to promote a strict admissions policy. This unwritten policy has limited the number of female students entering institutions of higher education, for; otherwise, they would outnumber the male students... Some institutions allocate no more than 50 per cent of the total available places to female applicants"*

In order to meet these targets, institutions may set higher admission requirements for females. Thus, it could happen, for instance, that a male applicant is admitted to a course with a secondary school mark of 70%, but a female applicant may be denied a place on the same course, even with a higher mark of 80%, simply because the institution has filled its quota of places for female applicants.

The idea of favouring males rather than females in chances for higher education, not only in Oman but in other Arab countries, is highlighted by Fergany (2000:14). He maintained:

> *"Higher education in Arab countries, especially in the higher levels, is selective in favour of males. This comes as no surprise in the general Arab societal context and in view of the fact that women are among the weakest social groups in such societies. It is therefore logical that relatively higher deprivation afflicts the weaker social categories in Arab countries, categories which do not cease to grow in size..."*

From the foregoing, it seems at first glance that expansion of higher education would help to satisfy the aspirations of Omani students, and meet the government's Omanisation and socio-economic development plans.

On the other hand, given that higher education is intended to serve certain economic objectives for the state, it may be that in some areas, balancing supply and demand means, not increasing supply, but reducing demand. It may be, for example, that students' demand for some disciplines far outstrips what will be needed or can be accommodated in the job market. In such cases, it might be preferable to try to divert demand to other disciplines rather than simply to keep increasing the number of places available. All this, however, requires a sensitive understanding of the social demand for education, which is currently lacking in the Omani context.

It has been suggested in previous studies, for example, Williams and Gordon (1975), Carpenter and Western (1984), Menon (1995) and James (2001), that students' attitudes towards higher education are shaped by interwoven psycho-social factors such as influence of parents, family and friends, students' self-confidence in their ability; economic factors such as expectation of higher earnings, better job opportunities and labour market conditions, i.e. availability of employments for higher education graduates; socioeconomic background factors such as parents' education, occupational level and family income, and personal factors such as student's academic attainment. Educational aspirations are, then, said to be influenced by all these factors which, together with parental and student aspirations, are suggested as possible factors in academic achievement at the completion of secondary school, and contribute to the explanation of the transition to higher education among individuals. However, there is as yet, little or no information about how these factors may operate within the Omani context.

Moreover, in Oman, there may be special cultural factors to be considered. For example, the idea of women working outside the home is still relatively new. Furthermore, for cultural reasons, there are certain occupations that are considered acceptable for women, such as teaching, while others are not. It seems likely, therefore, that male and female students may have different aspirations and preferences in relation to higher education. Such information would be of use to policy-makers in deciding what balance of courses should be offered; what numbers of students may need to be accommodated, and whether any special encouragement is needed for women to pursue higher education or to take non-traditional academic courses.

Examining these factors which influence students' decisions to enter higher education will lead to a better understanding of the formation of social demand for education at the higher level. Knowledge of the factors affecting social demand can in turn be used in a variety of circumstances according to the policy-maker's needs. It is hoped that the knowledge and understanding of these factors will help planners to adopt the most effective policies to expand the capacity of higher education in Oman.

1.3 Statement of the Problem of the Study

Oman faces two serious problems in the educational and labour sectors:

[a] the high increase in the numbers of secondary school graduates, compounded by the limited capacity of the Omani higher education institutions, which are not able to absorb or accommodate their needs for higher education, and [b] parallel to this higher educational problem is the problem of the existence of a huge number of foreign workers, who will eventually need to be replaced by well-qualified Omani citizens. The latter, in turn, will need to have obtained higher education level qualifications. The problem which this study will investigate, therefore, is:

> ***"Factors influencing secondary school students' decisions to enter higher education: Implications for higher education capacity in the Sultanate of Oman".***

1.4 The Reason for the Study:

The major reason for carrying out this study is the scarcity of studies that have investigated the factors influencing secondary school students' decisions to enter higher education in Oman. In fact, there has been only one such study, Al-Maskery (1992), which focused on the economic aspects of human capital theory and the motivations and expectations of *University students* in Oman. Furthermore, the author used only a questionnaire method.

This suggests that the present study (which used triangulation of methods; questionnaire, semi-structured interviews and documentary data) into the intentions of *secondary school graduates*, rather than *University students* who are already in higher education, may provide more relevant explanations to the problem of access to higher education in Oman.

1.5 Research Questions

The overall aim of this research is to investigate the factors that influence secondary school students' decisions to enter higher education and its implications for higher education capacity in Oman. In order to achieve this aim, the researcher attempts in this thesis to answer the following main questions:

Q1.What are the main factors influencing secondary school students' decisions to enter higher education?

Q2.Are there differences in attitudes and aspirations between male and female secondary school students or between Arts and Science students?

Q3. Is there any influence of students' scholastic ability (academic attainment) on their decisions to enter higher education or to work?

Q4. Does the current capacity of higher education in Oman meet the aspirations of secondary graduates and labour market demand in relation to the findings of the study?

1.6 Objectives of the Study:

The major aim of this study, stated above, is broken down into the following specific objectives which are to:-

1. Identify the main factors influencing the secondary school students' decisions in their final year at secondary school to enter higher education in Oman,

2. Investigate the influence of economic considerations (Human Capital Theory and labour market conditions as an influential factor in Oman) on the intention of secondary school graduates to continue into higher education,

3. Investigate the influence of psychological factors (students' perceptions and attitudes towards higher education, their self-confidence in their ability and their academic ability) on the intention of secondary school graduates to continue into higher education,

4. Investigate the social influences (parents and family, peers and family's socio-economic background) on the intention of secondary school graduates to continue into higher education,

5. Investigate the influence of demographic variables (students' gender and educational regions) on the intention of secondary school graduates to continue into higher education,

6. Investigate the influence of institutional factors (students' specialisation in secondary school i.e. Arts or Science and teachers) on the intention of secondary school graduates to continue into higher education,

7. Assess the adequacy of higher education provision in light of the aspirations of secondary school students and labour market demand from higher education graduates, and

8. Provide some recommendations to policy makers concerning the factors influencing secondary school students' decisions to enter higher education and its implications for higher education capacity in Oman.

1.7 The Significance of the Study and its Contribution to the Body of Knowledge

The present study will contribute to existing knowledge by examining the factors influencing students' decisions to enter higher education and its implication for higher education capacity in Oman. This is the first study that has examined these factors in Oman, to the best of the researcher's knowledge.

Most previous studies, for example, Williams and Gordon (1975), Carpenter and Western (1984), Menon (1995) and James (2001) have been carried out in developed countries and their culture, and different results might be obtained in different cultures such as the Omani Islamic culture. This study, therefore, offers an important contribution in this regard.

This study also uses multiple research methods (triangulation) including survey questionnaires, semi-structured interviews, and documentary data, to obtain both breadth and depth of data. The findings of the research should be of value to decision-makers, particularly those in Omani higher education. An understanding of the factors influencing the decisions of secondary school students in their final year to enter higher education in Oman, should inform policymakers' decisions on the scale and type of provision needed and on other measures that may be necessary to establish a suitable balance between young people's aspirations, the educational opportunities available, and the needs of the labour market.

Given that the study's main focus will be on understanding the factors influencing the decisions of final year secondary school students, the following section provides the reader with a brief and basic introduction to Oman and its education system. This is important as aspects of this context will impinge on the study.

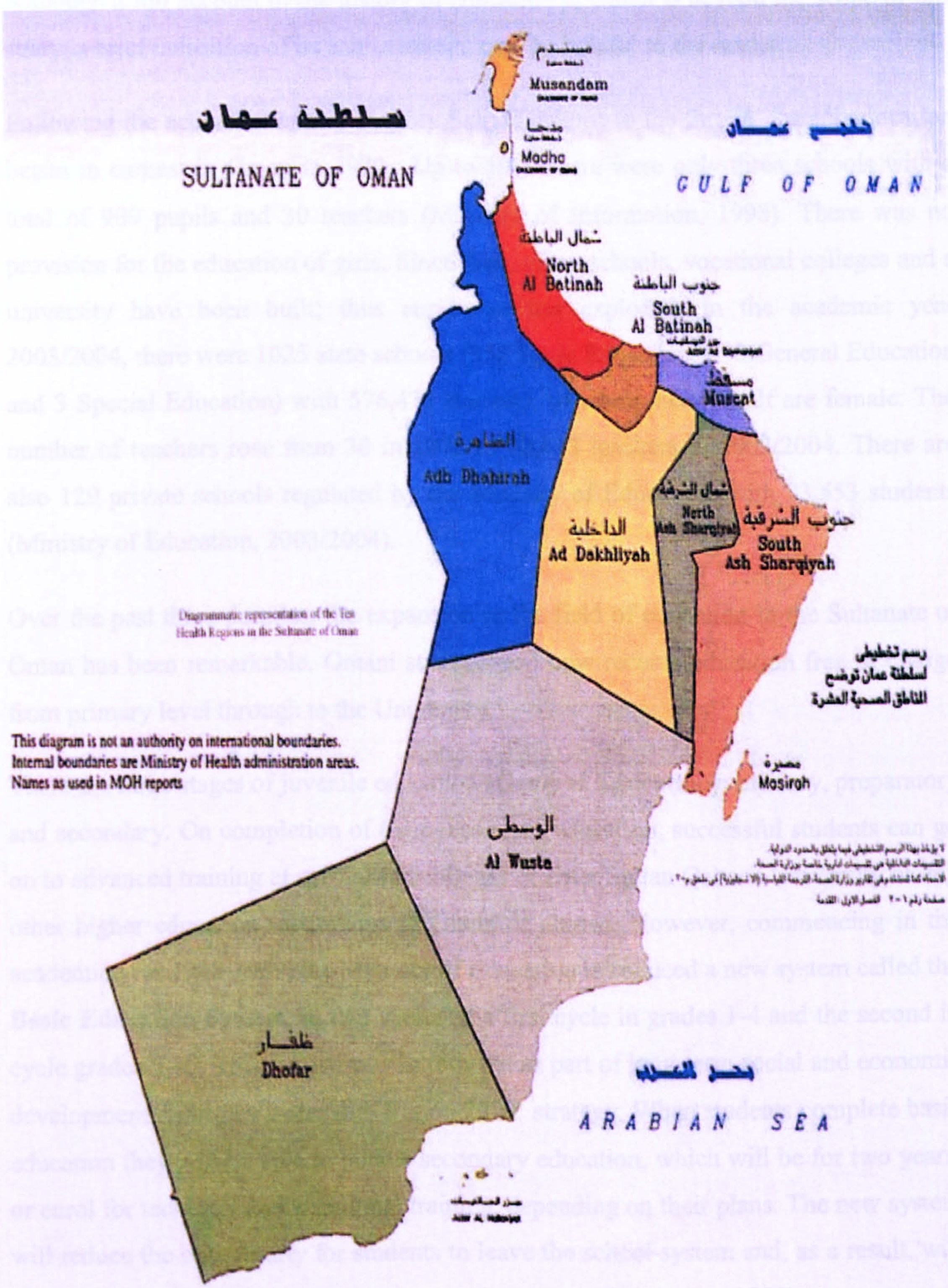
1.8 Brief background about Oman and its education system

The Sultanate of Oman occupies the south-eastern corner of the Arabian Peninsula and borders Saudi Arabia and the United Arab Emirates in the west; the Republic of Yemen in the south; the Strait of Hormuz in the north, and the Arabian Sea in the east. The total land area is 309,500 square kilometres, making Oman the third largest country in the Arabian Peninsula after the Kingdom of Saudi Arabia and the Republic of Yemen (Ministry of Information, 2003/2004).

According to the 2003 census, the total population of Oman is 2,331,391, with native Omani citizens accounting for 1,781,558 or 76% of the total population. The total number of non-Omani citizens who are working and living in Oman is 549,833, representing 24% of the total population (Ministry of National Economy, 2004).

As shown in Figure 1.1, Oman is divided into different regions with Muscat as its capital area, the Batinah Region, the Interior of Oman (Dhahiliyah), the Dhahira Region, the Sharqiya (Eastern) Region, Al-Wusta or "the Central Region", the Southern Region (Dhofar), and lastly, the Musandam Region which is separated from the rest of Oman by part of the United Arab Emirates.

Figure 1.1 Sultanate of Oman map (Regions and Governorates).



Source: Ministry of Information (2003/2004).

1.8.1 General educational achievements

Although a full account of the history of education in Oman is beyond the scope of this study, a brief indication of its achievements may be helpful to the reader.

Following the accession of His Majesty Sultan Qaboos to the throne, formal education began in earnest in Oman in 1970. Up to 1970 there were only three schools with a total of 909 pupils and 30 teachers (Ministry of Information, 1998). There was no provision for the education of girls. Since then, many schools, vocational colleges and a university have been built; thus enrolment has exploded. In the academic year 2003/2004, there were 1025 state schools (352 Basic Education; 670 General Education and 3 Special Education) with 576,472 students, of whom nearly half are female. The number of teachers rose from 30 in 1970 to 32,473 teachers in 2003/2004. There are also 129 private schools regulated by the Ministry of Education, with 23,553 students (Ministry of Education, 2003/2004).

Over the past three decades, the expansion in the field of education in the Sultanate of Oman has been remarkable. Omani students can now receive education free of charge from primary level through to the University.

There are three stages of juvenile education **(General Education):** primary, preparatory and secondary. On completion of their secondary education, successful students can go on to advanced training at specialised colleges or enter Sultan Qaboos University or any other higher education institutions in Oman or abroad. However, commencing in the academic year 1998-1999, the Ministry of Education introduced a new system called the **Basic Education System,** in two cycles: the first cycle in grades 1-4 and the second in cycle grades 5-10. This system was introduced as part of long-term social and economic development strategies under the 'Vision 2020' strategy. When students complete basic education they will be able to pursue secondary education, which will be for two years, or enrol for technical and vocational training, depending on their plans. The new system will reduce the opportunity for students to leave the school system and, as a result, will minimise the illiteracy level in the country (Ministry of Education, 1995).

The reform covers many different areas, such as developing the aims of education, improving the curriculum, upgrading teachers' qualifications, changing ways of assessment, abandoning the afternoon school system, extending the school year and day, and improving various education practices as a result of the new educational goals

(Al-Belushi, 1997, Sayyid Saud Al Busaidi, 1997, Ministry of Education, 1997, Al-Rabiey, 2002).

1.8.2 Higher Education in Oman

In the 1970s and early 1980s, higher education studies were only available through overseas scholarships, which were thus crucial in producing trained and qualified Omani personnel. The establishment of the first Teacher Training Institute in 1977 and the upgrade of these institutes in 1995 to Colleges of Education marked a great development of in-country tertiary education institutions in Oman. In November 1986, Sultan Qaboos University admitted its first cohort of students. A tremendous expansion and substantial development in other fields of in-country higher education such as Sharia and Law, Vocational and Technical education, Health education, and Banking and Financial Studies, have been witnessed last twenty five years. It should be remembered that this has been achieved from a zero base.

1.8.2.1 Agencies of higher education in Oman:

In 1994 the government addressed the crucial need for higher education and the expansion of numbers and scope of higher educational institutions, both government and private, to meet the needs of the labour market (Ministry of Information, 2003/2004). Therefore, the following higher education bodies have been established:

1.8.2.1.1 The Ministry of Higher Education

In the light of the rising importance of higher education and to meet the expansion and complexity of its institutions in the Sultanate of Oman, the Ministry of Higher Education (MHE) was established in 1994 by the Royal Decree number 15/1994.

1.8.2.1.2 The Higher Education Council

To formulate higher education policies and co-ordinate the execution of these policies in Oman, a Higher Education Council was established in accordance with the Royal Decree No. 65/1998.

1.8.2.1.3 The Accreditation Council

Higher education in general, and particularly in Oman, has witnessed a rapid growth in demand from society and its organization is expected to provide quality outcomes in term of graduates, research, and services. But higher education cannot meet these demands unless this sector adopts a systematic evaluation process as emphasized by

Gregory (2001). Therefore, the Accreditation Council has been established in Oman as a special body to issue licences for academic programmes, besides offering consultant services to higher educational institutions regarding the quality of their programmes (Al-Ghanboosi, 2002).

Although the two of these three bodies currently share the same chairman (the Minister of Higher Education) it should be noted that further rational integration has not taken place.

1.8.3 Public Higher Education Institutions

The public higher education sector consists of all higher educational institutions which receive full funding from the government and whose supervisors are appointed by a Royal Decree. These institutions have to implement the plans that are set by the national planners and they also have to achieve the aims of these plans (Al-Ghanboosi, 2002). The following is a list about these public institutions and their awards:

1. Sultan Qaboos University (BA in Education, Licentiate in Arts and Social Sciences, B.Sc, Doctor of Medicine degree, Master's degrees in Education, Arts and Social Science, Agriculture and Marine Sciences, Engineering, Sciences, and Medical and Health Sciences).
2. The Colleges of Education (BA in Education).
3. College of Sharia and Law (BA in Islamic Sharia and BA in Law).
4. Institute for Islamic Law (Sharia) Sciences (Licentiate in Islamic Law Judiciary or in Preaching and Guidance).
5. Technical Colleges (Diploma and BA degrees).
6. Technical College of the Oman Royal Guard (Diploma).
7. Health Institutions (Diploma).
8. College of Banking and Financial Studies (Diploma and BA).

1.8.4 Private Higher Educational Institutions

The Ministry of Higher Education encourages the private sector to establish universities and colleges of higher education. Public higher education is facing pressure from society to increase the number of admissions to public institutions and, therefore, private higher education in Oman is expected to play a significant role in recruiting those who otherwise would not have an opportunity to enter higher education (Al-Ramadhani, 2003).

Oman's government has spared no efforts to encourage the private sector to invest in higher education by the provision of facilities such as the allocation of suitable areas of land for constructing the buildings. The government supports private institutions by exemption from some customs duties and grants equivalent to 50 per cent of the capital cost of each university, up to a maximum of 3 million Omani Rials or 5.5 million pounds sterling (Al-Manthri 2000: 24).

As a result there are now three private universities and sixteen colleges under the supervision of the Ministry of Higher Education. The period of study in the universities and colleges ranges from three to four years, dependent on the programme of study. Each institution must be approved by the Ministry of Higher Education regarding its programmes, educational system and degrees awarded as well as the curricula and syllabi (Ministry of Higher Education, 2001: 37). The programmes offered by the private universities are summarised in Table 1.1 below.

Table 1.1 Private universities in Oman

University	Date of establishment	Area	Programmes	Affiliation
University of Sohar	2001	Sohar	Accounting, Management, Marketing, Computer Science, Engineering	University of Queensland Australia
University of Nizwa	2004	Nizwa	Computer Science, Statistics, Mathematics, Biotechnology, Chemistry, Physics, Languages & Translation, Engineering & Architecture, Economics, Administration & Information Systems, Pharmacy and Nursing	Co-operation with many international universities such as SQU, George Town (USA), University of Leipzig (Germany), and University of Exeter (UK).
University of Dhofar (previously National College for Science and Technology which was established in 1998)	2004	Salalah	Engineering, Business & Administration Sciences, Languages & Translation, Social work, Computer Science.	American University of Beirut

Source: Ministry of Higher Education (2004a), Sultanate of Oman.

It can be seen from the table that these private universities have been established in some of the more densely populated cities, Sohar, Nizwa, and Salalah, in order that they can absorb more students. The courses offered are predominantly in technical and professional fields. All these universities offer computer science, engineering, and one or more business/administration-related course. Only one university, Nizwa, offers courses in 'traditional' academic disciplines, and these focus on mathematics and science courses which have practical applications. Arts subjects are totally absent except for, in two universities, language courses, and the focus on translation suggests that these two are also oriented to the needs of the modern business and technological environment. In order to ensure the survival of private higher education institutions, which are vital in realising the Sultanate of Oman's goals for improving access to higher education, each university is affiliated to one or more foreign university which helps to maintain standards by monitoring progress and providing appropriate support.

These affiliations are very widespread, ranging from the Arab world (Beirut), to Europe, Australia and the United States of America.

Whilst this wide range of opportunities is to be welcomed, the location of these institutions could pose difficulties and result in non-participation for some students. For example, the possible need to travel far from home and, hence, to take up residence in a distant city in order to participate and complete higher education, could be problematic, especially for female students and students with limited financial backing. Also, whilst it is a sound strategy to distribute university provision throughout all the regions of Oman, it may have been preferable to ensure that basic higher education courses are available in all universities, as opposed to rigid educational specialisations as demonstrated in Table 1.1. This would allow each university in each region to meet the needs of its local students, as well as ensuring a positive contribution towards the higher education strategies and plans of the country overall.

Table 1.2 lists the private colleges in Oman. It can be seen that most are concentrated in Muscat, except for three distributed in the regions of Barka, Sur and AlBuraimi. However, each college offers similar programmes, resulting in a lot of duplication in their fields of study. For example, 7 colleges, 4 of them in Muscat, offer Accounting; the same number offer Business Administration, and 11 colleges, 8 of them in Muscat, offer Computing or similar courses. The attempt to attract more students by offering

similar programmes of study has led to criticism of some private colleges for producing weak performance indicators. Al-Ramadhani (2003) states that it would have been better if the colleges had been distributed among the more densely populated cities. Thus, they could have absorbed more students, developed their programmes of study and added other programmes to meet the increasing demand for higher education.

Table 1.2: Private colleges in Oman

College	Date of establishment	Area	Programmes	Affiliation
College of Administrative Science (Majan College)	1995	Muscat	Business Administration, Accounting, Finance, Computing, Communications, Marketing, Travel& Tourism	Luton University, UK
Modem College of Business & Science	1996	Muscat	Business Administration, Accounting, Computing, Banking. Economics, Management& Information System	Missouri Univ., St Louis, USA
Caledonian College of Engineering	1996	Muscat	Civil, Electronic and Mechanical Engineering, Engineering Management	Caledonian Univ., UK
The Fire Safety Engineering College	1997	Muscat	Courses in Fire Safety, Drilling and Safety	Central Lancashire University., UK
Muscat College of Management Science and Technology	1998	Muscat	Communications, Computing, Business Administration. Engineering	Perth College, UK
Mazoon College of Management and Applied Science	1999	Muscat	Business Administration, Accounting, Computing, Information System Management, English Language	Missouri Univ., St Louis, USA
Al-Zahra College for Girls	1999	Muscat	Business Administration, Finance and Banking Management, Computing, English Language	Amman National Univ., Jordan
Oman Medical College	2001	Muscat/ Sohar	Doctor of Medicine, Bachelor of Science	West Virginia University- USA
Sur University College	2001	Sur	Management and Marketing, Accounting, Finance and Banking, Business Information System, Information Technology, Hotel Management and Tourism	Melbourne University Private- Australia
Oman Tourism and Hospitality Academy *	2001	Muscat	Tourism and Hospitality Management	University of Applied Management Science-t-Institute of Tourism and Management- Austria
Waljat College of Applied Sciences	2001	Muscat	Computer Science& Engineering, Electronics and Communication Eng., Biotechnology Eng., Business Admin-information Technology Management	Birta Institute of Technology - India
Middle East College of Information Technology	2002	Muscat	Software Technology, Hardware Technology & Networking. Internet Technology	Manipal Academy of higher Education - India
AlBuraim College	2003	AlBuraimi	English language, International Business, Marketing, Human Resource Development, Accounting, Computer Science, Information System	California State University USA
Scientific College of Design	2004/2005	Muscat	Interior Design, Graphic Design	Lebanese American University- Lebanon
Oman College of Management and Technology	2004/2005	Barka	Business Administration, Accounting, Banking and Finance Science, Marketing and E-Commerce, Computer, Interior Design	Al-Yarmouk University- Jordan
Gulf College	2004/2005	Muscat	Accounting, Finance, Marketing Management, Travel & Tourism Management, Business Economics, Computing Science, Information Systems, and Mobile computing	University of Staffordshire-UK

Source: Ministry of Higher Education (2004a), Sultanate of Oman.

*This public institution is listed here because it accepts full-fee paying private students.

It would be a more sensible strategy to diversify and enrich the higher education in Oman, thereby promoting the higher education which would help in the development of the society rather than educational institutions competing against each other.

These colleges award the following degrees, B.Sc. (Honours) in Business Administration, Diploma of Higher Education, University Diploma, Higher National Diploma (HND) and B.Sc. in Engineering (Ministry of Higher Education, 2001a)

According to statistics from the Ministry of Higher Education (2004b), during the period 1995 to 2003, despite the available capacity, these colleges accepted only 28,402 students, which indicates that demand to enrol in them is still low. One reason forwarded by the Ministry of Higher Education to explain these colleges not functioning to full capacity is the comparatively high tuition fees, which range from 1,500 to 5,400 Omani Rial per year (Ministry of Higher Education, 2004c). This may explain the reason that most students who study in these private institutions receive government scholarships.

This assertion is supported by recent data reported by Al- Mandhari (2004), who showed that 57% of the students in private higher education (2004) are on government scholarships, which are funded by both Ministry of Higher Education and Ministry of Labour Force (see Table 1.3 below).

Although this financial support provided by the government is most welcome, as it provides further access to higher education to Omani citizens, this data does raise an important question as to whether these students would have been able to enter higher education without the scholarship provided by the government.

Table 1.3 demonstrates that there is a wide range of government scholarship support, ranging from 35% to the Caledonian College of Engineering to 90% to the University of Sohar. This wide variation in the volume of support could reflect the government's perceived priority in the academic disciplines offered by these institutions. Because of the need for engineers, technicians, and medically trained personnel, it might have been expected that government scholarships would have been readily forthcoming. Yet, from Table 1.3 this is not necessarily the case.

Table 1.3: Government scholarship students in private higher education, 2004

Institution	Total students	MOHE funded	MOLF funded	% students on Government Scholarships
University of Sohar	1158	829	210	90%
Oman Medical College	273	171	23	71%
Sur University College	509	259	95	70%
Middle East College of Information Technology	605	302	91	65%
Al-Zahra College for Girls	954	425	188	64%
The Fire Safety Engineering College	398	173	80	64%
National College for Science and Technology (currently University of Dhofar)	1047	320	266	56%
College of Administrative Science (Majan College)	1594	513	351	54%
Mazoon College of Management and Applied Science	1003	476	24	50%
Modern College of Business & Science	614	212	73	46%
Waljat College of Applied Sciences	518	151	51	39%
Muscat College of Management Science and Technology	265	67	31	37%
Caledonian College of Engineering	1101	134	250	35%
Total	**10039**	**4032**	**1733**	**57%**

Source: Al-Mandhari, F. (2004).

The lower governmental scholarship for students studying at the Caledonian College of Engineering, in particular, might be explained by the fact that unlike the other institutions in Table 1.3, this institution is a campus of a full-fledged overseas university with a licence to operate in Oman.

Increasing the overall number of government scholarships at these institutions could be one obvious strategy for enhancing access to higher education for young Omani citizens, particularly given the limited places available at the country's only public university.

1.9 Organisation of the Thesis

This thesis comprises **Eight Chapters,** including this introductory chapter. This chapter **(Chapter One)** provides background information about the research problem and then states the problem of the study. It sets out the research questions and objectives and highlights its significance. Furthermore, it provides a brief background about Oman and its general and higher education. In **Chapter Two,** theories and empirical evidence on the nature of the factors influencing students' decisions to enter higher education are reviewed, with particular reference to Human Capital Theory and Omanisation (employment of Omani nationals). **Chapter Three** presents a review and analysis of documentary data related to the higher education capacity and labour market conditions in Oman. **Chapter Four** describes the research methodology selected and then goes on to explain in detail the application of the methodology in the field. **Chapter Five** presents the results of the questionnaire surveys, using descriptive statistics to describe the demographic variables, students' motivations and expectations from higher education, factors influencing students' decisions to enter higher education, family background and students' academic attainment profile, and inferential statistics to test the hypotheses of the study. **Chapter Six** presents the findings from the semi-structured interviews. The findings from both data sets are discussed and interpreted in **Chapter Seven.** Then, in **Chapter Eight,** conclusions, implications and recommendations are presented, as well as suggestions for further research.

This, then, is the context of the present chapter. In the next chapter, Chapter Two, theories and empirical evidence on the nature of the factors influencing students' decisions to enter higher education are reviewed.

CHAPTER TWO
LITERATURE REVIEW PART ONE: FACTORS INFLUENCING SECONDARY SCHOOL STUDENTS' DECISIONS TO ENTER HIGHER EDUCATION

2.1 Introduction

"Education is not the filling of a pail, but the lighting of a fire"

Anon.

As knowledge becomes more important for economic competiveviness, so does access to higher education. The quality of knowledge generated within higher education institutions, and its availability to the wider economy, is becoming increasingly critical to national competitiveness. Hence, countries, especially developing countries, need to educate more of their young people to a higher standard, as a university degree is now considered a basic qualification for many skilled jobs (World Bank, 2000a).

However, making the decision to pursue higher education is not an easy task. In fact, it can be highly complex for each student, because generally their decisions are embedded in a wide range of factors and local cultural influences. Thus, students' decisions concerning their entry into higher education are and will be influenced by a large range of factors which, when combined with intentions, are influential in accounting for patterns of participation. Major categories of influence are those that relate most directly to secondary school students, e.g. factors that can be ascribed to their educational achievement; their personal desire to obtain higher education qualifications, in order to gain higher salaries and thereby have better future job prosperity. Other factors are concerned with their family socio-economic background and parents' encouragement. Some additional sets of influences can be seen to impact on secondary school students' perceptions of whether or not to enter higher education as external influences ascribed to significant others, such as peers, teachers, academic specialisation and other attributes of the educational institutions themselves, and labour market conditions (availability of employment for higher education graduates).

These factors have been the subject of much debate and extensive higher education research all over the world. However, in the Middle East, this subject has received little or no attention as an area of research. As Shaw (1997:6) emphasised:

> *"Higher education has long been an area of research interest in the West, in America and United Kingdom. . . This is much less so in the Middle East and the Gulf region"*

Although the Government of the Sultanate of Oman makes every effort to emphasize and increase awareness of the importance of higher education, this specific field needs research and study. A former Minister for Higher Education in Oman (1997) asserts that research findings in this area in Oman will be the tools needed by the Sultanate of Oman to develop and cope with changes. He asserted that:

> *"We are now on the verge of the 21st century trying to foresee the future with all the anticipated advancement in sciences and knowledge in the various aspects of life. This entails that we work hard in steering education into the right track of development and progress. Modern technologies of information communication systems and the highlighting of research findings in our educational institutions will be the tools we need if we are to cope with changes of the approaching century"*

(Message of welcome by the Minister of Higher Education in Oman at Promoting Quality Teacher Education for an International World Conference, Forty Fourth World Assembly of the International Council on Education for Teaching, Muscat, December, 1997)

Based upon the above introduction, this chapter will review the relevant literature on factors influencing secondary school students' decisions to enter higher education in five parts. In section two, an overview about economic factors influencing the demand for higher education will be presented. The literature on the social factors influencing the demand for higher education will be discussed in section three. This will be followed by section four with a review of the literature on the psychological factors influencing the demand for higher education. Section five will present a review of the literature on the institutional factors influencing the demand for higher education. Section six will highlight the demographic factors influencing the demand for higher education. A theoretical framework for the factors influencing secondary school students' decisions to enter higher education will be offered and presented in section seven. The chapter will conclude with a summary.

2.2 Economic Factors

This section will review literature on economic factors influencing the demand for higher education in two ways: the influence of Human Capital Theory will be highlighted. Then the influence of labour market conditions in Oman on students' decisions to enter higher education will be presented.

2.2.1 Human Capital Theory

During the early 1960s, economists such as Theodore Schultz (1961) and Becker (1964) formulated a theory of development, centred on the productive ability of a human labour force in the economic development process. Because of this they regarded manpower and its output as a form of human capital investment. Also, these economists highlighted two distinct but inter-related issues related to Human Capital Theory: [a] at the individual level, people invest in themselves and their education in order to earn higher wages and a better standard of living, and [b] at the collective level, to pursue economic development, human capital development is needed in the form of native skilled manpower relevant to each country needs. Both of these issues must be linked by education (Al-Maskery, 1992).

According to Blaug (1976: 829), Human Capital Theory is based on:

> *"The idea that people spend on themselves in diverse ways, not for the sake of present enjoyment, but for the sake of future pecuniary and non-pecuniary returns"*

From this perspective, the decision to enter higher education is seen as strongly influenced by the expected return to the individual of the investment made in gaining relevant educational qualifications.

The concept of Human Capital Theory in its present form was developed when Theodore Schultz, an American economist, analysed educational expenditure as a form of investment as asserted by Blaug (1976: 827), who stated that:

> *"The birth of human-capital theory was announced in 1960 by Theodore Schultz. The birth itself may be said to have taken place two years later when the Journal of Political Economy published its October 1962 supplement volume on "Investment in human beings"*

Al-Maawali (2000) asserts that any decisions which influence an increased income in the future can be called 'Human capital investment'. Thus, 'Human capital' is described as a concept that relates to the fact that people invest in themselves through advancement in education, training, or any other activity that will raise their future income by increasing their lifetime capacity to earn. And 'investment', contrary to 'consumption' (which produces immediate satisfaction or benefits but does not necessarily create future income), is related to expenditure and assets that will produce increased income in the future (Al-Maawali, 2000).

Al-Hajry (2002) suggests that in Human Capital Theory, all expenditure on labour that increases its productivity can be comparable to the expenditure spent on maintenance and improvement of plant and machinery, whilst education may be regarded either as a consumption good or an investment good, or both. The distinction Al-Hajry (2002) made was that consumption benefits take the form of increased personal satisfaction for those who invest in education, whereas investment benefits refer to the development and enhancement of specific skills and general abilities to meet society's needs. It is these that are identified as human capital. The example he gives is that improved labour productivity resulting from enhanced skills and knowledge should lead to higher income for individuals, with an increased level of economic growth for society.

Equally, Al-Hajry (2002) stated that skills and knowledge gained from education that have market value will benefit both individuals and societies monetarily and non-monetarily. For this reason, individual students have invested in higher education directly or indirectly, getting support from families and friends or borrowing from private or public financial institutions, or through being employed in part-time jobs to cover the cost of books, learning materials, living and travelling expenses. Generally, due to heavy public subsidies for higher education in most countries, direct private costs represent a substantial portion of the total cost. However, in the Sultanate of Oman and other Arab Gulf states, as education is paid for from public monies, this cost is reduced to nil (Al-Hajry, 2002).

According to some researchers, such as Blundell *et al.* (2000) and Siphambe (2000) there is a direct, positive association between individuals' income level and its annual growth rate, and the numbers of years spent acquiring education. Those who obtain higher education qualifications start work on higher salaries, and their incomes rise

more quickly than those with lower educational qualifications. Researchers attribute this to the additional skills and expertise gained by those with more education, which make them more productive. For example, Siphambe (2000: 293) stated that:

> *"As expected, average earnings increase as the level of education rises. Males with post-secondary education earn six times more than those with no formal education. The earnings differentials are more pronounced for female employees, where those with post-secondary education earn 13 times more than those with no formal education"*

Studies of the earning capacity of educated people in many regions of the world have conclusively established that 'educated workers earn more' on average, compared to less educated and less qualified workers (Menon, 1995). Pereira and Martins (2004:525) supported this when they observed that:

> *"Education is one of the many investment decisions motivated by the fact that the investment yields a choice that one would not otherwise have. Part of the return to the investment is to be found in the set of options that emerges. For instance, when an individual decides upon the level of education to be attained, it is believed that such academic qualification will lead to a better-paid job. That qualification will also extend the number of options in other matters, as well, such as the sector and/or specific firm where the individual will be employed. Part of the individual's return to education will thus be the return to subsequent choices–choices that are available only after qualification is obtained"*

Furthermore, Menon (1995:103-4) claimed that the additional education attained by individuals will lead to increases in their productivity, which are rewarded with higher earnings. She said:

> *"The treatment of educational investment as investment in human capital rests on the assumption that the additional education acquired by individuals will lead to an increase in their productivity, which will be rewarded with higher earnings. The higher earnings of educated workers are thus believed to reflect their superior productivity. Education is thought to raise productivity through the provision of skills and knowledge, which increase the efficiency and hence the value of the more educated"*

Moreover, Levin (1987:150) asserted that:

> *"Human capital theory, therefore, views education and training as a linkage between the source of variation in the productivity between individuals, which leads to higher earnings, and the source of skilled manpower that in turn leads to economic development. Those who*

> *are more educated are supposedly more productive and are appropriately rewarded for their education/productivity. Higher productivity is assumed to be rewarded in labour markets in the form of higher earnings"*

On the other hand, Arrow (1973) questioned the validity of this view and argued that the association between education and productivity arises not because of the effect of education, but because people who pursue higher education and achieve higher qualifications will be those who are naturally more able; education is simply a 'screening device' for identification of such individuals.

However, in an attempt to clarify whether or not the effect of education on wages is because education raises productivity or because education is simply a signal of ability, Chevalier *et al.* (2004) applied a number of tests for discriminating between these two explanations and found that they did not support the signalling hypothesis.

The pecuniary benefits of higher education can be measured by estimating the marginal incomes of graduates, that is, the amount by which the estimated total income return expected by university graduates during their whole working life exceeds that of secondary school leavers (Al-Hajry, 2002). Al-Hajry (2002) explains that this process leads to the construction of age earning profiles to be utilised in the estimation of 'rates of return' to private investment.

Becker (1964) suggested that such 'rates of return' to educational expenditure should be calculated as a basis for educational planning and policy making. Both he and Mincer (1962) suggested the 'rate of return' should be estimated as the investment in training and education by using 'cost-benefit analysis', as this allows for comparisons between costs of additional education or training against additional lifetime earnings of qualified or trained employees (Menon, 1995). In this respect Mincer (1962:63) stated that:

> *"The rate of return computed by equating the present values of net earnings of two education groups should not be interpreted as a rate of return on schooling costs. The computed rate is some average of rates of return to schooling and to on-the-job training"*

This is supported by Woodhall (1987:21- 22) when he stated that:

> *"If money devoted to education, training, or health care is regarded as investment in human capital, since it raises the lifetime earning of workers who are better educated and trained or more healthy than other workers, then techniques of cost-benefit analysis can be used to*

> *compare the economic profitability of different types or levels of education of on-the-job compared with off-the-job training, or of different types of medical treatment. It should also be possible to compare rates of return to investment in human capital and physical capital, in order to discover whether it is more profitable to invest in men and women or machines"*

Thus, when economists refer to expenditure on education and training as investment in human capital, they make the assertion that it is possible to measure the profitability of investment in human capital by using the same or similar techniques available to study the feasibility of investment in physical capital (Al-Maawali, 2000). In line with the above, Al-Maawali (2000) states that profitability, or the 'rate of return' on investment, is a measure of the expected yield of the investment, in terms of the future income stream generated by the capital, compared with the cost of acquiring the capital asset.

According to human capital theory, individuals will decide to continue higher education only as long as the expected gains of doing so go beyond the costs of their education, and the qualification gained will lead to a better-paid job. As Blundell *et al.* (1999: 2-3) put it:

> *"The concept of human capital arose from a recognition that an individual's or a firm's decision to invest in human capital (i.e. undertake or finance more education or training) is similar to decisions about other type of investments undertaken by individuals or firms. Human capital investments involve an initial cost (tuition and training course fees) which the individual or firm hopes to gain a return on in the future (for example, through increased earnings or higher firm productivity)...Human capital investment will only be undertaken by a wealth-maximising individual or firm if the expected return from investment (or 'net internal rate of return') is greater than the market rate of interest...individuals will only undergo additional schooling or training (i.e. invest in their human capital) if the costs (tuition and training course fees) are compensated by sufficiently higher future earning"*

Individuals, who participate in education or vocational training, benefit by increasing their opportunities for employment and increasing their lifetime earning capacity. The result is gains for themselves, as well as to their countries' economy. For this reason Al-Maawali (2000) concluded that after allowance for payment of taxes, additional earning capacity can be compared with the direct and indirect costs of education, as this gives a measure of the private 'rate of return' on investment in education or other forms of human capital.

It is clear from the above that calculating the 'rate of return' on investment in training and education by using 'cost-benefit analysis' necessitates comparing the costs of additional education/training with the income expected by higher education graduates during their whole working life. However, since there are no direct costs paid by secondary school students to pursue higher education in Oman, due to the free higher education policy provided by its government, it was not possible in this study to apply the method of 'cost-benefit analysis'.

Alternatively, therefore, in order to examine the applicability of the concept of Human Capital Theory, which means that people invest in themselves in terms of education because they expect education will bring them better job opportunities with higher salaries (Blaug, 1976), secondary school students who participated in this study were asked two questions about income expectation. The first one was how much they would expect to earn monthly if they got a job immediately after secondary school; the second, how much they would expect to earn monthly if they gained a higher education qualification. The researcher here followed the pattern applied by Al-Maskery (1992) in his study about 'Human Capital Theory and The Motivations and Expectations of University Students in the Sultanate of Oman'.

In addition to pecuniary benefits, there are non-measurable or non-pecuniary private benefits of investing in higher education, in the form of personal satisfaction and enjoyment identified by individual students during their university years and during their working life. For example, Al-Hajry (2002) indicated that satisfaction and enjoyment from studying different sources of knowledge in a university library, sitting in a lecture or socialising in the students' union are examples of benefits that are difficult to measure, along with examples of socialising skills that extend beyond the university years. Other non-pecuniary benefits that individuals accrue after university graduation include reduced chance of unemployment, extended choice of job opportunities and better working environments.

A number of research studies have found support for the link between higher education and earning power, presumed in Human Capital Theory. For example, Psacharopoulos (1977) used the human capital model in order to explain disparities of income in a less developed country, Morocco. He found that almost three quarters of the relative

earnings dispersion among 1,600 male full-time employees could be explained by differences in education and experience.

The same author, with a colleague, investigated the extent to which Human Capital Theory explained inequalities in earnings among 7,000 male workers in Britain (Psacharopoulos and Layard, 1979). They found that schooling and on-the-job training accounted for about half the variance in earnings.

In Malaysia, Chung (2004) investigated the private returns to education and training for a random sample of women. The study revealed that returns to education were high and positive and the average rate of return was very high for those with higher education qualifications.

Fazio and Dinh (2004) examined the effects of education on the earnings of employed urban workers, migrants and re-employed workers, in China. They used the worker data from a 1999–2000 urban enterprise survey. The study revealed that returns to education increased with marketisation and competition in the workplace. Furthermore, it was found that educational attainment was an important explanatory variable of the earnings' differentials between groups of workers in China's urban labour markets.

In addition to verifying the impact of education on earnings, research has investigated students' awareness of this relationship, and its effect on their expectations and decisions for education and careers. For example, Williams and Gordon (1981) applied Human Capital Theory to examine if English pupils were aware of the relationship between educational qualifications and average earnings: their findings supported the assumptions of the Human Capital Theory model. They concluded that boys expected to earn more than girls, regardless of their education. However, their findings revealed that social background exerted very little independent influence.

Psacharopoulos and Sanyal (1981) investigated students' perceptions of the labour market against actual labour market outcomes in the Philippines. They found that higher education students had a realistic perception of the level of earnings they would receive in the labour market upon graduation and students also had realistic expectations regarding the structure of labour market rewards by sex, field of study, and occupation.

In addition, another study by Psacharopoulos and Sanyal (1982) compared the students' expectations and actual labour market performance in Egypt. They revealed that students' expectations of the labour market were consistent with the actual market conditions and the social demand for different fields of university specialisation was closely linked with the expected economic rewards.

The findings of Al-Maskery's (1992) study, about the motivations and expectations of first and final year students at Sultan Qaboos University in Oman, were consistent with the argument posed by Human Capital Theory that people are motivated to invest in themselves in the form of education and training because they expect education will bring better job opportunities and higher salaries during their work life. In Oman, this motivation is reflected in the prevailing preference among the educated, for work in the public sector. The majority of students in Al-Maskery's (1992) study were expecting to work in the public sector because they found government jobs more appealing. Government jobs provide more economic and non-economic returns, provide stable and secure employment, offer better personal and career opportunities, and confer higher social prestige, compared to private sector employment.

In Cyprus, Menon (1995) found that those students intending to continue their education perceived a much higher rate of return to higher education, in comparison to those intending to work and that was strongly suggestive of the Human Capital Theory interpretation of educational choices as investment decisions.

In USA, Dominitz and Manski (1996) presented evidence to show that secondary school students predicted higher wages for university graduates, and had a strong belief that the wage gap and earning capacity between secondary school and university graduates continues to widen as they gain employment experience. They also found that many students used current wage levels to predict future wage levels. Students who believed that current medium level wages were high, were more likely to over-estimate their own future earnings when asked to give a prediction, by saying that their earnings would be high, when realistically their prediction should have been medium to average wages.

In Spain, Albert (2000) tested the Human Capital Theory through discrete choice models where the process of selection of secondary school students for higher education, was considered. The study revealed that labour market signals in Spain were found to have an influence on students' decisions to enter higher education, as a signal

of both the opportunity cost of finding a job if not going to university and the employment expectations for each relevant education level.

Hung et al. (2000) surveyed the educational intentions of 1,513 senior secondary students in Shenzhen, China. Ninety per cent of students in their study decided to continue higher education after completing secondary school because they expected a much higher rate of return to higher education than the remaining ten percent of students who opted to find an employment directly after secondary school. Analysis of a logistic regression revealed that students' expectation of rate of a return to higher education had a positive and significant effect on their decision to enter higher education and therefore, decisions of availability and access to higher education were influenced.

From the above review of literature, it can be concluded that secondary school students' expectations of education are substantially affected by the variety of opportunities available within their immediate local labour market. Therefore, as Furlong and Cartmel (1995) advocate, it is essential that any decisions or adjustment to these decisions based on the local market perceptions of the value of continuing education needs to be understood in relation to secondary school students' occupational aspirations. Because of these assertions, the next sub-section will highlight labour market conditions in Oman.

2.2.2 Labour market conditions in Oman

A brief review of literature related to the relationship and association between students' decisions to enter higher education and local labour market conditions will be undertaken to place the current labour market conditions in Oman into context. This is based upon the assumption that higher education qualifications increase higher employment possibilities with higher than average income, and are also perceived as lowering the risk of unemployment. For example, Hayden and Carpenter (1990:181) stated that:

> *"The labour market is one of the most important sources of extrinsic incentives for participation in higher education... A young person who goes on to qualify for a university or college qualification is more likely to obtain a well-paid occupation with high social standing"*

Furthermore, Jimenez & Salas-Velasco (2000) maintain that there are certain university degrees that, since there is a greater demand in the job market and/or less competition due to the fact that fewer graduates have this degree, have a certain advantage job-wise. They, therefore, allow a relatively quick transition from the university education system to the world of employment. It would be expected that, everything else being constant, the student would choose a university degree that offers the best job prospects.

The chances of getting a job and being able to practise a particular occupation are important motives to students in deciding whether or not to go further with their study (Heijke, 1996). A positive correlation between unemployment and the numbers going on to further education suggests that further study is to some extent seen as a way to avoid unemployment, and that people expect that gaining a higher education qualification will increase their chances on the labour market. Up-to-date accurate information regarding the labour market is important for secondary school and tertiary students, because availability of sound labour market information not only benefits the choice of study or occupation, but also contributes to reducing the gap between expectations and the reality after graduation. Such information would ensure a better allocation of secondary school and tertiary students to the various types of educational institutions available. This in turn would reduce the number of students mistakenly undertaking courses, because they have an excessively optimistic idea of the opportunities qualifications in these particular courses offer in the labour market (Heijke, 1996).

Furthermore, as Heijke (1996) maintained, such information would also help to reduce the opposite effect, whereby there would be fewer students mistakenly avoiding certain courses because they associate them with unfavourable labour market demands.

Therefore, human capital focuses especially on investment in human productive capacity through education and training as they provide knowledge and skills that can be used in future careers and relevant employment in the labour market (Heijke, 1996). A well-trained workforce, in turn, is seen as an important pre-condition for economic growth.

However, as Heijke (1996) argues, decisions related to investments in education and training have to be taken under uncertainty of outcome, because the benefits gained will only be known in the long term. To reasonably predict what such future benefits will be,

therefore, it is necessary to have some insights into how the labour market functions with respect to education and training.

As stated above, there is widespread consensus among scholars and policymakers that investments in human capital bring benefits to individuals, firms and societies, that is, better educated people have higher employment probabilities, are subject to a lower risk of unemployment and receive on average higher income (OECD, 1998).

According to Human Capital Theory, individuals are supposed to expect from their educational investment that they can and will improve their earning capacity and their employability. Young people attending tertiary level institutions appear to face lower unemployment risk. This may be accounted for by the fact that individuals with higher risks of being unemployed and who face lower return expectations are significantly less likely to be enrolled in higher education institutions. Consequently, the prospects of being non-employed appear to have a strong negative influence on higher education enrolments (Menon, 1995).

In this connection, Menon (1995) argues that young people will and do take into account labour market conditions, while the labour market itself will, in turn, adjust to the output of educated individuals.

Similarly, Petrongolo and Segundo (2002) investigated the impact of local labour market conditions on the demand for upper secondary education at the age of 16 in Spain. The study revealed that secondary school students base their decisions regarding higher education on local unemployment rates. The direction of these effects was found to be in line with the Human Capital Theory for the demand for higher education. The study concluded that an increase in the overall rate of unemployment reduces higher education demand and enrolment rates.

Placing the labour market conditions of the Sultanate of Oman into this background, because of the shortage of skilled and professional Omani workers, particularly in the private sector economy, Oman's development and modernisation programme depends heavily on expatriate labour (Al-Maskery, 1992). Consequently, concern about this phenomenon and the resultant loss of the country's wealth through repatriated earnings has led in recent years to a policy of Omanisation, which has been defined by Al-Farsi (1994:66) as:

> *"The replacement of expatriate labour with similarly skilled, trained, and highly educated Omani nationals"*

Similar to other countries in the Gulf States, Oman, as Al-Maawali (2000) points out, imports much of its labour force from other countries, particularly South Asian and Arab countries. The shortage, in Omani citizens, of skills in specific areas affects the balance in the labour market, so that it leans towards more expatriates being employed. Therefore, one important observation that must be taken into account of the Omani labour market is this growth of the expatriate labour force and its relationship to the economic growth of the country.

According to Al-Maawali (2000), the factors which led to the growth of expatriate labour were the following:

- Emerging prosperity in the economy associated with oil activities.
- Increasing oil prices, especially in the 1970s and the first half of the 1980s.
- Government commitment to finance ambitious plans, and the infrastructure and development of human resources.
- Scarcity of skilled and unskilled workers to meet the high demand of rapid growth in the country.

This policy has important implications for education, which can be used as a link between individual human capital development and aggregate development (Al-Maskery, 1992). This is because, at present, there is evidence that levels of education in Oman are not adequate to meet the goals of the Omanisation policy.

A review of the literature on the labour market conditions in Oman showed that the workforce has a large expatriate population in both the public and private sectors. In the public sector, the number of non-Omani citizens was 17,471 (19.2%), in all civil services, while the number of non-Omani citizens employed in the public corporations was 1,929 (24%). The total number of non-Omani employees in the private sector was 547,477, which constituted 89.3% out of the total labour force in this sector, i.e. 613,355 (Statistical Year Book, 2003).

Furthermore, it is reported that the majority of special group staff in the civil service are non-Omani citizens. They constituted 87.2%, compared to the total number of Omani citizens (12.8%) in the same grade. These are positions with higher salaries and more

decision-making authority. Moreover, the distribution of civil service employees by educational level showed that the majority of expatriate labour is educated at diploma level and above (Statistical Year Book, 2003). However, successful Omanisation of highly technical positions that require tertiary education can only be achieved when young Omani citizens are provided access to higher education.

A detailed analysis of the distribution of non-Omani professionals in both public and private sector, by educational level, occupational group and grades, as well as the need for well-qualified graduates at a higher education level to replace non-Omani professionals, will be presented in chapter four.

However, a number of writers have commented on the obstacles which contribute to the continued shortage of Omani citizens with the required education and training, particularly in the private sector, where non-Omani employees dominate the top executive posts and high salaried jobs requiring specific technical knowledge.

For example, Al-Farsi (1994) referred to Omani citizens' lack of adequate English, a good command of which is needed in most private sector jobs. This issue is partly being rectified, as recently the government has taken steps to address this problem by introducing English at grade one, instead of grade four, as formerly was the practice.

Al-Lamki (1998), in the context of her discussion of barriers to Omanisation in the private sector, however, highlighted pecuniary matters. Her study revealed that the overwhelming majority of Sultan Qaboos University students believed that the greatest deterrents to Omanisation in the private sector were aspects of the compensation and benefit programmes offered. Salaries, retirement plans, social security, compensation, educational assistance, vacations, sick leave, working hours and so on in the private sector were perceived to be less attractive than those offered in the government (public) sector. Al-Lamki's (1998) findings indicate that students would be willing to participate in the private sector if working conditions and employment benefits were similar to those in the government sector. In other words, students would be motivated to work in the private sector, provided that they received comparable or higher economic returns than those in the government sector. Al-Kharusi (1991) similarly highlighted the disparity in economic benefits between the two sectors, which makes private sector employment unattractive to educated Omani citizens.

Al-Maawali (2000) emphasized a number of aspects of the terms and conditions of employment which affect the attractiveness of jobs, such as the disparity in the official working hours between public and private sectors. For example, public working hours start at 7.30am to 2.30pm five days per week. In the private sector, working hours are 8.00am to 1.00pm, a break of 3 hours, then from 4.00pm to 7.00pm daily, for six days per week (Saturday to Thursday). Furthermore, during Ramadan, there was an expectation of Muslims working in private business to work for only 6 hours per day or a 36-hour week.

Since employees in the private sector were expected to work longer hours, this might suggest that they would earn more than employees in the government sector. The reverse is in fact the truth: workers in the private sector earn less than those in the public sector, due primarily to the fact that lack of high educational qualifications means that there are insufficient skilled Omani citizens to fulfil the employment needs of the private sector. Consequently, the private sector recruits its labour force from neighbouring countries, such as India and other Asian countries, where there is an excess of skilled labourers who are willing to work in other countries (Al-Maawali, 2000). Compounding this fact is the situation where overseas employees' primary objective is to earn money to support their families back in their home countries. This then takes much revenue out of Oman. Al-Maskery (1992) reported that most private sector businesses generally pay less for national labour than they pay expatriates. So, with the longer working hours and the lower pay in the private sector, most Omani citizens who have any chance of obtaining employment in the public sector, naturally try to secure a job there, rather than apply to the private sector.

Al-Maawali (2000) also highlighted the disparity of national holidays in the Sultanate of Oman between the public and private sectors as a factor contributing to low preference for private sector employment in Oman. For example, the Eid holiday that immediately follows the month of Ramadan is between 4 to 7 days in the public sector, whereas it is generally only 4 days in the private sector. Moreover, the annual holiday entitlement in the private sector is between 15 and 30 days, whilst in the civil service and public sector it is between 24 and 48 days. These facts, along with the others cited above, make employment in the public sector much more attractive to Omani citizens.

The perception of job prestige is another issue which could be considered as a deterrent for Omani citizens to work for the private sector (Al-Maawali, 2000). The author points out that during the 1970s and 1980s, many Omani citizens had pre-conceived notions of what a 'good' job was. Some would define a 'good' job as a public posting in a pleasant environment with an air-conditioned office, short working hours and no manual labour. Consequently, construction and manufacturing positions, whilst necessary for the economy, did not qualify as 'good' employment.

The study by Al-Dhahab (1997) examined the issue of self-sufficiency and development: and the role of technical education and vocational training in Oman. The study underscored the importance of having adequate technical education and vocational training systems and programmes for successful Omanisation of technical jobs. This concern was clearly reflected in the decisions made to reform the institutional framework of technical education and vocational training, its organisational structure and, above all, its system of education and training. Al-Dhahab (1997) cites Ministry of Development estimates that the Omani labour market until the end of the year 2020 will need 39,800 technicians: this represents the total number of technicians that is expected to be employed in the domestic economy in the year 2020. The total requirements for skilled and semi-skilled workers by the end of 2020 will reach about 453,600 and 246,400 respectively. He concluded that the ultimate goals underlying the emphasis on developing human resources generally, and technical education and vocational training in particular, are to achieve an acceptable level of self-sufficiency of technical and skilled manpower, and to attain a higher rate of Omanisation in the private sector employment comparable to that achieved by the government sector. But with the deterrents cited above, plus an identified reluctance by the private sector to employ Omani citizens, and the fact that less than half of this required number of secondary school students will be available by the year 2020, it is difficult to see how such a situation can be resolved.

Al-Kharusi (1991) pointed out that the intended objective of supplying the labour market with skilled nationals from Vocational Training Institutes is in trouble because of the private sector's low acceptance of these institutions' graduates. The two major problems that these institutions face are the low student population and the fact that only academically poor students enrol. The report criticised the current curriculum and

recommended reforms to give opportunities to Vocational Training Institutes graduates to proceed to higher education.

Ali Hassan's (1990) study about manpower planning and development in Oman drew attention to inadequacies in many aspects of the education and training system: the incentives, the resources, students' expectations, curricula, teaching staff etc. In Oman, the three dimensions (substance, process and structure) have developed at different rates. The education and training system has developed its substance (schools, staff etc.) to approaching a mature stage at which its growth rate is likely to begin levelling off. The system's structure dimension (organisation characteristic of the system) is lagging behind as it is still at an early stage of growth, and the process function is behind its expected levels of development.

The researcher emphasises that manpower development is a complex process. The success of manpower development in Oman requires effort and co-ordination between different organisations. He concludes by asserting that to overcome the manpower development problems in Oman, the education and training system should be viewed as a complex dynamic system consisting of inter-related parts containing these elements:

a) Substance: it means that the system should have physical reality, i.e. as appropriate schools, teaching staff and other financial resources.

b) Structure: it means the education and training system in Oman should have formal and informal structures in the main ministries, Education and Labour.

c) Process: this means the system should function and change dynamically. It should generate and transform outputs according to social and economic requirements.

Al-Hinai's (1998) study about Omanisation in the private sector in Oman discovered a number of factors that he felt contributed to the lack of indigenous manpower in Oman, which parallel some of those already identified above. The important ones are the small Omani population; lack of suitable education that meets the needs of the labour market; low salaries in the private sector; lack of proper training and in-house training, and lack of motivation from some of the private sector firms to employ Omani workers for one reason or another.

Evidence generated in Al-Hinai's research indicated that the Omanisation process will continue to face some obstacles in terms of Omani manpower in the private sector

because of demand for higher salaries; higher Omani labour turnover, and demand for a better working environment by Omani citizens. Moreover, the perception of private sector employers were that Omani citizens who preferred office jobs were low skilled; put family before work and were choosy about the types of work they were willing to engage in.

More specifically, among Al-Maskery's (1992) findings were opinions on the incentives that might encourage students to participate in the private sector labour market and conditions that currently discourage students from participating in the private sector labour market. These findings indicate that students would be willing to participate in the private sector labour market if working conditions and employment benefits were made similar to those in the public sector. For example, if students were provided with higher monthly salaries than those paid by the government; higher education opportunities similar to those provided by government; free houses and cars, or working hours similar to those in government, they would be more likely to participate in the private sector labour market.

Findings from another study which was conducted by Rayan (1998) about barriers to substituting nationals for expatriates in the Omani private sector revealed that private sector organisations have certain characteristics that encourage their dependence on expatriates rather than on Omani nationals. These characteristics are size, type of business and type of ownership. It also appeared that owners of private businesses have negative attitudes towards the Omani national labour force because of their demands for benefits parallel to those offered in the government sector. Hence, the far less attractive benefits available in the private sector organisations do not encourage Omani nationals to seek jobs in the private sector. These attitudes, together with the characteristics of this labour force, make the owners prefer to employ expatriates to nationals.

In order to achieve the goals of Omanisation, therefore, the government indicated that it was considering the following procedures as summarized by Al-Maawali (2000):

- Limiting expatriate inflows into each sector to the number projected in the plan.
- Omanising personnel development in private sector companies, in order to establish 'the appropriate climate' for the replacement of expatriates.
- 'Arabising' the administration of the companies.

- Providing compensation to private sector companies for training Omani citizens to replace expatriates or to fill new positions.

- Continuing to give priority to awarding of government contracts to private companies and institutions with a better record of implementing Omanisation and giving such companies a preferential margin to cover the costs of training Omani citizens.

- Tie-ing government grants, loans and general subsidies and support to provide companies that implement the Omanisation policy timetables.

- Encouraging graduates of training centres and technical colleges to establish their own business by providing soft finance, tax exemptions, and business support services.

- Encouraging Omani women to pursue employment through the establishment of training organisations for suitable jobs, and also encouraging them to join the present training schemes.

- Enhancing and upgrading the information storage system relating to the workers in the public and private sectors.

- Developing and enhancing the efficiency of the recruitment and employment offices, and establishing the essential rules and regulations to ensure the protection of Omani citizens working in the private sector.

This section has indicated that economic factors have been identified in the literature as influencing demands for higher education. Evidence worldwide suggests that students' decisions are significantly influenced by economic considerations, consistent with human capital theory. In the Omani context, these include the government's Omanisation policy, and disparities in salary and working conditions between the public and private sectors. Social factors influencing students' demand to enter higher education are considered in the next section.

2.3 Social Factors

This section will review the literature on social factors influencing the demand for higher education in two ways: firstly, the influence of parents, family encouragement and family background will be highlighted, and secondly, the influence of peers on students' decisions to enter higher education will be presented.

2.3.1 The influence of parents, family encouragement and family socio-economic background:

In relation to Social/Familial factors, Menon (1995) demonstrated that the influence of home environment was extremely strong across widely different social class

backgrounds of secondary school students when making decisions related to their future education and employment. The social background of secondary school students was seen as being significantly responsible for educational and occupational choices.

In this connection, Andrews (1999) states that socio-economic status is a measure of an individual's or group's rank in the community and is indicative of the command over resources which affects the level of choice or control over one's life, for example, in terms of lifetime career, educational and social options. Differences in individual and family income, occupation and educational qualifications are usually seen as the three largest components of social standing, as well as command over resources.

The influences of parents, family encouragement and family socio-economic background have been a topic of research worldwide. In USA and Canada many writers have investigated these issues. For example, Sewell, Heller, and Straus (1957) examined the influence of social status on the educational and occupational aspirations of a sample of 4,167 of high school seniors in public and private high schools in Wisconsin in 1947-1948. The study revealed that although intelligence was seen as important to educational and occupational aspirations, social status makes an independent contribution to these aspirations at all intelligence levels for both males and females.

Another study in USA by McDill and Coleman (1965) assessed the relative effects of socio-economic background and peer influence on students' college plans. They found that by the end of the senior year of high school, the significant influence of respected peers in the social system of the school contributed more to any variations in college plans than did parents' education. However, as the authors themselves acknowledged, their sample was small, 612 students, and therefore, their findings were not representative of the student population.

Rehberg and Westby (1967) examined the relationship of adolescent educational expectations to father's education, occupation, parental educational encouragement, and family size, based on data collected from 2,852 male second year university students in Pennsylvania cities. They found a positive relationship between educational expectations and parents' occupational and educational levels, as well as parents' encouragement to secondary school students in pursuit of post secondary education. However, the study revealed that the association between educational expectations and

family size was negative, i.e. the bigger the family size, the less likely students were to decide to pursue higher education.

Using data from standardised interviews with a sample of undergraduate students of the University of New Mexico, Meier (1970) found that students' intentions to pursue higher education were influenced by the socioeconomic background of the family, and the decision to pursue higher education was found to be a reflection of the influence of parents, especially that of the father.

In another American study, Christensen, Melder, and Wiesbrod (1975) examined the effect of socioeconomic status as a factor influencing high school graduates' decision to enter higher education in Wisconsin. They used four separate variables as indicators of socioeconomic status: family income, the occupation of the father, the education of the father, and the education of the mother. Their study revealed that the income variable was found to be the least positively correlated with college/university attendance. On the other hand, it was found that the mother's educational level had a greater effect on female family members' probability of attending higher education institutions than the influence of the father's educational level. However, mother's educational level was found to have little or no effect on the male family member students.

Mare (1980) used logistic response models of the effect of parental social background and family structure on the probability of school continuation for white American males. He found that father's occupational status effects were a significant factor in school continuation but this was only from high school onwards. Mother's schooling effects declined slowly over schooling levels, whilst family income and father's schooling effects declined sharply from the lowest schooling levels, with a narrowing of the gap at highest schooling levels. Thus, the findings suggested that parental encouragement was a stronger influence on school continuation decisions of secondary school students' at higher levels of schooling than at lower levels.

Also in the USA, Schwarts (1985) used a logistic model to investigate the effects of secondary school students' financial aid upon the college enrolment decision of high school seniors. The study results revealed that both the direct effect of public grants and indirect effects of parental income increased the probability of college enrolment.

In a more recent study, Crosnoe, Mistry and Elder (2002) applied a family process model, in Philadelphia, to explore the linkage between early economic disadvantage and later enrolment in higher education in the USA. They examined how economic disadvantage influences the educational trajectories of secondary school students by analysing parents' assessments of the future. This study demonstrated that there was an identifiable linkage between early disadvantage and later educational attainment. This linkage could be partially explained through the attitudes and behaviours of parents of secondary school students. For example, economically disadvantaged parents were found to be more pessimistic towards the chances of their secondary school student aged children being able to access university level education. This parental pessimism, in turn, reduced their motivations to make efforts to reduce the likelihood of their secondary school student children not having ambitions for higher education. Also, this study revealed that although there was a link between disadvantage and secondary school students' educational outcomes, such outcomes did not differ by gender or ethnic background. However, it found that the link between disadvantage and parental assessments and aspirations for the future educational achievements of their secondary school student children was strong and was much stronger for females and non-African American families.

Further evidence on the impact of social factors on educational choices was provided by Bui (2002), who examined the background characteristics of first generation college students, that is, students whose parents had not attended college or a higher education institution, at the University of California, Los Angeles. The author focused on their reasons for pursuing higher education, and their first-year experience, and found that in comparison to secondary school students whose parents had some experience of college or higher education, but had not received degrees, and secondary school students whose parents had achieved at least a Bachelor's degree, first-generation college students were more likely to come from a low socio-economic background. Most responses indicated that secondary school students had pursued or were pursuing higher education in order to help their family financially once they had successfully completed their college or higher institution programmes of study. Equally, many indicated that they had constant worries related to gaining financial aid and support for college or higher education courses.

Finally, in the USA, Averett *et al.* (2003) applied the Human Capital Theory model to estimate the rates of return for individual secondary school students based on the actual experience of males of their own race (black and white) and their geographical location. They used these measures of return, along with a rich set of family background, ability and local labour market variables, to predict higher education attendance. This study found that white secondary school students did not respond to higher rates of return with increased enrolments, whereas black secondary school students responded positively to the rate of return. Whilst family income and the level of parental education were found to be important determinants of the probability of secondary school students accessing higher education, it was found there were some notable differences between black and white secondary school students. For example, white secondary school students whose parents had graduated from university reported a strong, positive encouragement which resulted in a high probability of aspiration to enter higher education. This was nearly the opposite of the experience of black secondary school students, the majority of whose parents had much lower levels of education. Equally of importance was the finding that the number of siblings within a family had significant negative effects for black secondary school students, but there was no similar effect for white secondary school students. Hence, family background and circumstances are extremely important determinants for secondary school students' decision making towards higher education.

In Canada, Guppy and Pendakur (1989) using two surveys conducted in 1974-75 and 1983-84, examined the impact of gender and parental education on secondary school students' decision to study part-time or full-time in chosen colleges or universities as well as their decisions to enrol in different fields of study. The study revealed that parental education influenced the registration status and institutional choice, but had less bearing on the choice of field of study within higher education institution. However, the effects of parental education did not have a large influence on the level or the field of study except in law, and medicine. Female secondary school students were more likely than their male counterparts to come from well educated families.

Another study in Canada by Foley (2001) examined the reasons why some high school graduates did not pursue post-secondary education, using the data in Statistics Canada's School Leavers Survey. He found that educated parents could be important role models for their children, because in general, young people receive greater exposure to the

kinds of life trajectories that their parents are following and thus may choose a path simply because it is known and familiar to them. Equally, there were indications that the psychological environment constituted by fathers' education has significant negative and positive influences on decision making. The students surveyed also indicated that, although financial barriers were a factor, non-financial reasons, such as indecision, wanting to take time off, and having little or no interest in higher education, were more important in influencing decisions not to pursue higher education, than financial considerations. Male and female students offered similar reasons for not pursuing higher education.

Also in Canada, Knighton and Mirza (2002) examined the combined effects of household income and parents' education on post-secondary participation. From their sample of 1,640 Canadian students, they defined three levels of parents' education, i.e. high school diploma or less; college diploma and university degree, including bachelors; and masters and PhD. Their study revealed that the family income was an important determinant of access to post-secondary education; participation, particularly at the university level, increased with parents' income. They also found that young Canadian secondary school students whose parents had a higher level of education, were significantly more likely to pursue post-secondary education, and more specifically university education, than secondary school students whose parents had lower levels of education. For example, in line with studies discussed above, secondary school students whose parents were university educated were almost three times more likely to pursue higher education at university level than secondary school students whose parents' educational level was only high school diploma or less. They were more likely either not to pursue higher education or to pursue higher education at college level only.

In addition to the studies conducted in USA and Canada, several studies in Europe have also examined the issue of the influences of parents, family encouragement and family socio-economic background, on students' decisions to enter higher education.

For example, in Sweden, Harngvist (1966) investigated the academic oriented plans of students from grade 7 and their plans for the "Student examination" which would decide their eligibility for university entrance, along with the influences of social background

and aptitude. Their results revealed that students' social background played an important role when students planned for post secondary education.

In the United Kingdom, McCreath (1970) found that family influence on the secondary school students' higher education plans was twice as great as that of any influences from peers or teachers in the school that they attended.

Another study in United Kingdom, by Williams and Gordon (1975) investigated the influence of family background on 16 and 19 year old pupils' decision to stay on at school after compulsory education and their attitudes towards education and career opportunities. The study revealed that the father's occupation was an important significant factor that influenced secondary school students' decision to remain at school and pursue further education.

Also in the United Kingdom, Rudd (1987) examined the effect of the occupational and educational level of the parents of undergraduate students who had entered British universities in 1984. He found that there was strong positive relationship between the occupational and educational level of parents and probability of their sons or daughters pursing higher education. Rudd believed that this significant effect was due to the transmission of values from one generation to another. Thus, parents who had received a high level of education were more likely to encourage their children to pursue higher education. Rudd concluded that the pursuit of higher education by secondary school students was a familial matter where decisions were influenced especially by parental belief in its intrinsic value.

Working in Scotland, Tinklen (2000) examined the influence of social background on the application forms and the entry acceptance forms to higher education among Scottish secondary school leavers. She found that, generally, those students from less advantaged backgrounds were under-represented in higher education because of their lower achievements. However, the study revealed that students with more educated parents or from a middle class background were more likely to apply and enter higher education.

In England and Wales, Gayle, Berridge and Davies (2002) used a logistic regression model of exploratory analysis through statistical modelling to identify the factors that influence a secondary school student's chances of entry into higher education and

participating in a degree level course. They found that the occupational social class of the secondary school student's family was highly statistically significant. Thus, secondary school students from a disadvantaged social background were less likely to enter higher education or to study at degree level. They also found that the family size was an important factor, as secondary school students from larger families had a significantly lower chance of studying for entering higher education or studying for a degree.

In Britain, Chevalier and Lanot (2002) using data from National Child Development Study and the British Cohort Study, found that secondary school students from poor families were less likely to invest in education when they investigated the possible effect of family characteristics and family financial situation on the educational achievement of secondary school students. They also reported that, despite a financial transfer, this did not to lead to a significant increase in investment in education, which supports the views offered above, that family characteristics, such the parental education, have more impact than the financial constraints.

Finally, also in Britain, Oliverira and Zanchi (2003) explored the effect of the family background on secondary school students' decision making towards higher education, and found that the father's level of higher education increased the probability of secondary school students' participation in higher education. A similar conclusion was reached regarding the mother's level of higher education achievement. However, the positive effect of parents with higher education achievements was stronger for male secondary school students than female secondary school students. It was found also that fathers with non-manual occupations and house ownership had a greater influence on the decisions of secondary school students' participation in higher education.

In Cyprus, Menon (1995) found that parental encouragements along with high socio-economic family background exerted a highly significant effect on secondary school students' decisions to pursue higher education in Cyprus.

In Spain, Jimenez and Salas-Velasco (2000) used survey data (cross-sectional) to analyse the educational choices of Spanish high school graduates. They used a binomial logit model to analyse the choice of university degree course, such as four-year or three year university degree courses, that individuals make on finishing their secondary school studies. The factors they investigated to determine the choices of students after

finishing high school were academic aptitude; the social background in which the students have grown up; family income; the total expenditure in education and scholarships; preference or personal tastes; employment prospects and future income. Their results demonstrated that secondary school students from families with a higher educational level were more likely to follow a university degree of greater duration. Moreover, because secondary school students from families with higher family earning or income, found it easier to bear the higher cost of the studies, this resulted in a higher probability that these secondary school students would select a four-year university degree course.

Another study in Spain, by Albert (2000), tested the Human Capital Theory through discrete choice models where the selection process of secondary school students through the education system was considered. The study revealed that family background was the most important factor in the demand for higher education by secondary school students. In particular, the mother's education was more decisive than the father's. However, equally of importance was the high socio-economic status of the father, as this increased the probability of secondary school students demanding to pursue higher education, i.e. secondary school students whose fathers were in professional managerial skilled worker categories as compared to fathers in unskilled occupations.

Also in Spain, Petrongolo and Segundo (2002) investigated the impact of family characteristics and local labour market conditions on the demand for higher secondary education at the age of 16 in Spain. They found that secondary school students' decisions to enter higher education were greatly influenced by the social background of the family. In particular, there was a substantial impact of parental education level on the demand for higher education.

In Italy, empirical results supporting the hypothesis that net social welfare expenditure had a role in enhancing participation rates in university education in the south of Italy during 1983-1996 were reported by Pietro (2002). He found that unemployment rates among young secondary school students had been found to be the major determinant of enrolment rates.

In Netherlands, the importance of the education of parents and their encouragement on school careers of academically bright 17-year-old adolescents of Turkish and Moroccan

and Dutch backgrounds was borne out in a study by Veen (2003). The participants of this study were 106 secondary school students representing these three backgrounds. The study concluded that parents' education is a factor in the success of Turkish, Moroccan and Dutch background secondary school students. Parents of Turkish/ Moroccan background secondary school students were less well educated than the parents of Dutch background secondary school students, resulting in a less intellectually simulating climate at home.

Nevertheless, Veen (2003) found that Turkish/Moroccan background parents demonstrated a strong wish for their children to achieve well at school or in a job, to a far greater extent than the Dutch background parents. It was concluded that this ambition was probably associated with their motivations for migrating upwards in a social mobility sense. The result also revealed that older brothers and sisters of Turkish and Moroccan background secondary school students more often fulfilled the supporting role of parents than siblings of Dutch background secondary school students. However, such siblings' support did not seem to be crucial to the successful educational outcomes of Turkish/Moroccan background secondary school students. Successful secondary school students more often had brothers and sisters in higher levels of secondary or tertiary education who appeared to act as very strong role models. In this respect, it was concluded that students' choices reflected the intellectual climate within the family, more than the influence of siblings support.

On the opposite side of the world, in Australia, the influences of parents, family encouragement and family socio-economic background have been investigated by some researchers. For example, Carpenter and Western (1984) examined the processes whereby secondary school students made the transition from high school to university or college of advanced education. They applied a social psychological model of academic attainment which linked social origins to school experience, perceptions of others' support, academic self-assessment, and aspirations and school results in year 12. Their study found that for young males in specific, socio-economic contexts facilitated the transition from high school to further education. For example, fathers who were in a high-prestige job, and mothers who were not in paid employment but were well educated, proved to be significant advantages in this transition. Further, the perceived encouragement of parents played a significant part in the school to higher education transition of males. The study revealed that females whose fathers held jobs with little

prestige were less likely to enter higher education. Also, the study revealed that working mothers influenced their daughters' academic self-assessment and their daughters' views about the employment advantages of higher education. These factors, in turn, influenced their entry into higher education.

Hayden and Carpenter (1990) investigated relevant individual attributes, such as academic achievements, secondary school students' motivation to proceed to higher education, and situational characteristics: circumstances of the home, the peer group, the school, the higher education system, government policies and the labour market in two Australian states, Victoria and Queensland. They found that secondary school students were more likely to continue from school to higher education if they were attracted to certain features of higher education and if their parents encouraged participation in higher education, particularly if their parents were rich and well educated.

Also in Australia, James' (2001) research partly supports the above. He found comparative supporting effects of the socio-economic status and the residential location, which included the effects of the distance from a university campus and those within an urban or a rural context, upon the attitudes and the aspiration of young people towards higher education. Using a quantitative survey of 7,023 secondary school students, his research revealed that the secondary school students from an urban background were more likely than secondary school students from a rural background to believe that their parents wanted them to apply for and successfully complete a university course. Interestingly, secondary school students from a rural, low socio-economic background, with less educated parents, were found to be more likely to experience powerful discouragement, generally attributed to the distance from the university campus. Furthermore, it was found that secondary school students from a rural background but who were from a higher socio-economic background identified different attitudes towards the attainability and relevance of higher education compared to their urban counterparts and their rural counterparts from low socio-economic backgrounds. James concluded that there were twin effects that educationally disadvantaged secondary school students from a rural background. One of these was the perception of 'discouraging' inhibitors and barriers, such as the cost of living away from home plus the cost of travelling from and to home, and the effects of losing touch with friends and neighbours. The other was that secondary school students from a rural background were found to be more likely to experience lower levels of 'encouraging' factors, such as

parental encouragement, or a belief that a university course would offer them opportunities for an interesting and rewarding career.

The influence of social factors has also been reported by some studies in Asia. For example, in Japan, Ishida (1993) investigated the educational decisions of 20 to 69 year old males, based on 1985 data. Using logistic regressions, he examined the probability of completing high school or attending higher education institutions against not completing high school, in relation to the following variables: family income, father's education, mother's education, urban background, family origin, father's occupation and the number of siblings in the family. His findings led him to conclude that parental income and parental education were important influencing factors on the likelihood of young male secondary school students enrolling in higher education.

Another study in Japan, by Hashimoto and Heath (1995) demonstrated that higher family income leads to a higher allocation of family expenditure towards education, and thereby increases their secondary school students' probability of pursuit and admission into higher education institutions.

Also in Japan, a study by Ishida (1998), investigated the relationship between educational credentials of fathers and the labour market entry position for females, and found that young female secondary school students whose fathers had attended university and who were of a high social status had a significantly greater likelihood of seeking university education than their counterparts whose fathers were of lower education and status, thereby confirming the results of the previous study.

Finally, in Japan, Edwards and Pasquale (2002), investigating the importance of socio-economic and demographic factors, as well as the equal employment opportunity law, in determining the higher education decisions of 1,500 young women, concluded that one of the most important factors for determining whether or not a young female secondary school student attends university was whether or not her mother attended university. Other important factors they identified included whether or not her father attended university; family income and attendance at private secondary school. Further, the passage of the equal employment opportunity law had an impact on the higher education decisions of Japanese women. However, neither the expected returns to university nor the opportunity costs appeared to have strongly influenced secondary school students' attendance in higher education.

In China, using logistic regression techniques on a sample of Urban Household Survey data set conducted in 1999 by the State Statistical Bureau of China, Li and Min (2001) examined the individual enrolment choices of secondary school students. They analysed the impact of economic factors, which included private cost, expected earnings and family income background on private demand for higher education. The study found that family background factors, which included parental education and family income, expected return to higher education and private demand for higher education, were important influences on higher education enrolment decisions in China. However, whilst expected returns to higher education have a positive influence on the private demand, the private costs have a negative impact upon an individual's decision to attend higher education institutions.

In Taiwan, Tsai and Shavit (2003) examined the effects of higher education expansion for access to different types of tertiary education. They found that whilst the effects of parental education and father's occupation have declined, they are still a large and significant determinant regarding secondary school students' decision making to pursue higher education. This significance was most apparent when comparing secondary school students' access to junior colleges with the four-year institutions. It was found that secondary school students with parents with higher education achievements, plus fathers from higher social classes, tended to attend a university rather than a junior college. It was concluded that these results were in line with previous research into this area, although from a different culture and a developing third world country.

In Sri Lanka, Ranasinghe and Hartog (2002) used the Human Capital Theory model in order to estimate the school enrolment and length of schooling decision of Sri Lankan families. They reported that there was a positive correlation between family background and secondary school students' education decisions. Also, mother's education and parents' income had a strong effect on the education decision, whereas secondary school students whose fathers were in professional or administrative (managerial) level occupations had a much higher probability of completing higher levels of education than secondary school students whose fathers had lower occupations. They found there was a positive effect between belonging to a family with more than one secondary school student aged child and parental encouragement to pursue higher education. They concluded that the free education policy in Sri Lanka was not sufficient to erase the significantly positive family background effect on the education decision making of

secondary school students. This was because it was seen that secondary school students from more affluent families received more benefits from the free education than poor secondary school students did.

And finally, evidence comes from Africa in a study conducted in South Africa by Makosana (2001), that funding sources had a significant impact on education choices, and that families of female secondary school students were an important source of funding, with strong parental contributions at the undergraduate level. Scholarships at the graduate level, female secondary school students' own contributions and spousal benefits were among other sources.

Thus, findings from a variety of countries, regions and cultural settings have consistently indicated that students' educational aspirations and plans are significantly associated with family background factors such as financial circumstances, parents' occupations, and level of parental education. In the next section, the impact of a second category of social factors, namely peers' influence, will be explored.

2.3.2 Peers' influence

Whether the influence of peers is significant will now be reviewed. Harris (1998), contrary to the findings in the previous sub-section, argued that it was not the immediate family and its socio-economic background that had the most lasting influence on secondary school students, but the influences of their immediate peer group. Harris (1998, cited in Andrews, 1999) suggested that secondary school students living in low socio-economic regions tended to adopt their behaviour and values from their peer group, whilst they took on the culture of their neighbourhoods' attitude towards education. Because of this finding it was concluded that secondary school students were less likely to complete Year 12 or to undertake any higher education.

Kandel and Lesser (1970), however, found the opposite effect, when they examined the effects of school, family and peers on the educational aspirations or plans in United States and Denmark. From their sample of 2,327 students from USA and 1,552 from Denmark, they found that the influence of peers was very small compared to the influence of parents and school programmes in both countries, with the influence of school programmes being significantly stronger in USA than in Denmark. On the other hand, in Canada, Williams (1972) investigated the influence of reference groups to educational aspiration among 3,687 Canadian secondary school students. His

conclusions were that a greater significant influence came from parents, with a moderate degree of influence from teachers on secondary school students. These were far greater than the influence of peer sub-cultures.

Similarly, another study in the USA by Davies and Kandel (1982) examined the influence of parents and peers on secondary school students' educational aspirations, and found that parental influence on secondary school students' aspirations was far stronger than that of peer influences, although the influence of peers was significantly stronger among females than males.

Supporting these findings are the results of Carpenter and Western (1984), who examined the processes whereby secondary school students made the transition from high school to university or college of advanced education in Australia. Their study revealed that the perceived encouragement of parents and teachers and the plans of friends all play a part in the school to higher education transition of male secondary school students. They found also that for female secondary school students, peer modelling behaviour had a greater effect on higher education entrance than parental encouragement and a much greater effect than what was perceived as teacher encouragement.

Following up on these results, Hayden and Carpenter (1990) investigated relevant individual attributes, such as academic achievements, secondary school students' motivation to proceed to higher education, and situational characteristics, i.e. circumstances of the home, the peer group, the school, the higher education system, government policies and the labour market, in two Australian states, Victoria and Queensland. They found that secondary school students were more likely to go on from school to higher education if their friends and peers were planning to go to higher education.

Supporting these findings, Taylor (1992:319) emphasised that friends and peers could be a useful source of information on particular options. He stated:

> *"Friends could also be helpful ... especially for information on particular occupational experience, college reputations and course provision... For some, friends were a significant influence on post-16 choices, though there was little, if any, impression that they had undue influence"*

Equally, in Britain, Mangan, Adnett and Davies (2000) also found evidence that friends, along with brothers and sisters, were useful sources of information and influence in the decisions of Year 11 secondary school students when attempting to decide to pursue higher education.

A study in South Africa by Makosana (2001) revealed that if specified forms of support were not available, and there was no support from mentors or peers, of the same racial and gender background, then very few female secondary school students would persevere with their education.

Thomas and Webber (2001) using data from secondary school students in full-time education at the age of 16 years in Bradford, England, investigated the role of peer groups on the intention to continue on to higher education. Their study revealed that peer groups were a significantly influential factor for male secondary school students on their decisions to pursue higher education. On the other hand, the peer groups' influence was very small in relation to female secondary school students. Thomas and Webber found that female secondary school students attached more importance to academic ability and their self perceptions of being sufficiently capable of pursuing higher education.

Likewise, Thomas, Webber and Walton (2002) analysed the 1998 data of the Bradford Youth Cohort Study involving over 2,000 secondary school students from 32 Bradford schools. Their findings demonstrated that there was a significant correlation between male secondary school students' decisions to pursue higher education and their year groups' intentions. They did not find similar evidence associated with the decisions of female secondary school students. Contrary to the Bradford findings, evidence that peers have little influence on secondary school students' decisions to pursue higher education comes from Oliverira and Zanchi's (2003) research. They found that peer-group had little or no influence in male secondary school students' participation in higher education in Britain.

This section has highlighted the social factors identified in the literature as influencing demands for higher education from secondary school students. These appear to be predominantly familial, with economic status, occupation and education of parents all found to be significant in a variety of national contexts. The evidence regarding peer influence is less consistent, although it appears that this, too, may be a significant factor,

perhaps in association with gender. Psychological factors influencing students' demand to enter higher education will be considered in the next section.

2.4 Psychological Factors

This sub-section will review the literature on psychological factors influencing the demand for higher education. Firstly, the influence of secondary school students' self-confidence in their perceptions of ability, and the influence of their scholastic ability will be highlighted. Secondly, the influence of students' attitudes towards higher education on their decisions to enter higher education will be presented.

The rationale for this review is Menon's (1995) assumption that the psychological view of demand for education by individuals is strongly affected by his/her self-confidence in his/her own ability, as well as the influence of his/her scholastic ability and attitudes towards higher education as a whole.

2.4.1 Students' self-confidence in their ability and the influence of their scholastic ability:

The topics of students' self-confidence in their ability and the influence of their scholastic ability have been issues of much research over the world. In the USA, a number of studies provide evidence on this matter.

For example, Michael (1961) examined the influence of secondary school students' ability and their family background as predictors of attendance at higher education institutions, in the USA. The study revealed that the influence of family background was substantial, with 71 per cent of the highest-socio-educational status secondary school students planning to attend a higher education institution. However, in all five high schools included in the sample, the ability of the secondary school student accounted for the greatest proportion of variance in attending higher education.

Similarly, using a multi-dimensional mediation model of composition influences, Alexander and Eckland (1975) examined the influence of ability and secondary school students' social status on participation into higher education, in the USA. They found that the influence of the secondary school students' ability was lower than that of their socio-economic status, which positively affected the probability of their enrolment in higher education.

In addition, evidence from Tobias (2002) based on data from the National Longitudinal Survey of Youth, for a sample of American Students, found that an important determinant of higher education aspirations for all race and gender groups was academic ability. To verify this finding, Tobias (2002) examined the roles of measured ability, family characteristics and proxies for secondary schooling qualities as determinants of the decision to enter higher education. The sample consisted of both white males and females and black males and females.

Another study in USA, estimated the rates of return for individual secondary school students as affected by the actual experience of males according to their race (black or white) and geographical location (Averett et al, 2003). By applying the Human Capital Theory model and these factors, they predicted secondary school students pursuing higher education, and also found that their perceptions of their academic ability were found to be the most important determinant of the probability of pursuing higher education. This finding was applicable for both races.

This issue has been investigated in Europe by some writers and their findings support the importance of students' self-confidence in their ability and the influence of their scholastic ability in relation to their decisions to pursue higher education.

For example, in the Netherlands, Kodde and Ritzen (1988) investigated the direct and indirect effects of parental education level on the demand of secondary school students for higher education. The data were obtained from a sample of secondary school graduates in 1982, and their results revealed that family income, ability, and expectations had a significant direct effect on secondary school students' perceptions of potential earnings and employment for the choice of higher education whereas parental education level had only indirect effects.

Partly supporting this evidence, in Cyprus, Menon's (1995) study also revealed that secondary school students' self-confidence in their ability was found to be important when related to their capacity to undertake higher studies.

In Spain, Jimenez and Salas-Velasco (2000) found that secondary school students with high scholastic ability were more likely to demand a long-cycle university degree rather than a standard three-year one. This was because it was perceived that an additional year of education implied an additional risk of academic failure which, perhaps, a

secondary school student with a poorer academic record in her/his previous studies was not prepared to take.

Furthermore, in Britain, Connor (2001) explored the decisions made by secondary school students from lower social class backgrounds as to whether or not they wished to participate in higher education. She found that self-confidence in secondary school students' perceptions of their ability was found to be a motivating factor to pursue higher education. On the other hand, the study indicated that the factors which discouraged secondary school students from entering higher education were either a lack of confidence in their own ability, or difficulties with moving away from home.

Another study in Britain, by Oliverira and Zanchi (2003), examined the effect of ability and parental income on participation into higher education using a model of binary choice. They found that both ability and total household income had a positive effect on the decision to participation in higher education. However, the effect of academic ability was found to be much stronger for males than females.

In England, supporting these findings is the research by Thomas, Webber and Walton (2003). They found that secondary school students who perceived themselves to be of above average academic ability were more likely to remain in education by pursuing higher education and that raising attainment would be a key factor in secondary school students' decision to pursue higher education. They maintained that the intentions of secondary school students in relation to higher education are significantly influenced by their perceived ability at some academic subjects. For male secondary school students, perceived ability in English appeared to be influential on their intentions to pursue higher education, whilst female secondary school students were more influenced by perceptions of being good at mathematics. They concluded that there were strong differences between male and female students in the impact of their perceptions of their own ability.

The importance of students' ability in respect of pursuing higher education has been extensively studied in Australia. Based on a study of several factors related to individual attributes and institutional characteristics in two Australian states (Victoria and Queensland) Hayden and Carpenter (1990) found that secondary school students were more likely to have gone on from school to higher education if they had attained better year 12 academic achievements, especially in science subjects.

In Asia, the influence of academic ability was highlighted by Hung *et al.* (2000). They surveyed the educational intentions of 1,513 senior secondary students in Shenzhen, China. They found that secondary school students' academic ability had a significant effect on secondary school students' intention to pursue higher education, i.e. a secondary school student with high academic ability was twice as likely to enter higher education as a secondary school student with low academic ability.

2.4.2 Students' attitudes towards higher education

Research (such as Williams and Gordon, 1981, Connor, 2001, and James, 2001) demonstrates that secondary school students are also influenced by their personal desire, aspirations and attitudes to pursue higher education. They are motivated by the positive attitudes they attach towards the value of higher education and by the belief that higher education will link them to stable and secure future employment opportunities, plus a higher and a better social status once in employment.

Evidence reported by some studies from the United Kingdom confirm the importance of students' attitudes towards higher education. For instance, in Britain, Williams and Gordon (1981) found that secondary school students' attitudes towards the importance of higher education were likely to affect their decisions in relation to educational choice, their future earnings and their willingness to defer job satisfaction, which were found to be positively associated with a high expectation of salary earnings. Differences in secondary school students' attitudes towards and perceptions of salary earnings associated with higher education and employment had an identifiable impact on students' choices in relation to education strategies.

Another study in Britain by Furlong and Cartmel (1995) found that secondary school students' attitudes towards occupational and educational aspirations were primarily influenced by local opportunity structures, for example, opportunities available in the local labour market. They found that students were aware of the types of jobs available locally, and if certain careers were not available locally, as would be the case for rural students, secondary school students were willing to move into towns and cities in order to attend college or university, with a view to thereby achieving a more secure life-style.

Interestingly, Connor (2001) explored the decisions made by young secondary school students, from lower social class backgrounds, whether or not to participate in higher education in Britain. She reported that it was very clear that the positive labour market

benefits of pursuing higher education combined with the importance attached to the financial returns from completing higher education, were a key motivating factor among potential secondary school students deciding whether to pursue higher education or not. Equally, Connor (2001) found that there was a strong correlation between the belief that by pursuing higher education this would lead to better employment prospects with better salaries, choices of occupation, and the secondary school students' positive attitudes towards higher education by themselves and their immediate families.

Whereas, the studies reviewed above focused on reasons motivating secondary school students to pursue higher education, Hutchings and Archer (2001) took the opposite perspective, investigating the situation where higher education was not viewed as feasible, resulting in secondary school students being reluctant or unmotivated to pursue higher education. Among factors deterring students from considering university, they found low expectations of A level success; worries about the costs of a university education and the debts that would be incurred through the student loan system, discrepancies in the amount of information about higher education that was available, and differences in the advice given by school careers services. However, they found that some students were deterred by their image of university life, specifically an impression that university was for young people from rich backgrounds, so that they would feel out of place there.

In a study by Thomas, Webber and Walton (2003), in England, a correlation was found between mobility and rates of pursuit of higher education, supporting the view that young male secondary school students' lack of interest in pursuing higher education was associated with relatively low aspirations in relation to education generally.

In Australia, however, Andrews (1999) maintained that the reasons for low participation from low socio-economic background secondary school students were related to the different attitudes, expectations and support both from family and peers for those undertaking higher education. He argued that:

> *"The education service that is delivered by higher education institutions is dependent upon the attitudes and values of the customers (students). Parents of low socio-economic background students have limited education themselves in general and may be seen as less capable or willing to motivate their sons and daughters to undertake post-secondary education compared with middle class families that are greater users of higher education. This lower level*

> *of family support can arise a number of ways including through the lack of older family role models who have undertaken higher education, a depreciation of the value of higher education by the family and lack of appreciation of what practical support is required and can be given to family members undertaking higher education. Other concerns such as geographic distance, as well as wider cultural differences may operate to reduce access to higher education by such individuals"* (Andrews, 1999: 21)

Additionally, in Australia, the attitudes of secondary school students towards the value of higher education were found to be shaped not only by the secondary school students' socio-economic background, but also by their residence area and community attitudes towards the relevance of education. As James (2001: 470-71) emphasized:

> *"The effects of these powerful social influences are apparent well before the final years of senior schooling or eligibility for university entry- as school completion rates are lower in rural areas, many rural students do not reach the point at which it is meaningful to speak of potential barriers to higher education. For rural students in families and communities where higher education is seen as less relevant to life and employment, completing school and going to university is not yet the norm"*

The importance of students' attitudes towards higher education has also been reported in some studies conducted in Asia. For example, in Oman, Al-Maskery (1992) surveyed the motivations and expectations of first and final year university students attending Sultan Qaboos University. The parameters he used were university students who were from families who had no education or less than primary level of education; who were in a low income category, and who were working in low-paid government jobs, and who were born in rural Oman and had completed their high school in the rural areas. He reported that young Omani secondary school students' positive attitudes attached to the importance of higher education were found to be very strong, as they took full advantage of higher education opportunities. Students used education to link themselves to stable and secure modern employment opportunities, and to escape situations similar to those of their parents. Therefore, these findings equally supported the view that education provided a means of mobility, modernisation and economic improvement (Al-Maskery, 1992).

In China, Hung *et al.* (2000) found that Chinese secondary school students were influenced by their own positive attitudes in relation to the importance of higher

education when deciding whether to enter higher education or not. They found that secondary school students believed that higher education would bring them a brighter, more secure future, by providing them with better future employment and salary earnings.

Further evidence on this issue comes from Africa, as Makosana (2001) explored how a selected group of female secondary school students had managed to acquire an education supported by sources of funding, which made it possible for them to extend their education beyond the limits that generally applied to most black females in South Africa. The study revealed that the strong belief of these female secondary school students about the value of education developed in their families had enabled those, who dropped out before completing their academic qualifications, to go back and complete them.

This sub-section has highlighted some of the psychological factors that have been identified in the literature as influencing secondary school students' demands for higher education. They include students' perceptions of their academic ability, expectations regarding the benefits of higher education, perceptions of university life, and willingness to accept mobility. Now, consideration will be given to institutional factors influencing students' demand to enter higher education in the next sub-section.

2.5 Institutional Factors

This section will review the literature on institutional factors influencing the demand for higher education. Firstly, the influence of students' secondary school specialisation will be highlighted. Secondly, the influence of teachers on students' decisions to enter higher education will be presented.

2.5.1 Influence of students' secondary school specialisation

The school curriculum or the specialisation of the programme of study was found to be an important factor in terms of influencing secondary school students' decisions to enter higher education. Menon (1995) reported that studying certain academic subjects or specialisations may influence the secondary school students' decision on subsequent educational or career decisions. This claim is supported by Kandel and Lesser (1970:279-280) when they emphasized that:

> *"School program does indeed have a much higher correlation to the students' future plans than school status...Of course the type of program selected by the student represents, in a sense, a prior commitment to a certain kind of future educational career"*

When Kandel and Lesser (1970) examined the effects of school programmes of study upon the educational aspirations or plans of 2,327 secondary school students in the United States of America, and 1,552 secondary school students in Denmark, they found that the influence of school programmes of study was significantly stronger in the USA than in Denmark.

Both of the above also support the findings of several studies that institutional variables are relevant factors in the interpretation of the demand of secondary school students for higher education. For instance, Hayden and Carpenter (1990) report the existence of evidence that linked the type of school attended by the secondary school students to the likelihood of these secondary school students remaining in school and/or pursuing higher education after the end of compulsory education.

In another study, Carpenter and Western (1984) found that for young males, the type of secondary schooling, in particular, influenced the transition from high school to further or higher education. Attendance at a non-Catholic independent rather than a government school has also been found to influence students' probability to proceed from school to higher education (Hayden and Carpenter, 1990).

The influence of school type appears to interact with or be mediated by other factors, according to Gayle, Berridge and Davies (2002), who examined parental education and independent schooling in England and Wales. They found that for a young person who attended an independent private school, having non-graduate parents does not have a significant effect on the likelihood that they will pursue higher education to study for a degree. Similarly, they found that attending a state school as opposed to an independent private school, does not appear to have a large effect on the likelihood of a young secondary school student, with a graduate parent, studying for a degree. However, they did find that young people who attended state schools, but who did not have graduate parents, had the lowest likelihood of pursuing higher education to study for a degree. Consequently, they found that attending an independent school increases a young person's likelihood of pursuing higher education and studying for a degree and at the

same time, having graduate parents increased that young person's likelihood of pursuing higher education and studying a degree.

Even without the mediating effect of family factors, Gayle *et al.* (2003) found that the type of school that a secondary school student attended in Year 11 was significantly associated with their decisions to pursue higher education, university enrolment being much higher among secondary school students who had attended independent schools, than those who attended state schools in Year 11.The lowest incidence of university attendance was among students who had attended a secondary school similar to the old 1970s Secondary Modern schools. Having attended 'selective' as opposed to 'non-selective' schools was significantly associated with entry to higher education.

Supporting the above results, in England, Oliverira and Zanchi (2003) found that attendance at a grammar type secondary school or a private school increased the probability of higher education participation by secondary school students, whilst attending a secondary school which did not have any streaming of ability or selection procedures, decreases such a probability.

Whilst it is important to report the above findings within the review of literature in order to set this current research study into a global context, it should be noted that evidence in relation to this specific factor will not be an issue in this current research. In Oman, attendance at different schools by secondary school students is not likely to be an influential factor, since under Omani education policy the schools are reasonably standardised and there is no classification of comprehensive and grammar. There is, however, a distinction between Arts and Science streams. Thus, a potentially influential factor pertaining to the Omani education system that will need to be considered is the content of the school curriculum. The current system applied by the Ministry of Education in Oman does not give secondary school students the opportunity to choose the programme of study (Science or Arts) they are interested in. Rather, secondary school students to some extent are selected for the appropriate type of secondary education in accordance with the results of their examination after the first year of secondary school. However, Ministry of Education policy expects schools to have no more that 40% of their students in the Arts programme of study, and 60% in the Science programme of study (Ministry of Education, 2000).

As a consequence of schools' attempting to meet the Ministry of Education's policy requirements, Al-Adawi (2004) found that secondary school students sometimes find themselves in a compulsory programme of study that is contrary to their specific interests. Therefore, if the type of programme of study selected by the secondary school student represents, in a sense, a prior commitment to a certain kind of future educational career, as emphasized by Kandel and Lesser (1970), it would be arguable that Arts secondary school students in Oman may be less motivated to pursue higher education, as they may have been discouraged by their comparatively fewer specialisation opportunities. This is because Science secondary school students have far more academic areas of study available for them to pursue higher education than Arts secondary school students. For instance, they can study both Scientific and Arts fields, whereas this is not true for Arts specialisation students.

In Britain, Barnard and McCreath (1970) found that the academic examination subject commitments in the sixth form and below studied by secondary school students at G.C.E. and O-and A-level determined their educational paths. They pointed out that early subject commitments made by secondary school students, and streaming them on the basis of curriculum structure, were found to have a negative effect on their future educational career. Equally, their results revealed also that secondary school curricula were designed according to university entry requirements, so Barnard and McCreath (1970:389) stated that:

> *"Any pupil on the university route has freedom to apply for courses over the three sectors of higher education. Other routes may develop, generally at entry to the sixth form, from the common components of O- and A-level subjects, but because the combination of subjects taken is likely to meet entry requirements, the routes tend to prohibit pupils on them later making a successful university application. There appears to be a real conflict between what is regarded as a useful preparation for the traditional women's careers-primary school teaching, medical auxiliary work and nursing, and secretarial work-and the university route"*

From the above research, the prior commitment to a certain kind of specialisation made by secondary school students will be reflected in their future career and consequently their future employment and income. For example, in relation to the rate of return from investment in education, Psacharopoulos (1994), based on data from 18 Latin American countries, found that the rate of return to secondary vocational education is higher than that of secondary general education. These results suggest that secondary school

students, who graduated from a vocational track of the secondary level, generally enjoy a relatively higher rate of return to their investment in education.

However, in USA, Altonji (1995) found that the effect of high school curriculum on post-secondary education and wages was small in relation to the return to specific courses of study.

Menon (1995), in Cyprus, found that among non-economic variables, secondary school specialisation was responsible for the largest effect on secondary school students' decisions to pursue higher education. Also, it was found there was a positive interaction between secondary school students' socio-economic status and their secondary school specialisation, in terms of pursuing higher education. Secondary school students of high socio-economic status, undertaking vocational specialisation, were more likely to tend to enter higher education than their counterparts of low socio-economic status in the same specialisation.

Other issues related to school which might be considered to influence secondary school students' decisions to enter higher education are, for instance, school status, school size, and quality of secondary schooling. For example, Meyer (1970) investigated the influence of high school status on college/university attendance. He used data from a 1955 sample of students in 518 American high schools. The study revealed that the independent effect of high school status was weaker than the effect of social-status composition. Meyer concluded that secondary school students, with any given ability and status, were less likely to decide to enter a college or university because of the influence of school standard or status influence.

Also in the USA, Borus and Carpenter (1984) used the data from a 1979 and 1980 national longitudinal survey of youth labour market experience to examine the factors of demographic, location, family background, economic, attitudinal and school related variables, which could lead secondary school students to go directly on to higher education. The study found that school characteristics, such as school size, had a very limited influence on the probability of secondary school students going on to higher education directly from high school.

Moreover, Tobias (2002) examined the roles of a variety of individual, family and secondary schooling characteristics as determinants of the decision to enter

college/university, in the USA. This study revealed that the quality of public high school education played a very modest role in determining secondary high school students' decision to pursue higher education or college entry, although some small effects were found for white female secondary high school students.

2.5.2 Teachers' influence

In addition to family and peer influences, studies of the formation of educational aspirations have also dealt with the role of sources of reference individual secondary school students used to assist them in making decisions related to pursuing higher education, such as teachers (Menon, 1995). For example, in Canada, Williams (1972) using 3,687 secondary school students, investigated the influence of reference groups to educational aspirations such as pursuing higher education. He found that teachers had a moderate degree of influence on secondary school students. On the other hand, Williams and Gordon (1975) when investigating the influence of teachers on 16 and 19 year old secondary school students' decision to stay on at school after compulsory education and their attitudes towards higher education and career opportunities, in the United Kingdom, found that the influence of teachers was considered very important, particularly in choosing an institution.

In USA, Borus and Carpenter (1984) based on the longitudinal survey reported previously, regarding a range of variables which could lead students to go directly onto higher education, found that the influence of teachers was not associated with greater pursuit of higher education or attendance by secondary school students.

The perceived encouragement of teachers has been reported to play an important part in the transition to university or college of advanced education by secondary school students (Carpenter and Western, 1984). However, it was found that teacher encouragement had a much greater influence on female students. Similarly, Hayden and Carpenter (1990) in Victoria and Queensland reported evidence that if teachers encouraged secondary school students, they were more likely to pursue higher education.

Harris *et al.* (1986) explained teacher influence in two ways. Firstly, because secondary school students tended to live up to the expectations of their teachers, teachers could influence them by providing encouragement or discouragement. Secondly, teachers could influence students by offering information and guidance on plans for higher

education. However, opposite results were found by Kysel, West and Scott (1992), who found that very few secondary school students indicated that their teachers' advice assisted them in their decisions to pursue higher education or leave secondary school after the compulsory years.

In the UK, Mangan, Adnett and Davies (2000) investigated the educational decisions of Year 11 secondary school students, and found that twenty percent of those who intended staying on to join the sixth form rather than moving to college, cited teacher influence as a significant factor in their decision.

Connor (2001) provided some examples of the strong effects that teachers had on secondary school students' decisions about whether to leave and where to go after completion of secondary education. Some of the ways this influence occurred were through giving support, providing encouragement, boosting confidence and offering help with making decisions about different options.

Teachers' role in guiding their students was also reported in England by Thomas, Webber and Walton (2003). They found that by raising students' aspirations and increasing their awareness about future opportunities, teachers' advice contributed significantly in influencing students' intention to pursue higher education.

This section has highlighted the institutional factors identified in the literature as influencing demands for higher education. Variables considered depend on each country's educational system, but there is evidence for the influence of school specialisation, and school type (e.g. vocational versus general; state versus independent). Students' plans may also be influenced by the information and encouragement of their teachers. Demographic factors influencing students' demand to enter higher education are considered in the next section.

2.6 The Influence of Demographic Variables on the Demand for Higher Education

According to Menon (1995), among the demographic variables that can be considered relevant in an examination of the demand for higher education, the secondary school students' gender has most likely received the greatest attention. Menon (1995) points out that the under-representation of female secondary school students in post-compulsory education was a matter of concern in many developed countries in the 1960s.

The influence of gender on entry into higher education has been investigated by several studies worldwide. In the USA, for instance, Sewell and Shah (1967) investigated the effect of socio-economic status and intelligence on secondary school students' decisions and planning to attend higher education institutions for male and female students. This study randomly selected a cohort of Wisconsin high school seniors over a seven-year period (1957-1964). They found that the socio-economic status of these secondary school students had a greater effect on their higher education plans than did their intelligence, for female secondary school students, whereas the opposite was found for their male counterparts.

Continuing research in this area, Thomas, Alexander, and Eckland (1979) in the USA used a sample of 13,618 of black and white, male and female secondary school students to examine the effect of race, sex, social status, and academic credentials on higher education attendance. Whilst the effect of gender was found to be small to almost insignificant, the findings revealed that male secondary school students were more likely to go onto higher education than female secondary school students. It should be remembered that historically, at this time, a great many females generally completed secondary school education and pursued a career for a few years before marrying and having children.

Turning to the findings reported by some studies in Europe, recent data indicates that the access to higher education by females no longer constitutes a major problem in most of these countries. For instance, Egerton and Halsey (1993) reported their findings from a sample of 25,000 general household surveys in UK, that the gender gap between male and female secondary school students had been reduced, whereas the pattern of social class disadvantages with respect to access to higher education remained unchanged.

Furlong and Cartmel (1995), when examining whether the occupational and educational aspirations of secondary school students were influenced by local opportunity structures, such as opportunities available in the local labour market, in Britain, found that secondary school female students were more likely to decide that they expected to pursue higher education than male secondary school students.

In contrast, Gayle, Berridge and Davies (2002) found that young female secondary school students were less likely to enter higher education than their male secondary

school student counterparts in England and Wales. The participation rate by young males was 17%, compared to 13% for young females.

Like Gayle *et al.* (2002), Oliverira and Zanchi (2003) during their research in the UK found that female secondary school students had a lower probability of participation in higher education than male secondary school students with the same characteristics. They suggested that this result could be attributed to the higher risk of investment in female education, as the female labour market participation rate in UK in that period was about 50%, which meant that the expected return from investment was lower for females.

Whereas findings in the UK have been contradictory, in other parts of Europe, findings suggest greater participation in higher education by females. For example, Menon (1995) found that Cypriot female secondary school students were more likely to pursue higher education than their male secondary school counterparts.

In Spain, Albert (2000) found that male secondary school students were less likely to pursue higher qualifications than their female secondary school counterparts, in order to compete in the labour market. The labour market situation in Spain was also found to have an influence on secondary school students' decisions to enter higher education as a result of both the opportunity cost of finding a job if not going to university and the employment expectations for each relevant education level.

In Germany, Mayer, Muller and Pollak (2003) studied the growth, the internal differentiation and the inequalities of access to higher education by secondary school students in the German system of tertiary education. They found that female secondary school students were more likely to enter university because they were more likely to find what attracted them to university. At the same time, female secondary school students also seemed more likely to be diverted away from tertiary education than male secondary school students, because there were alternative options in non-tertiary vocational education that seemed especially attractive to females, such as in nursing and in many kinds of programmes for high level secretarial or personal assistant jobs.

Iannelli and Smyth (2004) examined data collected from 20 European countries, including six Eastern European countries, where the influence of two background characteristics: gender and parental education on young people's educational and labour

market outcomes were compared. They found that in most European countries, young female secondary school students were achieving higher educational qualifications than young female secondary school students, although they were still over-represented in traditionally female fields of study.

The gender issue was explored also in the Asia region. For example, in Mongolia, Robinson and Solongo (2000) found that female secondary school students' participation in education, including higher education, was higher than that of male secondary school students.

In China, Hannum and Kong (2003) investigated family attitudes and practices related to the schooling of male and female secondary school students from rural Gansu, China. Strikingly, rural secondary school students compared well to male secondary school students in relation to parents' economic investments and the provision of a learning environment, and in own achievement, industriousness, academic confidence, and alienation from school. Few mothers demonstrated bias in relation to female secondary school students' abilities and rights, hence female and male secondary school students both had high aspirations, but male secondary school students' research scores were significantly higher. However, gender differences in children's aspirations were attributable in part to mothers' aspirations and chore allocation (Hannum and Kong, 2003).

In Taiwan, Tsai and Shavit (2003) found that female secondary school students were slightly more likely to pursue higher education in either junior college or university. Nevertheless, this gender difference was not statistically significant, which was attributed to the fact that recently, education in Taiwan had been democratized, giving equal opportunities to both males and females.

In addition to the effect of gender with respect to access to higher education, a large body of research evidence exists, indicating that many members of minority ethnic groups hold positive attitudes towards education. As Menon (1995:77) stated:

> *"An additional demographic variable that can have an impact on the demand for higher education, especially in particular countries and culture is that of ethnic origin. This likely to occur in countries where significant subcultures exist as identifiable segments within society, as in the case of Blacks or Hispanics in the United States"*

For example, in Britain, Leslie and Drinkwater (1999) found that young secondary school students of Indian origin had on the whole high levels of participation in higher education. However, in the USA, Borus and Carpenter (1984) found that blacks and Hispanics were less likely to attend higher educational institutions, which was attributed to the low levels of fathers' educational achievement.

Further evidence on the effects of minority ethnicity on secondary school students' decision making related to higher education, can be found in a number of articles, although they are not reviewed in detail (see for example, Tariq, 1993, Yuan, 1993, Driessen, 2000, and Mickelson, 2003).

Whilst the influence of minority ethnic groups in relation to access to higher education is well documented globally, because Omani citizens are from the same social origin or race, the ethnic minority factor was not an issue in this research study. More relevant to this study may be gender which, as indicated above, has been shown to be significant across a variety of cultures.

2.7 Theoretical Framework

For the purposes of this study, a wide range of literature from many countries has been reviewed, covering a period of 50 years. These studies report various factors that have been identified as affecting secondary school students' decisions to enter higher education. Table 2.1 presents a summary of those published in the last 15 years, which represent the state-of-the-art evidence on the subject. Although the studies individually vary in the number and range of variables considered, none has covered the full range of factors, taken together. These and earlier studies provided the basis for construction of a theoretical framework to guide this study.

Table 2.1 Summary of studies investigating factors influencing secondary school students' decisions to enter higher education, 1990-2004

Continent / Country	Paper / Study	Factors Investigated										
		Human Capital Theory	Labour market conditions	Parents' encoura-gement	Friends	Students' ability	Students' attitudes towards HE	Type of school / specialisation	Teachers	Family's socio-economic background	Gender	HE capacity
USA and Canada	Altonji (1995)							✔				
	Dominitz & Manski (1996)	✔										
	Foley (2001)									✔	✔	
	Crosnoe et al (2002)									✔		
	Bui (2002)									✔		
	Knighton & Mirza (2002)									✔		
	Tobias (2002)					✔						
	Averett et al (2003)	✔	✔			✔				✔		
UK and Europe	Egerton & Halsey (1993)										✔	
	Furlong & Cartmel (1995)		✔				✔				✔	
	Menon (1995)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	
	Heijke (1996)	✔	✔									
	Jimenez & Salas-Velasco (2000)		✔			✔				✔		
	Albert (2000)	✔	✔							✔	✔	
	Tinklen (2000)									✔		
	Mangan et al (2000)				✔				✔			
	Thomas & Webber (2001)				✔							
	Connor (2001)					✔	✔		✔			
	Petrongolo & Segundo (2002)	✔	✔							✔		
	Gayle et al (2002)							✔		✔	✔	
	Chevalier & Lanot (2002)									✔		
	Thomas et al (2002)				✔							
	Pietro (2002)		✔							✔		
	Oliverira & Zanchi (2003)				✔	✔		✔		✔	✔	
	Veen (2003)			✔						✔		
	Thomas et al (2003)					✔	✔		✔			
	Gayle et al (2003)							✔				
	Mayer et al (2003)										✔	
	Iannelli & Smyth (2004)									✔	✔	
Australia	Hayden & Carpenter (1990)		✔		✔	✔		✔		✔		
	Andrews (1999)						✔			✔		
	James (2001)						✔			✔		
Asia	Ishida (1993)									✔		
	Hashimoto & Heath (1995)									✔		
	Ishida (1998)									✔		
	Robinson & Solongo (2000)										✔	
	Hung et al (2000)	✔				✔	✔					
	Li & Min (2001)									✔		
	Edwards & Pasqual (2002)									✔		
	Ranasinghe & Hartog (2002)									✔	✔	
	Hannum & Kong (2003)										✔	
	Tsai & Shavit (2003)									✔	✔	✔
	Chung (2004)	✔										
	Fazio & Dinh (2004)	✔										
Africa	Siphambe (2000)	✔										
	Makosana (2001)				✔		✔			✔		
Latin America	Psacharopoulos (1994)							✔				
Oman	Ali Hassan (1990)		✔									
	Al-Kharusi (1991)		✔									
	Al-Maskery (1992)	✔	✔				✔			✔		
	Al-Farsi (1994)		✔									
	Al-Dhahab (1997)		✔									
	Al-Hinai (1998)		✔									
	Al-Lamki (1998)		✔									
	Al-Maawali (2000)	✔	✔									
	Al-Hajry (2002)	✔	✔									
	Al-Lamki (2002)		✔									✔

Based on the above review of literature, it can be said that secondary school students' attitudes towards higher education are shaped by interwoven psycho-social, economic, socioeconomic background, and personal factors. Carpenter and Western (1984), for example, have hypothesised a causal ordering of the factors influencing secondary school students' choice and opportunities for access to higher education as an integrating framework.

According to Carpenter and Western (1984:250-1), this model sets out a hypothesized system of social processes which may be involved in the transition from secondary school to higher education. They state that:

> *"The social processes represented in the model are temporarily ordered and causal in nature. What is hypothesized is that social origins affect school experiences and that together, in turn, influence young people's perceptions of parental and teacher encouragement and the peer models to which they are exposed. These three groups of influences in their turn play a part in forming individuals' academic self-assessments and their perceptions of the usefulness or otherwise of higher education for their later careers. Educational aspirations are then said to be influenced by all these variables which, together with aspirations, are suggested as possible causes of academic achievement at the completion of high school. Finally, the model hypothesized that all of the preceding variables – social origins, schooling, influence of significant others, academic self-assessment, higher education utility, aspiration, and high school achievement – contribute to the explanation of the transition to higher education among individuals"*

The words 'higher education utility' in the above context are used to clarify the situation whereby perceived advantages and benefits of higher education for later life, after applying the Human Capital Theory model, and when there has been an investigation of labour market conditions (availability of employment for higher education graduates), are an influential factor on entry into higher education.

An example can be found in the previously-cited findings by Petrongolo and Segundo (2002), regarding the influential role of local labour market conditions on the demand for upper secondary education at the age of 16 in Spain, consistent with human capital theory.

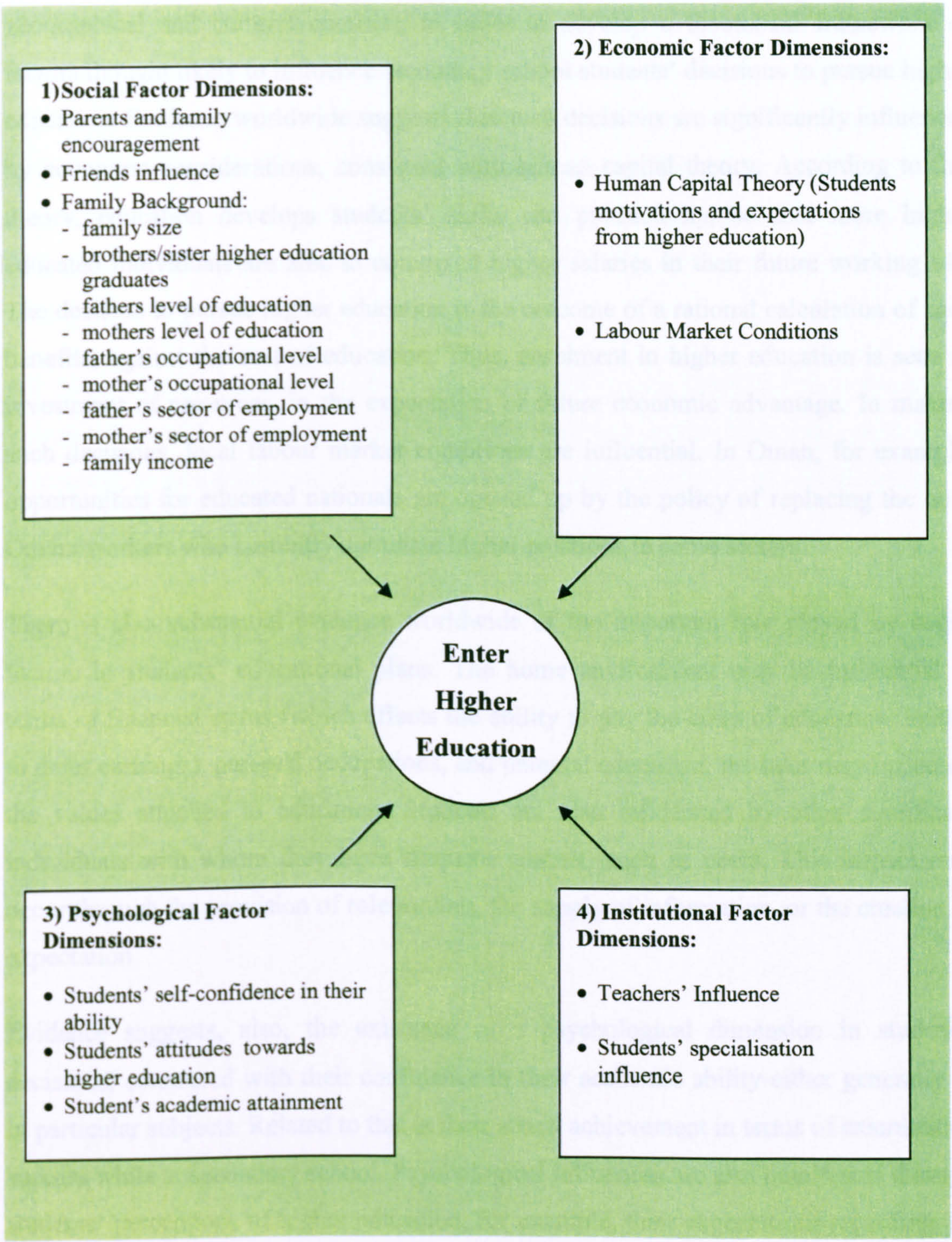
Albert (2000), also in Spain, found similar results. Labour market conditions provide indicators of both the opportunity cost of finding a job if not going to university and the employment expectations for each relevant education level.

Drawing on these ideas, and in order to utilize the related literature in this research, it was considered helpful to create a simplified model of factors influencing secondary school students' decisions to enter higher education in Oman. The model is adopted from Carpenter and Western (1984), Menon (1995), Albert (2000), and Petrongolo and Segundo (2002). It is used in this study as a guide, since it has basically been applied by similar studies worldwide, thereby contributing to the concurrent validity of this study and facilitating comparison of its results with those of other studies.

Therefore, the theoretical framework for the present study pre-supposed that secondary school students' decisions to enter higher education in Oman are influenced by a range of inter-related factors including social factors (parents' and family encouragement, family background and the influence of friends), economic factors (Human Capital Theory and labour market conditions), psychological factors (secondary school students' self-confidence in their ability, secondary school students' attitudes and perceptions toward higher education and secondary school students' academic attainment), and institutional factors (teachers' influence and secondary school students' specialisation).

It can be anticipated in this framework, therefore, that secondary school students' expectations and intention to pursue higher education are the outcomes of a multi-dimensional context for their decisions. The first dimension is social context, followed by economic, psychological, and institutional context (See Figure 2.1).

Figure 2.1: Conceptual framework for the factors influencing secondary school students' decisions to enter higher education



2.8 Summary

This chapter has reviewed literature spanning several decades and a wide variety of geographical and cultural contexts, in order to develop a theoretical framework of factors thought likely to influence secondary school students' decisions to pursue higher education. Evidence worldwide suggests that such decisions are significantly influenced by economic considerations, consistent with human capital theory. According to this theory, education develops students' skills and productivity, so that more highly educated individuals are able to command higher salaries in their future working life. The decision to pursue higher education is the outcome of a rational calculation of such benefits, against the cost of education. Thus, enrolment in higher education is seen as investment of resources, in the expectation of future economic advantage. In making such decisions, local labour market conditions are influential. In Oman, for example, opportunities for educated nationals are opened up by the policy of replacing the non-Omani workers who currently dominate higher positions in some sectors.

There is also substantial evidence worldwide of the important role played by social factors in students' educational plans. The home environment may be influential in terms of financial status (which affects the ability to pay the costs of education, and/or to defer earnings), parental occupations, and parental education; the later may influence the values attached to education. Students are also influenced by other significant individuals with whom they have frequent contact, such as peers. This impact may occur through the provision of role models, the supply of information, or the creation of expectation.

Evidence suggests, also, the existence of a psychological dimension in students' decisions, connected with their confidence in their academic ability-either generally or in particular subjects. Related to this is their actual achievement in terms of examination success while at secondary school. Psychological influences are also manifested through students' perceptions of higher education, for example, their expectations regarding the benefits of higher education, their impressions of university life, and their willingness to move or travel in order to pursue higher education.

Institutional factors such as the type of school attended or programme followed may also contribute in encouraging students to pursue or reject particular educational and vocational alternatives. Whilst in Oman, the distinctions between academic and

vocational, selective and non-selective, grammar and comprehensive schools do not apply, there are differences between Science and Arts streams. The availability of places in each stream is determinated partly by government policy, which means that students may be directed to a stream not of their preference. At the same time, this has implications for higher education and professional opportunities. International studies have shown such considerations to be influential on education decisions. Teachers may also influence student choices, either directly, through the provision of information, or indirectly, by communicating certain expectations which influence the student's self-concept.

All these factors, identified in the academic literature, are combined in a theoretical framework, used to guide this study. The framework was further developed, particularly in relation to economic factors, by specific knowledge related to the local context in Oman, for example, prevailing labour market conditions.

Documentary evidence on higher education capacity and labour market demands in Oman is reviewed and analysed in the next chapter.

CHAPTER THREE
LITERATURE REVIEW PART TWO: DOCUMENTARY DATA RELATED TO HIGHER EDUCATION CAPACITY AND LABOUR MARKET DEMAND IN OMAN

3.1 Introduction

Drawing on official documents and previous research, this chapter analyses higher education capacity and labour market demands in Oman, in order to investigate the gap between current higher education provision and the demand for higher education. The latter is considered in terms of the social demand to absorb the graduates of secondary education and the economic demand for skilled and qualified Omani citizens to replace existing expatriate workers. For convenience these issues will be addressed separately. However, it is acknowledged that they are interlinked, and the provision of higher education serves both social and economic objectives. It is intended that this chapter will contribute, alongside the empirical findings in later chapters, to answer research question No. 4, i.e.:

Does the current capacity of higher education in Oman meet the aspirations of secondary graduates and labour market demand in relation to the findings of the study?

Consequently, student enrolment in state higher education institutions will be presented and the influence of population structure will also be emphasised, highlighting the limited capacity of higher education existing in Oman. A comparison of enrolments of secondary school students, cost of university student and expenditure on education both in Oman and in other countries at the same level of development will be undertaken.

After this, an overview of the economic demand for higher education will be presented. The disadvantages of employing large numbers of expatriate workers, as well as the advantages of replacing them with suitably qualified Omani workers, will be discussed. The needs of public and private sectors for well-qualified graduates at a higher education level will be identified. The chapter will point out some of the obstacles to Omanisation (i.e. the employment of Omani nationals) in the private sector. At the end, a summary of the chapter will be given.

3.2 Higher Education Capacity in Oman

Currently, the demand for higher education, plus the diversity of forms in which higher education is provided, is greater than ever previously experienced in the history of Oman. This is because Omani citizens are increasingly recognising the importance of higher education in contributing to the socio-cultural and economic development needed for the prosperity and continued existence of their country. Consequently, in order to assess and evaluate the future supply and demand for higher education in Oman, it is important to address related social issues. This is because, for a positive and productive future, good understanding of such factors is crucial to Omani policy decision-makers whilst endeavouring to foster collaborative linkages between diverse socio-cultural and economic agencies.

As a result, human resources development is one of the most important dimensions of Oman's development strategy. Achieving the 'Vision 2020' of the Omani economy depends to a large extent on success in achieving policies related to developing human resources. The human resources development report (Ministry of Development, 1995) includes detailed policies and mechanisms designed for this purpose. The most important of these are the following:

- Working to provide university education and post-graduate studies according to the market needs, whether public or private;
- Adopting advanced systems for technical education and vocational training that enable institutions to cope with rapid technological developments;
- Providing employment opportunities for interested Omanis. It is also necessary to train and qualify them according to the needs of the labour market;
- Creating an integrated information system concerning the labour market. Such a system should allow the designing, monitoring and evaluation of policies, and should provide the necessary information for students to determine their choices in an objective way. It will also provide those seeking employment with information about available opportunities;
- Encouraging the establishment of private educational and training institutions. These will provide their services directly or indirectly to the public, thus reducing the pressure on government services and providing sufficient alternatives for society to choose from.

In line with these policies, the Sultanate of Oman has attempted to make a qualitative and quantitative development in all the fields of higher and technical education and vocational training in order to prepare the Omani society for the 21st century, in which

science and knowledge are the cornerstones of development. However, the question arises: how far is Oman capable of meeting the growing demand for higher education?

3.2.1 Student enrolment in state higher education institutions

To aid clarity and because the current period is one of tremendous development and expansion in higher education as a cornerstone of society's general growth, the researcher believes it would be helpful to highlight some features of the existing admission system in Oman before analysing the current higher education capacity.

Most public higher educational institutions in Oman share a common selection system, in which admission depends on the mark obtained in the secondary school certificate. Students may apply to any institution for which they achieve the required mark. However, in practice, fulfilment of the specified criterion does not guarantee a place, because the number of candidates is usually far higher than the number of places available (Al-Ghanboosi, 2002).

The strict and selective admissions policy, which admits only a few of those who satisfy the conditions, is claimed by Al-Ramadhani (2003) to result in a large number of students being unable to register for their preferred course, as very high pass marks in the secondary school examinations are needed to secure a place on the most popular courses. The outcome may be that students look for an opportunity to change courses later, or may drop out. Furthermore, the author emphasized that this restricted admission policy has limited the number of female students absorbed in higher education. This is because females usually achieve higher grades than males in the Secondary School Certificate and decision-makers have therefore to specify the numbers of male and female applicants to be admitted to institutions of higher education in each academic year. Otherwise, female students would outnumber the male students. As a result some institutions allocate no more than 50 per cent of the total available places to female applicants, irrespective of the number who meet the admission criteria (Al-Ramadhani, 2003).

However, in the case of private higher education, the system is different: institutions are open to all who are able to pay the tuition fees demanded (Al-Ghanboosi, 2002). Consequently, in the last six years, the number of secondary school graduates in Oman has increased dramatically. This is shown in Table 3.1 below, which displays the intake capacity of state higher education institutions from 1998/1999-2003/2004.

Table 3.1 Student enrolment in state higher education from 1998/1999 to 2003/2004

Institutions	Number of enrolled students					
	1998/ 1999	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**	**2002/ 2003**	**2003/ 2004**
Sultan Qaboos University	1,800	1,800	2,038	2,231	2,420	2,715
Sultan Qaboos University (Accounting diploma program)	-	-	575	457	-	-
Education Colleges	2,523	2,006	1,997	2,094	1,871	1,972
College of Sharia and Law	120	120	128	169	170	183
Technical Colleges	2,070	1,555	2,088	2,204	3,360	4,176
Health Institutions	684	568	694	695	696	651
College of Banking and Financial Studies	141	44	90	115	100	58
Institute for Islamic Law (Shariah) Sciences	-	40	59	42	60	53
Scholarships (abroad)	67	60	60	60	60	60
Grants (abroad)	-	-	-	128	120	124
Petroleum Development of Oman company.	51	39	30	27	30	30
Local scholarships (Ministry of Labour force)	-	-	500	688	638	637
Local scholarships (for students from very low income)	-	-	1000	1,063	1000	1,726
Technical Collage of Royal Guard	-	-	-	33	25	32
Oman Academy for Tourism and Hospitality*	-	-	-	217	216	60
Total of enrolled students	**7,456**	**6,232**	**9,259**	**10,220**	**10,766**	**12,477**
Total of secondary school graduates	**20,886**	**24,903**	**27,037**	**32,211**	**34,471**	**41,573**
Total of secondary school graduates with no higher education opportunity	**13,430**	**18,671**	**17,778**	**21,991**	**23,705**	**29,096**

Source: Ministry of Higher Education (2004), Sultanate of Oman.

* Although this is a public higher education institution, it also accepts full-fee paying private students.

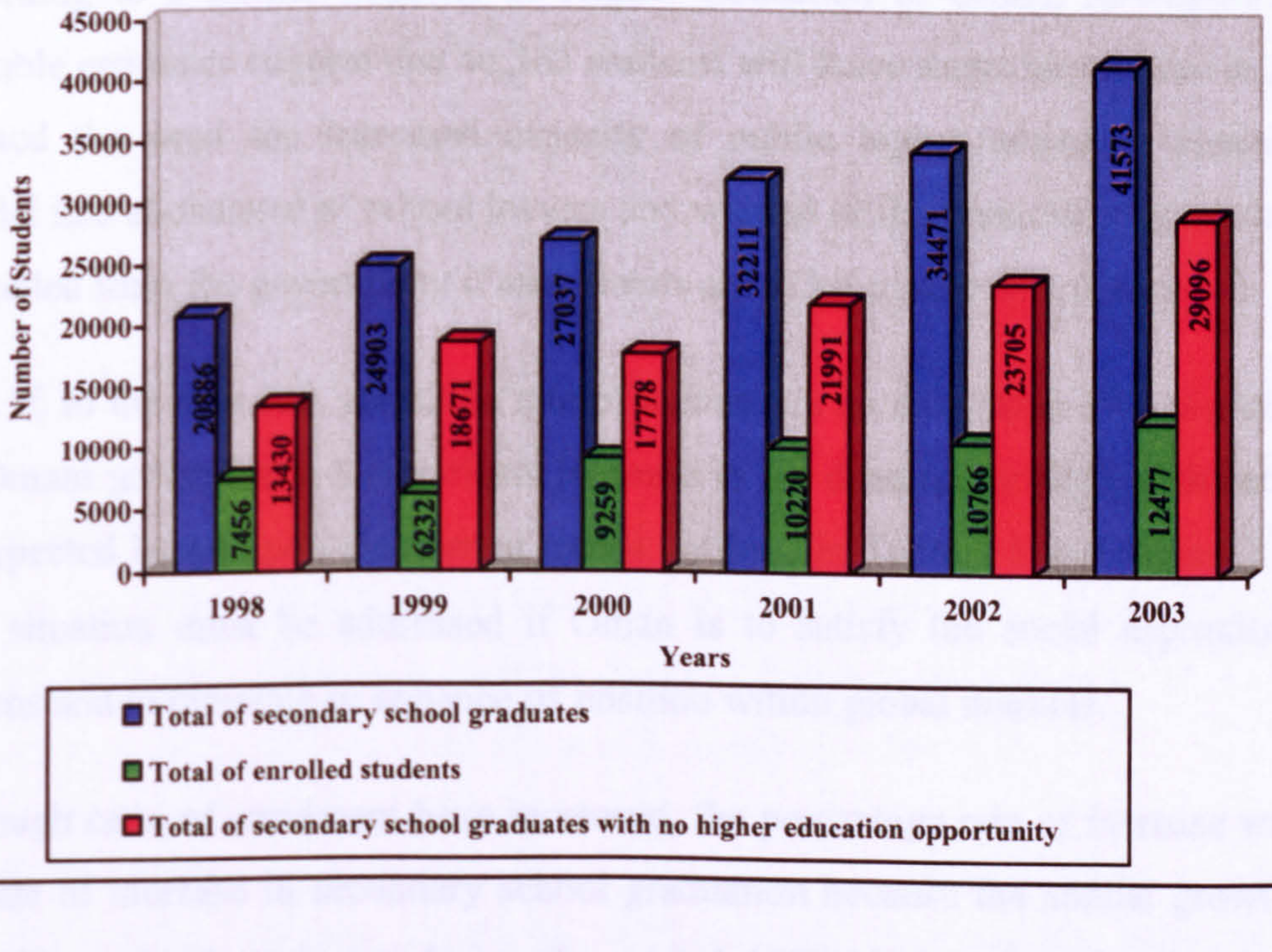
For instance, in 1998 there were 20,886 secondary school graduates, but by 2003 the number had doubled to 41,573. However, the intake capacity of state higher education in that year was only 12,477 students, leaving around two thirds of school leavers with no access to higher education within Oman unless their families can afford to pay the tuition fees demanded by the private colleges within Oman or elsewhere in the world.

As can be seen from the data presented in Table 3.1, from 1998/1999-2003/2004 there has been a 67% overall increase in the number of enrolled students in the various educational institutions. However, within this overall trend there are significant factors which require description and discussion. For example, whilst there have been

significant increases in the number of students enrolling at the Sultan Qaboos University and Technical Colleges, enrolments in the College of Banking and Financial Studies have fluctuated, declining by 42% between 2002 and 2003. This fluctuation may have occurred because during the boom years of economic expansion, expertise in banking and financial skills was required. The steadying of the steep upsurge and the fact that many of the original candidates taught these skills do not require replenishment or replacement at the present time, since they are still in post, may account for the decline in numbers between 2002 and 2003.

Figure 3.1 shows the number of secondary school students who have enrolled in higher education compared with students who have graduated from secondary school and those students who had no higher education opportunities during the period 1998/1999 to 2003/2004.

Figure 3.1. Number of secondary school students who graduated, enrolled and had no higher education opportunity, 1998/1999-2003/2004



It can be seen from Figure 3.1 that although both secondary school graduation and acceptance into higher education have increased during the period under review, they have not done so at the same rate. For example, the number of students enrolled in higher education institutions in 2003 increased by 67% compared with 1998, whilst the number of secondary school graduates increased by 99% over the same period.

Consequently, the gap between secondary school graduation and higher education enrolment is increasing. In 1998, 36% of secondary graduates found places in higher education institutions, whereas in 2003, only 30% did so. This difference was not because of any fall-off in demand, but because of the inability of the existing higher education institutions to absorb the increasing number of secondary school graduates wishing to enrol in such institutions.

Moreover, it is worth noting that the number of secondary school graduates and the rate of increase, in 1998 and 1999 far outstripped government predictions and expectations. Projections by the Ministry of Higher Education anticipated the number of secondary school graduates to be 17,440 and 18,312 in 1998 and 1999 respectively, based on an assumed annual rate of increase of 5%. In actual fact, however, the results were 20,886 and 24,903 in 1998 and 1999 respectively. This under-prediction is a basic part of the problem to date, and one reason why there is a need for an investigative study such as this one.

According to a former Minister of Higher Education in Oman, Al-Manthri (2001), available estimates suggest that 46,363 students will leave secondary school in 2005. He asserted the need for increased capacity of public higher education institutions to parallel this abundance of school leavers and warned of the financial support that would be needed from the government if enrolments are to keep pace with demand.

Even if, in the next few years, the rate of increase is no more than 5%, as predicted by the Omani government, a significant increase in the demand for higher education must be expected based upon the current trends outlined in Table 3.1 and Figure 3.1 above. This situation must be addressed if Oman is to satisfy the social aspirations of its citizens and to maintain or enhance its position within global markets.

Although rates of enrolment have increased, the percentage rate of increase was below the rate of increase in secondary school graduation because the annual growth rate of secondary school graduates during the period 1998-2003 averaged 5%, whereas the annual growth rate of enrolments for the same period averaged 4.4%. In other words, the gap between supply and demand has rapidly widened and increased. This can be seen in Table 3.2 below, which shows the percentage of secondary school leavers who had no chance of higher education during the same period, i.e. 1998-2003.

Table 3.2 Percentage of secondary school leavers not absorbed by higher education 1998-2003

Year	% of secondary graduates unabsorbed	% change from previous years
1998	64,0	-
1999	74.9	10.9
2000	65.7	-9.2
2001	68.2	2.5
2002	68.7	0.5
2003	69.9	1.2

From Table 3.2 above, in 1998 almost two thirds of all secondary school graduates (64%) were not absorbed by Higher Education, and in the following year, 74.9%. After this steep rise of 10.9%, in the following year 2000, some progress was made in narrowing the gap between secondary school graduations and Higher Education enrolments, when the rate of unabsorbed dropped by 9.2%. Nevertheless, this did no more than restore the absorption rate to something approximating to the 1998 level, and the situation has once again deteriorated since then, until by 2003, almost 70% of school-leavers were unabsorbed by higher education. It seems unlikely, based upon the evidence cited above, therefore, that the anticipated rise in demand can be met without a significant expansion in higher education provision.

If such provision is not adequately made, the gap between secondary school graduates and acceptance into higher education institutions will continue to increase. This will be catastrophic for Oman, because without the benefits of higher education qualifications and experience, an increasingly high proportion of secondary school graduates will be denied the opportunity to reach their potential. And equally of importance, they will be denied access to the labour market and the positions at present held by many expatriate workers. In order to sustain Oman's position in global economic and social markets, this situation cannot be allowed to continue. Some solution must be found, along with some interventions designed to address this gap in supply and demand.

3.2.2 Scholarships

The scholarship field has played an important role in absorbing secondary school graduates in Oman. In 1985/1986 the number of students studying abroad was 2,681. However, this number decreased as a result of the opening of Sultan Qaboos University. For example, the number of students who were awarded scholarships for overseas study in 1998 was 67, whereas in 2003 there were 60 such students (Ministry of Higher Education, 2004). However, the government has established local scholarships which

helped enormously to absorb a total of 2,363 students in 2003, as detailed in Table 3.1, for students from families who receive welfare and those who have limited income, according to an approved system.

3.2.3 Private universities and colleges

There are now three private universities and sixteen private colleges under the supervision of the Ministry of Higher Education in existence in the Sultanate of Oman. These institutions offer post secondary education in business administration, economics, engineering, commerce and computer sciences as mentioned earlier in chapter two (see Tables 1.1 and 1.2).

The diplomas awarded at the end of one to three year courses qualify the students to enter overseas universities. Admission to private higher education is open to all who are able to pay the tuition fees demanded. Further enrolment in private higher education is made possible by the scholarships referred to above. By boosting the number of students who can avail themselves of private education, these scholarships are intended to encourage private sector investment in higher education.

Private colleges accepted 28,402 students between 1995 and 2003 as detailed in Table 3.3 below. Although they have the capacity to accept more, the demand to enrol in them is still low. This may be because the tuition fees are quite high, which does not encourage students to apply. The tuition fees in these private institutions range from 1,500 to 5,400 Omani Rials, according to the Ministry of Higher Education (2004c). Nevertheless, as Table 3.3 shows, enrolments increased steadily up to 2000, and although there was a decline in numbers in 2001, this was followed by an enormous increase, to reach an unprecedentedly high level in 2002. Thus, the evidence suggests that Omani students are motivated to enter higher education, even though some financial sacrifice is involved.

Table 3.3 Students enrolled in private institutions 1995-2003

Year	Number of institutions	Students enrolled		Total
		Male	Female	
1995	1	69	81	150
1996	4	249	176	425
1997	5	486	318	804
1998	8	677	1353	2030
1999	11	1230	2460	3690
2000	14	1520	3040	4560
2001	14	1245	1431	2676
2002	14	3937	3943	7880
2003	14	4146	2041	6187
Total	**14**	**13,559**	**14,843**	**28,402**

Source: Ministry of Higher Education (2004c), Sultanate of Oman.

3.2.3.1 Access and equity in private higher education institutions:

Having a large number of private higher education institutions is not necessarily a guarantee of access to absorb the high demand for higher education in Oman, because of the considerable differences in fee structure between these private institutions and public institutions. Comparing the number of students on government scholarships in private higher education institutions (e.g. 5765 in 2004, as shown earlier in Table 1.3) to the annual intake at Sultan Qaboos University (approx. 2500) suggests that there could well be a strong case for another viable government institution/ university.

It should be noted that even families who can afford it, may be reluctant to send their children to private higher education institutions, given the fact that students in all public institutions are fully funded by the government. Thus, the establishment of these private institutions alone is not sufficient to tackle the problem of limited higher education capacity in Oman. This must be matched by the availability of affordable places for students to enrol for higher education.

3.2.4 The influence of population structure

Higher education globally, and in the Arab world in particular, came under pressure in the latter half of the twentieth century. As a result of dramatic changes in population growth, the rapid advancement of knowledge and technology Oman is no exception to this trend.

The population census in Oman, undertaken at the end of 2003, has provided a large amount of demographic data and information. According to this census, the total

population of Oman was found to be 2,331,391, of whom native Omani citizens numbered 1,781,558 or 76% of the total population. At the same time, the total number of non-Omani citizens who were working and living in Oman was 549,833 representing 24% of the total population. Table 3.4 shows the age structure of the Omani population in 2003, according to the same source.

Table 3.4 Age group structure of the Omani population, according to the Population Census of 2003

Age group	Males	Females	Total	%
0-4	109,544	105,987	215,531	12
5-9	121,222	116,259	237,481	13
10-14	137,646	132,705	270,351	15
15-19	130,471	124,757	255,228	15
20-24	107,506	106,781	214,287	12
25-59	246,696	252,648	499,344	28
60+	47,455	41,881	89,336	5
Total	**900,540**	**881,018**	**1,781,558**	**100**

Source: Ministry of National Economy (2004), Sultanate of Oman.

It is clear from Table 3.4 above, that Oman has a very young population, with the age group (0-19) representing **55%** of the total Omani population. This population structure is not uncommon in developing countries and the age structure of Oman's population is very similar to that of other Gulf States. This phenomenon can be attributed to the increased access to free education and better health care; greater employment opportunities, improvements in social welfare, housing, water and electricity, transport and communications, and other social services. Improved health and welfare services have greatly reduced under-5 mortality and contributed enormously to the sharp rise in population growth rate.

According to the population census in 2003, Oman's population growth rate was 1.84%, one of the highest in the world compared with, for example, 1.58 in UAE; 1.51 in India; 0.15 in Japan; 0.05 in Italy and 0.21 in Britain, according to the Ministry of National Economy (2004).

As a result of this demographic structure, demand for education can be expected to rise, putting pressure on the Omani government to develop and expand provision. It is to be expected that the growth of population will lead to growth in demand for higher education places. Special attention should be given to higher education, to be ready for the demand which can be expected as those of the population still in the early stages of education, primary, intermediate and secondary school, complete their basic education.

3.2.5 International comparisons

The limited capacity of higher education in Oman is highlighted by comparison of enrolments in Oman with those in other countries at the same level of development, for the same level or fields of education. The International Standard Classification of Education (ISCED) used by UNESCO (2003) enables such comparisons to be made (see Table 3.5, below).

Table 3.5 Comparison in gross enrolment ratio between Oman and some countries classified at the level of development as Oman, 2000/2001

Country	Gross Enrolment Ratio 2000/2001								
	Primary Education			Secondary Education			Tertiary Education		
	Male	Female	MF	Male	Female	MF	Male	Female	MF
Oman	74	71	72	69	67	68	10	7	**8**
Nepal	128	108	118	58	43	51	7	2	5
Qatar	105	104	105	86	92	89	13	38	25
S. Korea	101	101	101	94	94	94	97	57	78
Thailand	97	93	95	84	80	82	33	37	35
Turkey	105	96	101	-	-	-	27	20	24
Austria	104	103	104	101	97	99	54	62	58
Greece	99	99	99	98	99	98	60	66	63

Source: UNESCO (2003).

It can be seen from Table 3.5 that Oman, at only 8%, has one of the lowest rates of enrolment in tertiary education, among all the countries listed. Indeed, secondary and tertiary enrolment in Oman was higher than only one country in the table, Nepal. The late start of education in Oman is not in itself sufficient to account for the very low level of tertiary enrolments.

A particularly interesting comparison is with Qatar, the only other Arab Middle Eastern country featured in the table, and one which has economic and cultural similarities with Oman. By 2000/2001, primary and secondary school enrolment ratios for both males and females in Qatar had overtaken those of Oman; and of particular relevance to this study is that 25% of Qatari citizens in the relevant age group enrol in tertiary education, almost three times the ratio in Oman. It is also interesting to note that in Qatar, female students outnumber males in higher education by 2 to 1, whereas in Oman, the percentage of female enrolments is lower than that of male, despite the claim cited earlier, that female secondary school students get higher scores in the secondary school certificate.

Another example of the limited capacity of higher education in Oman is highlighted by comparing the proportion of higher education students per 100,000 population in Oman

with those in other countries at the same level of development. Data from the UNESCO (1998a) enable such comparisons to be made (see Table 3.6).

Table 3.6 Proportion of higher education students per 100,000 population: 1996

Country	**Oman**	UAE	Bahrain	Qatar	Saudi Arabia	Egypt	Kuwait	Jordan
Ratio	**433**	1,137	1,416	1,459	1,530	1,578	2,052	2,543

Source: UNESCO (1998a).

Table 3.6 reveals that Oman compares unfavourably with the Gulf States, and many other Arab countries such as Egypt and Jordan with regard to the proportion of higher education students per 100,000 of population.

For example, UAE has almost three times as many students per 100,000 of population as Oman, whilst Jordan has more than six times as many.

In relation to the population of female students in higher education, Oman is the lowest among all the Arab countries listed in the Global Monitoring Report issued by UNESCO (2003/2004), as can be seen in Table 3.7 below.

Table 3.7 Proportion of female students as percentage of all students in higher education

Country	**Oman**	Jordon	Morocco	Lebanon	Saudi Arabia	Libya	Tunisia
%	**22**	25	32	32	38	42	49

Source: UNESCO (2003/2004).

The limited capacity of higher education in Oman could be a result of the very high cost of each student. According to UNESCO (2002) the cost of each student at Sultan Qaboos University is the highest among all the Arab countries. It was found to be $15,701, compared with $11,313 for a university student in Kuwait; $10,351 in Bahrain, and the lowest in Yemen i.e. $ 511 as detailed in Table 3.8.

Table 3.8 Cost of a university student in Oman compared with some Arab countries in 1996

Country	Cost/Student ($)
Oman	**15,701**
Kuwait	11,313
Bahrain	10,351
Saudi Arabia	9,868
United Arab Emirates	8,731
Qatar	7,620
Jordan	2,855
Egypt	1,191
Yemen	511
World average	**3,703**

Source: UNESCO, 2002.

The cost of each student in Sultan Qaboos University is four times the world average of $3,703 as indicated by UNESCO (2002). This cost is a particularly severe burden on government, especially as Oman is a developing country with a strong internal competition for resources to develop other economic and social service sectors. In addition, Oman spends only 7% of its public education expenditure on higher education. This fact could also contribute to the limited capacity of higher education as shown in Table 3.9, which details a comparison between Oman and some Arab and non-Arab countries in expenditure on education by level in 1995-1997, as indicated in Human Development Report 2001.

Table 3.9 Expenditure on education and percentage of distribution by level 1995-1997

Country	Public education expenditure by level (as % of all level)		
	Pre-primary & primary	Secondary	Tertiary
Oman	**40.9**	**51.3**	**7.0**
Syria	41.9	29.8	25.9
Morocco	34.6	48.8	16.5
Tunisia	42.5	37.2	18.5
Iran	29.0	33.9	22.9
Malaysia	32.7	30.6	25.5
France	31.4	49.5	17.9
Spain	33.3	47.9	16.6

Source: Human Development Report, 2001.

The statistics show that compared to the other countries listed, Oman spends a higher proportion of its budget on primary education than all but two of the benchmark countries, and more on secondary education than any other country. However, the share allocated to tertiary education is the lowest among all the countries listed. This may

reflect the recent priority accorded to reforms in the general education system and particularly the introduction of the Basic Education system. Equally, this information is indicative of the fact that Oman initially concentrated its finances on promoting early education through to secondary school level education, whilst higher education has been comparatively neglected. This may mean that aspirations are created in students as a result of the promotion of secondary school education, only to be frustrated when they reach the end of the secondary school stage and find there is nowhere else for them to go to complete their higher education.

Al-Ramadhani (2003:186) points out that, in his opinion, the government of Oman has not yet decided on the ultimate aim of education in Oman, that is, whether it should be based on employment requirements or offered for its own sake. He goes on to argue that:

> *"If the aim is the former and the government plans to develop human resources to meet the local labour market needs with qualified staff in different specialisation – as was pointed out by development planners – then it is its responsibility to provide employment opportunities for all graduates in either the state or private sector. However, if the aim is to provide citizens with knowledge and culture without considering future employment within the country, then this requires the provision of higher education opportunities for everyone without discrimination based on age or sex. Therefore, graduates should accept this fact and not request the government to find employment for them, as is currently the case"*

The researcher believes that adjusting the capacity of tertiary education is not, however, a matter only of meeting the wishes of students leaving school. A balance also has to be maintained with the requirements of the labour market. Therefore, the next section considers labour market conditions in Oman.

3.3 Labour Market Conditions in Oman

Higher education institutions are places of higher learning and can be considered as a springboard to the world of gainful employment and higher productivity. Equally, they provide a bridge between formal education in school and the world of the labour force. Generally activities in business and industry provide the engine which drives the wheels of the economy of a country. However, because it requires knowledge and ability to take informed decisions and to be able to participate in government policies, higher education has a vital role to play in the process of providing a labour force which has a

competitive edge in global markets. Thus, the diverse needs of a society for business and industry demand a variety of learning experiences which higher education institutions can offer.

Before presenting in detail the demand of public and private sectors from higher education graduates, it would be appropriate to consider the impact of the high rate of reliance on non-Omani workers, and the case for replacing them with Omani graduates.

3.3.1 Disadvantages of expatriate workers

In order to meet their manpower requirements, all the Gulf States, including Oman, have exploited the experience of expatriates. Recourse to an expatriate workforce was seen as an essential alternative until such time as sufficient numbers of Omani citizens are educated to assume the responsibility of development of their country and eventually to replace the expatriates (Mohammed, 1995).

However, the huge influx of foreign workers into the Gulf States, particularly the cheap labour from South East Asia, has important social, political, cultural and economic effects. The major effects as highlighted by Ali Hassan (1990) are outlined in the following paragraphs.

3.3.1.1 Social effects

An expatriate labourer, when he leaves his country to work abroad, carries with him his own culture and his social interactions. The large numbers of Asian workers created their own social structure which has affected nationals considerably (Ali Hassan, 1990). The combination of low incomes of expatriate workers and their separation from their families has contributed to problems of crime (such as drug dealing and robbery) and immorality among immigrant communities. Also, there are a large number of male expatriates compared to very few female expatriates, which has created gender imbalance in the population as a whole. On the other hand, employers favour immigrant workers, mainly because they are easier to control than locals (Al-Hinai, 1998).

3.3.1.2 Political effects

The political issue is one of concern to the Gulf States. Although there are different views on the matter, researchers feel that immigrant labour has implications for political issues in the country. Al-Rumaihi (1982, in Ali Hassan, 1990) points out that in 1981 the government of the Emirates announced its desire to control the number of

expatriates from the Indian sub-Continent residing illegally in the country. The Ministry of Foreign Affairs in India responded by saying that 250,000 Indians would be affected if the Emirate Government executed its plan to control the employment of expatriates. Migration does affect the population distribution in these countries, although politicians may claim otherwise (Ali Hassan, 1990).

3.3.1.3 Cultural effects

There is a strong belief that international migration of expatriates, especially from South East Asia, has affected the culture and language of the people in the Gulf States (Al-Hinai, 1998). In a study of the effects of expatriate manpower in the Arab Gulf States, Al-Said Khalifa Mater, a Member of Parliament in the Emirates, stated that:

> *"There is no doubt that we cannot keep silent on the dangers caused by the employment of an Asian labour force. Our language and customs are menaced or lost. The employment of expatriates causes a danger of controlling the sources of our livelihood"* (Cited from Al-Hinai, 1998).

Whether or not this assertion is true and to what extent it can be generalized, it is worth pointing out that at the present time a young nation like Oman could not function effectively in all economic and service sectors without expatriate manpower.

3.3.1.4 Economic effects

The effects of expatriates working in the Gulf are evidently seen by the nationals as a two-edged sword. Because of Oman's circumstances it was necessary to employ expatriates, who naturally brought their own cultures, values and preferences.

In many cases, business organisations are foreign owned, with national members acting as sponsors to help the expatriates. A high percentage of foreign labour income is remitted to their home countries and only a small portion is spent in the host country (Al-Hinai, 1998).

Evidence can be gained from Table 3.10 which indicates the remittances in Omani Rial millions by expatriate workers to destinations outside Oman during the period 1998 to 2002.

Table 3.10 Volume of earnings repatriated by immigrant workers (In Omani Rial million)*

Years	1998	1999	2000	2001	2002
Workers Remittance	564	553	558	589	616

Source: Statistical Year Book (2003), Ministry of National Economy, Oman.
*(Omani Rial= $ 2.6 OR £1.4).

The official transfers of O.R 616 million in 2002 were equal to 8% of the GDP (O.R 7809.1 million) in the same year (Ministry of National Economy, 2003). Equally, unofficial transactions through special dealings are believed to be high, but actual figures are difficult to document (Al-Hinai, 1998).

Much has been said about the disadvantages of large-scale reliance on expatriates. The expected benefits from turning instead to the potential local workforce will be considered next.

3.3.2 Advantages of Omani workers

According to Al-Hinai (1998), the advantages of Omani workers are:

i. Since Omani manpower is already available in the country, there is no need for the private sector to incur extra expenses on labour fees, visas, tickets, etc.

ii. Omani nationals can be treated free of charge at government hospitals, unlike expatriates.

iii. Children of Omani nationals receive free education, whereas the tuition fees for children of expatriate workers are generally paid for by their Omani sponsors.

iv. Omani workers spend their salaries in the country, while expatriates export more than 90% of their earnings to their home countries. The annual workers' remittances range from 500 million to 1 billion Omani Rials (i.e. £775 million to £1550 million).

v. Training benefits are free of charge for Omani workers, whereas expatriates often come semi-skilled or with no skills at all and learn on-the-job. As a

result, employers may incur costs due to machinery and equipment damaged by improper use.

Thus, it is widely recognized that there would be economic advantages for employers and for the state if more Omani citizens were employed instead of expatriates. Although a deliberate policy of replacement has been instituted, however, there is still a long way to go in this respect, as the following sub-section shows.

3.3.3 The needs of the public sector (government sector)

An examination of the structure of the Omani workforce reveals a large proportion of expatriates in both the public and private sectors.

This can be seen in some statistics on the number of workers in both the public and private sectors in the Statistical Year Book (2003) published by the Ministry of National Economy. Table 3.11 gives details of the government staff for the period 1998-2002.

Table 3.11 Civil service employees 1998-2002

Year	Civil Service			Public Corporation		
	Omani	Total	Omanis %	Omani	Total	Omanis %
1998	55858	80978	68.9	5181	7137	72.5
1999	59774	82905	72.0	5418	7390	73.3
2000	63934	84662	75.5	5602	7556	74.1
2001	68496	87652	78.1	5822	7755	75.0
2002	**73,766**	**91,237**	**80.8**	**6,132**	**8,061**	**76.0**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

From the above table it can be seen that the great majority of all employees in the government sector are Omani citizens. With 73,766 in civil service and 6,132 in the public corporations, the total in 2002 was 79,898, out of a total work force of 99,298 (91,237+8,061). Further, the proportion of Omani citizens has increased over the last few years in both the civil service and to a lesser extent in the public corporations, where most are traditionally employed. The number of indigenous employees in the civil service in 1998 was 55,858, which is equal to 68.9% of the total number of employees, leaving 25,120 positions, 31.1%, to be occupied by non-Omani citizens.

By 2002, the number of Omani employees in the civil service had reached 73,766 (80.8%) out of a total of 91,237, meaning that 17,471 (19.2%) would be non-Omanis. Thus, the percentage of non-Omani citizens has decreased very slightly. Nevertheless, expatriates still occupy almost a fifth of all civil service positions.

In the public corporations, the number of Omani citizens employed in 1998 was 5,181 (72.5% of the total number of employees), and by 2002, the number had risen to 6,132 constituting 76.0% of the total workforce in the public corporations in that year. Thus; the percentage of positions in the civil service occupied by Omani citizens is higher than in the public corporations. However, in the government sector as a whole in 2002 it can be calculated from the above table that there were 19,400 non-Omani employees (17,471 in civil service + 1,929 in public corporations).

Table 3.12 below, shows the workforce composition in specific government sector institutions.

Table 3.12 Employees in public corporations and percentage of Omani citizens

Organisations	2001				2002			
	Omani	Non-Omani	Total	% Omani	Omani	Non-Omani	Total	% Omani
Oman Telecommunications Company	1,794	280	2,074	86.5	1,923	248	2,171	88.6
Public Authority for Stores and Food Reserves	148	0	148	100.0	145	0	145	100.0
Public Establishment for Industrial Estates	92	7	99	92.9	94	8	102	92.2
State General Reserve Fund	35	6	41	85.4	37	6	43	86.0
Public Authority for Social Insurance	144	4	148	97.3	154	5	159	96.9
Oman Establishment for Press, News Publication and Advertising	356	87	443	80.4	363	83	446	81.1
State Audit Institution	151	37	188	80.3	166	25	191	86.9
State Consultative Council	109	5	114	95.6	115	5	120	95.8
State Council	70	2	72	97.2	68	2	70	97.1
Central Bank of Oman	391	51	442	88.5	392	48	440	89.1
Sultan Qaboos University	1,984	1,420	3,404	58.3	2,125	1,466	3,591	59.2
Oman Housing Bank	253	7	260	97.3	259	8	267	97.0
Oman Development Bank	140	5	145	96.6	133	2	135	98.5
Muscat Securities Market	50	6	56	89.3	48	6	54	88.9
Capital Market Authority	81	11	92	88.0	81	11	92	88.0
The Omani Centre for Investment Promotion and Export Development	24	5	29	82.8	29	6	35	82.9
Total	**5,822**	**1,933**	**7,755**	**75.1**	**6,132**	**1,929**	**8,061**	**76.1**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

It can be seen from Table 3.12 that Omanis constitute a high percentage of employees in banks and important public authorities such as State Council, States Consultative Council and Public Authority for Social Insurance, but it is notable that they account for only 59% of the employees in the university, in 2002.

In addition to the 1,929 highly qualified and proficient indigenous employees that would be required to Omanise current posts in this sector, other qualified people will be

needed to cope with the continuing process of development and future expansion. The problem, however, is not simply one of numbers of Omani citizens relative to non-Omani citizens, but also their distribution within the sector.

Economic pointers show that the national labour force in some sectors is concentrated in the lower-ranking jobs, while specialised non-Omani labour forces are in the intermediate and upper-rank jobs.

The details in Table 3.13 show the distribution of the employees in the public service according to their nationality group and grade. This information contributes to identifying and clarifying elements of the problems associated with Omanisation.

Table 3.13 Comparison between civil service employees (Omani/non-Omani) by group and grade, 2002

Year	2002			
Group & Grade	**Omani**	**Non-Omani**	**Total**	**% Omani**
Special Group	225	1,536	1,761	12.8
Special Grade	58	0	58	100.0
Group I	4,799	1,032	5,831	82.3
Group II	49,838	14,158	63,996	77.8
Group III	18,846	745	19591	96.1
Grand Total	**73,766**	**17,471**	**91,237**	**80.8**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

It can be seen from the table that the majority of special group staff are non-Omani citizens. They constituted 87.2% of the total number, compared to 12.8% for Omani citizens in the same grade.

The non-Omani occupiers of the grades of Group 1 constitute 17.7% of the workforce at that grade, and 22.2% in Group II. The percentage of Omanisation is (apart from the special grade) highest in Group III, where Omani citizens account for 96.1% of the total employees. This means that positions which require higher education (First degree and higher studies), are predominantly occupied by non-Omani citizens, while indigenous personnel are heavily concentrated in positions which do not require such qualifications. These are positions with lower salaries and less decision-making authority.

The previous discussion reflects the major problem, namely, the need of the governmental sector for qualified Omani employees with university degrees or professional qualifications, to enable them to fill the top posts in the sector.

This interpretation of the data is confirmed by Table 3.14 below, which shows the distribution of the employees of the civil service (Omani citizens and non-Omani citizens) according to educational level (Diploma, Bachelor degree, higher diploma, Masters, Ph.D.).

Table 3.14 Civil service employees by educational level, 2002

Educational Level	2002					
	Omani	%	Non-Omani	%	Total	%
Illiterate	6879	9.3	230	1.3	7109	7.7
Can read and write	7040	9.5	300	1.7	7340	8.0
Primary	4832	6.5	106	0.60	4938	5.4
Preparatory	4746	6.4	81	0.46	4827	5.2
Secondary	9984	13.5	316	1.8	10300	11.2
Diploma	17973	24.3	5816	33.2	23789	26.0
Bachelor Degree	21005	28.4	7318	41.8	28323	31.0
Post-graduate Diploma	531	0.71	1338	7.6	1869	2.0
Master's Degree	703	0.95	1282	7.3	1985	2.1
Ph.D.	73	0.09	684	3.9	757	0.82
Total	**73,766**	**100**	**17,471**	**100**	**91,237**	**100**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

Further, the table shows that at all the lower levels of education (up to secondary level) the number of Omani citizens is considerably higher than that of non-Omani citizens. For example, among illiterate people occupying menial positions, the number of Omani citizens is almost 30 times that of non-Omani citizens. Up to Diploma and Bachelor degree level, the great majority of government employees are Omani citizens. However, at post graduate Diploma, Master's Degree and PhD level, the great majority of government employees are non-Omani citizens.

In 2002, a total of 16,438 non-Omani citizens with a Diploma or higher level qualification were employed in government positions; in other words, for these organisations to be staffed by indigenous personnel, 16,438 highly qualified Omani citizens would be needed, merely to cover current needs, without allowing for expansion in the sector.

Table 3.15 demonstrates and details employees in Public Corporations according to their educational level. It shows that the majority of the jobs occupied by non-Omani citizens in the public corporations are specialised jobs which require employees with high academic qualifications. However, the education gap between Omani citizens and non-Omani citizens is not as marked as in the civil service.

Table 3.15 Employees in public corporations by educational level, 2002

Educational Level	2002					
	Omani	%	Non-Omani	%	Total	%
Illiterate	56	0.91	-	-	56	0.69
Can read and write	341	5.5	31	1.6	372	4.6
Primary	520	8.4	6	0.31	526	6.5
Preparatory	699	11.3	13	0.67	712	8.8
Secondary	1,554	25.3	79	4.0	1633	20.2
Diploma	1,008	16.4	301	15.6	1309	16.2
Bachelor Degree	1,399	22.8	709	36.7	2108	26.1
Post-graduate Diploma	51	0.83	25	1.2	76	0.94
Master's Degree	380	6.1	326	16.8	706	8.7
Ph.D.	124	2.0	439	22.7	563	6.9
Total	**6,132**	**100**	**1,929**	**100**	**8,061**	**100**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

Further, Omani citizens outnumber non-Omani citizens at all levels up to Master's Degree. Two points are worthy of note: first, the illiterate group consists entirely of Omani citizens; second, at PhD level, non-Omani citizens outnumber Omani citizens by more than 3 to 1. This implies that the technical posts requiring specialist expertise would be occupied predominantly by non-Omani citizens. To Omanise all positions requiring a Diploma or higher qualification, 1,800 indigenous personnel with the appropriate qualifications would be needed.

A review of literature reveals that the correlation between the level of education and job opportunities is acknowledged and recognised by Omani citizens. This fact is supported by Al-Maskery (1992: 336) who stated that because of the huge gap between Omani and non-Omani employees, Omani students are motivated to invest in education:

> *"... people are motivated to invest in themselves in the form of education and training because they expect education will bring better job opportunities and higher salaries during their work life"*

This assertion is consistent with the prediction made thirty years earlier by Blaug (1972: 58) who suggested that:

> *"...those with more education will find themselves earning more than those with less. This creates an investment motive in acquiring education, at least for some, and in consequence we get an additional demand for education".*

However, currently the availability of places in higher education in Oman does not allow these ambitions to be fulfilled. Notwithstanding this fact, Al-Jahwari (2004:29) emphasises the importance of expanding higher education capacity not only to meet the needs of Oman, but other Gulf States, when he states:

> *"Our vision for higher education must be an integral one. Expanding the capacities of higher education should bolster the long strides made by the country in the field of general education. The generous expenditure on the education of generation of young men and women guarantees promising capacities for income generation in the future. The Sultanate acutely suffers from lack of specialised technical knowledge and specialisation in fields such as medicine and engineering. Planning for higher education in Oman should take into consideration the needs of the labour market in the other Gulf States with which Sultanate has many agreements for economic integration that include the merging of labour markets and equal treatment for Gulf nationals. Human capital is no doubt, the most important capital needs to be garnered through the provision of higher education, and the current financial capabilities of the country should be better utilized in this development"*

So far, consideration has only been given to the government sector. The question now arises whether Omani citizens fare any better in the private sector. The next section, therefore, considers the pattern of private-sector employment.

3.3.4 The needs of the private sector

There are no data available on the distribution of Omani citizens employed in the private sector according to their educational background and level of attainment when considering the needs of the private sector. However, Table 3.16 provides details of Omani citizens employed in this sector according to their gender and salary scale. The researcher believes that this will be helpful if it is accepted that there is a reasonable correlation between the amount of salary and the demands of the position in employment. That is, higher responsibility and demands equate to a higher salary.

Table 3.16 Omani employees in the private sector by gender & wage group, 2002

Wages Group (R.O)	Gender		Total	% Female
	Male	Female		
100-120	28,174	6,571	34,745	18.9
120-140	6,831	720	7,551	9.5
140-160	4,739	967	5,706	16.9
160-180	2,284	669	2,953	22.7
180-200	1,652	384	2,036	18.9
200-220	2,104	565	2,669	21.2
220-240	1,098	275	1,373	20.0
240-260	978	315	1,293	24.4
260-280	665	247	912	27.1
280-300	431	147	578	25.4
300-400	1,893	574	2,467	23.3
400-500	883	316	1,199	26.4
500-600	638	166	804	20.6
600-700	351	84	435	19.3
700-800	198	45	243	18.5
800-900	161	17	178	9.6
900-1000	125	9	134	6.7
1000-2000	488	21	509	4.1
2000+	93	-	93	-
Total	**53,786**	**12,092**	**65,878**	**18.4**
Average Salary	**172**	**166**	**171**	**-**

Source: Statistical Year Book (2003), Ministry of National Economy, Oman

In 2002, the total Omani and non-Omani employees in the private sector was 613,355, of which Omanis constituted 65,878, i.e. 10.7% of the total private sector workforce, and non-Omani citizens 547,477, i.e. 89.3% of the total private sector workforce. Based upon the assumption that wages reflect the demands of the job and that higher-paid jobs need higher education qualifications, it would be expected that employees in the lower wages group of 100-120 to 280-300 R.O are educated to below diploma level. From the details in Table 3.16 it is confirmed that it is at these low levels that most Omani citizens' employment is concentrated. At these levels, Omanis account for 59,816 out of the 65,878, i.e. 90.8% of this work force.

Conversely the wage groups of 300-400 up to 2000+ (shown in bold in Table 3.16), at which employees can be expected to have a diploma and above account for only 6,662 or 9.2% out of all Omani citizens working in the private sector.

So not only are Omani citizens seriously disadvantaged in their opportunities for employment in the private sector, but they are also disadvantaged once they have achieved employment in the private sector by the fact that the majority do not have the

level of educational achievement needed to gain high positions and high salaries. This is a matter of serious concern, the significance of which can be appreciated when the educational level of non-Omani citizens in the sector is considered.

Table 3.17, which shows the distribution of the non-Omani employees in the private sector according to educational level, reveals the existence of 46,586 employees who have a diploma, first degree or post-graduate degree in the private sector. This is in sharp contrast to the small number of highly educated Omani citizens inferred from the previous table (Table 3.16), and highlights the significance of higher education as a basic prerequisite for supplying the labour market with qualified Omani citizens if Omanisation is to be achieved.

Table 3.17 Distribution of expatriate workers in the private sector by educational level, 2002

Educational Level	Number
Pre primary	262,865
Primary	115,547
Preparatory	74,623
Secondary	47,856
Diploma	**10,439**
First degree	**35,182**
Post-graduate	**965**
Total	**547,477**

Source: Statistical Year Book (2003), Ministry of National Economy, Sultanate of Oman.

Looking at the pattern of occupational groups gives some idea of educational specialisations that will be needed by Omani citizens if they are to be employed in positions currently filled by expatriates.

Table 3.18 provides data for this purpose. It can be seen that distribution of expatriate workers in the private sector according to their occupational groups was similar in the two years. It can be seen from the table that the largest concentration of expatriate workers is in engineering, which accounts for about a third of all expatriates in the private sector, followed by service occupations, which account for almost a fifth. It is noticeable that very few non-Omani citizens are occupied in clerical positions.

Table 3.18 Distribution of expatriate workers in the private sector by occupational groups

Occupational Groups	2001	%	2002	%
Administration, Directors & Managers	21,564	4.1	21,974	4.0
Scientific, Technical & Human Matters Specialists	34,898	6.6	36,347	6.6
Scientific, Technical & Human Subjects Technicians	31,399	5.9	32,516	5.9
Clerical Occupations	3,289	0.6	3,061	0.6
Sales Occupations	55,447	10.5	56,132	10.3
Service Occupations	96,644	18.2	103,905	19.0
Agriculture, Stock Breeding, Agriculture & Hunting	65,458	12.4	67,708	12.4
Industrial, Chemical &Food Industries Occupations	41,051	7.7	40,662	7.4
Principal & Auxiliary Engineering Occupations	180,248	34.0	185,172	33.8
Gross Labour Force	**529,998**	**100.0**	**547,477**	**100.0**

Source: Statistical Year Book (2003), Ministry of National Economy, Oman.

These data show that substantial Omanisation of the private sector will clearly need people qualified in a variety of commercial and technical specialisations, particularly engineering.

From the data it can be seen that in total, Oman currently employs 64,824 of non-Omanis (18,238 in the civil service and public corporations, and 46,586 in the Private Sector) who have a diploma, first degree or post-graduate degree, and who need to be replaced by well qualified Omani citizens if Omanisation is to be a reality.

This desperate need for qualified Omani citizens is emphasised in projections for the Omani labour market by the Ministry of Development (1995), which were made as part of the preparation for the conference on "Vision 2020 for Oman's economy" which was held in Muscat, Oman, on 3rd and 4th June, 1995. The forecast figures for the forthcoming labour market requirements, along with the number of Omani citizens available, are shown in Table 3.19.

Table 3.19 Labour market requirement in Oman in 2020

Occupation	1993			2020	
	Total	**Omani citizens**	**Non-Omani citizens**	**Required**	**Available**
Specialists	62,600	19,300	43,300	153,200	127,700
Technicians	33,000	15,600	17,400	91,100	86,700
Skilled Labour	157,500	110,300	47,200	453,600	295,200
Semi-Skilled	111,000	9,100	101,900	246,400	174,900
Other Semi-Skilled	303,000	84,100	218,900	344,300	103,300
Total	**667,100**	**238,400**	**428,700**	**1,289,000**	**891,800**

Source: Ministry of Development (1995), Sultanate of Oman.

The forecasted figures of the labour market for 2020 detailed above show that the Sultanate of Oman will require a large number of qualified personnel. Also, it is clear from the figures provided in the above table that forecast requirements of the labour market far exceed the available number of Omani citizens in all occupations, by the year 2020.

The total number of labour force employed in 1993 was 667,100, of which Omani citizens accounted for only 35.7%, with a total of 238,400, whilst the total number of expatriates was 428,700. It is forecast that the total required workforce will increase to 1,289,000 by the year 2020, and it is expected that there will be 891,800 Omani citizens available in the various occupations by the same year. This means that Omanisation could increase to 69.1% by the year 2020. Although this would represent a great improvement, it will still leave a significant deficit to be met by expatriates. Therefore, this should be one of the factors for consideration in planning the future size and capacity of higher education in Oman. For this reason, most importantly, the Omani labour market will require more specialists and technicians than the number expected to be available.

3.3.5 Obstacles to Omanisation in the private sector

The foregoing discussion highlights the need for clear policies and structures to provide a framework in which effective Omanisation can take place, particularly in the private sector. Merely striving to qualify Omani students to replace the non-Omani workers is not enough.

A serious problem that must not be overlooked by the policy makers in Oman is that employment conditions in the private sector are seen as unattractive to Omani citizen graduates. Consequently, if this problem is not addressed, the result will be saturation in

the public (governmental) sector with the employment of national workers, while the private sector, which holds most of the job opportunities, continues to depend heavily on non-Omani citizens. Obviously, this would be totally contrary to Omanisation.

Previous writers (for example, Al-Maskery, 1992; Al-Lamki, 1998; Rayan, 1998, and Al-Maawali, 2000), have highlighted a number of factors that contribute to the lack of indigenous manpower in Oman, as discussed in detail in Chapter Two. In addition to the small size of the indigenous workforce, and a mismatch between the education profile of Omani citizens and the needs of the market, authors such as Al-Hinai (1998) have drawn attention to aspects of Omani values in relation to work which are not conducive to private sector employment. One of the major obstacles is that Omanis demand higher salaries and fringe benefits, and better working conditions, than are generally available in the private sector. These expectations make Omanis costly to employ and, hence, less attractive to private sector employers.

If it is true that Omani citizens are less interested in the kinds of jobs available in the private sector, this factor may be reflected in their higher education choices. It may be, for example, that courses expected to lead to government sector jobs, such as Education, may be over-subscribed, while other needed specialisations are less popular. This study will help to provide a deeper understanding of the considerations that motivate students' higher education choices, and will therefore help to clarify whether the problem can be solved simply by expansion of higher education, or whether other measures may be needed to encourage students' interest in specialisations needed by the economy.

3.4 Summary

Drawing on various government reports, statistics and previous research, this chapter has presented an overview of higher education capacity and the labour market demand in Oman.

As regards higher education capacity, it was shown that although, since 1998/9, there has been a substantial increase in the number of Omani citizens enrolling in public higher education, this has been concentrated disproportionately in Sultan Qaboos University and technical colleges. Moreover, it has not been commensurate with the increase in the number of secondary school graduates. As a result, more than two thirds of secondary school leavers are not absorbed by higher education. Oman's record in this respect compares unfavourably with those of other countries at a similar level of

development. At the same time, the high cost of university education in Oman compared with other countries may be a deterrent to expansion, whether the cost is borne by the government or by students themselves.

This situation is of particular concern, in light of the labour market conditions in Oman, which continues to rely heavily on expatriate workers, with negative consequences, in social, political, cultural and economic terms. In the government sector, around a fifth of all employees are non-Omani citizens. Moreover, they are disproportionately concentrated in senior positions, a fact which appears to be related to their higher educational qualifications. More than 16,000 Omani citizens qualified to diploma level or above would be needed to Omanise this sector.

In the private sector, too, non-Omanis predominate in top executive posts and high salaried jobs requiring specific technical knowledge and expertise. Most private sector businesses are run by non-Omani citizens, who have demonstrated a reluctance to employ Omani citizens because of social values which put family before work and disdain certain occupations. Moreover, Omanis are said to demand better material benefits than are currently provided in the private sector.

There is, therefore, ample evidence that in order to meet the government goal of replacing expatriate workers with indigenous personnel and to prevent saturation of government sector, substantial numbers of Omani citizens will need to be equipped with higher education qualifications in various specialisations, along with a dramatic endeavour at gaining some alteration and changing the attitudes of Omani citizens towards private sector employment.

In conclusion, it has been established that the current capacity is insufficient to meet projected needs. There is also a suggestion that the problem may be compounded by Omani citizens' unwillingness to enter certain kinds of occupations and, indeed, to work in the private sector generally. Such attitudes could well distort the demand for higher education.

The concerns that emerge from this chapter demonstrate clearly the need for a better understanding of the social and economic considerations that may underlie demand for higher education, to which this study will contribute.

The methods adopted to explore these issues empirically will be explained in the next chapter.

CHAPTER FOUR
THE RESEARCH METHODOLOGY

4.1. Introduction

The aim of this chapter is to give a description of the procedures that were followed in this research, in order to collect the data needed to fulfil the research objectives.

Cohen *et al.* (2000: 73) emphasized that:

> *"There is no single blueprint for planning research. Research design is governed by the notion of 'fitness for purpose'. The purposes of the research determine the methodology and design of the research"*

The chapter has eight sections in addition to this introduction. The research questions are presented in Section Two. The benefits of combining quantitative and qualitative approaches are discussed in Section Three. The survey population and the procedures implemented to select the study sample are described in Section Four. In Section Five, the development and piloting of the questionnaire are outlined, issues of validity and reliability are considered, and the implementation of the data collection process is described. The statistical techniques used in the analysis of the data are then detailed in Section Six. The chapter also describes the techniques used to collect the data by semi-structured interviews, in Section Seven. The information obtained by documentary data is described in Section Eight. A summary of the chapter is given in Section Nine.

4.2. Research Questions

The major goal of this study is to investigate the factors influencing secondary school students' decisions to enter higher education, along with the implications that such decisions will have for higher education provision in Oman. Specifically, the study aims to identify the main factors influencing secondary school graduates' decisions in their final year to enter higher education in Oman. It, therefore, investigates the influence of economic, sociological, psychological, demographic, and institutional factors on their decisions to continue into higher education. To meet these objectives, the following questions were formulated to guide the research:

Q1.What are the main factors influencing secondary school students' decisions to enter higher education?

1a. Is there any influence of social factors (encouragement of parents, family and friends, family's socio-economic background) on secondary students' decisions to pursue higher education?

1b. Is there any influence of psychological factors (students' self-confidence in their ability and students' attitudes and perceptions towards higher education) on secondary students' decisions to pursue higher education?

1c. Is there any influence of economic factors (human capital theory and labour market conditions in Oman) on secondary students' decisions to pursue higher education?

1d. Is there any influence of institutional factors (specialisation of the students and teachers) on secondary students' decisions to pursue higher education?

Q2. Are there any differences between male and female secondary school students or between Arts and Science students in:

(a) their future plans and motivations to enter higher education or to work?

(b) their choice of the higher education programme, i.e. diploma or degree, they wish to attend?

(c) their choice of the higher education course, i.e. medicine, education etc., they want to study?

(d) their choice of the employment sector they wish to join after graduating from higher education?

(e) their choice of the country in which they wish to study?

(f) their choice of the institution where they wish to study in Oman?

Q3. Is there any influence of students' scholastic ability (academic attainment) on their decisions to enter higher education or to work?

Q4. Does the current capacity of higher education in Oman meet the aspirations of secondary graduates and labour market demand in relation to the findings of the study?

4.3 Research Design (Quantitative or Qualitative Methods)

Easterby-Smith, Thorpe and Lowe (1994:84) defined research designs by saying:

> *"Research designs are about organizing research activity, including the collection of data, in ways that are most likely to achieve the research aims"*

It was important at an early stage to decide on an appropriate means of gathering data, while keeping the research within the constraints of time and resources, as both were limited. With regard to data collection, some writers such as Creswell (1994), Kumar (1996), and Punch (1998) state that the literature on research methods tends to classify research tools into two main approaches, quantitative and qualitative, as primary sources of collecting the required data.

Blaxter *et al* (1996:60) made the following distinction between quantitative and qualitative research methods:

> *"Quantitative research is, as the term suggests, concerned with the collection and analysis of data in numeric form. It tends to emphasize a relatively large-scale and respective set of data, and is often, falsely in our view, presented as being about the gathering of 'facts'. Qualitative research, on the other hand, is concerned with collecting and analyzing information in as many forms, chiefly non-numeric, as possible, smaller numbers of instances or examples which are seen as being interesting or illuminating, and aims to achieve 'depth' rather than 'breadth"*

Cresswell (1994) suggested that quantitative research tends to use the deductive form of logic in addition to the concepts, variables and hypotheses that are selected before the study commences. He believes this is necessary as the purpose of the study is to develop generalizations that contribute to existing theory, and which will enable researchers to predict, explain and understand new phenomena. Cresswell (1994) also makes the distinction that in contrast to the above, qualitative research tends to use inductive logic, which means the informer should reveal the information, rather than it being identified in advance by the researcher. Thus, he believes that the information provided by the informer will provide a bounded context which in turn will lead to patterns or theories which will assist in explaining the studied subject area.

Not only do the two types of research differ in the form of logic used, but they also collect and present data in different forms. Maykut and Morehouse (1994) stated that

quantitative research is based on observations that are converted into separate units that can be compared to other units by using statistical analysis. While there may be modifications and variations on this general description of quantitative research, statistical analysis is a vital part of quantitative research. On the other hand, qualitative research generally looks at people's words and actions in narrative or descriptive ways, more closely representing the situation as experienced by the participants (Maykut and Morehouse, 1994).

The different nature of the two approaches tends to be reflected in sample size. Punch (1998) indicated that samples in quantitative approach are larger than in qualitative studies, thus generalization in quantitative methods through samples is important. In contrast, since the qualitative approach deals more with cases where the researcher attempts to get closer to what is being studied, samples are usually small. Consequently, Punch (1998:243) summarized the different strengths and advantages of each approach by saying:

> *"Quantitative data enable standardized, objective comparisons to be made, and the measurements of quantitative research permit overall descriptions of situations or phenomena in a systematic and comparable way... On the other hand, there are important strengths and advantages to the qualitative approach. Qualitative methods are flexible, more so than quantitative methods. Therefore, they can be used in a wider range of situations and for a wider range of purposes. They can also be more easily modified as a study progress. Because of their great flexibility, they are well suited for studying naturally occurring real-life situations"*

However, the differences between quantitative and qualitative methods do not mean that one method is better than the other, because which approach is the most appropriate depends upon the topic being investigated; what the study tries to find out, and the kind of analysis to be used in investigating the research. As Verma and Mallick, (1999:26-7) emphasized:

> *"The choice of a particular perspective has implications for the type of evidence to be collected and the mode of analysis used in the investigation of a research question or issue...The way research questions are formulated and the research agenda specified make it clear what approach is most appropriate and trustworthy"*

Thus, whichever approach is followed, i.e. quantitative, qualitative or both, it should be

clearly stated why the chosen methods are selected and how they serve the research questions and purposes.

Based upon the above, the researcher in this study weighed the advantages of each research method before deciding it was appropriate to use both methods of quantitative and qualitative data collection. With regard to the quantitative method, this study has followed a similar pattern to most previous research into factors influencing secondary school students' decisions to enter higher education, in that the main approach was using questionnaires (see for example, Carpenter and Western (1984), Al-Maskery (1992), Menon (1995), James (2001), and Bui (2002). This was because quantitative data were needed in order to measure secondary school students' attitudes toward higher education, as well as to explore, statistically, the relationships between secondary school students' attitude towards higher education and their gender, specialisation (Arts or Science) and the influence of socio-economic background on their intentions to enter or not to enter higher education.

Furthermore, the decision to apply the questionnaire as the main method of collecting data was based on the views of Kumar (1996), Cohen *et al.* (2000), and Saunders *et al.* (2000) about the advantages of this method. These include the following:

- Questionnaires enable data to be gathered from a large number of respondents in less time and at less cost than, say, personal interviews.
- Questionnaires returns can be completely anonymous. In some situations when sensitive questions are asked the anonymity of a questionnaire helps to increase the likelihood of obtaining accurate information (Kumar, 1996).
- Data can be collected in a standardized form that facilitates statistical analysis.

On the other hand, it is acknowledged that survey questionnaires are not without their limitations. The following are some identified possible disadvantages of the use of questionnaires, and how the researcher in this study tried to minimize these effects.

- If questions are vague or badly phrased, it may lead to misunderstanding and consequently unreliable responses (Kumar, 1996). To overcome this, the researcher ensured that he made himself available at all times to answer or clarify any questions raised by secondary school students taking part in his study.

- Questionnaires cannot probe deeply into respondents' attitudes and may not provide in-depth data. Because of this, the researcher decided to conduct semi-structured interviews as a second research method with volunteer participants, in order to enrich, clarify and gain more in-depth data related to the factors investigated in this study.

- Questionnaires have limited applicability, since they cannot be used on a population that is illiterate, very young, very old, or persons with mental or physical handicaps that would prevent them from filling in the questionnaire without assistance (Kumar, 1996). The researcher distributed the questionnaires to the secondary school students who were in the final year of schooling, because they are literate and able to understand and complete questionnaires, as they were developed and structured in a manner that would allow for usage with other age groups other than the specific one used in this study.

The questionnaire used as the main method of data collection in this study was distributed to groups of respondents by the researcher, after a brief introduction outlining the aim of the research. The following were the reasons why a personally-administered questionnaire was considered to be the best method of collecting the required data:

- The researcher was able to have personal contact with respondents. Had a different research method been implemented, such as a telephone or mail survey, the reported benefits of personal face-to-face contact would not have been possible. For example, Zikmund (1989, in Menon, 1995) asserted that there is a much higher response rate when the researcher is physically present, as opposed to research conducted via telephone or mail contact.

- Through administering questionnaires personally, there is a likelihood of more accurate information being collected, because the researcher has direct control over the administration process, and respondents can raise questions and seek clarification if necessary. Supporting this assertion, Zikmund (1989) advocates that there is also likely to be a willingness to co-operate for a longer period of time than in the case of impersonal telephone or mail surveys.

Furthermore, Bell (1993:85) supporting administering questionnaires personally, stated:

> *"There are distinct advantages in being able to give questionnaires to subjects personally. You can explain the purpose of the study, and in some cases questionnaires can be completed on the spot. You are likely to get better co-operation if you can establish personal contact"*

However, bearing in mind the distinction between quantitative and qualitative methods, and in order fully to fulfil the purpose of this study, the researcher believed that an additional tool was needed to explore more deeply the factors influencing secondary school students' decisions to enter higher education. It was decided to conduct semi-structured interviews in order to obtain a deeper and broader range of secondary school students' views and attitudes. Thus, the decision was made to combine qualitative and quantitative data collection methods into a single project, as they provide complementary modes of inquiry, data collection and analysis.

Such an approach is in line with the view offered by Punch (1998:247), who argued that by combining two methods researchers could have more confidence about their findings, as one method could be checked, compared and contrasted against the findings from the other.

Many writers on research methodology, for example Maykut and Morehouse (1994), Creswell (1994), and Punch (1998) advocate that combining research methods into a single project can be highly productive, resulting in greater methodological mixes that strengthen the research design. This because the strengths of quantitative research are seen as lying in its highly structured nature, its reliability, and the possibility of generalising findings, whilst the strengths of qualitative research are seen as in its investigative nature, its in-depth focus, and the detailed complexity of the data provided.

Moreover, Cohen *et al.* (2000:112) confirmed the importance of combining more than one single method when researching social sciences. They stated:

> *"By analogy, triangular techniques in the social sciences attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of both quantitative and qualitative data"*

In addition to questionnaires and interviews, the researcher also used the existing

governmental and non-governmental documentary data and statistics related to the economy, human resource and education in Oman (See section 4.8).

4.4 Selecting the Sample

The choice of a representative sample is a crucial decision that has to be taken by a researcher. Before elaborating on the issue of selecting a random sample, a brief overview about the study population is provided below.

4.4.1 Population

According to De Vaus (1993:60) the term population refers to 'all members of a group'. Thus, the population of a study is a group to whom the researcher plans to apply his/her research results, i.e. the target population of the study whose members are the people to be researched.

The population of this study was that of all final year students of public secondary schools in Oman. Private secondary schools were excluded from this study, because there are few of them and they are located in only one educational region, that is, the capital, Muscat. In addition, private school students were excluded because their studies are supported by they own families who can afford to pay all their study expenses. This fact means they come from a particular group which can be classified as a high income group, and if they were included in this study the result might not accurately represent the secondary school student population. Their inclusion would, therefore, distort the results.

In this study, the total number of the final year secondary school students during the academic year 2002/2003 was 37,776. Table 4.1 shows the distribution of the public secondary school population according to their gender and specialisation across the educational regions.

Table 4.1 Distribution of the public secondary school population according to gender and specialisation across educational regions

Educational Region	Sex	Specialisation		Total	Grand Total
		Arts	Science		
Muscat	Male	1192	2073	3265	6758
	Female	1393	2100	3493	
Albatinah	Male	2518	3698	6216	12544
	Female	2892	3436	6328	
Aldakhiliyah	Male	1060	1519	2579	5242
	Female	1108	1555	2663	
Aldahirah	Male	859	1026	1885	3756
	Female	795	1076	1871	
Alsharqiyah	Male	1062	1564	2626	5226
	Female	1150	1450	2600	
Dhofar	Male	1061	626	1687	3814
	Female	1588	539	2127	
Musandam	Male	70	95	165	354
	Female	106	83	189	
Alwusta	Male	44	22	66	82
	Female	5	11	16	
Total		**16,903**	**20,873**	**37,776**	**37,776**

However, it is not always possible to include the whole population in research due to the enormous amount of time, funding and effort involved as asserted by De Vaus (1993:60):

> *"One way of finding out about a group of people is to collect information from everyone in the group. For large groups of people this is prohibitively expensive and impractical"*

For this reason, Cohen *et al.* (2000) advocate that a representative sample is preferred, because this allows for the research to be more manageable. It is also easier to control errors and so achieving better results is more likely (De Vaus, 1993).

4.4.2 Sample

The selection of a representative sample is a vital decision that a researcher has to make, because an unrepresentative or biased sample could lead to invalid or less valid conclusions. Hence, it is necessary to make sure that the sample selected is as representative of a wider population as is possible (Verma and Mallick, 1999).

According to Cohen *et al.* (2000) judgements have to be made about four key factors in

sampling:

- The sample size. Cohen *et al.* (2000) state that generally, for populations of equal heterogeneity, the larger the population, the larger the sample that must be drawn.
- The representativeness and parameters of the sample. Here the sample must, in fact, represent the whole population in question and, therefore, the researcher must identify a suitable sampling frame, or provide a list of all cases in the population to be sampled based on research questions or objectives.
- The access to the sample. Here the researcher has to make sure that the access to sample is possible. As Cohen *et al.* (2000:98-99) asserted:

  > *"Researchers will need to ensure not only that access is permitted, but is, in fact, practicable...access to sensitive areas might not only be difficult but problematical both legally and administratively, for example, access to child abuse victims, drug addicts...access might also be denied by the potential sample participants themselves for very practical reasons, for example, a doctor or a teacher simply might not have the time to spend with the researcher"*

- The sampling strategy to be used. The researcher must decide which approach of sampling plan is to be used, i.e. probability samples or non-probability samples. In a probability sample, every member of the wider population has an equal chance of being included in the sample; the inclusion or exclusion from the sample is a matter of chance and nothing else (Cohen *et al,* 2000). In a non-probability sample, however, some members of the wider population will definitely be excluded i.e. every member of the wider population does not have an equal chance of being included in the sample. In probability samples the researcher wishes to make generalizations, because the aim is to achieve representativeness of the wider population. In contrast, in non-probability samples, the researcher targeting a particular group, such as a particular group of students or teachers, in the full knowledge that it does not represent the wider population; it simply represents itself (Cohen *et al,* 2000).

Selecting a random sample is not a process without risk, since there is a possibility of introducing errors or bias. Making a decision about the sample size is an important consideration facing a researcher. The question is how large a sample should be to

conduct a specific survey. According to Cohen *et al.* (2000:93) there is no clear-cut answer:

> *"There is no clear-cut answer, for the correct sample size depends on the purpose of the study and the nature of the target population under scrutiny"*

However, Kumar (1996) points out that surveys often set sample size around constraints, such as resources and time available to collect data.

With these considerations in mind, the researcher in this study used probability samples and decided to take 4 percent of the population of public secondary school students after excluding two educational regions (Musandam and AlWusta). Musandam and AlWusta regions were excluded due to their small number of final year secondary school students, with 354 students in Musandam and only 82 students in Al Wusta, whereas the numbers of students in the surveyed educational regions in this study were in the thousands (see Table 4.1 above). Moreover, there were some difficulties in surveying these two regions, such as remote desert areas and isolation, making the distance to be travelled prohibitive. In addition, it was considered that 4 percent of the population of the other regions, yielding a sample size of 1,494, was enough to be representative of the whole population. The size of the sample chosen is important to make the sample representative of the whole population, so that comparisons can be made between the groups and inferences drawn (Cohen *et al*, 2000). Furthermore, Punch (1998:105) stated that:

> *"The logic of quantitative sampling is that the researcher analyses data collected from the sample, but wishes in the end to make statements about the whole target population, from which the sample is drawn"*

There are various ways in which probability samples may be selected, such as simple random sampling, systematic sampling, stratified sampling, multistage sampling and cluster sampling (Saunders, Lewis and Thornhill, 2000).

In this study, a combination of sampling strategies was employed, beginning with stratification. The sampling frame of secondary school students was divided into six groups (strata) by educational region. Within each educational region group, the secondary school students were further stratified into subgroups (substrata) according to

their gender (males or females) and specialisation (Arts or Science). The distribution of the research population according to these criteria is detailed in Table 4.2 below

Table 4.2: Sampling frame of students according to their educational regions, gender, and specialisation

Educational region	Sex		Specialisation		Total	%	Number of target sample in each region
	Male	Female	Arts	Science			
Muscat	3265	3493	2585	4173	6758	18	270
Al-Batinah	6216	6328	5410	7134	12544	34	508
Al-Dakhiliyah	2579	2663	2168	3074	5242	14	209
Al-Dhahira	1885	1871	1654	2102	3756	10	149
Al-Sharqiyah	2626	2600	2212	3014	5226	14	209
Dhofar	1687	2127	2649	1165	3814	10	149
Grand total	**18,258**	**19,082**	**16,678**	**20,662**	**37,340**	**100**	**1,494**

The second step of the sampling procedure was multi-stage cluster sampling. The number of students in Muscat in the target population of this study was 6,758. Muscat constitutes 18% of the target population of 37,340. Thus, the required number as a representative sample for Muscat was 270 (18% of the sample of 1,494). The same calculation was implemented for all surveyed regions (See Table 4.2 above).

Four secondary schools (two boys' and two girls' schools) from each surveyed educational region were randomly selected using a table of random digits. The secondary school students in these schools were then listed in alphabetical order according to their specialisation (Arts or Science). After this, a systematic random sample of students was drawn. For example, in Muscat, the number of students in the selected schools was 1,250. Dividing this by the target sample in Muscat, 270, gives 5. So taking the start point as 5, every fifth student thereafter was selected until the required number in Arts was reached. Then the same procedure was implemented for Science students, after which it was implemented for all surveyed regions (See Table 4.2 above).

In order to reach the target sample of 1,494, a greater number of students were included in the survey as it was anticipated that not all the 1,494 would respond well to the questionnaire. To reduce the effect of wastage, 1,950 students were selected. Hence, in

total, 1,950 questionnaires were distributed in person by the researcher and the return was 100%. Examination of the returned questionnaires showed that the vast majority had been satisfactorily completed. However, 120 of the 1,950 were excluded from the final analysis, because too many answers had been left blank (See Table 4.3 below)

Table 4.3 Main study questionnaire distribution in all surveyed educational regions

Educational Region	Student population	%	Number of target sample in each region	Total of students Surveyed in each region	Valid return
Muscat	6758	18	270	309	284
Al-Batinah	12544	34	508	545	510
Al-Dakhiliyah	5242	14	209	275	260
Al-Dhahira	3756	10	149	273	258
Al-Sharqiyah	5226	14	209	280	265
Dhofar	3814	10	149	268	253
Total	**37,340**	**100**	**1,494**	**1,950**	**1,830**

4.5 Questionnaire Design and Administration

The measuring instrument used in the present study was the administered questionnaire which was mainly derived from Al-Maskery (1992) and Menon (1995). In addition, a few items were derived from James (2001) and Bui (2002).

Care was taken in the development of the questionnaire to ensure that it translated the research objectives into specific questions in line with the advice of Verma and Mallick (1999:117-8) who asserted that:

> *"The first step in constructing the questionnaire is to review the objectives of the study and the intended function of the questionnaire within it...In designing the questionnaire, the researcher should make every effort to ensure that the demands made are the minimum consistent with the research objectives"*

In addition, consideration was given to the questionnaire development, in terms of the questionnaire's content, structure, format, and sequence of the questions, in order to make sure that it achieved the desired goals of the study (See for example, Bell, 1993, Cohen et al, 2000, Zikmund, 2000, and Pallant, 2001).

The questionnaire was divided into six sections. All questions in the questionnaire were of the closed ended type. This type was considered appropriate because it is more

commonly used and easier to code for subsequent analysis (Verma and Mallick, 1999). A discussion of the contents of each section is given below.

Section A

In order to encourage respondents to proceed with the completion of the questionnaire, clear simple questions were placed in the first section as advised by Zikmund (2000:322) who emphasized that:

> *"The order of questions, or the question sequence, may serve several functions for the researcher. If the opening questions are interesting, simple to comprehend, and easy to answer, respondents' cooperation and involvement can be maintained throughout the questionnaire"*

In the first question, respondents were asked to specify their gender in order to see the effect of gender in the secondary school student's educational intentions toward higher education. The second question asked secondary school students to identify their specialisation among the two specialisations, namely Arts or Science. This question was necessary in that students' specialisation is often considered to have an effect on subsequent educational and career decisions (Menon, 1995).

Respondents were asked to indicate their registration status (Repeater or Pass) in the third question. This question was important in order to check whether there was any difference between secondary school students, in that repeaters are relatively older than pass students.

In the fourth question, respondents were asked to indicate the educational regions in which they were studying. This was necessary in order to maintain a record of the frequency with which respondents from each region appeared in the sample, to allow comparisons between these educational regions in relation to their effect on students' decisions to enter higher education to be made.

Section B

This section provided options that secondary school students might consider after secondary school. It was used to separate those secondary school students who intended to go on to higher education after secondary school from those intending to go to work. An alternative question No.2 (find employment and then participate in part-time higher education) was included for those secondary school students who wanted to go on to

higher education, but for one reason or another could not go directly after completion of secondary school. Secondary school students who intended to go on to higher education after secondary school and those who intended to find employment and then participate in part-time higher education were asked to continue and complete the remaining questions of the questionnaire. Those students who were identified as intending to work after secondary school were asked to go directly to sections E and F of the questionnaire.

Question No. 5 was intended to find out to what extent secondary school students are motivated to pursue higher education, reflected by their willingness to study at their parents' expense, or even by getting a loan in case they did not get a scholarship.

Section C

This section was designed to investigate whether human capital theory is reflected in secondary school student motivations and expectations to pursue high education, and in order to provide an answer for question No. 1c of this study. This section was based on the instrument of Al-Maskery (1992) with a number of omissions and changes to suit the context and purpose of the present study. According to Al- Maskery (1992:123):

> *"Human capital theory argues that people invest in themselves in form of education because they are motivated by economic incentives, personal developments, and other incentives such as career opportunities and social status"*

Blaug (1976) also asserted that the concept of human capital is the idea that people spend on themselves in diverse ways not for the sake of present enjoyments, but for the sake of future pecuniary and non pecuniary return. Therefore, in question No. 7 related to secondary school student motivations, secondary school students were requested to rate the degree of importance they attached to each reason motivating them to pursue higher education in a 5 point likert scale with values of 1= Not at all important to 5= Extremely important. Some items in this question referred to pecuniary returns as implied by human capital, such as item No. 8 (to earn a high salary), whereas some items represented non-pecuniary returns of education, such as item No. 9 (personal development), item 1 (to fulfil my parents' wishes) and item No. 5 (to get a better job).

Regarding secondary school students' income expectations, in question No. 8,

participants were asked to estimate how much they would earn per month if they got a job after secondary school, and how much they would earn per month if they got a job after they gained a higher education qualification. This question represents the opportunity cost of attending higher education. As mentioned earlier in Chapter Two, it was not possible to apply the 'cost-benefit analysis' method in this study, since there are no direct costs paid by secondary school students to enter higher education, due to the free higher education in Oman. Alternatively, therefore, these two questions about income expectations were asked in order to examine the applicability of the concept of Human Capital Theory.

According to the Ministry of Civil Service (2003) a realistic expectation of monthly salary, for secondary school graduates, is between R.O. 120-300 for employees working in a government ministry under the civil service pay scale. It is difficult to assess the level of salary in the private sector, because scales are not established for each level of education (Al-Maskery, 1992). However, a realistic average monthly salary for secondary school graduates if they worked in the private sector is about RO 120-200, according to the researcher's experience.

On the other hand, for higher education graduates, respondents could expect a realistic monthly salary of between RO 400-500 or RO 501- 600, according to the civil service pay scale or even over R.O. 600 in some jobs, such as the Army or Security (Ministry of Civil Service, 2003). These estimates were used in formulating response options.

Question No. 9, in what sector would students want to be employed after completing higher education, was used to see whether the students would vary in their choices and to provide an answer to research question No. 2d. As mentioned by Al-Maskery (1992), the public sector is the dominant employer of Omani graduates and non-graduates because of the perceived advantages which can be gained in this sector compared with private sector, such as higher salary; social prestige; good working hours; promotions; higher education opportunities; good annual leave and better retirement benefits.

The next question, Question No. 10: the advantages which are most likely to be gained in the public sector (government sector) in Oman, was used to assess the awareness of the respondents about the importance of getting a job in this sector, which has these advantages. This was in order to see whether or not human capital theory was reflected

in their motivations and expectations of higher education.

Section D

This section was included in order to provide an answer to research question No. 2. In this section, secondary school students were asked to identify the programme of higher education (Diploma or Degree and above) they would like to attend (question No.11), and in questions No. 12, No. 13 and No. 14 respectively, secondary school students were requested to identify the country and the course they would wish to study. It was hypothesized that comparisons of secondary school students on their decisions of higher education programme, place of study and their preferred field of higher education courses could reveal differences in their general attitudes toward higher education, particularly between males and females, and the influences of their specialisation (Arts or Science) in secondary school. In addition, it was used in order to assess and compare secondary school students' preferred field of higher education courses and the actual needs of the labour market in Oman in light of the existing of huge number of non-Omani employees.

Section E

This section contained some attitude statements on issues concerning factors influencing secondary school students' plans after secondary school education. It was designed to provide an answer to research question No. 1. This section was based on the instruments of Al-Maskery (1992), Menon (1995), James (2001) and Bui (2002) with some omissions and changes to suit the context of Omani culture and the purpose of the present study.

In constructing this section, a Likert scale was used. This is one of three types of scale that measure attitude: the Likert, Thurstone and Guttman scale (Kumar, 1996). The Likert scale is the most common, because it is easy to construct. Furthermore, Likert-type scales have been very popular as a means of measuring human attitudes (Bell, 1993, and Cohen et al, 2000). Zikmund (2000:191) defined the Likert scale as:

> *"A measure of attitudes ranging from very positive to very negative designed to allow respondents to indicate how strongly they agree or disagree with carefully constructed statements relating to an attitudinal object"*

With Likert scaling, respondents are presented with number of statements which appear to relate to a common theme; they then indicate their degree of agreement or disagreement on a five-or seven-point range (Bryman and Cramer, 1997:55). The researcher adopted a 5-point version. This decision was based upon Verma and Mallick (1999:119) who stated that:

> *"The five-point scale is the most practical for most common purposes"*

Secondary school students were requested to indicate their degree of agreement or disagreement for each statement by using a 5-point Likert scale with a value 1= (Strongly Disagree) to 5 = (Strongly Agree). The statements covered several sources of factors influencing educational plans, such as sociological, psychological, economic, and institutional. Statements relating to these factors were arranged randomly throughout the questionnaire, to avoid bias induced by respondents becoming aware of the specific factor being examined. The distribution of statement items was as follows:

Sociological factor items in the questionnaire:

A. Parents and family:

Item number in the questionnaire	Items
4	My parents/guardians influenced my future plan to continue onto higher education
19	My parents/guardians think higher education brings social status
35	My parents/guardians believe that investment in higher education will ensure me a better future
38	My parents/guardians have a direct input into my future plans
46	My parents/guardians do not encourage me to pursue higher education
48	My parents/guardians believe in education for its own sake
50	My wider family influence me to go on to higher education

The Parents and family sub-scale: contained 7 items. Six items were taken from Menon (1995) and item No. 50 (My wider family influence me to go on to higher education) was added by the researcher. This item was considered an important addition to suit the Omani culture, where the influence might occur from the extended family and not just from the parents alone.

B. Friends:

Item number in the questionnaire	Items
7	My friends had a direct influence upon my future plans
15	My friends influenced me to go on to higher education
20	Many of my friends are doing higher education degrees
29	Many of my friends will not be continuing on to higher education
44	Most of my friends will probably go on to higher education

The Friends sub-scale: contained 5 items. Items No.7 and No. 29 were taken from Menon (1995) and item No. 44 was taken from James (2001). Items No.15 and No. 20 were added by the researcher.

Psychological factor items in the questionnaire:

A. Students' self-confidence in their ability:

Item number in the questionnaire	Items
1	I am good at school work
12	I am not good at school work
22	I believe that I have the ability to pursue studies at higher education level
27	I believe that I have an aptitude for higher education studies
37	I am not a hard working student
47	I believe that I have good intellectual abilities

The Students' self-confidence in their ability sub-scale: contained 6 items that were taken from Menon (1995).

B. Students' attitudes and perceptions towards higher education:

Item number in the questionnaire	Items
2	I believe that it is necessary to continue in higher education in order to improve as a person
6	I think that even without gaining higher education degree, I can get a good job
10	I believe that if I get a higher education degree I will bring honour to my family
14	I believe that a higher education qualification will enable me to contribute to society and to help other people
26	I believe that I will get respect/status if I acquire a higher education qualification
30	I think that people ought to pursue higher education in order to develop as individuals
31	I believe that only academically good students should continue onto higher education
41	I believe that higher education does not necessarily bring higher social status
42	I believe that students in higher education do not have interesting life
49	I would wish to go on to higher education because it is possible to gain a free scholarship

The Student's attitudes, perceptions toward higher education sub-scale: contained 10 items. Items Nos.2, 14, 26, 30, 31, 41 and 42 were taken from Menon (1995), and item No.10 was taken from Bui (2002). Items Nos.6 and 49 were taken from Al-Maskery (1992).

Economic factor items in the questionnaire:

A: Human Capital Theory:

Item number in the questionnaire	Items
3	I think that economic benefits are the most important advantage of having higher education
11	A higher education degree would improve my chance of getting a good job with a high salary
18	I believe that gaining higher education is an investment for my future
23	It is my opinion that having higher education degree is important for my financial security
33	I would wish to go onto higher education to improve my chance of future job prosperity
36	A higher education degree will improve my chances to obtain better job opportunities
39	I certainly would wish to get employment immediately after graduation in order to start earning money

The Human capital theory sub-scale: contained 7 items. Item no.3 was taken from Menon (1995), whereas items Nos. 11, 18, 23, 33, 36, and 39 were taken from Al-Maskery (1992).

B: Labour Market Conditions in Oman:

Item number in the questionnaire	Items
8	The existence of non-Omani professional employees in Oman is a motivating reason for me to pursue higher education studies
16	I am really keen to continue with my education in order to replace the non-Omani professionals.
17	Labour market conditions (existence of non-Omani professionals) is one of my reasons for pursuing higher education
25	I believe that without higher education it is difficult to replace professional non Omani employees
32	I think it is good to have non-Omani professionals in labour market
45	I think that if not enough students go to higher education, the existence of non-Omani professionals will continue

The Labour market conditions in Oman sub-scale: contained 6 items. All were added by the researcher. The information on the conditions of the labour market in Oman and the extensive reliance on non-Omani professionals, derived from documentary data (see Chapter Three) was used to develop this sub-scale, in order to explore whether these conditions influence the secondary school students' decisions to enter higher education.

Institutional factor items in the questionnaire:

A: Specialisation of students (Arts or Science):

Item number in the questionnaire	Items
5	The subjects I study in secondary school encourage me to pursue higher education studies
13	The specialisation I study at secondary school influenced my future plans
24	The educational system at the secondary school encourage me for higher education studies
43	The subjects I study in secondary school influence my future plans

The Specialisation of the students (Arts or Science) sub-scale: contained 4 items. Items Nos. 13 and 24 were taken from Menon (1995), with items Nos.5 and 43 added by the researcher.

B: Teachers:

Item number in the questionnaire	Items
9	My teachers persuaded me to go on to higher education
21	My teachers encouraged me to aim for higher education
28	My teachers influenced my future plan to continue on to higher education
34	My teachers usually emphasise the importance and benefits of higher education
40	My teachers talk about their interesting experience of higher education life

The Teachers' influence sub-scale: contained 5 items. Item No. 9 was taken from Bui (2002) and item No. 21 was taken from James (2001), whereas item No.28 was taken from Menon (1995). Items Nos. 34 and 40 were added by the researcher.

Because the use of only positive statements could be considered a possible source of bias, in that phrasing of a statement can often influence the responses provided, it was deemed necessary that some statements appeared as negations, i.e. No. 12, whilst other appear as assertions, i.e. No. 1. This was seen to be important based on Saunders et al (2000:295) who asserted that:

> *"You should, however, include both positive and negative statements so as to ensure that the respondent reads each one carefully and thinks about which box to tick"*

Section F:

The last section of the questionnaire investigated familial background. As some secondary school students may have considered this information as personal or confidential and therefore off-putting, it was placed at the end of the questionnaire. This was based on Zikmund (2000:332) who emphasized that:

> *"Personal questions should be postponed to the middle or end of the questionnaire"*

It was hoped that secondary school students would answer these questions as a final

offer in their willingness to contribute to this study. This section was designed to discover an answer for the study question No. 1.a. In the questions No. 16 and No. 17 secondary school students were asked to indicate their families' size, and the number of their brothers and sisters who were higher education graduates. This was seen as essential because the literature suggests that secondary school students who are from small families and who have graduated brothers and sisters are more likely to enter higher education, because they have better chances to get funding from their families, and also they have a model to follow from their brothers or sisters (See for example, Wales, Gayle, Berridge and Davies (2002), and Veen (2003)). The average family size in Oman is 8 persons (Ministry of National Economy, 2002).

In questions Nos. 18, 19, 20, 21, 22 and 23, secondary school students were asked to indicate the highest level of education completed by their parents' and to identify their parents' sectors of employment, plus their parents occupation status. Hayden and Carpenter (1990) suggests that secondary school students who are from high socio-economic status (parents with a high level of education, occupational and income status), are more likely to enter higher education, because they are influenced by their families and because they have a suitable environment to do so.

In question No. 24, secondary school students were asked to indicate their family's estimated monthly income. As suggested by the review of literature, such as Chevalier and Lanot (2002), secondary school students who are from high income families are more likely to enter higher education because they have money to fund their studies. The average income for a family in Oman is 400–700 Omani Rials (Ministry of National Economy, 2002).

Question No. 25 (the last question in the questionnaire), about the secondary school student's secondary school scores during the first semester, was used because it was hypothesized that the level of these scores might give some indications of which group of secondary school students (male / female) have higher scores and whether secondary school scores can explain variation in secondary school students' motivations and expectations. In other words, this question would be used to measure the influence of secondary school students' academic ability on their decisions to enter higher education. This question provided an answer to research question No. 3. This question was placed

as the last question because it was thought that secondary school students were likely consider it confidential or sensitive, and if it had been placed at the beginning of the questionnaire, they might have been discouraged from continuing with the questionnaire.

The questionnaire was translated into Arabic by a professional translator and the translation was double-checked to avoid any confusion in the questionnaire items (see Appendix 4).

4.5.1 Validity

Pallant (2001:6) states that "The validity of a scale refers to the degree to which it measures what it is supposed to measure". Validity, therefore, refers to the suitability of the research instrument, i.e. the ability of the instrument to measure that which it was designed to measure.

There are many types of validity, such as face, content, criterion, concurrent, predictive, construct, and convergent validity (Kumar, 1996, Cohen et al, 2000, and De Vaus, 2001). However, the most common types used are the face and content validity. These two types of validity of the questionnaire are discussed below:

Face and content validity:

It has become increasingly common to use a panel of experts in the content area to evaluate and document the face and content validity of instruments, because there are no completely objective methods of ensuring adequate content coverage of an instrument. Both face and content validity can be tested through the judgement of the panel of experts to evaluate the validity of instruments (Zikmund, 2000).

Face validity refers to whether the instrument looks as though it is measuring the appropriate construct. As Bryman and Cramer (1997:66) stated:

> *"At the very minimum, a researcher who develops a new measure should establish that it has face validity- that is, that the measure apparently reflects the content of the concept in question"*

For this reason, the aim was to test the clarity of the items and their relevance to their scales. The researcher tested the face and the content validity of the questionnaire

through the following procedures:

- In order to check on the clarity of the questions and their appropriateness to secondary school students in Oman, as well as ensuring that their meaning reflected the content of the scales, the researcher and his supervisor scrutinized the questionnaire. Clear instructions were given in each section of the questionnaire where items had been classified into sections according to the objectives of the study. Also, simple wording was selected to facilitate respondents' understanding of the items and such understanding was made as simple as possible.

- The questionnaire was also shown to a panel of experts at the University of Hull. Their comments were considered and some of the questions and statements were modified accordingly.

- The questionnaire of this study was reviewed by a panel of experts in the field of education in Oman. Furthermore, the researcher discussed the questionnaire with the panel in Oman, question by question and statement by statement, to ensure that the questions were understandable, appropriate, and relevant to the measured scales. These experts in Oman judged the questionnaire and their judgments were followed by interviews to discuss their ideas and comments on the questionnaire.

Because there is no clear-cut definition of urban and rural in Oman, the panel of experts in Oman deleted a question about the area of residence (city or village) from section A of the questionnaire, before the questionnaire was piloted. In addition, they suggested adding a question in section D (No.13) asking, if the secondary school students wanted to continue their higher education in Oman, which higher education institutions they would like to go to. This was added to get an idea about the preferred field of higher education and preferred higher education institution in Oman, in relation to the finding of this study.

The comments of the experts resulted in some questions and statements being modified to meet the aims and objectives of the questionnaire and the research study. In this process, two key issues were considered: whether individual items were related and

suitable in terms of the constructs, and whether they adequately measured all the dimensions of the construct. Once these were satisfied, it was deemed that the questionnaire was suitable for its purposes and was, therefore, valid, based on Zikmund (2000:282) who maintained that:

> *"Face validity or content validity refers to the subjective agreement among professionals that a scale logically appears to reflect accurately what it purports to measure. The content of the scale appears to be adequate. When it appears evident to experts that the measure provides adequate coverage of the concept, a measure has face validity"*

In addition to the face and content validity, the researcher made sure that the questionnaire has also concurrent validity. For this purpose, he applied factor analysis as can be seen in section 4.5.4. The new version of the questionnaire resulting from modification as recommended by the panel of experts was tested in a pilot study, as explained in the next sub-section.

4.5.2 Piloting the questionnaire

Through out the literature review on research methods, the importance of a pilot study was emphasized. For example, Youngman (1994) described piloting as an integral part of any research including a questionnaire survey. Supporting this idea, Blaxter *et al.* (1996:122) stated that:

> *"You may think that you know well enough what are you doing, but the value of pilot research cannot be overestimated. Things never work quite the way you envisage, even if you done them many times before, and they have a nasty habit of turning out very differently than you expected"*

Undertaking a pilot study of the questionnaire improves its content and avoids ambiguities. Thus, the piloting of the questionnaire in this study was conducted to serve the following purposes:

- To check how long the questionnaire would take to complete;
- To determine any ambiguities and identify the questions which were ambiguous;
- To make sure that the instructions were clear;
- To eliminate or remove questions which did not yield usable data;

- To add questions or items to fill any data gaps and
- To reword unclear questions in order to make them understandable in the main study.

Before piloting the questionnaire, a letter from the Ministry of Education in Oman was obtained, stating the researcher's intention and the purpose of his study, as the regulation in the country requires Government permission to conduct research in any organization. This letter was important to facilitate the researcher's access to the selected secondary schools, particularly girls' secondary schools (see Appendix 1). The pilot of the questionnaire was conducted in the capital of Oman, Muscat, in February 2003. To gain the maximum feedback about the questionnaire, it was decided to have a large piloting sample, therefore, 200 secondary school students were selected randomly from four secondary schools (two boys' and two girls' schools) as illustrated in Table 4.4 below. The researcher used the same technique explained in section 4.4.2, in respect of selecting the pilot sample.

Table 4.4 Pilot study sample

Variables		Students' number	%	Total
Student Sex	Male	94	49.0	**192**
	Female	98	51.0	
Secondary school specialisation	Arts	94	49.0	**192**
	Science	98	51.0	
Registration status	Repeater	11	5.7	**192**
	pass	181	94.3	

The researcher did not pilot the study in one of the main study schools. This was in order to avoid the spread of information about the questionnaire amongst secondary school students in the schools which would be used in the main study, and so avoid a possible source of response bias. This decision was based on Cohen *et al.* (2000:261) who advised:

> *"Pilot the questionnaire, using a group of respondents who are drawn from the possible sample but who will not receive the final, refined version"*

Before the questionnaire was distributed, the researcher personally explained the purpose of the study and provided a brief introduction on its topic, asking secondary

school students to read the instructions of each section carefully and let the researcher know of any difficulties, such as ambiguity in any questions or items. The researcher emphasized the importance of the study to their country and requested the students to be very honest in their responses. Respondents were promised total confidentiality.

At the end of the questionnaire, secondary school students were requested to list the questions which were difficult to understand. This was to obtain feedback from the respondents, to ensure that all questions were easy to understand and also to avoid any ambiguity in the questions in the final copy of the main study questionnaire.

The average time taken by secondary school students to complete the questionnaire was 30-35 minutes. The results of the pilot study pointed to the need for minor changes to the content of the questionnaire. The number of questions was reduced, and several questions were modified in order to achieve better comprehension of their content on the part of the respondents. The comments based on the feedback made by all participants resulted in the following changes:

Section B

In question No. 5, some participants had lost both or one of their parents and they commented upon option 1 (Study supported at my parents' expense). Therefore, the word 'guardians' was added to this option modifying it to: Study supported at my parents'/guardians' expense, in order to suit different participants' circumstances.

Moreover, participants suggested adding a new option to question 5 to express their desire to continue higher education and that was (Repeat secondary in order to get better grades and then pursue higher education).

Section C: (A)

Participants were asked in question No. 7 to add any other reasons behind their decisions to go to higher education. Three more reasons were added by them: No. 19 (To help to develop the country), No. 20 (To get social prestige) and No. 21 (To replace non-Omani professional employees).

Section C: (B)

In question No. 9, four options were given to participants to indicate the sector they

would like to be employed in after completing their higher studies. One more option was added by participants to this question, namely, Work abroad.

Section D

In question No. 12, four options were offered to participants to identify the country in which they would like to continue their higher education. One more option was added by them, and that was Distance learning.

In question No. 14 participants were asked to add any other higher education courses they would like to study. Four higher education courses were added by them and these were Accounting, Aeronautics, Military Science and Nursing.

Section E

Due to the loss of both or one of the participants' parents, items Nos. 4, 19, 35, 38, 47 and 49 were modified in order to fit with different participants' circumstances, i.e. (guardians) was added to these items by the researcher.

The word 'prepared' in item No. 24 (The educational system at the secondary school 'prepared' me for higher education studies) was changed to 'encouraged' because it was considered unclear; as students had not been to higher education, they could not gauge whether the educational system at secondary school 'prepared' them for higher education or not.

In item No. 39 (I certainly would wish to get employment immediately after graduation in order to start earning money) a clarification was made by adding (graduation from higher education) as 'graduation' in the Arabic language, could refer to graduation from secondary school.

In the case of item No. 44 (I believe that I do not have any ability for higher education), in this section, the alpha value of the subscale was dramatically improved when this item was deleted. On the basis of the alpha tests in the pilot study, it was decided to delete item 44, and accordingly this section ended with 50 items in the main study (see Appendix 3).

Section F

In question No. 16 a clarification was made to the meaning of 'family' in this study, which only included father, mother, brothers and sisters, as in Omani culture 'family' could include, for example, aunts, uncles, cousins, grandparents and so on.

In questions Nos.18, 19, 20, 21, 22 and 23, the word 'guardian' was added to fit all participants' circumstances, in case of the death of one or both of their parents.

Questions 24 and 25 about father's and mother's monthly incomes were merged into one question to be: What is your family's total estimated monthly income?. This merger was done to suit the Omani culture, where some brothers and sisters work and live with their parents and contribute to the budget of the family and, therefore, increase the family income.

An English version of the final questionnaire is provided in Appendix (3).

4.5.3 Reliability of the questionnaire

Cohen *et al.* (2000:117) defined reliability in quantitative research as:

> *"A measure of consistency over time and over similar samples. A reliable instrument for a piece of research will yield similar data from similar respondents over time"*

Supporting this Bryman and Cramer (1997:63) further advocated that the reliability of a measure must refer to its consistency. Such reliability often involves two separate aspects, i.e. external and internal. External reliability refers to the degree of consistency of a measure over time. That is, the researcher should expect the same results if he/she applied the same scale on different occasions, or with a different set from an equivalent population. Internal reliability, which is more commonly used, when connected with multiple-item scales, raises the question of whether each scale is measuring a single idea, and therefore, whether the items that make up the scale are internally consistent.

Cronbach's Alpha coefficient is one of the procedures commonly used to determine measurements of reliability of questionnaires (Bryman and Cramer, 1997). This is because Cronbach's Alpha coefficient measures the internal consistency and homogeneity (Pallant, 2001) of a group of items combined to form a single scale: Cronbach's Alpha coefficient ranges from 0.0 to 1.0, where 1.0 indicates perfect

agreement. Thus, a high alpha measurement means that the inter-item correlation is high, thereby indicating that the more internally reliable is the scale. Conversely, a low alpha measurement gives an indication of no inter-item correlation for that dimension, and thereby the scale is less internally reliable (Bryman and Cramer, 1997). Based upon this, in this study Cronbach's Alpha coefficient was used to measure the reliability of the eight sub-scales of Section E, in order to determine how well the items in each sub-scale measure the same dimension.

The eight sub-scales were intended to measure different aspects of factors influencing secondary school students' decisions' to enter higher education. These sub-scales were: Parents' and Family influence, Friends' influence, Students' Self-confidence in their ability, Students' Attitudes and Perceptions towards Higher Education, Human Capital Theory, Labour Market Conditions in Oman, Specialisation influence (Arts or Science) and Teachers' influence. The reliability of these sub-scales using Cronbach's Alpha coefficient is shown below in Table 4.5.

Table 4.5 Cronbach's Alpha for the sub-scales of pilot study

Sub-scale	**Alpha**
Parents and Family	0.65
Friends	0.54
Students' self-confidence in their ability	0.71
Students' attitudes and perceptions towards higher education	0.62
Human Capital Theory	0.73
Labour market conditions in Oman	0.51
Students' specialisation	0.61
Teachers	0.76
Overall Alpha for the whole scale	**0.84**

As can be seen from the table, Cronbach's Alpha coefficient for the eight subscales ranged from 0.51 to 0.76. The final overall Cronbach's Alpha coefficient for the whole scale was 0.84. This value was very acceptable and indicated a statistically reliable scale according to Pallant (2001:85) who stated that:

> *"One of the most commonly used indicators of internal consistency scale is Cronbach's alpha coefficient. Ideally, the Cronbach alpha coefficient of a scale should be above 0.7"*

Furthermore, this value was also acceptable according to Bryman and Cramer (1997:63) who maintained that:

> *"A correlation coefficient is then generated, which varies between 0 and 1 and the nearer the result is to 1- and preferably at or over 0.8- the more internally reliable is the scale"*

Therefore, the resulting scale was composed of 50 items, after deleting item No. 44 (I believe that I do not have any ability for higher education). This scale was used in the main study (see Appendix 3).

4.5.4 Factor analysis

Factor analysis was used to verify the validity of the four main factors (economic, sociological, psychological, and institutional factors) scales. The 51 items from section E of the pilot study questionnaire were carefully analysed. The four main areas built into the questionnaire were two economic sub scales; two sociological sub scales; two psychological subscales and two institutional sub-scales. The initial scales in the questionnaire had been derived from the literature and were constructed to assess eight underlying sub-scales.

The 192 responses in the pilot study were analysed using an *a priori* approach to factor analysis, as this assumes that the items have concurrent validity. The items from each of the four dimensions were subjected to a factor analysis in turn. In each case the factor analysis was instructed to extract two factors in line with the *a priori* dimensions from the review of literature. Principal components analysis with Varimax rotation was used, and factor loadings of less than 0.3 were suppressed. The data from these four factor analyses are presented below in Tables 4.6, 4.7, 4.8 and 4.9 respectively

Table 4.6: Factor analysis of economic sub-scale measure (sorted factor loadings)

Component	Item No.	Items	Factor loadings	
			1	2
Human Capital Theory	23	It is my opinion that having higher education degree is important for my financial security	.811	
	11	A higher education degree would improve my chance of getting a good job with a high salary	.757	
	36	A higher education degree will improve my chance to obtain better job opportunities	.747	
	33	I would wish to go onto higher education to improve my chance of future job prosperity	.682	
	18	I believe that gaining higher education is an investment for my future	.565	
	39	I certainly would wish to gain employment immediately after graduation in order to start earning money	.395	
	3	I think that economic benefits are the most important advantage of having higher education	.390	
Labour market conditions in Oman	17	Labour market conditions (existence of non-Omani professionals) is one of my reasons for pursuing higher education		.761
	8	The existence of non-Omani professional employees in Oman is a motivating reason for me to pursue higher education studies		.706
	16	I am really keen to continue with my education in order to replace non- Omani professionals		.612
	32	I certainly would wish to get employment immediately after graduation in order to replace professional non-Omani employees in my own field		.561
	25	I believe that without higher education degree it is difficult to replace professional non Omani employees		.413
	46	It is my opinion that without gaining higher education degree it is not possible to Oman-ise the posts which are currently occupied by professional non-Omani employees		.341

It can be seen from Table 4.6 that factor 1 contains seven items from the Human Capital Theory component. Four of these items are loaded heavily and three are loaded moderately. With regard to factor 2, it contains six items from the labour market conditions in Oman component of which half are loaded heavily and the other half are loaded moderately.

Factor analysis of sociological sub-scale measure is presented below in Table 4.7.

Table 4.7: Factor analysis of sociological sub-scale measure (sorted factor loadings)

Component	Item No.	Items	Factor loadings	
			1	2
Influences on my future plans (Parents and family)	38	My parents have a direct input into my future plans	.757	
	35	My parents believe that investment in higher education will ensure met a better future	.652	
	19	My parents think higher education brings social status	.506	
	51	My wider family influence me to go onto higher education	.584	
	7	My friends had a direct influence upon my future plans	.577	-.347
	4	My parents influenced my future plan to continue onto higher education	.473	
Following those whose views I respect (Friends)	29	Many of my friends will not be continuing onto higher education		.726
	45	Most of my friends will probably go onto higher education studies		.664
	15	My friends influenced me to go onto higher education		.600
	20	Many of my friends are doing higher education degrees		.448
	47	My parents do not encourage me to pursue higher education		.414
	49	My parents believe in education for its own sake		.321

In respect of the *a priori* scale of sociological factors, the items in the two factor solution loaded a little differently from what had been expected from the review of literature. Our respondents appeared to interpret these items differently from how they had originally been conceived. From this pilot analysis, it appeared that it would be better to rename these two subscales. The first subscale is about 'Influences on my future plans' and the second is more about 'Following those whose views I respect'. Nevertheless, both of these sub-scales represent issues in the sociological domain.

It can be seen from the table above that factor 1 contains six items of the Parents and Family component. Two items are loaded heavily and three are loaded moderately. Additionally, one item from friend component (item No. 7) is loaded moderately on this factor. Factor no. 2 contains six items of the Friends component. Three items are loaded heavily and one item is loaded moderately. Another two items (Nos. 47, 49) came from

the Parents and Family component and loaded moderately on this factor.

Factor analysis of the psychological sub-scale measure is presented below in Table 4.8.

Table 4.8 Factor analysis of psychological sub-scale measure (sorted factor loadings)

Component	Item No.	Items	Factor loadings	
			1	2
Students' self-confidence in their ability	27	I believe that I have an aptitude for higher education studies	.707	
	12	I am not good at school work	.674	
	22	I believe that I have the ability to pursue studies at higher education level	.671	
	44	I believe that I do not have an ability for higher education	.645	
	1	I am good at school work	.570	
	37	I am not a hard working student	.519	
	48	I believe that I have good intellectual abilities	.472	
Students' attitudes and perceptions towards higher education	26	I believe that I will get respect/status if I acquire a higher education qualification		.698
	31	I believe that only academically good students should continue onto higher education		.557
	2	I believe that it is necessary to continue in higher education in order to improve as a person	.401	.515
	50	I would wish to go onto higher education because it is possible to gain a free scholarship		.512
	42	I believe that students in higher education do not have interesting life		.470
	30	I think that people ought to pursue higher education in order to develop as individuals		.425
	10	I believe that if I get a higher education degree I will bring honour to my family		.417
	41	I believe that higher education does not necessarily bring higher social status		.337
	6	I think that even without gaining a higher education degree, I can get a good job		.318
	14	I believe that higher education qualification will enable me to contribute to society and to help other people		.311

As can be seen from the table above, factor 1 contains seven items of the Students' self-confidence in their ability component. Four items are loaded heavily and three are loaded moderately. Factor 2 contains ten items of Students' attitudes and perceptions

towards higher education. One item is loaded heavily and nine are loaded moderately.

Factor analysis of the Institutional sub-scale measure is presented below in Table 4.9.

Table 4.9: Factor analysis of institutional sub-scale measure (sorted factor Loadings)

Component	Item No.	Items	Factor loadings	
			1	2
Teachers' influence	9	My teachers pursued me to go onto higher education	.814	
	21	My teachers encouraged me to aim for higher education	.781	
	28	My teachers influenced my future plan to continue onto higher education	.712	
	34	My teachers usually emphasise the importance and benefits of higher education	.701	
	40	My teachers talk about their interesting experience of higher education life	.504	
Specialisation Art/Science	13	The specialisation I study at secondary school influenced my future plans		.728
	5	The subjects I study in secondary school encourage me to pursue higher education studies		.623
	24	The educational system at the secondary school prepared me for higher education studies	.308	.545
	43	The subjects I study in secondary school influence my future plans		.481

From the table above it can be seen that factor 1 contains five items of the Teachers' influence component. All except one of these items are loaded heavily. Factor 2 contains four items of the Specialisation component. Two items are loaded heavily and two are loaded moderately.

After the factor analysis, again each of the eight sub-scales was subjected to a reliability analysis using Cronbach's Alpha coefficient test and the outcomes of these tests are presented below in Table 4.10.

Table 4.10: Pilot study reliability after factor analysis

No	Sub-scale	No. of Items	Reliability of the sub-scales
1	Human Capital Theory	7	0.73
2	Labour market conditions in Oman	6	0.51
3	Influences on my future plans (Parents and Family)	7	0.65
4	Following those whose views I respect (Friends)	5	0.54
5	Students' self-confidence in their ability	7	0.71
6	Students' attitudes and perceptions toward Higher Education	10	0.62
7	Specialisation (Art / Science)	4	0.61
8	Teachers	5	0.76
N. of cases = 192		**N0. of item =51**	**Alpha=0.87**

As can be seen from the table above, the overall reliability of the whole scale as measured by Cronbach's Alpha coefficient was 0.87, which is a very acceptable value and indicated a statistically strong scale according to Pallant (2001), and Bryman and Cramer (1997).

In addition to the Cronbach's Alpha coefficient test, a test of 'trustworthiness' was also applied to ensure that the secondary school student respondents to the questionnaire were treating the instrument carefully and that their answers could be accepted as having integrity.

To that end, items 1 (I am good at school work) and 12 (I am not good at school work) and 4 (My parents influenced my future plan to continue on to higher education) and 47 (My parents do not encourage me to pursue higher education) were inserted into the questionnaire, so that when the negative item in each pair was recoded, the respondents' mean scores on each pair of items could be compared. The closer the two mean scores, the more trustworthy the responses could be assumed to be. The outcome is shown below in Table 4.11.

Table 4.11: Test of trustworthiness

Item number	Statement	Mean
1	I am good at school work	**3.89**
12	I am not good at school work	**3.90**
4	My parents influenced my future plan to continue onto higher education	**4.26**
47	My parents do not encourage me to pursue higher education	**4.44**

It can be seen from Table 4.11 that the mean for item 1 was 3.89 and for item 12, was 3.90. The means for items 4 and 47 were 4.26 and 4.44 respectively. This suggests that the responses provided by the participants in this study were highly trustworthy.

4.5.5 Administration of the questionnaire

The administration of the survey questionnaire started on the beginning of April 2003 and lasted for six weeks, finishing around mid May 2003. Because of his awareness of the importance of the complete preparation of organizations involved in the preparatory steps and lines of communication between himself as the researcher and the educational regions, the researcher obtained official approval from the Ministry of Education. This was in the form of an official letter to the general directors of the intended survey educational regions explaining the purpose of the study and asking for their co-operation (see Appendices 2a-2f).

As the general directors responded very positively to the Ministry of Education's letter, there was a high level of willingness to be involved and to co-operate fully in the study. The researcher started by preparing the sampling frame for each surveyed educational region. This involved the head teachers of randomly selected schools in the different regions, as detailed earlier in section 4.4.2, being informed by their general directors about the study. Since the researcher preferred to administer the questionnaire himself, the head teachers were informed by him about the visit ahead of time. The researcher again explained the purpose of the study to head teachers and promised participants' confidentiality, in order to ensure the co-operation of secondary school students in the responses to the questionnaire. In April 2003, the researcher started visiting the regions. The first region to be visited was Muscat. Other regions were visited subsequently in the following sequence: Albatinah, Aldakhiliyah, Aldahirah, Alsharqiyah and finally

Dhofar Governorate. A week was needed to survey each region.

The questionnaires were distributed in person by the researcher to selected secondary school students in each educational region, as mentioned earlier in section 4.4.2. The researcher provided a brief introduction on the topic of the study and explained its purposes. He ended by asking secondary school students to read the instructions of each section carefully and let him know of any ambiguity in any questions or items. The researcher emphasized the importance of the study and hence requested the secondary school students to be very honest in their responses. He promised participants' confidentiality. He then asked them to complete the questionnaire. The face-to-face contact with respondents allowed the researcher to probe or clarify when necessary, to obtain more accurate information and a greater amount of valid returns. Finally, the researcher collected the completed questionnaires immediately after the respondents had completed their contributions.

4. 6 Statistical Analysis of the Questionnaire Data

The Statistical Package for the Social Sciences (SPSS) for windows (Version 10) was used to carry out the analysis of data obtains by the questionnaires. SPSS is an extremely powerful programme. The decision to use SPSS for analysing and displaying data was based on Punch (1998:134) who emphasized that:

> *"SPSS is one of the most popular statistical packages, and can perform highly complex data manipulation and analysis with simple instructions. SPSS has a vast number of statistical and mathematical functions, scores of statistical procedures, and a very flexible data handling capability"*

After data were entered, the researcher double checked all data entries, and then ran frequency screening from the data to make sure that there were no missing cases (Pallant, 2001). Data obtained from the questionnaires were presented in two types: descriptive statistics and inferential statistics. A number of descriptive tools and procedures were utilised, such as descriptive cross-tabulation statistics, frequencies, percentages, means and standard deviations. In relation to the inferential analysis, the question arose of when parametric rather than non-parametric tests should be used in quantitative data analysis. Bryman & Cramer (1997:117) stated that:

> *"The term parameter refers to a measurement that describes the distribution of the population, such as the mean and variance"*

Parametric tests are more powerful tools in statistical analysis, as emphasized by Cohen *et al.* (2000:318). They stated that:

> *"Parametric tests are more powerful than non-parametric tests because they not only derive from standardized scores but enable researchers to compare sub-populations with the whole population...They enable the researcher to use powerful statistics in data processing e.g. means, standard deviations, t-tests, factor analysis, analysis of variance, and to make inferences about the results"*

Although parametric tests are also widely used in research, however, they "assume" that the data are interval or ratio and normally distributed, and the samples have equal variance (Brace, Kemp and Snelgar, 2000).

On the other hand, non-parametric tests do not require interval data or a normal distribution of the population, as Zikmund (2000:465) asserted:

> *"Non-parametric statistics: Statistical procedures that use nominal- or ordinal-scaled data and make no assumptions about the distribution of the population or sampling distribution"*

As these tests are also described as distribution free tests, they attempt to avoid reliance on any particular assumptions regarding the form of the underlying distribution or parameters (Bryman & Cramer, 1997; Zikmund, 2000).

Based on the above, it is clear that with interval or ratio data it is more appropriate to use a parametric test, whereas for nominal and ordinal data it is more appropriate to use a non-parametric test.

In this study, since a variety of kinds of data were collected, the researcher used both parametric and non-parametric tests. The types of tests which were used in inferential statistics and the reasons behind selecting them are described in the following discussion:

A. Parametric tests:

- **The t-test**

Among the parametric tests used, the researcher employed the t-test. Brace, Kemp and Snelgar (2000:72) defined the t-test as:

> *"...a parametric test used to determine whether two means are significantly different from one another"*

An independent sample t-test was used in this study to investigate differences in means between boys and girls, and between Arts and Science students, in relation to the motivation incentives scale: (economic, career, and self-development incentives) in section C of the questionnaire. This test was applied based on Pallant (2001:177) who stated that:

> *"An independent-samples t-test is used when you want to compare the mean score, on some continuous variable, for two different groups of subjects"*

In addition, it was used to investigate differences in means between boys and girls and between Arts and Science students in relation to the eight factors scale, which was about factors influencing students' decisions to enter higher education, in section E of the questionnaire.

- **One-way analysis of variance (ANOVA)**

ANOVA is an appropriate statistical technique to compare the means of three or more groups (Pallant, 2001). In this study, ANOVA was used to examine the effects of six educational regions on secondary school students' motivations to enter higher education, and their effects on secondary school students in relation to the eight factors influencing secondary school students' decisions to enter higher education.

Furthermore, the Bonferroni post-hoc test, a multiple comparison test, was used to determine which means within each educational region were significantly different from the others. Bryman and Cramer (1997:150) explained why these types of test are called post-hoc. They said:

> *"Because these tests are carried out after the data have been initially analysed, they are referred to as post-hoc"*

There are many multiple comparison tests available, such as Bonferroni, Tukey, Scheffe, and Duncan. However, the more commonly used tests are Tukey and Bonferroni (Norusis, 1993, Brace, Kemp, and Snelgar, 2000, and Pallant, 2001). Based on this, the researcher applied the Bonferroni test.

- **Pearson's Correlation Test**

Among the parametric tests also the researcher employed Pearson's correlation test. Brace, Kemp, and Snelgar (2000:108) maintained that:

> *"A test of correlation will give both the significance level and the strength of the correlation. The strength of correlation is indicated by the value of the correlation coefficient which varies between 1 and 0. A perfect negative correlation would have a coefficient of -1, and a perfect positive correlation would have a coefficient of +1".*

This test was used to test statistically if there was any correlation between students' self-confidence in their ability and their academic attainment.

B. Non-parametric test

- **The Chi square ($\chi 2$) test**

Among the non-parametric tests the researcher employed chi-square. The chi-square test is widely used in combination with contingency tables (cross-tabulation) which contains a cell for each combination of categories of the two variables (Bryman & Cramer, 1997). Brace, Kemp, and Snelgar (2000:90) stated that:

> *"The chi-square test is used to explore frequency data-that is data that indicate how often a particular event occurs (nominal data). The chi-square statistic allows us to compare the distribution of frequency data that we have collected in a study with the distribution that we would expect to occur by chance. That is, it allows us to compare the observed frequencies with the expected frequencies"*

Therefore, this test is a test of statistical significance, meaning that it allows the researcher to ascertain the probability that the observed relationship between two variables may have arisen by chance (Bryman & Cramer, 1997).

The chi-square tests in this study were used to test the hypotheses dealing with the influence of family's background and academic attainment on secondary school students' decisions to enter higher education. The chi-square tests were applied here because the data collected by the questionnaire related to the family's background and academic attainment were categorical in nature.

4.7 Interviews

The interview is a popular method of collecting data from people. According to Kumar (1996:109) interview can be defined as:

> *"Any person-to-person interaction between two or more individuals with a specific purpose in mind is called an interview"*

Wragg (1994) points out that the three types of face-to-face interview are distinguished as structured interviews, unstructured interviews, and semi-structured interviews. Structured interviews depend on the use of a questionnaire as a data collection instrument, as highlighted by May (1997:110):

> *"The theory behind this method is that each person is asked the same question in the same way so that any differences between answers are held to be real ones and not the result of the interview situation itself"*

Thus, a structured interview is a standardised form where the wording of the questions and questions' order are pre-placed by the interviewer. As Merriam (1988:73) puts it:

> *"In highly structured interviews, questions and the order in which they are asked are determined ahead of time. The most structured interview is actually an oral form of the written survey"*

From the above, it seems that this type of interview may increase the reliability of the interview, but it might not allow an in-depth discussion with the interviewee because the interviewee has limited opportunity to express his/her opinions (Kvale, 1996). In line with above the structured interview technique was not applied in this research, because the researcher wished to have opportunities to explore in-depth subjects' responses.

The unstructured interview, on the other hand, is more like a conversation. This form of interview, as Merriam (1988:74) stated:

> *"...particularly useful when the researcher does not know enough about a phenomenon to ask relevant questions. Thus there is no predetermined set of questions and the interview is essentially exploratory"*

However, this kind of interview requires a great deal of expertise and considerable time to conduct and it can be a challenge for the interviewer to turn the discussion and

maintain the focus of the interview. Moreover, it may require a substantial effort to analyse and interpret the content of the data (Bell, 1993). Therefore, because the researcher lacked this high degree of expertise required to conduct totally unstructured interviews plus there were time constraints, this form of interview was not used.

The semi-structured interview is in-between these extremes, and makes use of techniques from both structured and unstructured interviews, as emphasized by May (1997:111):

> *"In between the focused and structured methods sits one which utilizes techniques from both. Questions are normally specified, but the interviewer is more free to probe beyond the answers in a manner which would appear prejudicial to the aims of standardization and comparability"*

Thus, this type of interview gives a chance for the interviewer to explore in-depth the issues under investigation by interacting with interviewees. Interviewing can be very flexible when the interviewer has the freedom to ask questions as they come to mind around the issue being investigated (Kumar, 1996). Hence, because of this flexibility, as opposed to structured interviews where the interviewer must ask the same questions in the same sequence and cannot probe further to obtain more information, Nachmias and Nachmias (1996) state that it is not necessary to ask questions in the same sequence or wording in every semi-structured interview.

Bearing the above considerations in mind, semi-structured interviews were conducted in order to add to the richness of the quantitative data obtained by the research questionnaire. The semi-structured interviews generated qualitative data that should support the research findings and validate its results. The decision to conduct semi-structured interviews was also based on Wragg (1994:272-3) who stated that:

> *"A semi-structured interview schedule tends to be the one most favoured by educational researchers as it allows respondents to express themselves at some length, but offers enough shape to prevent aimless rambling"*

To guide the interviews, the researcher developed an interview guide containing a list of topics that were covered by the questionnaire, but required more elaboration to support the evidence (see Appendix 5). Kvale (1996:129) stated that:

> *"An interview guide indicates the topics and their sequence in the interview. The guide can contain just some rough topics to be*

> *covered or it can be a detailed sequence of carefully worded questions. For the semi-structured type of interview... the guide will contain an outline of topics to be covered, with suggested questions"*

The list of topics used in this study was focused on the factors which might encourage or discourage secondary school students from pursuing higher education courses.

In selecting the interview sample, ethical issues such as the willingness or unwillingness to take part in these interviews were taken into consideration. Thus, participants were given freedom to participate or not, and their feelings about how far they wished to contribute were respected. Therefore, all participants in each surveyed region were invited to volunteer to participate in semi-structured interviews.

The researcher received responses from 42 students (male and female) inviting him to conduct interviews with them in their schools. The sample of students involved in semi-structured interviews is presented in Table 4.12 below.

It is acknowledged that random selection of these students would have totally eliminated any research bias, but the fact that only 42 students out of 1,950 of the total number of questionnaire respondents agreed to take part, demonstrated a reluctance to be further involved. The use of volunteers did not allow the researcher to employ alternative controlled empirical data collection using random selection procedures that would have reduced any bias. As a result, it was not possible to investigate the effects of the educational regions, due to the small number of participants in some regions in this part of the study.

Table 4.12: Semi-structured interviews sample by sex, specialisation, and registration status

Educational Region	Sex		Specialisation		Registration status	
	Male	Female	Arts	Science	Pass	Repeater
Muscat	5	5	5	5	10	0
Al-Batinah	4	5	5	4	9	0
AlDakhiliyah	3	2	2	3	4	1
Al-Dhahira	3	3	2	4	5	1
Al-Sharqiyah	3	3	3	3	5	1
Dhofar	3	3	3	3	6	0
Total	**21**	**21**	**20**	**22**	**39**	**3**
Grand total	**42**		**42**		**42**	

The interviews were conducted during the questionnaire survey period (early April to 15th May 2003), with each interview taking around twenty minutes. The researcher carried out all interviews, which took place in rooms not in use in the surveyed schools. However, the issue of the sensitivity of interviewing female students in Oman was considered and problematic, insofar as some of the female interviewees were unwilling to be interviewed alone by a male researcher behind closed doors. This was fully understandable and respected by the researcher, as it was in line with the Muslim culture of Oman. As a result, some of the female interviewees asked to be interviewed in the school library where there were librarians on duty and if it was in use, the interviews were conducted in the deputy head's office, where the secretary was close by.

In order to put respondents at ease and get them to feel more comfortable talking to the researcher, the official letter from the Ministry of Education authorizing the research to be conducted was shown to each participant (see Appendices 2a-2f). This was deemed necessary due to cultural norms and expectations in Oman. Furthermore, the purpose of the interviews was clearly explained to the interviewees before starting the interview, and they were promised total confidentiality.

Permission to use tape recording was obtained before the start of each interview, and then all interviews were transcribed in Arabic then translated into English by a professional translator. The decision to use a tape recorder was considered important in order to allow the researcher to focus on the interview. This was based on Kvale (1996:160) who suggested that:

> *"The usual way of recording interviews today is with a tape recorder. The interviewer can then concentrate on the topic and the*

> *dynamics of the interview. The words and their tone, pauses, and the like, are recorded in a permanent form that can be returned to again and again for re-listening"*

Before the commencement of the interview, factual questions were asked in order to establish a relationship with the interviewee and to create a good information base. These included the respondent's gender, specialisation, registration status and educational region. Subsequently, various issues related to factors which might encourage or discourage secondary school students to enter higher education were raised and discussed with the respondents.

The approach adopted here was very flexible. Respondents were encouraged to talk freely about their perspectives on the raised topic. Thus, the role of the researcher was one of a mediator who directed and controlled the interview under flexible conditions, allowing him to probe for further information as and when he considered that there was a gap in information (Merriam, 1988).

In addition to the face to face interviews with students, semi-structured interviews were also conducted by telephone, with four decision-makers in the Ministry of Education in Oman. The decision to apply telephone interviews was made in order to save time and cost in consistent with the comments of Fidler (1994:284) who maintained that:

> *"In many ways the telephone interview lies on a spectrum of data collection methods between postal surveys and face-to-face interviews. It lies between the two in terms of (a) cost, and (b) response rate. An important advantage of telephone interviewing is speed. The time taken to conduct the survey and obtain working results is the least of all survey methods and if directly using a computer can be very swift indeed"*

These interviews were conducted after analysing the data obtained from the questionnaires (April 2004), in order to follow up emergent issues. For example, it was found that secondary school students from Muscat, Dhofar and Albatinah regions were more motivated to enter higher education for economic reasons compared with secondary school students from other surveyed regions. In addition, students from Dhofar region were found to be more interested in joining higher education to secure jobs of higher status compared to secondary school students from other surveyed regions. Students from Aldhahirah region appeared to be less motivated to enter higher

education for self-development and own improvement compared to secondary school students from other surveyed regions. The researcher was keen to explore the reasons behind these differences between secondary school students' motivations and the impact of educational regions in this respect. Thus, the interviews with these government policy decision-maker participants were mainly to provide an explanation for the effect of educational regions on secondary school students' motivations to enter higher education.

In order to enlist the cooperation of these government policy decision-makers, a copy of the official letter from the Ministry of Education authorizing the interviews to be conducted was sent to each one (See Appendix 6a-6d). These semi-structured interviews contained three main questions as an interview guides which were asked by the researcher as follows:

Q.1 The study findings showed that students from Muscat, Dhofar and Albatinah are more interested in joining higher education for economic reasons and incentives (i.e. drawing higher salaries) compared to students from Aldakhiliyah and Alsharqiyah regions. In your opinion, what are the reasons behind this?

Q.2 The study findings showed that students from Dhofar Governorate are more interested to join higher education to secure jobs of higher status compared to students from other surveyed regions. In your opinion, what are the reasons behind this?

Q.3 The study findings revealed that the students from Aldhahirah region are less motivated to join higher education for self-development and own improvement compared to students from other surveyed regions. In your opinion, what are the reasons behind this?

Analysis of the interviews

With the permission of the secondary school students and an assurance of total anonymity, the answers to the questions were taped. The recordings were transcribed for analysis using the software package ATLAS/ti 4.2. In this package, two principal modes of working with ATLAS/ti 4.2 are distinguished. The first part is the textual level, which focuses on the exact words used in the responses. This mode includes facilities,

such as segmentation of data files, coding of text, image and audio passages and the writing of memos. The second part is the conceptual level, which means that the perceptions of the secondary school students are identified and then the conceptual level focuses on model building activities, such as linking codes to form semantic networks. In other words, ATLAS/ti 4.2 helped in linking the phrases and clauses related to the question asked by the researcher and thus helped in categorizing the data.

4.8 Documentary Data

The third research instrument applied was documentary data. Documentary analysis was used to investigate higher education capacity and labour market demands in Oman. According to Kumar (1996) documentary data (or secondary sources of data) fall into various categories. They include government or semi-government publications such as public documents and official records, including census data, labour force surveys, economic forecasts, and demographic information. Another category is personal records; some people write historical and personal records which may provide the information required by the researchers. Earlier research and mass media, such as reports published in newspapers and magazines are other sources of secondary data. Saunders *et al.* (2000:190) cited some advantages of documentary data:

> *"These data can be analysed both quantitatively and qualitatively. In addition, they can be used to help to triangulate findings based on other data such as...primary data collected through observation, interviews or questionnaires"*

Based on the above, and in order to investigate the current higher education capacity and labour market demands in Oman, the researcher used official statistics obtained from some government bodies, such as Ministry of Education, Ministry of Higher Education, Ministry of National Economy, Statistical Year Book (2003), Oman population census (2003), UNESCO, World Bank, Human Development Reports, and from previous research related to higher education capacity and labour market conditions in Oman (See Chapter Three). Furthermore, the researcher consulted relevant supporting materials such as books, journals, theses, conferences and data from the internet.

It was hoped that using documentary data in addition to the questionnaires and semi-structured interviews would enhance understanding by providing triangulation of

research methods used in this study and thereby result in rich and convincing findings.

4.9 Summary

This chapter described and explained the rationale for the procedures used to collect and analyse the research data. The starting point was a formulation of research questions around the core issue of factors influencing secondary school students' decisions to enter higher education. Based on the strengths and limitations of the qualitative and quantitative research paradigms, this research was conducted using a triangulated approach. This enabled a large volume of statistically comparable data to be complemented by a more in-depth exploration of individuals' attitudes and experiences.

The target population was final year students of secondary school in Oman. A large and reasonably representative sample of these students was drawn using multiple strategies, including stratification by region, gender and specialisation, and multi-stage cluster sampling.

Two main methods were used to collect data: an administered questionnaire and semi-structured interview. The questionnaire items were based on existing instruments, with modifications and additions to suit the Omani context. Careful piloting resulted in an instrument of 50 items, with acceptable face, content and concurrent validity and a high level of internal consistency. The data obtained were subjected to descriptive and inferential analysis, the later involving both non-parametric and parametric tests.

The questionnaires were followed up by semi-structured interviews with 42 volunteer students, and telephone interviews with Ministry of Education officials. Interview data were analysed using the ATLAS/ti 4.2 software package. Additional data were obtained from secondary sources such as governmental and non-governmental publications.

The collected data are presented and discussed in the next three chapters, beginning in Chapter Five, with the questionnaire data.

CHAPTER FIVE
DATA ANALYSIS PART ONE: QUESTIONNAIRE

5.1 Introduction

This chapter provides an analysis of the first part of the data collected, namely quantitative data collected by questionnaire concerning some of the main factors influencing Omani secondary school students' decision to enter higher education.

Part two, the data from the semi-structured interviews, will be presented in chapter six.

This chapter contains nine sections in addition to the summary. Section one is the Introduction where a brief resume of the intention of this chapter is detailed. This is followed by section two detailing the demographic characteristics of the students who participated in the research study, which leads onto section three, the analysis of students' intentions to study or work after secondary school education. The students' motivations and expectations to enter higher education are analysed in section four, followed in section five by the specific courses and programmes of study they would wish to follow entry to higher education. Section six analyses the factors influencing students' decisions to enter higher education and the influence of specific factors such as familial background is explored in section seven. Section eight analyses the results in relation to the scholastic ability (academic attainment) of the students participating in the research study. A summary of the chapter is given in section nine.

5.2 Demographic Characteristics of the Students

Return results from the questionnaires, which were distributed to 1950 students were detailed in the last chapter, on methodology (see Table 4.3). A return of 100% was received and the valid return was 1830 (94%) as shown below in Table 5.1.

Table 5.1: Distribution of demographic variable (male and female participants by educational regions and specialisation)

Educational Regions	Specialisation and Gender				Total
	Arts		Science		
	Male	Female	Male	Female	
Muscat	59	74	75	76	284
Albatina	129	123	133	125	510
Aldakhiliyah	69	55	64	72	260
Aldhahirah	64	61	65	68	258
Alsharqiyah	65	55	66	79	265
Dhofar	62	67	62	62	253
Total	448	435	465	482	1830

Table 5.1 shows the breakdown of the respondents by Educational Region, Gender, and Specialisation (Arts or Science). The representation of male and female students was very similar in each region. Moreover, the gender distribution in Arts and Science was reasonably equal, i.e. there were 448 male students to 435 female students studying Arts based subjects, and 465 male students to 482 female students studying Science based subjects.

In Table 5.2 below, registration status (Pass or Repeater) is shown. As can be seen from the table, the great majority of participants had achieved passes to continue onto Higher Education and only 8.0% (146) needed to repeat courses to obtain the necessary grade to continue onto higher education. Repeater status was slightly higher among Science than among Arts students, and the percentage of repeaters was approximately twice as high among boys as among girls, in both specialisations.

Table 5.2: Distribution of male and female participants' Registration Status

Registration Status	Specialisation and Gender								Total
	Arts				Science				
	Male	%	Female	%	Male	%	Female	%	
Pass	415	92.6	418	96.1	395	84.9	456	94.6	1684
Repeater	33	7.4	17	3.9	70	15.1	26	5.4	146
Total	448	100	435	100	465	100	482	100	1830

5.3 Students' Intentions to Study or Work after Secondary School

The second section of the questionnaire elicited views on options that students might consider after secondary school. It was used to separate those students who intended to go to higher education after secondary school from those intending to go to work. An

alternative option was included for those students who wanted to go to higher education but for one reason or another could not go directly after secondary school (Find employment and then participate in part- time higher education) .

To find out to what extent students were motivated to pursue higher education, Table 5.3 shows their responses when asked what their actions would be if they were not fortunate to receive a free scholarship into higher education.

Table 5.3: Actions if no free scholarship

Alternatives if no free scholarship	Specialisation and Gender								Total
	Arts				Science				
	Male	%	Female	%	Male	%	Female	%	
Study supported at my parents'/ guardian expense	84	18.8	103	23.6	105	22.5	140	29.0	**432 (24%)**
Get a loan in order to study	63	14.0	57	13.1	74	15.9	57	11.8	**251 (14%)**
Repeat secondary in order to get better grade and then pursue higher education	170	37.9	218	50.1	172	36.9	222	46.1	**782 (43%)**
Secondary school certificate will be sufficient for me	131	29.2	57	13.1	114	24.5	63	13.1	**365 (20%)**
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**	**1830**

As can be seen, the preferred option for both male and female students, in both specialisations, was to repeat their secondary education in order to get a better grade that would enable them to pursue higher education entrance. More than 40% of the sample overall gave this response. A similar proportion indicated that they would pursue higher education using other sources of funding, either at their parents'/ guardian's expense or by taking a loan, although the former was preferred. These results overall are indicative of the strong motivation of the students to continue their studies.

Comparing the responses of male and female students, it is interesting to note that a higher proportion of female than male students stated that they would repeat their secondary education in order to gain better grades and then pursue higher education. Similarly, overall, slightly more female than male students expressed a wish to pursue higher education by means of alternative funding. There was, however, a difference

between boys and girls in their responses to specific types of funding. More girls than boys expected to study at their parents'/ guardian's expense, whereas more boys than girls were prepared to consider obtaining a loan to finance their studies. This could be explained by the fact that, traditionally, males are more likely to gain employment than females. Therefore, although there is a strong willingness for equality between males and females, female students may feel reluctant to seek a loan. Nevertheless, the results illustrate how strongly female Omani students wish to pursue higher education and, bearing in mind that until recently female education was not regarded as essential, there has been a highly significant change in social views and attitudes towards female participation in education. Thus, generally females indicate that they wish to enjoy equal rights with their male counterparts and to pursue higher education as a means to achieving their career ambitions.

When comparing the responses of students from Arts and Science specialisations, it can be seen that the results are equal in their distribution related to students aspiring to achieve higher education. For example, a combined total of 388 out of 883 (43.9%) Arts students and a combined total of 394 out of 947 (41.6%) Science students indicated that they would definitely repeat secondary education in order to gain better grades in order to pursue higher education, while combined 307 (34.8%) Arts students, and 376 (39.7%) Science students would seek alternative financial backing to pursue their higher education if they were unsuccessful in obtaining free scholarships.

This gives an overall percentage total of 78.8% of Arts students and 81.3% Science students demonstrating a very strong commitment to achieving entrance to higher education, as opposed to 18.7% of Science students and 21.3% Arts students indicating that they would not strive for improvement, but would simply be content to achieve their secondary school certificate qualifications. It can be concluded, therefore, that well over three quarters of the students in Oman had high expectations of themselves and of the existing educational system, with a desire to gain higher education places.

Supporting the above results are the responses of students towards options that they could consider after their final year of secondary school education, detailed in Table 5.4 below. The table shows that overall, 490 out of 913 (53.7%) male students expected to go directly to higher education, and a further 227 (21.5%) said they would do so after finding employment. For female students, the corresponding percentages were 71.2%

and 14%. The responses indicate that among male students, Arts specialists were more likely than Science specialists to state the intention to find employment (27.6% and 15.5%, respectively) rather than going onto higher education.

Table 5.4: Options that could be considered after final year of secondary education

Options after final year of secondary school education	Specialisation and Gender								Overall (%)
	Arts				Science				
	Male	%	Female	%	Male	%	Female	%	
Go to higher education	205	45.8	306	70.4	285	61.3	347	72.0	63%
Find employment and then Participate in part-time higher education	119	26.6	68	15.6	108	23.2	60	12.4	19%
Find employment after completion of secondary school education	124	27.6	61	14.0	72	15.5	75	15.6	18%
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**	**100**

Nevertheless, the proportion of both sexes and in both specialisations identifying the importance they attached to higher education was very high. Clearly, Omani students are willing to invest in their wish to pursue higher education, in preference to working and then re-entering higher education, or not entering higher education. The following section explores in more depth the nature of this motivation.

5.4 Students' Motivations and Expectations to Enter Higher Education

This section investigates whether Human Capital Theory is reflected in students' motivations and expectations to pursue higher education. This part of the questionnaire was based on the research instrument used by Al-Maskery (1992).

The argument posited by Human Capital Theory is that people are more likely to invest in themselves in the form of education and training, because they expect by doing so to secure better quality jobs that pay higher salaries and have attractive fringe benefits (see Review of Literature section 2.2.1 for further details).

5.4.1 Students' motivations to enter higher education

Human Capital Theory argues that people invest in themselves in the form of education and training, because they are motivated by Economic incentives; Career incentives and

Personal Development incentives. These three dimensions were explored in this study (see Tables 5.5; 5.6 and 5.7 below).

Students were requested to rate the degree of importance they attached to each reason that motivated them to pursue entrance into higher education on a 5-point Likert-type scale, where 1 equals 'Not at all important' and 5 equals 'Extremely important'.

The reliability of the scale was tested, before carrying out further statistical analysis, using the Cronbach Alpha test. The overall reliability for the whole scale was 0.74. This value was acceptable and indicated a statistically strong scale according to Pallant (2001).

The section is divided into two sub-sections. Firstly, the relative importance students attached to various motivations to enter higher education will be presented. Secondly the data are further analysed to explore whether there are significant differences in motivation to enter higher education, related to gender, specialisation or region.

5.4.1.1 Importance of motivations to enter higher education

In this section, the attitude of the students towards the importance of each reason motivating them to enter higher education is investigated.

Analysis was performed by computing the mean and standard deviation scores for each item. Component (subscale) mean and standard deviation scores were calculated by dividing the sum of the item scores by the number of items comprising that component. These mean and standard deviation scores are based on a response scale of 1 to 5, in which 1 represents 'Not at all important' for the item concerned and 5, 'Extremely important'. Therefore, the higher the mean, the stronger the importance attached to the item. In this study, a mean score of 3 (out of 5 points) or more indicates importance and a mean score below 3 indicates unimportance.

Table 5.5: The importance of career incentives

Number of Item	Item	N	Mean	S.D.
5	To get a better job	1498	4.42	.806
12	Future job prosperity	1498	4.30	.874
19	To help to develop the country	1498	4.29	.919
1	To fulfill my parents' wishes	1498	4.25	.923
15	To have more job opportunities	1498	4.01	1.036
20	To get social prestige	1498	3.98	1.051
21	To replace non-Omani professional employees	1498	3.96	1.280
17	To work for the government	1498	3.88	1.162
Sub-scale Mean and Standard Deviation:		**1498**	**4.13**	**1.006**

From Table 5.5 on Career Incentives, it can be seen that mean scores range from 3.88 to 4.42. This means that each of the item options was considered important as a motivation for higher education. Item 5 'To get a better job', had the highest mean score. It is interesting to note that Item 17 'To work for the government' had the lowest mean score. Nevertheless, the mean was still above the mid-point, reflecting the fact that government jobs often carry prestige and offer more attractive pay and working conditions than private jobs. This will be explored more in a subsequent section (5.4.2.1.).

Another relatively lower-ranked item was Item 21 'To replace non-Omani professional employees', which is perhaps surprising, given the importance attached in government policy to equipping Omanis with suitable qualifications and experience in order to take over professions and occupations at present occupied by non Omanis. To this end, the Omani government actively fund free education and expensive literacy programmes. Nevertheless, this item too scored well above the mid-point.

Overall, Career Incentives were very important to the respondents, consistent with Human Capital Theory. The next table presents the findings regarding the second dimension of that theory, namely, Economic Incentives.

Table 5.6: The importance of economic incentives

Number of Item	Item	N	Mean	S.D.
16	To have a better future	1498	4.67	.626
18	To provide a better standard of living for my own children	1498	4.56	.735
8	To earn a high salary	1498	4.14	.982
14	Financial security	1498	3.74	1.070
4	Because I can get a free scholarship	1498	3.29	1.368
6	To set up my own business	1498	3.16	1.286
Sub-scale Mean and Standard Deviation:		**1498**	**3.92**	**1.011**

From Table 5.6 it can be seen that two of the Economic Incentives scored highly, i.e. Item 16 'To have a better future' and item 18 'To provide a better standard of living for my own children', had particularly high means, suggesting they were regarded as important by the great majority of respondents. These were followed in importance by item 8 'To earn a high salary', and Item 14 'Financial security'. The high mean scores for these items reflects the traditional family oriented culture in Oman. Students appreciate the need to provide for a better future and to provide a better standard of living for their children, and this can be achieved by earning a high salary.

The incentive 'to set up my own business' was given the least importance by the students. This response might be explained by the fact that the private sector is still developing in Oman and the majority of Omanis (including graduates) are currently employed in the government sector. With ongoing efforts by the government to diversify and open up the economy to outside investors, it is anticipated that this situation will change in the future, especially as the opportunities for new employment positions in government sector reduce. Overall, the importance of economic factors as a motivation for higher education is consistent with Human Capital Theory. Table 5.7, below, shows the findings for the third dimension of the theory, namely, personal development incentives.

Table 5.7: The importance of personal development incentives

Number of Item	Item	N	Mean	S.D.
9	Personal development	1498	4.21	.911
2	To get a professional qualification	1498	4.10	.978
11	Apply my knowledge on the job	1498	3.95	.960
7	To continue higher education	1498	3.82	1.197
3	Because I like studying	1498	3.72	1.054
10	Be able to do creative work	1498	3.64	1.084
13	To be in charge of others	1498	3.48	1.222
Sub-scale Mean and Standard Deviation:		**1498**	**3.84**	**1.058**

The sub-scale mean in the above table overall, Personal Development is seen as important, and indeed, item 9 had the highest mean in this sub-scale. Other than item 9, greatest importance was attached to obtaining professional qualifications, which may reflect the career and economic aspirations revealed in the previous discussion. Indeed, the responses suggest that students were keen to pursue higher education, more in order to enhance their working lives than because of enjoyment of study per se, given that item 3 was one of the lower-ranked items. Generally, the range of means (from 3.48-4.21) is high, although slightly lower than those for the other dimensions.

The findings for the three sub-scales show that all the dimensions of the Human Capital Theory were important to students. However, they were accorded different levels of importance, as can be seen from the summary of sub-scale scores in Table 5.8 below. The table shows that Career Incentives had the highest mean score, suggesting that this was the dimension that students saw as most important. This was followed by Economic Incentives and Personal Incentives, in that order.

Table 5.8: Rank of mean and standard deviation total scores for students' motivations to enter higher education sub-scales

Number	Sub-scale	N	Mean	S.D.
1	Career Incentives Dimension	**1498**	**4.13**	**1.006**
2	Economic Incentives Dimension	**1498**	**3.92**	**1.011**
3	Personal Development Incentives Dimension	**1498**	**3.84**	**1.058**

In the following sub-sections, the data are further analysed to investigate whether the factors students saw as motivating them towards higher education varied in relation to their gender, specialisation or educational regions.

5.4.1.2 Testing the hypotheses (Inferential statistics)

For hypothesis testing in this section, each of the sub-scales analysed in the previous sub-section was treated as a composite variable. That is, rather than analysing each item in each scale separately, it was considered preferable and reasonable to combine them into one index or scale, representing a composite variable (Nachmias and Nachmias, 1996; Bryman and Cramer, 1997). To do this, the scores of individual responses were aggregated, and then the total score was divided by the number of statements in the scale to obtain the mean score value for that particular scale.

To explore the relationship between students' Gender, Specialisation and Educational Regions and their attitudes toward reasons motivating them to enter higher education, the following null hypotheses were tested:

(a) There are no significant differences between male and female in their perceptions towards the reasons motivating them to enter higher education (career incentives, economic incentives and personal development incentives).

(b) There are no significant differences between Arts and Science students in their perceptions toward the reasons motivating them to enter higher education (career incentives, economic incentives and personal development incentives).

(c) There are no significant differences between students from different regions, in their perceptions towards the reasons motivating them to enter higher education (career incentives, economic incentives and personal development incentives).

To test the first hypothesis, a T-test was applied to the collected data. The T-test results, in Table 5.9 below, show that there were significant differences between male and female students in the importance they attached to Economic Incentives ($t=5.86$; $p<0.05$) and Personal Development Incentives ($t=-5.95$; $p<0.05$) motivating them to enter higher education. Male students attached more importance than female students to Economic Incentives, while for Personal Development Incentives, the position was reversed. Therefore, the null hypotheses were rejected for these two incentives. However, the results show no significant difference in the Career Incentives scale ($p>0.05$) and, therefore, that null hypotheses was accepted.

Table 5.9: The independent sample t-test comparing motivations scores for gender

Motivations	Males			Females			t-Test	df	p
	N	Mean	S.D.	N	Mean	S.D.			
Economic Incentives	717	4.01	0.53	781	3.84	0.57	5.86	1496	**.000**
Career Incentives	717	4.14	0.48	781	4.12	0.48	0.76	1496	**.447**
Personal development Incentives	717	3.75	0.60	781	3.93	0.52	-5.95	1496	**.000**

Table 5.10, below, shows the result of comparison of student attitudes based on specialisation. The results show that there were significant differences between Arts and Science students' motivation in relation to Economic Incentives and Career Incentives, with Arts students' mean scores significantly higher ($p<0.05$). Therefore, the null hypotheses were rejected for these two incentives, i.e. $p<.05$.

However, for the personal development dimension, the test failed to reject the null hypothesis ($p>0.05$). There was no significant difference between the two groups in their mean scores on the Personal Development Incentives scale and, therefore, the null hypothesis was accepted, as $p>.05$.

Table 5.10: The independent sample t-test comparing motivation scores for specialisation

Motivations	Arts			Science			t-Test	df	p
	N	Mean	S.D.	N	Mean	S.D.			
Economic Incentives	698	3.96	0.56	800	3.89	0.56	2.14	1496	**.032**
Career Incentives	698	4.17	0.49	800	4.10	0.47	3.12	1496	**.002**
Personal development Incentives	698	3.83	0.60	800	3.85	0.55	-0.84	1496	**.397**

With regard to educational regions, one-way Analysis of Variance (ANOVA) was applied to determine if there was any difference between the regions, in students' perceptions of their motivations to enter higher education. Table 5.11 below summarises the results of ANOVA, where the educational regions were the independent variables and students' motivations to enter higher education (i.e. Economic Incentives; Career Incentives and Personal-development Incentives) were the dependent variables.

Table 5.11: ANOVA results for the effect of educational regions on students' motivations to enter higher education

Dependent Variables (factors)	Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F	Sig.
Economic Incentives	Between groups Within groups Total	5 1492 1497	12.50 463.68 467.18	2.50 0.31	8.05	**0.000**
Career Incentives	Between groups Within groups Total	5 1492 1497	7.27 343.09 350.36	1.45 0.23	6.32	**0.000**
Personal-development Incentives	Between groups Within groups Total	5 1492 1497	7.73 485.96 493.69	1.54 0.32	4.75	**0.000**

Table 5.11 above shows that the effect of educational regions was highly significant in all three motivation incentives or factors, because, $p< 0.05$. Those three factors were 1) Economic Incentives ($F = 8.05$, $p =0 .000$), 2) Career Incentives ($F =6.32$, $p = 0.000$), 3) Self-development Incentives ($F = 4.75$, $p =0 .000$). In other words, the mean scores of the educational regions in each of these three factors were not equal. Therefore, the null hypothesis was rejected.

The question now arises as to the location of these differences in students' motivations to enter higher education. To ascertain this, and to identify more clearly the differences between educational regions, Bonferroni's test was carried out. The results of this test for each of the three factors are presented separately as follows:

Economic incentives

Results of the Bonferroni test for economic incentives for each educational region are shown in Table 5.12. The Bonferroni post-hoc test revealed significant differences in economic incentives between Muscat and Aldakhiliyah ($p=0.000$), between Muscat and Alsharqiyah ($p=0.000$), between Albatinah and Aldakhiliyah ($p=0.011$), between Albatinah and Alsharqiyah ($p=0.014$), between Aldakhiliyah and Dhofar ($p=0.000$) and between Alsharqiyah and Dhofar ($p=0.000$). All other comparisons showed no significant differences ($p>0.05$).

Table 5.12: Bonferroni's test for economic incentives for educational regions

(I)Educational regions	(J)Educational regions	Mean Difference (I-J)	Sig.
Muscat	Albatinah	7.366E-02	**1.000**
	Aldakhiliyah	.2323*	**0.000**
	Aldahirah	.1296	**0.204**
	Alsharqiyah	.2325*	**0.000**
	Dhofar	-1.0887E-02	**1.000**
Albatinah	Aldakhiliyah	.1587*	**0.011**
	Aldahirah	5.592E-02	**1.000**
	Alsharqiyah	.1588*	**0.014**
	Dhofar	-8.4550E-02	**1.000**
Aldakhiliyah	Aldahirah	-.1027	**0.840**
	Alsharqiyah	1.683E-04	**1.000**
	Dhofar	-.2432*	**0.000**
Aldahirah	Alsharqiyah	.1029	**0.882**
	Dhofar	-.1405	**0.135**
Alsharqiyah	Dhofar	-.2434*	**0.000**

*The mean difference is significant at the .05 level.

Possible explanations for the greater importance attached to economic reasons and incentives for joining higher education showed by students from Muscat, Dhofar and Albatinah compared to students from Aldakhiliyah and Alsharqiyah regions were explored during interviews with policy makers in the Ministry of Education in Oman. All the officials interviewed thought that the prevalent life styles (high standard of living) in the capital region (Muscat) and Dhofar (generally considered as the second capital region) and Albatinah, which is close to Muscat and feels its influence may contribute to the higher economic ambition of students living in them. Furthermore, the concentration of business activities in these three regions (such as sea and airports, tourism, business and service centres) also promotes a competitive economic environment for students and indeed other citizens living in these regions; jobs are available but high qualifications are needed in order to seize the best opportunities.

This explanation is also supported by recent data obtained from Oman Chamber of Commerce and Industry's annual report, 2002, which shows that the numbers of registered companies in Oman were highest in Muscat, Albatinah and Dhofar regions (see Table 5.13 below).

Table 5.13: Number of registered companies at Oman Chamber of Commerce and Industry in Muscat and its branches, according to their grades and region

Companies Grade / Regions	International	Excellent Grade	First Grade	Second Grade	Third Grade	Fourth Grade	Consultancy	Total
Muscat	222	1036	3335	4280	2899	28513	257	**40542**
Albatinah (Sohar)	2	157	310	829	823	15947	2	**18070**
Dhofar	6	257	419	603	1104	10829	46	**13264**
Aldakhiliyah (Nizwa)	0	91	176	276	868	6025	0	**7436**
Alsharqiyah (Ibra)	0	52	102	422	381	5183	1	**6141**
Alsharqiyah (Sur)	1	98	127	431	352	6539	2	**7550**
Aldhahirah (Buraimi)	1	51	169	516	338	4655	0	**5730**
Aldhahira (Ibri)	0	48	97	204	262	4691	0	**5302**
Musandam (Khasab)	0	15	35	64	75	889	0	**1078**
Total	**232**	**1805**	**4770**	**7615**	**7102**	**83281**	**308**	**105113**

Source: Oman Chamber of Commerce and Industry, 2002.

Another way in which favourable economic conditions in these three regions would inspire students to enter higher education was suggested by an education decision maker from Aldahirah region:

> *"These regions do offer job opportunities requiring high qualification. This may be also attributed to high-ranking personalities who are able to provide funds for students to pursue higher education"*

Of course, the availability of funds could be seen more as an enabling factor that would help students to pursue higher education, whatever their motivations for doing so. However, the presence of high profile, wealthy individuals may provide a role model, inspiring students to seek similar success and status. Given the likely connection between a good job and economic status, it will be of interest to see whether or not there are regional differences for Career Incentives. This will be considered next.

Career incentives

The result of the Bonferroni's test revealed significant differences in Career Incentives between educational regions, as can be seen from Table 5.14 below. There were significant differences between Muscat and Dhofar (p=0.017), between Albatinah and Dhofar (p=0.002), between Aldahirah and Dhofar (p=0.000) and between Alsharqiyah

and Dhofar (p=0.000). None of the other comparisons revealed significant differences (p>0.05).

Table 5.14: Bonferroni's test for career incentives for educational regions

(I)Educational regions	(J)Educational regions	Mean Difference (I-J)	Sig.
Muscat	Albatinah	8.074E-03	**1.000**
	Aldakhiliyah	-3.3225E-02	**1.000**
	Aldahirah	7.793E-02	**1.000**
	Alsharqiyah	7.143E-02	**1.000**
	Dhofar	-.1493*	**0.017**
Albatinah	Aldakhiliyah	-4.1299E-02	**1.000**
	Aldahirah	6.986E-02	**1.000**
	Alsharqiyah	6.335E-02	**1.000**
	Dhofar	-.1573*	**0.002**
Aldakhiliyah	Aldahirah	.1112	**0.244**
	Alsharqiyah	.1047	**0.416**
	Dhofar	-.1160	**0.202**
Aldahirah	Alsharqiyah	-6.5078E-03	**1.000**
	Dhofar	-.2272*	**0.000**
Alsharqiyah	Dhofar	.2207*	**0.000**

*The mean difference is significant at the .05 level

The high interest expressed by students from Dhofar region in joining higher education to secure jobs of higher status compared to students from other educational regions reflected the presence of a highly class-conscious society in this region. Interviews with educational policy officers in the various regions revealed that many people (especially in Dhofar region) consider higher education and qualification as a means to establish their 'status'; 'prestige' and 'esteem' in their communities. The availability of many individuals who hold higher education qualifications in the Dhofar region and who command high reputation and social status could also provide inspiration to students living in this region. The following example narrated by an educational policy maker from Muscat underscored the importance of class and social status within the main regional centres in Oman (namely Muscat and Dhofar region):

> *"When a resident in these two regions wants to marry, the family of the bride will ask about the job of the fiancée. The higher this job (status) the higher his chances to get marry that fiancé ; this was to the extent that one employee asked to be transferred from the Transport Department, fearing that the fiancée's family might find out that he works in such a Department and would refuse him accordingly"*

The importance attached to job status in the region was attributed by one interviewee to tribal values. Among certain Arabs, there is a disdain for manual and vocational work.

Having considered regional differences in economic and career incentives, we now turn to the relative importance given to personal development incentives by students in the various regions.

Personal development incentives

There were statistically significant differences in Personal Development Incentives between educational regions as can be seen from Table 5.15 below. There were significant differences between Muscat and Aldahirah (p=0.002), between Albatinah and Aldahirah (p=0.021), between Aldahirah and Alsharqiyah (p=0.018) and between Aldahirah and Dhofar (p=0.000), whereas other regional comparisons were non-significant (p>0.05).

Table 5.15: Bonferroni's test for self-development incentives for educational regions

(I)Educational regions	(J)Educational regions	Mean Difference (I-J)	Sig.
Muscat	Albatinah	5.221E-02	**1.000**
	Aldakhiliyah	4.609E-02	**1.000**
	Aldahirah	.2033*	**0.002**
	Alsharqiyah	2.281E-02	**1.000**
	Dhofar	-4.2768E-02	**1.000**
Albatinah	Aldakhiliyah	-6.1167E-03	**1.000**
	Aldahirah	.1511*	**0.021**
	Alsharqiyah	-2.9394E-02	**1.000**
	Dhofar	-9.4975E-02	**0.731**
Aldakhiliyah	Aldahirah	.1572	**0.065**
	Alsharqiyah	-2.3278E-02	**1.000**
	Dhofar	-8.8859E-02	**1.000**
Aldahirah	Alsharqiyah	-.1805*	**0.018**
	Dhofar	-.2460*	**0.000**
Alsharqiyah	Dhofar	-6.5581E-02	**1.000**

*The mean difference is significant at the .05 level

These results indicate that students from Aldhahirah region are less motivated to join higher education for self development and own improvement compared to students from other educational regions. Aldhahirah region presents an interesting contrast to other regions in Oman in many ways, which might explain the low motivation among students in this region to pursue higher education for personal development:

a) it is a border region to the United Arab Emirates (UAE), and many residents of Aldhahirah work in the UAE and other neighbouring countries;

b) there are good job opportunities and pay in the neighbouring countries, which often do not require high qualifications;

c) many students in this region already have fathers and relatives who work in those neighbouring countries, and who can facilitate their employment after secondary school;

d) many residents of Aldhahirah region engage in trading and tend to own their business.

Put together, the above factors may contribute to 'low marks', low educational attainment and low motivation for personal development through higher education in students from Aldhahirah region, as suggested by one educational policy maker from Aldhahirah.

The findings in this section overall suggest that students' motivations to enter higher education were in line with Human Capital Theory in that they attached importance to securing their future through a well-paid job, which also has good prospects and social prestige and opportunities to apply their knowledge. The next section sheds further light on their expectations in this regard.

5.4.2 Students' expectations to enter higher education

The following analysis presents students' self-assessed foregone earnings. These data represent the opportunity cost of attending higher education. This is the only opportunity cost that students incur indirectly through higher education; there is no direct cost, as the government provides free education for every eligible Omani.

Students were asked to estimate how much they would have earned per month had they chosen to work instead of going to higher education. Their responses are detailed in Table 5.16 below.

Table 5.16: Estimation of salaries per month if not pursuing higher education

Options	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
R.O 120-300	218	67.3	312	83.4	277	70.5	337	82.8
R.O 301-400	68	21.0	36	9.6	74	18.8	47	11.5
R.O 401-500	25	7.7	16	4.3	27	6.9	17	4.2
Over R.O 500	13	4.0	10	2.7	15	3.8	6	1.5
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

The majority of both sexes and in both specialisations gave an estimate of R.O 120 300. Thus, they considered that their earnings would be very low if they did not pursue higher education. Their estimate appears reasonable, considering that a realistic expectation of monthly salary is between R.O. 120-300 in Oman under the government civil service pay scale, according to the Ministry of Civil Service (2003).

However, when asked to consider the situation in which there was no employment available and they decided to continue in higher education, students varied considerably in their estimation of how much they would earn. The general expectation was that earnings would be higher after higher education, as can be seen from Table 5.17, below. Science students had higher expectations than Arts students did and females estimated their earning capacity slightly lower than did their male counterparts. Furthermore, male students (both Arts and Science) had higher expectations to earn over 600 R.O. per month. This could be an effect of culture because, generally, within Omani households men have more financial responsibilities, for example, for paying bills and keeping financial records. Therefore, perhaps the males in this study had more relevant experience of finance than the females. However, both males and females considered that their income would increase if they gained higher education.

Table 5.17: Estimated earnings after gaining higher education qualifications

Range of earnings	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
R.O. 300-400	33	10.2	41	11.0	33	8.4	34	8.4
R.O. 401-500	92	28.4	128	34.2	84	21.4	132	32.4
R.O. 501-600	110	34.0	131	35.0	146	37.2	172	42.3
Over R.O. 600	89	27.4	74	19.8	130	33.1	69	17.0
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

A realistic average monthly salary for a higher education graduate in Oman is between R.O. 400-500 or R.O. 501-600 according to the civil service pay scale or even over R.O. 600 in some jobs such as the Army or Security (Ministry of Civil Service, 2003). Thus, the students had reasonable expectations on their salary after graduation. Their expectations were no doubt linked to the sector in which they hoped to be employed, as the next sub-section will show.

5.4.2.1 Sector of employment

Participants were then asked in which sector of employment they would wish to pursue their career. Table 5.18 below shows that a substantial majority of both sexes, irrespective of specialisation, looked to the government sector. The second preference, especially for male students, was for Omani Government owned companies. Male Science students were less inclined than Arts students to expect employment in the government sector, but more inclined to look to Government owned companies for employment, perhaps because their science background would qualify them for technician posts.

As can be seen in Table 5.18, those who did not wish to be employed by the Omani Government or by an Omani Government owned company were very small in number, for both males and females. The especially high proportion of female students wishing to be employed by their Government can be partly explained by the increase in professional females wishing to attain higher status within an Omani society that has historically been male dominated. Further, many female students opt for professions such as medicine, nursing and education which they can practise without having to mix with men. This reason could also explain why there is a higher percentage of female participants taking Sciences and not Arts based subjects.

Table 5.18: Employment after completion of higher education

Future Employment	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Government sector	252	77.8	316	84.5	258	65.6	351	86.2
Private sector	10	3.1	12	3.2	17	4.3	15	3.7
Government owned companies	37	11.4	20	5.3	93	23.7	16	3.9
Self employment	12	3.7	16	4.3	16	4.1	14	3.4
Work abroad	13	4.0	10	2.7	9	2.3	11	2.7
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

The reasons for the strong preference shown for government employment are further explained by responses to the next question, discussed below.

5.4.2.2 Advantages of employment sectors

According to Al-Maskery (1992), the government sector is the dominant employer of Omani graduates and non-graduates, because of the advantages which can be gained in

the government sector, for example, higher monthly salary; social prestige; good working hours; promotion prospects; higher education opportunities; good annual leave and better retirement benefits.

Students were asked about the above advantages, which are most likely to be gained in the government sector in Oman, in order to assess the expectations of students regarding their preferred employment sector, and to see whether Human Capital Theory was reflected in their motivations and expectations of Higher Education.

The responses are detailed in Table 5.19 below, where it can be seen that a very large majority of students perceived these advantages as more likely to be gained in the government sector. Among female students, expectations were very similar for Arts and Science specialists. Among male students, however, Science students had lower expectations than Arts students, of salary, promotion prospects and higher education opportunities in the government sector. They were, however, more inclined to see advantages in these areas, in Government owned companies.

These results support previous findings that students want to gain good educational qualifications in order to obtain employment within the Omani Government, with all its advantages. In other words, Human Capital Theory is reflected in their expectations. It is important to note the consistency of response in Tables 5.18 and 5.19; students want to work in the sector offering greatest benefits. This supports the claim that Human Capital Theory is reflected in their responses.

Table 5.19: Advantages in specific work sectors as perceived by students

Work Sectors/ Advantage	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Government sector :								
Higher monthly salary	204	63.0	273	73.0	196	49.9	264	64.9
Social prestige	237	73.1	273	73.0	283	72.0	267	65.6
Good working hours	231	71.3	250	66.8	276	70.2	310	76.2
Promotion prospects	260	80.2	283	75.7	272	69.2	304	74.7
Higher education opportunities	237	73.1	285	76.2	254	64.6	301	74.0
Good annual leave	243	75.0	285	76.2	285	72.5	334	82.1
Better retirement benefits	278	85.8	308	82.4	323	82.2	338	83.0
Private sector :								
Higher monthly salary	19	5.9	19	5.1	24	6.1	32	7.9
Social prestige	13	4.0	18	4.8	18	4.6	28	6.9
Good working hours	20	6.2	25	6.7	15	3.8	29	7.1
Promotion prospects	21	6.5	29	7.8	29	7.4	41	10.1
Higher education opportunities	21	6.5	33	8.8	29	7.4	26	6.4
Good annual leave	17	5.2	17	4.5	21	5.3	26	6.4
Better retirement benefits	11	3.4	21	5.6	10	2.5	23	5.7
Government owned companies :								
Higher monthly salary	69	21.3	54	14.4	139	35.4	80	19.7
Social prestige	25	7.7	38	10.2	52	13.2	42	10.3
Good working hours	24	7.4	19	5.1	43	10.9	18	4.4
Promotion prospects	30	9.3	39	10.4	75	19.1	47	11.5
Higher education opportunities	48	14.8	32	8.6	82	20.9	45	11.1
Good annual leave	36	11.1	19	5.1	58	14.8	20	4.9
Better retirement benefits	28	8.6	26	7.0	48	12.2	35	8.6
Self employment :								
Higher monthly salary	32	9.9	28	7.5	34	8.7	31	7.6
Social prestige	49	15.1	45	12.0	40	10.2	70	17.2
Good working hours	49	15.1	80	21.4	59	15.0	50	12.3
Promotion prospects	13	4.0	23	6.1	17	4.3	15	3.7
Higher education opportunities	18	5.6	24	6.4	28	7.1	35	8.6
Good annual leave	28	8.6	53	14.2	29	7.4	27	6.6
Better retirement benefits	7	2.2	19	5.1	12	3.1	11	2.7

So far, the findings have focused on students' expectations and motivations to enter higher education, and the employment advantages they hope to secure thereby. The next section considers the specific kinds of institutions, programmes and courses students preferred.

5.5 Entry to Higher Education

Students were asked to indicate which programmes of study they would wish to attend once entry into higher education has been achieved; in which country they would intend to continue their higher education; which higher education institutions they would like to enrol in if they continued their higher education in Oman and which higher education course they would wish to study.

5.5.1 Higher education programmes

As can be seen from Table 5.20 below, there was a preference among both male and female students in both specialisations, to take a degree programme, rather than a diploma programme.

Table 5.20 Programme of study after leaving secondary school

Programme of study	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Diploma (less than 4 years)	106	32.7	93	24.9	111	28.2	116	28.5
Degree (4 years or more)	218	67.3	281	75.1	282	71.8	291	71.5
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

In the case of Science students, the pattern of responses was almost identical for male and female students. In Arts, however, male students were somewhat more inclined than female students to favour a diploma programme, and slightly less inclined to want to pursue a degree programme.

To explore if there was a reason behind the preference for a degree rather than a diploma in terms of earning expectations, a Chi-Square test was undertaken and the result is detailed in Table 5.21.

Table 5.21: Chi-Square for choice of higher education programme and estimated monthly earnings

Estimated earnings after gaining higher education qualification	Higher education programme		Total
	Degree (4 years or more)	Diploma (less than 4 years)	
R.O. 300-400	61	80	**141**
R.O.401-500	303	133	**436**
R.O. 501-600	428	131	**559**
Over R.O.600	280	82	**362**
Total	**1072**	**426**	**1498**

df=3; Chi-Square= 69.234; p= .000

The Chi-Square results is highly significant, $p<0.05$. The table shows a statistically significant difference in frequencies between students preferring a degree and those preferring a diploma. The difference between the two figures became greater with successive estimated income bands. In other words, students who hoped to take a degree programme anticipated higher earnings than those who wanted to take a diploma programme. This finding is consistent with Human Capital Theory.

5.5.2 Country to continue higher education

Having indicated their preferred programme of study, respondents were asked where they wished to study. The results are shown in Table 5.22. As can be seen, the great majority of both males and females, in Arts and Science, wished to remain in Oman, in Government higher education institutions. Overall, female students (irrespective of specialisation) expressed stronger preference to study in Oman. However, once alternatives were offered, some differences became apparent, especially with regard to study abroad. Whereas there was little difference between Arts and Science students in the interest shown in studying in Arab countries, Science students were more likely than Arts students to consider studying outside the Arab world. In both specialisations, more girls than boys wanted to study in Arab countries, but more boys wanted to study in foreign countries.

Table 5.22: Preferred country of study

Alternatives	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Oman-government higher education institutions	216	66.7	261	69.8	249	63.4	294	72.2
Oman-private higher education institutions	20	6.2	28	7.5	26	6.6	18	4.4
Abroad-Arab countries	39	12.0	59	15.8	42	10.7	55	13.5
Abroad–foreign countries	39	12.0	21	5.6	72	18.3	34	8.4
Distance learning	10	3.1	5	1.3	4	1.0	6	1.5
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

Moreover, there was a difference between male and female students in both specialisations with regard to distance learning. Among Science students, slightly more girls than boys favoured this option, whereas the reverse was the case for Arts students. However, only very small numbers in any groups favoured this option.

5.5.3 Studying higher education in Oman

Following on from selecting where students would wish to study, those wishing to remain in Oman were asked to select their choice of institution from the seven options open to them. Their responses are detailed in Table 5.23 below.

Table 5.23: Institutions within the Oman

Institutions within the Oman	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Sultan Qaboos University	171	52.8	227	60.7	212	53.9	214	52.6
Colleges of Education	39	12.0	66	17.6	22	5.6	54	13.3
The Technical Colleges	16	4.9	9	2.4	41	10.4	8	2.0
The Health Institutions	2	0.6	0	0	49	12.5	84	20.6
College of Sharia and Law	56	17.3	34	9.1	32	8.1	19	4.7
Institute for Banking/ Finance	13	4.0	14	3.7	14	3.6	6	1.5
Private Universities/ Colleges	27	8.3	24	6.4	23	5.9	22	5.4
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

It is important to point out, before analysing the results in Table 5.23, that Arts students are only permitted to study in Arts based institutions, whereas Science students are permitted to study in either Science or Arts based institutions. This is why no girls and only two boys in the Arts group expressed a wish to study in the Science based 'Health Institutions'.

As can be seen from Table 5.23, regardless of gender and specialisation, most students, more than 55% of the overall total, responded that they wished to study at the Sultan Qaboos University- not surprisingly since it is free, and offers a wide range of courses. Female students were more inclined than male students to express a wish to study at Colleges of Education, perhaps reflecting the fact that education is a popular career among women, as it is suited to cultural perceptions of female roles. However, more male than female students were interested in enrolling in Technical Colleges. Nevertheless, the proportion of students choosing this option was small even among Science students, perhaps reflecting the low status of the vocational jobs to which technical courses lead, compared to the professional positions available with a degree.

A popular option among male Arts students was the College of Sharia and Law. This was less popular with girls, perhaps because Sharia (Islamic Law) is traditionally a male preserve; and less popular with Science students, who may not have the necessary level of specialisation in Arabic.

Clearly, the institution of study would be related to the intended field of study, certain specialisations are only available at particular institution, and students might choose an institution because it offers the course they prefer. Conversely, some students may adopt their choice of course in order to attend an institution they prefer, perhaps because it is affordable, or close to home, for example. The next sub-section presents the findings on students' course preferences.

5.5.4 Choice of higher education course

When deciding upon which higher education course to study from a selection of seventeen alternatives, there were wide variations between male and female and between Arts and Science students, as detailed in Table 5.24 below.

Table 5.24: Higher education course to study

Higher Education Course to study	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Arts	57	17.6	116	31.0	3	0.8	8	2.0
Business and Commercial	29	9.0	10	2.7	16	4.1	3	0.7
Economy	21	6.5	19	5.1	6	1.5	3	0.7
Education	31	9.6	105	28.1	22	5.6	76	18.7
Nursing *	0	0.0	0	0.0	35	8.9	67	16.5
Computer	18	5.6	23	6.1	39	9.9	37	9.1
Islamic Studies	26	8.0	42	11.2	10	2.5	22	5.4
Agriculture *	2	0.6	0	0.0	5	1.3	0	0.0
Pharmacy *	1	0.3	0	0.0	13	3.3	53	13.0
Medicine *	0	0.0	0	0.0	22	5.6	46	11.3
Aeronautics	32	9.9	7	1.9	54	13.7	7	1.7
Science *	0	0.0	1	0.3	15	3.8	21	5.2
Military Science	53	16.4	0	0.0	28	7.1	4	1.0
Law	36	11.1	16	4.3	16	4.1	11	2.7
Languages	12	3.7	19	5.1	3	0.5	15	3.7
Accounting	6	1.9	16	4.3	7	1.8	10	2.5
Engineering *	0	0.0	0	0.0	99	25.2	24	5.9
Total	**324**	**100**	**374**	**100**	**393**	**100**	**407**	**100**

* Only permitted for Science students.

As the table shows, Science students have more options open to them than Arts students. As a consequence, their responses were more widely distributed than those of Arts students.

Among Arts students, the preferred option for both sexes, but more especially girls, was a general Arts course. However, whereas boys' other main preferences were Military Science and Law, female students opted for Education and Islamic Studies. The latter, like Education, could lead to a teaching career, one of the most popular career choices for Muslim women. These choices are consistent with the current trend of female students pursuing studies that will help meet the needs of women in general.

It is, however, perhaps surprising that few women chose Law, as recent trends in women's rights would open career opportunities in this field. The same trend of female students choosing vocational studies that will meet the needs of females can be seen in the responses of Science students, where females' preferred courses were Education, Nursing, Pharmacy and Medicine.

Male students, on the other hand, showed a preference for industry-related courses: Engineering, Aeronautics and Computers. Of these, only the last was popular with female students also. Subjects such as Engineering are considered undesirable for women, as the work they lead to is regarded as unsuitable for women; also, since industries such as Petroleum are confined to specific regions, work in these sectors could take engineers away from their families; again, this is considered unacceptable for women. No female Science students reported wishing to study Agriculture. Unlike Western societies or non Islamic societies, Islamic women are not encouraged to do manual work such as Agriculture or to be involved in the rearing of animals, as Islamic society's expectation of females is primarily as wives and mothers, although open Islamic societies, such as in Oman, encourage females to pursue a culturally acceptable career if they wish to do this. The lack of interest to study Agriculture among Science students is particularly noteworthy given its historical importance in Oman and continuing relevance in providing the feed, food and fibre for society. This may be explained by agriculture's poor image in society as a 'dirty' profession, which involves heavy manual work.

5.6 Factors Influencing Students' Decisions to Enter Higher Education

The fifth section of the questionnaire contained a measure of factors influencing secondary school students' decisions to enter higher education. Factor analysis reduced 50 items which measure respondents' attitudes to eight sub-scale components that might influence students to enter higher education: Human Capital Theory; labour market conditions in Oman; influences on my future plans (parents and family); following those whose views I respect (friends); students' self-confidence in their ability; students' attitudes and perceptions towards higher education; teachers' influence; and specialisation of the students (Arts/Science).

During the pilot study, the researcher tested the reliability of the questionnaire using the Cronbach Alpha test. Reliability was again tested in the main study to check the data were reliable, before carrying out further statistical analysis. The overall reliability for the whole scale of the main study was 0.86.This value was very acceptable and indicated a statistically strong scale according to Bryman and Cramer (1997) and Pallant (2001).

This section is divided into two sub-sections. Firstly, the overall profile of factors influencing students' decisions to enter higher education is presented. Then, secondly the data are further analysed to explore if there are significant influences of each of the above mentioned factors on students' decisions to enter higher education and to explore any differences related to gender, specialisation and educational region.

5.6.1 Factors influencing students' decisions to enter higher education

Analysis was performed by computing the mean and standard deviation scores for each item. Component (subscale) mean and standard deviation scores were calculated by dividing the sum of the item scores by the number of items comprising that component. These mean and standard deviation scores are based on a response scale of 1 to 5, in which 1 represents strong disagreement with the item concerned and 5, strong agreement. Therefore, the higher the mean, the stronger the influence of the item and the lower the mean, the stronger the uninfluenced. In this study, a mean score of 3 (out of 5 points) or more indicates that the item is influential and a mean score below 3 indicates that it is not influential.

The tables that follow show the data for the 1,498 students who expressed a desire to go on to higher education, presented in descending order of the sub-scale means, that is, the sub-scale with the highest mean is presented first, and so on. Moreover, within each table, items are rank ordered by mean score.

The influence of Human Capital Theory was strongly supported by students' responses, as shown in Table 5.25. They saw higher education as an investment, as a pathway to future job prospects and high salaries, although the lower levels of agreement with items 23, 39 and 3 suggest that they acknowledged the importance of other benefits in addition to the economic and, moreover, that they did not necessarily expect the rewards to be immediate. From these results, clearly, students in this study were deeply aware of the economic, educational and financial benefits of gaining higher education, i.e. The Human Capital Theory.

Table 5.25: Item mean and standard deviation scores for Human Capital Theory sub-scale

Number of Item	Item	N	Mean	S.D.
18	I believe that gaining higher education is an investment for my future	1498	4.59	.633
11	A higher education degree would improve my chance of getting a good job with a high salary	1498	4.51	.707
36	A higher education degree will improve my chances to obtain better job opportunities	1498	4.48	.742
33	I would wish to go onto higher education to improve my chance of future job prosperity	1498	4.45	.710
23	It is my opinion that having a higher education degree is important for my financial security	1498	4.37	.802
39	I certainly would wish to get employment immediately after graduation from higher education in order to start earning money	1498	3.89	1.101
3	I think that economic benefits are the most important advantage of having higher education	1498	3.75	1.117
Sub-scale Mean and Standard Deviation:		**1498**	**4.29**	**0.830**

The next scale to be considered concerns students' self-confidence in their scholastic abilities. The relevant findings are shown in Table 5.26. The mean scores indicate that those items were all considered influential.

Table 5.26: Item mean and standard deviation scores for Students' self-confidence in their Ability sub-scale

Number of Item	Item	N	Mean	S.D.
1	I am good at school work	1498	4.25	1.021
27	I believe that I have an aptitude for higher education studies	1498	4.22	.824
22	I believe that I have the ability to pursue studies at higher education level	1498	4.16	.885
47	I believe that I have good intellectual abilities	1498	4.13	.799
12	I am not good at school work	1498	3.91	.999
37	I am not a hard working student	1498	3.83	.816
Sub-scale Mean and Standard Deviation:		**1498**	**4.08**	**0.890**

The results show means ranging from 3.83 to 4.25, with the highest score for item 1 'I am good at school work'. This is interesting, considering the evidence presented later in Tables 5.61 and 5.62, that there is a positive correlation between students' academic attainment and their personal perceptions of their scholastic abilities in school.

Students' perceptions of their abilities might well be influenced by the reactions of others such as parents and friends, and in a relatively collectivist society like Oman, the encouragement of significant others would certainly be expected to influence decisions about education and work. The next section explores this influence.

The Influence on the Future Plans (Parents and Family) sub-scale results, as detailed in Table 5.27 below, show that the students saw all the items related to parents and family as influential. However, item 7 had a low mean of 2.93, meaning that students did not think that their friends had a direct influence upon their future plans.

From these responses, the strong parental and familial influences prevalent in the Omani traditional culture are clearly indicated by the high mean scores for the items indicating that parents/guardians believed in investment in higher education to ensure a better future for them, and that their wider family influenced students to pursue higher education, and that their parents/guardians considered that success in higher education would bring social status.

Thus, overall, family, and particularly parents, were seen to have a strong influence on students' decisions, if not as a direct input, then through the values they held in relation to education.

Table 5.27: Item mean and standard deviation scores for Influences on my Future Plans (Parents and Family) sub-scale

Number of Item	Item	N	Mean	S.D.
35	My parents/guardians believe that investment in higher education will ensure me a better future	1498	4.52	.690
50	My wider family influence me to go onto higher education	1498	4.48	.807
19	My parents/guardians think higher education brings social status	1498	4.25	.885
4	My parents/guardians influenced my future plan to continue onto higher education	1498	4.17	1.023
38	My parents/guardians have a direct input into my future plans	1498	3.86	1.080
7	My friends had a direct influence upon my future plans	1498	2.93	1.256
Sub-scale Mean and Standard Deviation:		**1498**	**4.03**	**0.956**

Students also had their own personal attitudes and perceptions towards higher education, which are explored in the results detailed in Table 5.28 below.

Table 5.28: Item mean and standard deviation scores for Student's Attitudes and Perceptions toward Higher Education sub-scale

Number of Item	Item	N	Mean	S.D.
10	I believe that if I get a higher education degree I will bring honour to my family	1498	4.64	.764
2	I believe that it is necessary to continue in higher education in order to improve as a person	1498	4.62	.623
14	I believe that higher education qualification will enable me to contribute to society and to help other people	1498	4.43	.752
26	I believe that I will get respect/status if I acquire a higher education qualification	1498	4.43	.757
42	I believe that students in higher education do not have interesting life	1498	4.01	1.071
49	I would wish to go onto higher education because it is possible to gain a free scholarship	1498	3.81	1.108
30	I think that people ought to pursue higher education in order to develop as individuals	1498	3.81	1.090
6	I think that even without gaining a higher education degree, I can get a good job	1498	3.72	1.154
41	I believe that higher education does not necessarily bring higher social status	1498	3.38	1.263
31	I believe that only academically good students should continue onto higher education	1498	3.34	1.409
Sub-scale Mean and Standard Deviation:		**1498**	**4.01**	**0.999**

The mean scores for all items fell above the mid-point, indicating that the views expressed were seen as influential. However, item 31 'I believe that only academically good students should continue onto higher education' had the lowest mean score.

Consistent with the results in previous tables, students acknowledged the influence of career incentives (for example, items 14 and 26) and personal development incentives (for example, item 2). The relatively low mean score for item 6 suggests that students thought a degree would be needed to get a good job, consistent with the economic incentives expressed earlier. Although the availability of a free scholarship was clearly a factor in their thinking (item 49), the mean score suggests that this factor weighed less with students than, for example, the aspiration to achieve status and to bring honour to the family.

Overall, students' perceptions toward education appeared to be strongly influential in their decision to go onto higher education.

One reason for this may have been their expectations of the labour market. Table 5.29, below, shows students' answers related to labour market conditions in Oman.

Table 5.29: Item mean and standard deviation scores for Labour Market Conditions in Oman sub-scale

Number of Item	Item	N	Mean	S.D.
16	I am really keen to continue with my education in order to replace non-Omani professionals	1498	4.14	1.053
17	Labour market conditions (existence of non-Omani professionals) is one of my reasons for pursing higher education	1498	3.93	1.077
25	I believe that without higher education it is difficult to replace professional non-Omani employees	1498	3.89	1.139
45	I think that if not enough students go to higher education, the existence of non-Omani professionals will continue	1498	3.83	1.183
8	The existence of non-Omani professional employees in Oman is a motivating reason for me to pursue higher education studies	1498	3.66	1.306
32	I think it is good to have non-Omani professionals in labour market	1498	3.59	1.276
Sub-scale Mean and Standard Deviation:		**1498**	**3.84**	**1.172**

As can be seen from Table 5.29, students showed awareness of a need for themselves and other students to pursue higher education in order to acquire the skills and knowledge needed to replace professional non-Omanis currently employed in Oman. Given the strong emphasis on this issue by the government, it is surprising that a large proportion of students agreed that is good to have non-Omani professionals in the labour market, resulting in a higher mean than might be expected. Taking this response together with the endorsement of items 25 and 45, it may be that students were simply acknowledging the need for non-Omani professionals in the short term, until sufficient Omanis have been trained. This need not, therefore, be seen as necessarily contradicting their responses concerning the aspiration to replace non-Omanis. However, further research would be needed to clarify this issue.

Overall, prevailing labour market conditions appeared to be influential in students' decisions, although less strong than family influence and perceptions of higher education.

Students' decisions with regard to higher education may also be influenced by their teachers, as can be seen from Table 5.30 below. The items reflecting this factor all received mean scores between 3 and 4, showing that teachers' influence took various forms such as talking about their positive experiences at higher education; emphasising the importance of higher education qualifications; and persuading and encouraging students to aim for higher education studies. Of these, teachers' emphasis on the benefits and importance of higher education appeared to be most influential, as this item had the highest mean score in this subscale.

Table 5.30: Item mean and standard deviation scores for Teachers' Influence sub scale

Number of Item	Item	N	Mean	S.D.
34	My teachers usually emphasise the importance and benefits of higher education	1498	3.94	1.018
40	My teachers talk about their interesting experience of higher education life	1498	3.82	1.070
21	My teachers encouraged me to aim for higher education	1498	3.74	1.114
28	My teachers influenced my future plan to continue onto higher education	1498	3.51	1.081
9	My teachers persuaded me to go onto higher education	1498	3.40	1.245
Sub-scale Mean and Standard Deviation:		**1498**	**3.68**	**1.105**

Another factor that, it was thought, might influence students' future plans was their specialisation at secondary school. The findings on this factor are shown in Table 5.31. Mean scores on this scale, again, were all between 3 and 4. The highest level of agreement was for item 13, while the other items had significantly lower mean scores. Thus, it seems that the overall specialisation (Arts or Science) in secondary school was more influential than individual subjects were.

Table 5.31: Item mean and standard deviation scores for Specialisation (Arts/Science) sub-scale

Number of Item	Item	N	Mean	S.D.
13	The specialisation I study at secondary school influenced my future plans	1498	3.97	1.044
5	The subjects I study in secondary school encourage me to pursue higher education studies	1498	3.56	1.135
24	The educational system at the secondary school encourage me for higher education studies	1498	3.55	1.186
43	The subjects I study in secondary school influence my future plans	1498	3.35	1.182
Sub-scale Mean and Standard Deviation:		**1498**	**3.60**	**1.136**

Further support for some of the results in the preceding tables, can be found from the following table (Table 5.32) regarding whose views students respected. The table suggests, consistent with item 7 in Table 5.27, that friends' plans were not a strong influence on students' own decisions; although the items had mean scores above the mid-point, in some cases they were not markedly so, especially for items 29 and 15.

One would have expected a high level of agreement to item 48 'My parents/guardians believe in education for its own sake', given that previous results above indicate a significant influence of parents and family upon all decisions, yet this had the lowest mean score on the sub-scale which, being below 3, represented lack of influence. It may be that students answered in this way because their parents valued higher education for instrumental reasons, that is, as a way of acquiring a good salary and high status, rather than for its own sake.

Table 5.32: Item mean and standard deviation scores for Following those whose Views I Respect (Friends' Influence) sub-scale

Number of Item	Item	N	Mean	S.D.
46	My parents/guardians do not encourage me to pursue higher education	1498	4.46	.923
20	Many of my friends are doing higher education degrees	1498	3.64	1.068
44	Most of my friends will probably go onto higher education	1498	3.37	.936
29	Many of my friends will not be continuing onto higher education	1498	3.30	1.033
15	My friends influenced me to go onto higher education	1498	3.13	1.229
48	My parents/guardians believe in education for Its own sake	1498	2.53	1.156
Sub-scale Mean and Standard Deviation:		**1498**	**3.40**	**1.057**

The findings regarding the factors influencing students' decision to enter higher education are summarized in Table 5.33, which shows the score for all eight sub-scales, ranked in descending order according to the mean. It can be seen that all the factors had overall means higher than the criterion threshold of 3, meaning that all were perceived by students as influencing their decisions. The sub-scale reflecting Human Capital Theory scored highest, suggesting this factor was seen as most influential. This was followed by students' self-confidence in their ability, influence of parents and family, students' own attitudes and perceptions. External influences, such as the labour market and school, were seen as less influential and friends as least influential of all.

Table 5.33: Rank of mean and standard deviation total scores for factors influencing students' decisions to enter higher education sub-scales

Number	Sub-scale	N	Mean	S.D.
1	Human Capital Theory	**1498**	**4.29**	**0.830**
2	Students' self-confidence in their ability	**1498**	**4.08**	**0.890**
3	Influences on my future plans (Parents and Family)	**1498**	**4.03**	**0.956**
4	Student's attitudes and perceptions toward higher education	**1498**	**4.01**	**0.999**
5	Labour market conditions in Oman sub-scale	**1498**	**3.84**	**1.172**
6	Teachers' influence	**1498**	**3.68**	**1.105**
7	Specialisation (Arts/Science) influence	**1498**	**3.60**	**1.136**
8	Following those whose views I respect (Friends)	**1498**	**3.40**	**1.057**

As indicated previously, the data in Tables 5.25 – 5.33 were based on the 1,498 students who expressed a wish to go on higher education. The question now arises whether or not these students may have been differently influenced by these factors, than students

who did not. The sub-scale means when the whole sample is taken into account (Table 5.34) revealed that the rank order of influences remains the same. However, the mean scores are consistently lower, with only Human Capital Theory scoring higher than 4. This suggests that students who did not intend to pursue higher education were less motivated or influenced by these factors.

Table 5.34: Rank of mean and standard deviation total scores for factors influencing students' decisions to enter higher education sub-scales (The whole sample)

Number	Sub-scale	N	Mean	S.D.
1	Human Capital Theory	1830	4.22	0.889
2	Students' self-confidence in their ability	1830	3.99	0.956
3	Influences on my future plans (Parents and Family)	1830	3.98	1.001
4	Student's attitudes and perceptions toward higher education	1830	3.95	1.042
5	Labour market conditions in Oman sub-scale	1830	3.78	1.200
6	Teachers' influence	1830	3.63	1.131
7	Specialisation (Arts/Science) influence	1830	3.55	1.152
8	Following those whose views I respect (Friends)	1830	3.36	1.072

This view is confirmed by Table 5.35 below, which shows that the sub-scale means for the 332 students who did not intend to pursue higher education were substantially lower than those shown in Table 5.34. Not only this, but there was a difference in the rank order of some sub-scales; for this group, parental and family influence and students' attitudes and perceptions ranked higher , and students' self-confidence in their ability ranked lower, than for their counterparts who aspired to higher education.

Table 5.35: Rank of mean and standard deviation total scores for factors influencing students' decisions to enter higher education sub-scales (Only students who did not want to enter higher education)

Number	Sub-scale	N	Mean	S.D.
1	Human Capital Theory	332	3.93	1.051
2	Influences on my future plans (Parents and Family)	332	3.75	1.131
3	Student's attitudes and perceptions toward higher education	332	3.67	1.015
4	Students' self-confidence in their ability	332	3.58	1.081
5	Labour market conditions in Oman sub-scale	332	3.54	1.291
6	Teachers' influence	332	3.42	1.219
7	Specialisation (Arts/Science) influence	332	3.29	1.183
8	Following those whose views I respect (Friends)	332	3.13	1.100

We now turn to the second part of the analysis, which explores whether the importance of the various influencing factors differed according to students' gender, specialisation, or educational region.

5.6.2 Testing the hypotheses (Inferential Statistics)

The following discussion sheds light on the relationship between the factors influencing students' decisions to enter higher education, i.e. Human Capital Theory; labour market conditions in Oman; influences on my future plans (parents and family); following those whose views I respect (friends); students' self-confidence in their ability; students' attitudes and perceptions toward higher education; teachers influence; and specialisation of the students (Arts/Science), and their Gender, Specialisation and Educational Region.

For hypothesis testing in this section, a number of composite variables were constructed. That is, rather than treat each item in each scale as a separate measure (as was done in the previous analysis), they were combined into one index or scale which is defined as a composite variable (Nachmias and Nachmias, 1996; Bryman and Cramer, 1997). To do this, the scores of individual responses were aggregated and then the total score was divided by the number of statements in the scale to obtain the mean score value for that particular scale.

For this purpose, the following null hypotheses were tested:

(a) There are no significant differences in the influence of social factors (parents, family and friends) on secondary students' decisions to enter higher education in relation to their gender, specialisation and educational region.

(b) There are no significant differences in the influence of psychological factors (students' self-confidence in their ability and students' attitudes toward higher education) on secondary students' decisions to enter higher education in relation to their gender, specialisation and educational region.

(c) There are no significant differences in the influence of economic factors (human capital theory and labour market conditions in Oman) on secondary students' decisions to enter higher education in relation to their gender, specialisation and educational region.

(d) There are no significant differences in the influence of institutional factors (specialisation of the students and teachers) on secondary students' decisions to enter higher education in relation to their gender, specialisation and educational region.

To test these hypotheses, t-tests were carried out on the mean scores for each factor subscale. The results are displayed in Table 5.36, 5.37, 5.38, for gender, specialisation and educational regions respectively.

The results, in Table 5.36 below, show that there were highly significant differences in the influences of all eight factors on students' decisions to enter higher in relation to their gender, ($p<0.05$) . Therefore, all null hypotheses were rejected. In all cases, female students' mean scores were higher than those of their male counterparts, indicating that the investigated factors were more influential on female students than male students.

Table 5.36: The independent sample t-test comparing influences of factors scores for gender

Factors	Males			Females			t-Test	df	p
	N	Mean	S.D.	N	Mean	S.D.			
Influences on my future plans(parents and family)	913	3.87	0.63	917	4.09	0.53	-7.99	1828	**.000**
Following those whose views I respect (friends)	913	3.30	0.53	917	3.40	0.50	-4.03	1828	**.000**
Students' self-confidence in their ability	913	3.86	0.65	917	4.11	0.56	-9.03	1828	**.000**
Students' attitudes and perceptions toward higher education	913	3.88	0.46	917	4.02	0.44	-6.42	1828	**.000**
Human capital theory	913	4.19	0.59	917	4.25	0.51	-2.27	1828	**.023**
Labour market conditions in Oman	913	3.70	0.68	917	3.86	0.64	-5.07	1828	**.000**
Specialisation (Arts/Science)	913	3.41	0.79	917	3.68	0.75	-7.33	1828	**.000**
Teachers	913	3.52	0.85	917	3.74	0.82	-5.51	1828	**.000**

Table 5.37 shows the results of the analysis for the effect of specialisation. The table shows no significant differences in the influences of the social, psychological and economic factors on students' decisions to enter higher education in relation to their specialisation (Arts or Science). Therefore, the null hypotheses were accepted for these factors, since $p>0.05$. However, the results show a significant difference in the influence of one of the institutional factors, teachers' influence, with Arts students apparently

more influenced by this than Science students. Therefore, the null hypothesis was rejected for this factor, since $p<0.05$.

Table 5.37: The independent sample t-test comparing influences of factors scores for Specialisation

Factors	Arts			Science			t-Test	df	p
	N	Mean	S.D.	N	Mean	S.D.			
Influences on my future plans(parents and family)	883	3.98	0.61	947	3.98	0.57	0.07	1828	**.941**
Following those whose views I respect (friends)	883	3.34	0.52	947	3.36	0.51	-0.95	1828	**.341**
Students' self-confidence on their ability	883	4.00	0.64	947	3.97	0.60	0.99	1828	**.321**
Students' attitudes and perceptions toward higher education	883	3.95	0.48	947	3.95	0.43	-0.04	1828	**.997**
Human capital theory	883	4.22	0.59	947	4.22	0.52	-0.21	1828	**.827**
Labour market conditions in Oman	883	3.77	0.69	947	3.79	0.65	-0.93	1828	**.351**
Specialisation (Arts/Science)	883	3.57	0.78	947	3.52	0.77	1.53	1828	**.126**
Teachers	883	3.67	0.84	947	3.59	0.84	2.03	1828	**.042**

With regard to the effect of educational region, a Univariate test was undertaken to explore whether or not regions appeared to have any effects upon how students reported their views on the eight factors. Whilst the tests indicated that the F ratio was significant, values for eta squared ranged between .008 and .034, indicating that potential effect sizes were very small according to Cohen's (1988 in Pallant, 2001) classification. He classifies .01 as a small effect, .06 as a medium effect and .14 as a large effect. Since the effects are small, the tables are not reported here (See Table 5.38 below, for the effect size of Univariate test).

Table 5.38: Partial eta squared values (effect size) of Univariate test

Factors	Partial eta squared values (effect size)
Human Capital Theory	**.008**
Students' self-confidence in their ability	**.009**
Labour market conditions in Oman	**.010**
Friends' influence	**.010**
Parents and family	**.012**
Students' attitudes toward higher education	**.014**
Teachers' influence	**.020**
Specialisation	**.034**

5.7 The Influence of Family Background on Student's Decisions to Enter Higher Education

The analysis of this section will consider the impact of the family background, i.e. family size; number of brothers or sisters who are higher education graduated; the highest level of education completed by father/guardian; the highest level of education by mother/guardian; father's/guardian's sector of employment; mother's/guardian's sector of employment; father's/guardian's occupational status; mother's/guardian's occupational status and the family's estimated monthly income, on students' decisions to enter higher education or find employment after secondary school.

This section is divided into two sub-sections. Firstly, distribution of the whole sample in relation to each aspect of the family background mentioned above is reported. Then, the data are further analysed to explore if there are significant differences of the influences of these variables on secondary students' decisions to enter higher education or to find employment after secondary school.

5.7.1 Family background of respondents

5.7.1.1 Family size

In the following Table 5.39, Size of families, it can be seen that most students, both Arts and Science, belonged to large families.

Table 5.39: Size of families

Size of Family	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Less than 4 persons	20	4.5	7	1.6	5	1.1	6	1.2
From 4 to 8 persons	149	33.3	105	24.1	136	29.2	94	19.5
From 9 to 12 persons	195	43.5	230	52.9	232	49.9	244	50.6
13 persons or more	84	18.8	93	21.4	92	19.8	138	28.6
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

For each specialisation and both genders, the largest group was of students with 9-12 family members, and the second largest was those with 4-8 members. These two categories together accounted for more than 70% of the students. Very few students came from small families of fewer than 4 persons.

The distribution of responses to this question is representative of the general national trend of family size in Oman, where the average family size is 8 persons (Ministry of National Economy, 2002). In these large families, it is likely that many students would have older brothers and sisters, whose prior experience of education and employment may have influenced their own choices. The next sub-section, therefore, reports on the numbers of brothers and sisters who had completed higher education.

5.7.1.2 Brothers and sisters graduated from higher education

It is interesting to note that when asked how many brothers and sisters were higher education graduates, the majority of students in all categories answered 'None' (see Table 5.40) below. This can be explained by the fact that, as stated earlier in this thesis, prior to the discovery of oil within the Sultanate of Oman, most families were tribal and nomadic, so education was not a priority as it is today.

Table 5.40: Brothers and sisters who are higher education graduates

Number of brothers and sisters higher education graduates	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
None	277	61.8	275	63.2	261	56.1	293	60.8
1 person	81	18.1	85	19.5	84	18.1	90	18.7
2 persons	42	9.4	31	7.1	54	11.6	44	9.1
3 persons	15	3.3	17	3.9	25	5.4	20	4.1
4 persons	12	2.7	14	3.2	16	3.4	16	3.3
5 persons	5	1.1	5	1.1	7	1.5	8	1.7
More than 5	16	3.6	8	1.8	18	3.9	11	2.3
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

This being so, it is often the case nowadays that children have more educational opportunities than their parents did. Theoretically, however, it might be expected that parents who are more educated would, through the values they hold in relation to education or practical help they can provide with schoolwork, encourage their children to enter higher education. The next sub-sections investigate parents' education.

5.7.1.3 Father's/guardian's level of education

That the trend towards achieving educational qualifications is relatively recent is supported by the result of the responses to the next question, indicating the education level achieved by the students' fathers (see Table 5.41).

Table 5.41: Highest level of education completed by father/guardian

Highest Level of education completed by father/guardian	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
No education (illiterate)	161	35.9	116	26.7	103	22.2	76	15.8
Can read and write or Elementary education	142	31.7	154	35.4	142	30.5	186	38.6
Some preparatory or Preparatory school	62	13.7	81	18.6	95	20.4	110	22.8
Some secondary or Secondary school	45	10.0	48	11.0	50	10.8	56	11.6
College (diploma)	18	4.0	21	4.8	20	4.3	20	4.1
University (bachelor degree)	8	1.8	11	2.5	31	6.7	27	5.6
Higher studies (Master)	5	1.1	4	0.9	17	3.7	6	1.2
Higher studies (PhD)	7	1.6	0	0.0	7	1.5	1	0.0
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

The largest concentrations of responses in all groups were in the 'No education (illiterate)' and 'Elementary education' categories, and the percentages become progressively lower with successive levels of study. However, Science students appeared to have slightly better educated fathers than Arts students, with a smaller percentage of illiterate parents, and large percentages with bachelor degree and postgraduate qualifications.

It must be remembered that during the period of study of most of these fathers/guardians, opportunities to progress to PhD level higher education were not generally available; also, Oman was still developing from a tribal nomadic country into an important, more cosmopolitan Oil State in the global economy.

If opportunities were limited for men, they were still more so for women, as reflected in the next set of results.

5.7.1.4 Mother's/guardian's level of education

Mothers had generally attained lower levels of education than fathers; more than half were illiterate (Table 5.42). Very few had received education beyond the elementary stage. This can be explained by what has previously been stated about the traditional culture of the Sultanate of Oman, where traditionally females were not encouraged to pursue any education. The mothers of the students responding to this questionnaire would have grown up under this traditional culture, as radical changes have been on-going for the past 20-30 years, and for some families there is still much resistance to female members of the family receiving education other than elementary.

Table 5.42: Highest level of education completed by mother/guardian

Highest Level of education completed by mother/guardian	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
No education (illiterate)	266	59.4	259	59.5	207	44.5	244	50.6
Can read and write or Elementary education	120	26.8	135	31.0	158	34.0	145	30.1
Some preparatory or Preparatory school	34	7.6	25	5.7	58	12.5	57	11.8
Some secondary or Secondary school	17	3.8	13	3.0	22	4.7	26	5.4
College (diploma)	4	0.9	1	0.2	9	1.9	5	1.0
University (bachelor degree)	4	0.9	2	0.5	10	2.2	4	0.8
Higher studies (Master)	3	0.7	0	0.0	1	0.2	1	0.2
Higher studies (PhD)	0	0.0	0	0.0	0	0.0	0	0.0
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

The next aspect of family background to be considered is the employment status of parents- both sector and occupation. We begin with father's sector of employment.

5.7.1.5 Father's/guardian's sector of employment

Given the strong influence of family on Omani students' plans, father's sector of employment may be significant. The findings in this respect are shown in Table 5.43.

The largest concentration of responses for each of the four groups of students completing the questionnaire was in category of 'Public sector (government) followed by 'Retired'. Comparatively few were self-employed, and fewer still worked in the private sector.

Table 5.43: Father's/guardian's sector of employment

Father/guardian's sector of employment	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Public sector (Government)	174	38.8	201	46.2	215	46.2	217	45.0
Private sector	31	6.9	35	8.0	40	8.6	47	9.8
Self- employed	62	13.8	63	14.5	54	11.6	64	13.3
Work abroad	8	1.8	1	0.2	7	1.5	12	2.5
Retired	127	28.3	102	23.4	124	26.7	113	23.4
Does not work	46	10.3	33	7.6	25	5.4	29	6.0
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

These employment patterns would be a major determinant of the status of the family, given that fathers/guardians are the principal salary earners because of religious beliefs. This point is supported when the responses to mother's/guardian's sector of employment is analysed and compared to the above results.

5.7.1.6 Mother's/guardian's sector of employment

The great majority of students in each of the four groups indicated that their mothers/guardians did not work i.e. male Arts (94.9%) and Science (92.9%) students' mothers/guardians and female Arts (94.9%) and Science (93.6%) students' mothers/guardians (see Table 5.44).

Table 5.44: Mother's/guardian's sector of employment

Mother/ guardian's sector of employment	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Public sector (Government)	10	2.2	7	1.6	19	4.1	13	2.7
Private sector	2	0.4	7	1.6	5	1.1	9	1.9
Self -employed	5	1.1	3	0.7	4	0.9	5	1.0
Retired	6	1.3	5	1.1	5	1.1	4	0.8
Does not work (housewife)	425	94.9	413	94.9	432	92.9	451	93.6
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

Slightly more Science than Arts students reported having mothers who worked outside the home, but with such low percentages, this may not be significant. The response pattern reflects the traditional culture of females marrying young and remaining in the home to raise families, run the home and care for elderly relatives, while their husbands go to work to earn money to support them and their children.

Having obtained a broad picture of the sectoral distribution of students' parents, we now turn to their specific occupation.

5.7.1.7 Father's/guardian's occupational status

Following on from the above information, the occupational status of the father/guardian was ascertained. The largest concentrations of response were within the 'Retired' category, around a quarter of all responses (see Table 5.45). Science students appeared somewhat more likely to have fathers in professional and technical occupations, but

otherwise, the pattern of distribution was similar for all the groups: professional/ technical, military and service occupations were the most common.

Table 5.45: Father's/guardian's occupational status

Father/guardian's occupational status	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Professional, technical or administrative worker	44	9.8	44	10.1	70	15.1	76	15.8
Owner or businessman	47	10.5	42	9.7	45	9.7	51	10.6
Clerical worker	27	6.0	67	15.4	44	9.5	56	11.6
Service worker	71	15.8	72	16.6	57	12.3	70	14.5
Military/Police service/security	73	16.3	59	13.6	91	19.6	76	15.8
Fisherman/Farmer	13	2.9	16	3.7	9	1.9	11	2.3
Retired	127	28.3	102	23.4	124	26.7	113	23.4
Does not work	46	10.3	33	7.6	25	5.4	29	6.0
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

A relatively high proportion of fathers/guardians was employed in the military, police service or security. The results also revealed that agriculture and fishing, once the mainstays of the economy, occupied very few of the students' fathers.

In the next sub-section, the occupational profile of students' parents is completed by data on mother's occupational status.

5.7.1.8 Mother's/guardian's occupational status

The majority of students reported their mothers did not work (Table 5.46). The few who worked were generally in the owner/businesswomen, service and clerical positions. Few mothers were in professional occupations, reflecting their low levels of education; however, more Science than Arts students had mothers in this category.

Because 'Police service/security' is not generally seen as a suitable area of work for women in Oman, due to the traditional culture, only 0.4% of students' mothers/guardians were indicated in this category.

Table 5.46: Mother's/guardian's occupational status

Father/guardian's occupational status	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Professional, technical or administrative worker	4	0.9	0	0.0	14	3.0	7	1.5
Owner or businesswoman	4	0.9	4	0.9	6	1.3	7	1.5
Clerical worker	5	1.1	5	1.1	1	0.2	1	0.2
Service worker	4	0.9	8	1.8	7	1.5	10	2.1
Police service/ security	0	0.0	0	0.0	0	0.0	2	0.4
Retired	6	1.3	5	1.1	5	1.1	4	0.8
Does not work	425	94.9	413	94.3	432	92.9	451	93.6
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

The occupational status of students' parents would inevitably affect family income, which in turn may influence students' expectations regarding higher education. Income is, therefore, reported next.

5.7.1.9 Family monthly income

The results related to total monthly income indicate that the majority of the families of the students participating in this research fell within the R.O. 100-399 category; this accounted for nearly half of participants (See Table 5.47 below).

Table 5.47: Family's total monthly income

Family's total monthly income	Specialisation and Gender							
	Arts				Science			
	Male	%	Female	%	Male	%	Female	%
Less than R.O. 100	81	18.1	65	14.9	36	7.7	67	13.9
R.O. 100-399	179	40.0	174	40.0	187	40.2	178	36.9
R.O. 400-700	115	25.7	107	24.6	128	27.5	137	28.4
R.O. 701-1000	35	7.8	57	13.1	52	11.2	62	12.9
R.O. 1001 or more	38	8.5	32	7.4	62	13.3	38	7.9
Total	**448**	**100**	**435**	**100**	**465**	**100**	**482**	**100**

The next largest category identified is 'R.O. 400-700', which is the average monthly income in Oman according to the Ministry of National Economy (2002). There were, however, small numbers of students, an average of 13.6% across the few response groups, from economically disadvantaged families with incomes 'less than R.O. 100',

and at the other extreme, a very small percentage of participants from very wealthy financially secure families.

5.7.2 Testing the hypotheses (Inferential Statistics)

In order to explore whether students' family backgrounds influence their decisions to enter higher education or find employment after secondary school, and for the purpose of analysis, question No. 6 in the questionnaire was collapsed into two categories, i.e. options 1 (Go to higher education) and 2 (Find employment and then participate in part-time higher education) became option 1 'Go to higher education' and option 3 (Find employment after secondary school) remained the same, as 2 'Find employment'. After that, most of the family background categories were collapsed as detailed in each sub-section below.

This section deals with those hypotheses testing possible influence of family background on students' decisions, in order to build a base for the analysis and interpretation of data in the next chapter. These hypotheses are:

***Hypothesis one**: There is no significant difference between students from different size families, in their decision to go to higher education or find employment after secondary school.*

***Hypothesis two:** There is no significant difference between students who have higher education graduated brothers and sisters and those who do not, in their decision to go to higher education or find employment after secondary school.*

***Hypothesis three:** There is no significant difference between students whose fathers/guardians have different levels of education, in their decision to go to higher education or find employment after secondary school.*

***Hypothesis four:** There is no significant difference between students whose mothers/guardians have different levels of education, in their decision to go to higher education or find employment after secondary school.*

***Hypothesis five:** There is no significant difference between students, related to Father's/ Guardian's sector of employment, in their decision to go to higher education or find employment after secondary school.*

***Hypothesis six:** There is no significant difference between students, related to Mother's/ Guardian's sector of employment, in their decision to go to higher education or find employment after secondary school.*

Hypothesis seven: ***There is no significant difference between students, related to Father's/ Guardian's occupational status, in their decision to go to higher education or find employment after secondary school.***

Hypothesis eight: ***There is no significant difference between students, related to Mother's/ Guardian's occupational status, in their decision to go to higher education or find employment after secondary school.***

Hypothesis nine: ***There is no significant difference between students, related to Family income, in their decision to go to higher education or find employment after secondary school.***

Chi-square Tests were undertaken to determine if there was any significant differences of the influences of family backgrounds on students' decisions to enter higher education or find employment after secondary school.

5.7.2.1 Influence of family size

Because the average family size in Oman is 8 persons according to the Ministry of Economics (2002), the three categories used were option 1 'Less than average'; option 2 'Average' and option 3 plus option 4 'Above Average'.

Hence, the family size question, No. 16, was collapsed from four options into three categories as detailed in Table 5.48 below.

Table 5.48: Chi-Square test for the influence of family size

Family size	Decision after secondary school		Total
	Go to higher education	Find employment	
Less than average	26	12	38
Average	382	102	484
Above average	1090	218	1308
Total	**1498**	**332**	**1830**

df=2; Chi-Square=9.339; p=.009

As the Chi-square result is highly significant $p < 0.05$, it can be concluded that the influence of family size has a strong effect on students' decisions to pursue higher education, with students from larger families more likely to plan to go to higher education. Therefore, the null hypothesis was rejected.

The next section examines whether having siblings who were higher education graduated influence secondary school students' aspirations to enter higher education.

5.7.2.2 Influence of brothers' / sisters' education

Because most of the student participants did not have brothers or sisters who were higher education graduates, question 17 was collapsed into two categories, i.e. option 1 became None and options 2-7 became 2 i.e. they had brothers and sisters who were graduates. The pattern of responses is shown in Table 5.49.

Table 5.49: Chi-Square test for the influence of having brothers and sisters who were higher education graduated

Brothers or Sisters higher education graduated	Decision after secondary school		Total
	Go to higher education	Find employment	
No brothers or sisters higher education graduated	854	252	1106
There are brothers or sisters higher education graduated	644	80	724
Total	**1498**	**332**	**1830**

df=1; Chi-Square=40.576; p=.000

The Chi-square result is highly significant $p<0.005$. Although the majority of students hoped to pursue higher education, those who had brothers or sisters who had graduated from higher education were significantly less likely to choose this option than those who did not. Therefore, the null hypothesis was rejected.

Next, we consider the effect of parents' education.

5.7.2.3 Influence of father's /guardian's education

In order to ascertain the influence of father/guardian's and mother/guardian's levels of education, questions 18 and 19 were collapsed into three categories, i.e. Option 1 remained 1; options 2, 3, 4 became 2 (some education) i.e. until secondary school; options 5, 6, 7 and 8 became 3 (higher education) i.e. diploma or above.

Table 5.50: Chi-square for the influence of level of education completed by father/guardian

Father's level of education	Decision after secondary school		Total
	Go to higher education	Find employment	
No education	347	109	456
Some education	959	212	1171
Highly educated	192	11	203
Total	**1498**	**332**	**1830**

df=2; Chi-Square=32.322; p=.000

The Chi-square $p<0.005$ shows a significant influence of parental education on students' desire to pursue higher education (see Table 5.50). Students whose fathers had some or no education were more likely to want to find a job than those whose parents were highly educated. Therefore, the null hypothesis was rejected.

The next section investigates whether there were differences in students' aspirations, related to their mothers' education.

5.7.2.4 Influence of mother's /guardian's education

As stated earlier, for Table 5.50, question 19 was collapsed into three categories (see Table 5.51). The Chi-square result is significant at $p< 0.05$. The pattern is the same as with fathers. Students whose mothers were not educated or had some education were more likely to decide to seek employment than those whose mothers were highly educated. Therefore, the null hypothesis was rejected.

Table 5.51: Chi-square for the influence of level of education completed by mother/guardian

Mother's level of education	Decision after secondary school		Total
	Go to higher education	Find employment	
No education	779	197	976
Some education	678	132	810
Highly educated	41	3	44
Total	**1498**	**332**	**1830**

df=2; Chi-Square=8.399; p=.015

In the four sub-sections that follow, the influence of parents' employment situation is explored.

5.7.2.5 Influence of father's / guardian's sector of employment

As it was important to identify as wide a range as possible of students' fathers/guardians sector of employment in question 20, it was not seen as necessary to collapse any of the options offered.

Table 5.52: Chi-Square for the influence of father's/guardian's sector of employment

Father's/Guardian's sector of employment	Decision after secondary school		Total
	Go to higher education	Find employment	
Public sector	663	144	807
Private sector	123	30	153
Self-employed	198	45	243
Works abroad	21	7	28
Retired	388	78	466
Does not work	105	28	133
Total	**1498**	**332**	**1830**

df=5; Chi-Square=2.557; p=.768

As shown in Table 5.52, the Chi-square result was not significant at the $p>0.05$ level. In other words, fathers'/guardian's sector of employment did not influence the likelihood of students pursuing higher education. Therefore, the null hypothesis was accepted.

The next sub-section examines the corresponding data for mothers.

5.7.2.6 Influence of mother's / guardian's sector of employment

As stated under Table 5.52, it was important to identify as wide a range as possible students' mother's/guardian's sectors of employment in question 21; it was not seen as necessary to collapse any of the options offered.

Table 5.53: Chi-Square for the influence of mother's/guardian's sector of employment

Mother's/Guardian's sector of employment	Decision after secondary school		Total
	Go to higher education	Find employment	
Public sector	40	9	49
Private sector	18	5	23
Self-employed	14	3	17
Retired	16	4	20
Does not work	1410	311	1721
Total	**1498**	**332**	**1830**

df=4; Chi-Square=0.257; p=.992

The result in Table 5.53 shows that the great majority of students in all categories said they would prefer to go to higher education. The Chi-square result was not significant at the $p>0.05$ level. Thus, the sector of employment of mother/guardian did not influence the likelihood of students pursuing higher education. Therefore, the null hypothesis was accepted.

Having examined the influence of parents' employment sector, we now turn to their specific occupation.

5.7.2.7 Influence of father's / guardian's occupational status

The influences of Father's /Guardian's occupational status on decision after secondary school are summarised in Table 5.54.

As it was important to identify as wide a range as possible students' fathers/guardians occupational status in question 22, it was not seen as necessary to collapse any of the options offered.

The Chi-square result is highly significant at the $p < 0.005$ level. Students whose fathers were professional, technical or administrative workers were more likely to choose higher education, and less likely to choose employment, than those whose fathers were in any other category. The highest proportions of students who chose employment rather than education were those whose fathers were service workers, military/police service/security or retired. Therefore, the null hypothesis was rejected.

Table 5.54: Chi-Square for the influence of father's/guardian's occupational status

Father's/Guardian occupational status	Decision after secondary school		Total
	Go to higher education	Find employment	
Professional, technical or administrative worker	218	16	234
Owner or businessman	164	21	185
Clerical worker	160	34	194
Service worker	196	74	270
Military/police service/security	234	65	299
Fisherman/farmer	33	16	49
Retired	388	78	466
Does not work	105	28	133
Total	**1498**	**332**	**1830**

df=7; Chi-Square=52.468; p=.000

5.7.2.8 Influence of mother's/ guardian's occupational status

The influences of Mother's/Guardian's occupational status on decision after secondary school are summarised in Table 5.55.

As it was important to identify as wide a range as possible students' mothers/guardians occupational status in question 23, it was not seen as necessary to collapse any of the options offered.

Table 5.55: Chi-Square for the influence of mother's/guardian's occupational status

Mother's/Guardian occupational status	Decision after secondary school		Total
	Go to higher education	Find employment	
Professional, technical or administrative worker	24	1	25
Owner or businessman	18	3	21
Clerical worker	9	3	12
Service worker	21	8	29
Military/police service/security	1	1	2
Retired	16	4	20
Does not work	1409	312	1721
Total	**1498**	**332**	**1830**

df=6; Chi-Square=7.112; p=.311

The Chi-square result is not significant at the $p>0.05$ level. This not surprising, given that over 93% of the mothers of students surveyed were full-time housewives. Thus, the decision of students to either pursue higher education or find employment were not affected by mother's occupational status but rather by father's occupation (Table 5.54). Therefore, it would be expected not to have a significant Chi-square result. Therefore, the null hypothesis was accepted.

The effect of family income is considered next.

5.7.2.9 Influence of family income

The average monthly income options in question 24 were collapsed as follows: Options 1 and 2 became 1 (Low Income); Option 3 became 2 (Average income) and Options 4 and 5 became 3 (High Income). These categories were considered appropriate as the average monthly income in Oman is R.O. **400-700** according to the Ministry of National Economy (2002).

Table 5.56: Chi-Square for the influence of family monthly income

Family monthly income	Decision after secondary school		Total
	Go to higher education	Find employment	
Low income	729	238	967
Average income	427	60	487
High income	342	34	376
Total	**1498**	**332**	**1830**

df=2; Chi-Square= 59.337; p=.000

The Chi-square result is highly significant at the $p < 0.005$ level as shown in Table 5.56. The high intention to find employment rather than pursue higher education was expressed by a higher proportion of students from low-income families than those in other groups; the higher income, the less likely students were to prefer employment. Therefore, the null hypothesis was rejected.

Although this section has provided evidence that students' family background influences their preference whether or not to pursue higher education, their opportunities to do so in practice would depend on their academic achievement. Since students may adopt their aspirations accordingly. In the next section, therefore, the possible relationship between academic attainment and students' plans for higher education or employment are considered.

5.8 The Influence of Scholastic Ability (Academic Attainment) on Students' Decisions to Enter Higher Education

In the Review of Literature, scholastic ability is one of the most important factors influencing students' decisions to enter higher education (See for example, Kodde and Ritzen (1988), Connor (2001), Tobias (2002), and Averett *et al.* (2003).

This section is divided into two sub-sections. Firstly, a profile of the whole sample with regard to students' scholastic ability (academic attainment) will be presented. Then, secondly the data are further analysed to explore if there is a significant differences of the influence of academic attainment on secondary students' decisions to enter higher education or to find employment after secondary school.

It is important, in order to make comparisons, to state that according to the educational system in Oman, the classification of students' academic performance scores used to assess their ability in school is as follows:

A – Scores of 90-100%

B – Scores of 75- 89%

C – Scores of 60-74%

D – Scores of 40-59%

For the purpose of analysis the sample scores were categorised into three levels as follows:

High ability is the combination of A and B i.e. 75-100%

Medium ability is 60 - 74%

Low ability is 40 - 59%

The total numerical score of **Arts** students is **640** for a maximum score of 100%, therefore, the Arts students' scores were categorised as follows:

High ability (75-100%) i.e. scores 480.5-640

Medium ability (60-74%) i.e. scores 384.5-480.4

Low ability (40-59%) i.e. scores less than 384.4

The total numerical score of **Science** students is **760** for a maximum score of 100%, therefore, the Science students' scores were categorised as follows:

High ability (75-100%) i.e. scores 570.5-760

Medium ability (60-74%) i.e. scores 456.5-570.4

Low ability (40-59%) i.e. scores less than 456.4

5.8.1 Distribution of sample by scholastic ability (academic attainment)

5.8.1.1. Arts students' attainment

As can be seen from Table 5.57 below, that according to their scholastic ability Male Arts students were fairly equally distributed across the three categories.

Table 5.57: Distribution of Arts students by their gender according to scholastic ability

Students' gender	Students ability			Total	%
	High ability	Medium ability	Low ability		
Male	156	171	121	448	100
	34.8	38.2	27.0		
Female	245	133	57	435	100
	56.3	30.6	13.1		

However, Female Arts students were not fairly equally distributed across the three categories, since the majority scored within the high ability range and only 13.1% scored within the low ability range of 40-59%: scholastic score 384.4. Thus, overall, the female students were academically higher achievers than their male counterparts were.

5.8.1.2. Science students' academic attainment

As can be seen from Table 5.58 below, according to their scholastic ability, Male Science students are reasonably distributed across the three categories, with just over a third in the high and medium categories, and slightly under a third in the low ability categories.

Table 5.58: Distribution of Science students by their gender according to scholastic ability

Students' gender	Students ability			Total	%
	High ability	Medium ability	Low ability		
Male	158	164	143	465	100
	34.0	35.3	30.7		
Female	240	130	112	482	100
	49.8	27.0	23.2		

However, Female Science students are not evenly distributed across the three categories; almost half scored within the high ability range of 75-100%; scholastic scores between '570.5-760'; with the remainder divided fairly evenly between the high and medium categories. So, again, females were higher achievers than males.

Thus, the pattern for both subject specialisations is the same, with girls being higher achievers and boys' scores being more widely distributed.

5.8.2 Testing the hypotheses (Inferential Statistics)

This section deals with those hypotheses testing possible influence of scholastic ability on students' decisions to enter higher education or to find employment after secondary school. These hypotheses are:

Hypothesis one: ***There is no significant difference between Arts students, related to their academic attainment, in their decision to go to higher education or find employment after secondary school.***

Hypothesis two: ***There is no significant difference between Science students, related to their academic attainment, in their decision to go to higher education or find employment after secondary school.***

Hypothesis three: ***There is no statistically significant correlation between Arts students' self-confidence in their ability and their academic attainment.***

Hypothesis four: ***There is no statistically significant correlation between Science students' self-confidence in their ability and their academic attainment.***

Chi-square Tests were undertaken to determine if there were any significant differences between students of different academic attainment in their decisions to enter higher education or find employment after secondary school. In addition, Bivariate tests of correlation (Pearson test) were undertaken for both Arts students' attainment and Science students' attainment to test statistically if there was any correlation between students' self-confidence in their ability and their academic attainment.

5.8.2.1 Influence of academic attainment, for Arts students

The Chi-square test was used to ascertain if there is any significant differences in the influence of the Arts students' academic attainment in their decision after secondary school and the result was highly significant ($p < 0.005$) as shown in Table 5.59 below.

Table 5.59: Chi-square for Arts students' scholastic ability

Arts Students' Ability	Decision after secondary school		Total
	Go to higher education	Find employment	
High ability	373	28	401
Medium ability	218	86	304
Low ability	107	71	178
Total	**698**	**185**	**883**

df= 2; Chi-Square=95.669; p=.000

The table shows that students of high ability were more likely to plan to go to higher education than those of medium and low ability. Therefore, the null hypothesis was rejected.

Next, the corresponding data for Science students will be examined.

5.8.2.2 Influence of academic attainment, for Science students.

The Chi-square test was used to ascertain if there is any significant differences in the influence of the Science students' academic attainment in their decision after secondary school and the result was highly significant ($p < 0.005$) as shown in Table 5.60 below.

Table 5.60: Chi-square for Science students' scholastic ability

Science Students' Ability	Decision after secondary school		Total
	Go to higher education	Find employment	
High ability	374	24	398
Medium ability	247	47	294
Low ability	179	76	255
Total	**800**	**147**	**947**

df=2; Chi-Square= 67.058; p=.000

The table shows that students of high attainment were more likely to plan to go to higher education than those of medium and low ability. Therefore, the null hypothesis was rejected.

As stated earlier, these results can be compared to those in Table 5.26 where students were asked to identify their perceptions of their scholastic abilities. The majority of the students believed that they had good scholastic abilities. For example, the Mean for 'I am good at school work' was 4.25 and that for 'I believe that I have an aptitude for higher education studies' was 4.22. These results, taken together with the evidence of actual ability in Tables 5.59 and 5.60, suggest a correlation between students' academic attainment and their personal perceptions of their scholastic abilities in school.

The existence of such a correlation is tested in the next two sub-sections.

5.8.2.3 Correlation between Arts students' self-confidence in their ability and their academic attainment

Bivariate test of correlation (Pearson test) was undertaken for Arts students' ability and the result is shown in Table 5.61 below.

Table 5.61: Pearson correlation test between Arts students' self-confidence in their ability and their scholastic attainment

Test	r-value	Decision
Pearson's r	**0.403 P < 0.000 N=883**	**Reject H0**

** Correlation is significant at the 0.01 level (2- tailed).

As can be seen from Table 5.61, there was a significant positive correlation between Arts students' self-confidence in their ability and their scholastic attainment

(r =0.403, n =883, p<0.000, 2-tailed) and, therefore, the null hypothesis was rejected.

5.8.2.4 Correlation between Science students' self-confidence in their ability and their academic attainment

Bivariate test of correlation (Pearson test) was undertaken for Science students' ability and the result is shown in Table 5.62 below.

Table 5.62: Pearson correlation test between Science students' self-confidence in their ability and their scholastic attainment

Test	r-value	Decision
Pearson's r	**0.370 P < 0.000 N=947**	**Reject H0**

** Correlation is significant at the 0.01 level (2- tailed).

As can be seen from Table 5.62, there was a significant positive correlation between Science students' self-confidence in their ability and their scholastic attainment

(r =0.370, n =947, p<0.000, 2-tailed) and, therefore, the null hypothesis was rejected.

The results also revealed that the relationship between confidence in scholastic ability and academic attainment was stronger for Arts students than Science students, as the correlation result value was (r= 0.403) for Arts, compared to (r=0.370) for Science.

5.9 Summary

This chapter has presented the questionnaire data concerning Omani students' motivations, expectations and attitudes toward higher education and employment after secondary school, and the factors that affect their decisions.

It was found that overall, a very high proportion of students aspired to higher education, and that demand was similar among male and female students, and between Arts and Science specialists.

Students' motivations and expectations towards higher education support human capital theory; career, economic and (to a slightly lesser extent) personal development incentives were all reflected in their reasons for pursuing higher education. In particular, they saw it as a route to a secure, well-paid job offering a prosperous future for themselves and their dependents. Such a job would, in their perception, bring them social status and bring honour to their families. The findings showed that students from Muscat, Dhofar and Albatinah are more motivated to enter higher education for economic reasons compared to students from Aldhaliliyah and Alsharqiyah. On the other hand, students from Dhofar are more interested in joining higher education to secure jobs of higher status, compared to students from other educational regions. Moreover, students from Aldhahirah region are less motivated to enter higher education for self-development and their own improvement compared to students from other educational regions. The great majority of all students hoped to work in the government sector, where the advantages of job security, status and prosperity were seen as most readily available.

The majority of students had aspirations to follow a degree rather than a diploma programme, this preference being linked to the anticipation of higher earning power. Most would prefer to study in Oman, in one of the government-owned institutions, particularly Sultan Qaboos University. Vocational college courses were less popular. Among male students, Arts students favoured business courses, while Science students favoured engineering and industry-related courses. Among females, education was the preferred option for both specialisations, but a large number of Science students favoured one or other of the health care-related courses.

Students' future plans were influenced particularly by their families, and to a lesser extent, their teachers. Their self-confidence in their ability, and their perception towards higher education also appeared to be strongly influential. The rank order of the eight influencing factors was similar for students who did and did not aspire to higher education; however, the lower mean scores for all factors, among the latter group, suggest that they were less motivated by these factors than students who wanted to go to

higher education. The impact of the various social, psychological, economic and institutional factors varied with gender, but not with specialisation, and any effect of educational region was very small.

Students tended to come from large families, with few or no role models of higher education. The level of education of their parents, especially mothers, was generally low. Most mothers were housewives, and a large proportion of fathers were retired. Science students were likely to have more educated parents and parents in professional, technical and administrative positions.

Family background was shown to be influential on students' decisions to pursue higher education or seek employment. A great tendency to aspire to higher education was found among students from large families; those with more educated fathers; those with more educated mothers; and those whose fathers were in professional, technical or administrative occupations. Father's and mother's sector of employment showed no significant influence, however, nor did mother's occupation, perhaps because so few students had mothers employed outside the home, and the intention to find employment rather than pursue higher education was expressed by a higher proportion of students from low income families.

Finally, it was shown that students' academic ability was a significant factor in their future plans. Those of higher ability (who tended also to have greater self-confidence in their ability) were more likely to plan to go to higher education rather than find employment.

These findings provide a wide picture of the motivations and expectations of young people in Oman and the factors influencing them to enter higher education. More detailed insights will be provided in Chapter 6, which contains an analysis of the qualitative data obtained from semi-structured interviews.

CHAPTER SIX
DATA ANAYSIS PART TWO: SEMI-STRUCTURED INTERVIEWS

6.1 Introduction

The second part of this research study involved secondary school students who volunteered to take part in semi-structured interviews to investigate further some of the reasons for the responses to specific questions in the questionnaire.

Of the 42 volunteers, 32 students, who had expressed a wish to enter higher education, were asked to give their responses to five main questions, each of which was sub-divided into numerous details to assist the researcher to investigate further the students' reasons for entering higher education. Ten students indicated that they did not want to enter higher education, so they were asked two main questions related to this aspect of the questionnaire. Again, each main question was sub-divided to elicit more detailed information on the students' reasons for their proposed decisions.

The results are presented in two main sections. Section 6.2 gives the results of interviews with 32 students who wished to enter higher education. The results of interviews with 10 students who did not want to enter higher education are detailed in section 6.3. A summary ends the chapter in section 6.4.

6.2 Results of Interviews with 32 Students who Wished to Enter Higher Education

Although the semi-structured interviews used with these students were restricted to 5 questions, for analysis each question was then sub-divided into specific factors that the students identified in response to the researcher's further investigative questions. For example, in Question One: There are factors which encourage people to enrol in higher education, in your opinion what are these factors? Fourteen factors were identified as shown in Table 6.1. A number of these related to the influence of significant others, particularly parents and teachers, and to a less extent friends and siblings.

Table 6.1 Factors which encourage people to enrol in higher education

No	Factors which encourage people to enrol in higher education	Number of respondents	%
1	Parent's influence	31	97
2	Teachers' influence	29	91
3	Scholastic ability and self-confidence	28	88
4	Replace non-Omani professionals	25	78
5	Economic influence (secure good job and draw high salary)	20	63
6	Obtaining higher education degree	18	56
7	Friends influence	17	53
8	Brothers/sisters encouragement (role model)	15	47
9	Specialisation (Arts/Science) influence	15	47
10	Self-actualization and Self- development	6	19
11	Desire to have better future for them and their children	4	13
12	Willingness to serve the country (Oman)	2	6
13	Pursue post graduate studies	2	6
14	Securing highly regarded and well respected job	2	6

Other reasons included economic considerations, such as to secure a good job, personal reasons such as the pursuit of education for its own sake, or for self-development and social reasons such as the desire for respect and social status, or the wish to serve the country. Students were also encouraged to pursue higher education by confidence in their academic ability. It can be inferred from the frequencies in the table that most respondents cited several reasons for wishing to enrol in higher education. As this question is central to the research study, each factor was fully analysed.

6.2.1 Question One: There are factors which encourage people to enrol in higher education, in your opinion what are these factors?

As can be seen from Table 6.1, **Parents' influence** was identified by 97% of the students as the main influence upon their decision to go onto higher education. From the transcription of the semi-structured interviews student interviewee number 1 stated:

> *"There is a strong social influence from parents' encouragement... My parents are very keen that I pursue my higher education..."*

Similarly student interviewee number 3 stated:

> *"My parents' influence is the strongest".*

And student interviewee number 28 stated

> *"...I receive big encouragement from my parents..."*

The statements made by the interviewees also revealed a variety of reasons why parents encouraged them to pursue higher education. One factor was parents' own level of education, which both provided a role model for students and helped to provide conditions conducive to study. For example, interviewee 2 commented:

> *"...especially educated families who value higher education....the student himself has a feeling of belonging to this educated family and wants to follow suit of his educated parents..."*

While secondary school student interviewee 8 reflected:

> *"Being educated parents, they realize the importance of higher education, and encourage me and set good conditions and atmosphere for me to study and review lessons"*

And secondary school student interviewee 20 revealed:

> *"My parents are university graduates....I, therefore, receive great encouragement from my parents..."*

Some students saw pursuit of higher education as a way of meeting filial obligations, for example:

> *"Satisfaction of my parents' wishes, to pay back some of their favours" (Interviewee 8).*

A number of students also indicated that their parents' ambitions for them were fuelled by a desire that they should benefit from opportunities available to them, which had not been open to the parents. For example, interviewee 1 attributed the encouragement received from his parents to a wish that:

> *"...I make good what they missed out in the past"*

Similarly interviewee 41 reported receiving strong encouragement from parents:

> *"...in order to make good what they could not do because of the situation in Oman before 1970."*

Such responses confirm the findings from the questionnaire that the very strong family orientated traditional culture in Oman results in a strong influence of parents who wish their children to achieve more than perhaps they had. Interviewees also related their parents' aspirations for them to the desire for their economic well-being, such as financial security; job and career opportunities helping to support the family, and

ensuring a secure future for the student once he/she marries and has a family of his/her own.

Next to parental influence in frequency of responses was **teachers' strong influence,** which 91% of the students said contributed in their decision to enter higher education. Teachers were seen as role models, where views were respected because they were based on long experience and concern for students' well-being. For example:

> *"Teachers have a significant role, particularly proficient and widely experienced teachers. They have seen many generations of students and act as fathers in the school. They are devoted to their profession and guide and advise students for a better future. Many of the devoted teachers have become good models for us and our predecessors, and we try to follow suit"(Interviewee 20).*

> *"My teachers have stronger influence on me than that of my friends..." (Interviewee 31).*

> *"Teachers have a significant role in explaining lessons and advising students, drawing on their long experiences. I consider them as examples for us". (Interviewee 34).*

> *"Our teachers are our good examples, and they always talk about their good times during higher education. They have a positive role in convincing us to enter higher education, for our own good and for the best interests of the country" (Interviewee 38)*

Whilst the above comments demonstrate how much teachers can influence secondary school student interviewees in pursuing higher education, one secondary school student, interviewee 29, insisted that her teachers had no influence on her decision to pursue higher education, as indicated in her comment:

> *"To me, my teachers have no effective role. I obtained high marks by virtue of my own initiative and hard work, and my teachers have had no role or influence. Also, my desire to enter higher education is self-originated and not teacher-induced'' (Interviewee 29).*

Whilst the above examples demonstrate comparisons and contrasts of opinion, it is clear that most secondary school students in the semi-structured interviews identified teachers as a strong influence.

Following on in third highest position 88% of students identified that their own **scholastic ability and self-confidence** was an important factor. Interviewee 2 expressed this view in general terms, as follows:

> *"There are many reasons, but to me the most important reason is psychological influence and scholastic aptitude of the student, which enables him to pursue his higher education up-to post-graduate studies, in order to prove himself in his community. The brilliant student is very keen not to waste 12 years of education, and his scholastic aptitude drives him to go into higher education"*

Another student expressed a strong motivation to achieve, saying:

> *"I obtained 92.8% in the first term, which motivated me to obtain even higher marks" (Interviewee 40).*

Although this quote does not explicitly refer to academic self-concept, it does demonstrate the interviewee's self confidence in his scholastic ability, which encouraged him even further to aim for higher achievement. Other students drew the link between their own marks and the perception of having the requisite aptitude for higher education more explicitly:

> *"I obtained 97%, which was a result of my hard working, and I hope to obtain higher marks in the second term. I think that the scholastic aptitude is one of the prerequisites for higher education. No one can go beyond his capacities. A weak student will face great difficulties in obtaining a university degree" (Interview 28).*

Student interviewee 1 in particular was absolutely clear about his self-confidence and scholastic ability when he stated:

> *"...the good scholastic aptitude I have. I am a brilliant student who has obtained 96% in the first term exams. This in fact has boosted my self-confidence and improved my chances to pursue higher education"*

However, one student interviewee, number 35, remarked that, while ability is an important consideration, it must be accompanied by motivation:

> *"I obtained 97.3%. I think scholastic aptitude is very important, but I also think that scholastic aptitude alone is not enough; there must also be real desire and determination with the student to pursue higher education".*

In relation to the factor of **replacing non-Omani professionals**, student interviewee 2 stated:

> *"Also, my aspiration is to see all positions in Oman being filled by Omanis, and I really want to replace an expatriate in my field of study".*

Similarly, another student commented:

> *"I think the availability of expatriate labour in Oman should be an aspiration for each student to enter higher education in order to replace expatriates. Availability of expatriate is an instigating factor for me and others to pursue studies and prove that Omanis are well capable to build their country, if qualified and given the appropriate chance'' (Interviewee 35).*

Some students elaborated on the reasons why they considered Omanisation desirable, indicating that they thought foreigners would not have the same commitment to the country's development that could be expected from its nationals, as well as expressing concern about the economic and other effect of having a large number of foreign workers.

Student interviewee 13 stated:

> *"Yes. Omanisation should be done quickly because the country's resources are being drained by expatriate labour. No one will build the country like its people".*

Supporting this point of view are student interviewees 20 and 25 who also stated:

> *"I think expatriate labour ought to be replaced by qualified nationals. Expatriate labour may not be devoted to their job besides other negative effects of these expatriate labours to economy through huge financial transfers abroad. There are also ideological, doctrinal and social effects" (Interviewee 20).*

> *"Expatriate labour has had a role in building Oman and that is a credit to them then, but now it is time for Omanis to have a chance to serve their country, which can be better served by its citizens''* (Interviewee 25).

Other students, however, offered more complex reasoning. Whilst they favoured Omanisation, they recognized that the success of such a policy would depend on the availability of locals with a high level of knowledge and skills, since expatriates had been recruited in order to provide needed expertise. For example:

> *"One of the reasons for me to enrol in higher education is to contribute, along with my other colleagues, in replacing these*

> *expatriate labour. This should be achieved by qualification and education, not by merely replacing expatriates for the sake of replacement. As it is known, the expatriate labour are educated, qualified and widely experienced" (Interviewee 29).*

Indeed, interviewee 18 did not think the time had yet come when all jobs could be Omanised. He commented:

> *"With regards to availability of expatriate labour, I personally think we have to have foreign expertise in Oman. USA, for example, is highly advanced country but still has European and Arab experts amongst others. USA didn't close its doors before these experts, so what is wrong with countries like Oman, which is working hard to reach an advanced level, seeking big technical assistance from these expatriates? By expatriates, I mean here those with high educational degrees who can work as experts and advisors. Other jobs currently performed by expatriates, which can be filled by nationals, ought to be Omanised before long"*

One student not only recognized the need for Omani nationals to be suitably qualified before they could take on jobs currently performed by expatriates, but also explicitly related this situation to the availability of higher education, and suggested that such opportunities should be more widely available:

> *"Availability of expatriate labour has to come to an end when there are qualified nationals. I therefore think it is important to hurry with expanding higher education in order to accommodate greater numbers of secondary school leavers, to meet labour market requirements and to reduce remittances abroad by expatriates, most of whom give too little to the country."(Interviewee 23).*

From the above and from reading other responses related to expatriates in the labour market, many secondary school student interviewees offered a range of opinions ranging from acknowledging that expatriate labour was essential and to a certain extent is still required in Oman to an extremist view, not held by many Omanis, that the country should be rid of all expatriate workers.

In relation to the **economic influences,** such as securing good jobs and drawing high salaries, several interviewees, saw these as important considerations. Frequently, students explained their concern in terms of their current circumstances and a desire to contribute to the family's welfare. For example:

> *"The economic factor influence is great. I want to get money to improve my economic conditions, and to repay what I owe to my*

> *parents, who spared nothing from me during the whole of my life" (Interviewee 38)*
>
> *"The economic factor is very important to me. I want to better my income and that of my family" (interviewee 17).*
>
> *"Economic factors are important, especially as my family is not rich. They very much hope that I obtain university degree and high salary, to better the living standards of my family" (Interviewee 25).*
>
> *"Given the economic conditions of my family, the economic factor is one of my top priorities. My family income is average, and hardly meets our 11 members' family needs" (Interviewee 28).*

In contrast however, some student interviewees gave responses which indicated that they opted for higher education for other reasons and that economic factors were of little importance to them. For some, economic considerations were subordinate to self-fulfillment. These are some examples:

> *"To me, economic factor influence is not the most important or significant. I care much about fulfilling my ambitions and serving my country" (Interviewee 6).*
>
> *"The economic factor is not important. I am from a well-off family and want to obtain a university degree more than my desire to secure financial gains" (Interviewee 21).*
>
> *"The economic factor has minimal role. My utmost aim is to obtain a university degree" (Interviewee 24)*

For others, social status and respectability took priority. For example:

> *"Financial return from the university degree is not paramount for me, rather I seek to obtain a degree to give honour to my family and get decent social status for myself" (Interviewee 23).*

Lastly, student interviewee 35 expressed a balance between the two views above:

> *"To me, this is not one of the very important factors, even though I don't deny its importance. One will always be in need for money, but for me money is a means not an aim in itself."*

So, these responses demonstrate a range of opinions and much variation as to why and how far students are motivated by economic factors in their decision to enrol in higher education.

The reasons offered for **obtaining a higher education degree** have been partly covered above, as for some students, the importance of the degree comes from the expectation that it would help them to secure a good job and high salary to help themselves, families, and that it would bring honour to their families by conferring social status.

However, student interviewee 32 gave a partly different response when stating:

> *"I want to obtain a university degree in the first place, not to earn money but to improve myself and personal abilities, and bring pride to me and my family socially".*

When the student interviewees discussed the **importance of friends' influence** in their decisions to enrol in higher education, again there was a range of responses; some thought friends were a highly significant influence, others thought they had no influence whatsoever. In the first category, student interviewee 8 stated:

> *"There is also strong encouragement from friends. I have friends who are currently pursuing their higher education, and we keep regular contacts"*

Similarly student interviewees 41 and 25 emphasized the positive influence of their friends. They maintained:

> *"Friends have positive influence. We always sit together and discuss our future and concerns"(Interviewee 41)*
>
> *"Also my friends have a positive role. We always discuss our future and the types of major, which can benefit each one of us" (Interviewee 25).*

On the other hand some student interviewees offer the opposite opinion, for example student interviewees 18, 28 and 37 when they stated:

> *"They have a minor role. They do encourage me, but their role is not very influential" (Interviewee 18).*
>
> *"There is no significant influence by friends on me" (Interviewee 28)*
>
> *"Encouragement by friends is too little. Teachers have great influence" (Interviewee 37).*

Whilst agreeing that friends influence decisions, student interviewee 20 adds a further insight, that this depends on the choice of friends:

> *"Friends do have a role as well. I am very careful in choosing my friends, from those of the same educational standard and who have the same interests. Many of my friends are currently attending colleges and universities."*

The importance of **brothers' and sisters' encouragement** was expressed in very similar terms. The students who mentioned this had brothers or sisters already studying or having studied for a higher education degree, therefore, offering a positive role model for the student interviewee.

For example, student interviewee 12 stated:

> *"Influence by my brothers who are currently enrolled in the Sultan Qaboos University."*

Student interviewee 14 aspired to equal the achievement of her brothers who had university degrees. She commented:

> *"There is another big influence, i.e. my five brothers who have university degrees and encourage me to be like them. I, therefore, feel obliged not to be less than them."*

Another student responding to a family example of educational achievement was interviewee 24, who stated:

> *"Encouragement from my family, especially as I am from a family with several higher education graduates. I have three brothers who graduated from universities and two sisters have Diplomas. I certainly want to be just like my brothers and sisters."*

In some cases, higher education could be seen as a family tradition or part of its culture, with children following their parents' footsteps, as in the case of interviewee 20:

> *"My parents are university graduates and I have four brothers who are higher education graduates. I, therefore, receive great encouragement from my parents and brothers."*

Each of these responses demonstrates that a family background of educational achievement, whether from parents or brothers and sisters, can be important in encouraging the student's aspirations in this respect.

When considering **specialisation into Arts or Science influence,** the majority of responses reflect the effect of the current unbalanced situation with regard to

specialisation, whereby Science students have many more fields open to them than Arts students. For example, student interviewee 3 stated:

> *"Unfortunately in Oman the Science section opportunities are varied and extensive and its students have better chances than those of Arts section. We are therefore unable to compete except to a very limited extent and with really very high marks."*

In the same way, student interviewee 9 emphasized the positive influence of Science specialisation when she said:

> *"Good influence because we can study both Scientific and Arts fields, whereas this is not true for Arts section students. I, therefore, think that Arts students are more worried and frustrated, particularly those who have not obtained high marks."*

Two interviewees saw the wider opportunities available to Science students as a reflection of the importance of Science in the modern world:

> *"Being a Science section student gives me a chance to enter higher education, especially as our chances are more than those of Arts section students. This specialisation also deals with modern trends: all scientific advancement that we see today is scientific discoveries, and not arts, such as advancement in medicine and computers etc." (Interviewee 14).*

> *"Specialisation has positive influence on me, because the Science section offers varied and extensive opportunities. As I know, most of next year's secondary school students will chose the science section, for its ever increasing chances and importance." (Interviewee 38).*

Another student saw Arts as in some ways more difficult to succeed in than Science:

> *"Arts require great effort in memorization much more than comprehension. We have fewer chances than the Science section students: and we have nothing but to obtain high marks."*
> (Interviewee 13).

On the other hand, student interviewee 7 believed that there is no influence of specialisation. She said:

> *"I don't think that specialisation has an influence. I want to study Arts, which is available to Arts section students."*

Other students, whilst agreeing that there is an imbalance in the opportunities available to Science and Arts specialisation students, argued that it is the student's

responsibility to make a considered choice and that opportunities are available to Arts students who have the will to succeed.

> *"Arts section offers fewer chances than the science section. However, a student can choose between science and arts, and thus he should be responsible for his choice. Arts section offers useful fields of study, and students should work hard so that they can compete for such field." (Interviewee 25)*

> *"Arts section, as is well known, offers fewer chances than the science section. But there are also chances for Arts students, if they realize the importance of such fields and enrol in them.'' (Interviewee 35).*

> *"Specialisation has no considerable influence because the student is supposed to have an aim when choosing a major. He then should seek to achieve that objective. The Arts section offers good fields, which are available to eligible students." (Interviewee 40).*

Finally, student interviewee 29 is the only student interviewee who appears to have ignored negative or positive influences and simply chosen what she wanted as a specialisation:

> *"I enrolled in the Arts section due to my own interests, and therefore I obtained high marks. The Arts section offers many fields.''*

Various reasons were also given for **self-actualization and self-development** as indicated in the statements of student interviewees 8, 32, 28 and 31 when they stated:

> *"There is another reason which is my desire for self-actualization, to have a well-educated independent personality and prove myself in the community." (Interviewee 8).*

> *"Self-actualization, ambition, a distinguished personality in the community..." (Interviewee 32).*

> *"What makes me enter higher education is my interest in education. Self-development, improving economic standards and aspiration for social status."(Interviewee 28).*

> *"And my desire to obtain university degree for self-development and promising future for my children and myself." (Interviewee 31).*

Analysis of the interview transcripts revealed that the **'Desire to have a better future for the students and their children'** was a major concern of four of the student interviewees. This is captured in the statements of student interviewees 21, 31, 34 and 38 when they stated:

> *"My personal desire to have better future for me and my sons by obtaining a university degree" (Interviewee 21).*

> *"My desire to obtain a university degree for self-development and a promising future for my children and myself. Better income for my family" (Interviewee 31).*

> *"The other incentive is my desire to build myself for a better future" (Interviewee 34).*

> *"My desire for education, my aspiration to have a better future for me, my family and my children" (Interviewee 38).*

From these responses it is possible to see that secondary school students valued higher education because they expected it to bring monetary and other benefits in the long term.

Willingness to serve Oman brought only two specific responses. These were from student interviewees 2 and 14 respectively who stated:

> *"Another factor is my willingness to serve my country"*

> *"My strong desire to have a role in serving the community..."*

Each obviously demonstrated a strong desire to have a positive influence on their community and country.

Because of the value they placed on higher education, some students had already decided that they did not want to stop at a first university degree but would strive towards **obtaining Masters and Ph.D. degrees**. For example, student interviewee 16 maintained that:

> *"Also, I want to give myself a chance to pursue post-graduate studies. Masters and PhD"*

And student interviewee 24 asserted that:

> *"Also, my wishes to obtain a university degree and postgraduate studies thereafter".*

These examples demonstrate that some secondary school students will not stop at a Bachelor level degree to fulfil their ambitions. One of these was **securing a highly regarded and well respected job.** Student interviewee 18 argued that:

> *"I don't deny the economic factor, however, to me, securing highly regarded and well-respected job is far more important than drawing a high salary".*

Similarly, student interviewee 20 emphasized:

> *"The economic factor is not important to me. I want to secure a decent job regardless of salary''.*

As the first question is absolutely central to this thesis it has been analysed fully detailing the similarities and differences of opinion given by the student interviewees related to the fourteen factors identified in the semi-structured interview.

The comments made in response to this question support the results from the questionnaire, detailed in the last chapter. For example, they confirm the importance of Career Incentives (Table 5.5), Economic Incentives (Table 5.6) and Personal Development Incentives (Table 5.7). They also support the findings in relation to the influence of parents, family and friends [social factors]; students' self-confidence in their ability and perceptions towards higher education [psychological factors]; human capital theory and labour market conditions in Oman [economic factors] and lastly, specialisation of students and influence of teachers [institutional factors]. Furthermore, the results confirm the importance of scholastic attainment and self-confidence as influential factors in students' decisions to enter higher education, and the relationship between students' self-confidence and actual marks gained.

6.2.2 Question 2: Please put in order the reasons which encourage you to enrol in higher education, given their importance to you

Question 2 enquired about the reasons which encouraged students to enrol in higher education. To generate a rank order for their varied reasons the following procedure was used. All items ranked first were scored as 4 points; all items ranked second were scored 3 points; all items ranked third were scored 2 points and all items ranked fourth were scored 1 point. Then the numbers of respondents for each rank were multiplied by the score for that rank. These scores were summed to create a final overall score from which the rank order for the items was calculated where the item with the highest score, i.e. (91) "Satisfying parents' wishes" came first; (54) "Self-actualization and self-development" came second and so on. The relationship between the overall score (X), the ranks (Xi) and number of respondents for each rank (Ni) can be expressed mathematically as follows:

$$X = \sum_{i=1}^{4} XiNi$$, where

X= overall score

i= rank (1-4)

Xi= score for ith rank

Ni= number of respondents for ith rank.

An example calculation for 'Satisfying parent's wishes' is shown below

maximum rank (i= 4); N4= 12; X4= 4

∴ X4 N4= 4x12= 48

i=3; N3=11; X3=3

∴ X3 N3=3x11=33

i=2; N2=5; X2=2

∴ X2 N2=2x5=10

i=1; N1=0; X1=1

∴ X1 N1=0x1=0

X= X1 N1+ X2 N2 +X3 N3 +X4 N4= 48+33+10+0=91

X=91

The following table (6.2) details the order of importance achieved by the ranked responses described above.

Table 6.2 Students' ranked responses

Order of reasons according to their importance	Reasons which make students enrol in higher education	Number of respondents	Score
1	Satisfying parents' wishes	28	91
2	Self-actualization and self-development	15	54
3	Obtain higher education degree	10	36
4	Get high salary	15	31
5	Get good job	12	30
6	Serve the country (Oman)	7	15
7	Replace non-Omani professionals	8	14
8	Scholastic ability	4	12
9	Get social prestige	5	9
10	Pursue postgraduate studies	4	9
11	Get better future for children	2	4
12	Get better prospects	1	3

It is clearly seen from this table that there is a very strong desire for "Satisfying parents' wishes" when considering enrolling in higher education, which supports the results of this research study throughout, i.e. 91% of the secondary school students identified parents' influence (Table 6.1). The lowest ranking was for 'Get better prospects', which seems surprising, given the number of student interviewees who imply, although not specifically state, that one factor in their decision to enrol in higher education is to improve theirs and their families' existing current position through gaining a good, secure, well paid job after gaining a higher education. The reason could lie in the fact that much subtle but important information gets lost when ranking responses where the specific words used in naming the factor are not explicitly stated. It also seems, bearing in mind the interview responses quoted in relation to Question 1, that for many students there was no clear distinction between some of the factors: they wanted to get a higher degree, for example, in order to have a better chance of getting a good job, and hence, in turn, to improve their future prospects. Thus, although 'Get better prospects' itself ranked low, the human capital-linked motivations of students are reflected in the related items, which were ranked third, fourth and fifth. The close relationships between some of the factors may also partly account for the discrepancies in rank order, between what students stated in their interviews and identified in the questionnaire.

6.2.3 Question 3: What field do you want to study in your higher education? And why?

The percentage response rates to Question 3: What field do you want to study in your higher education? And why? are detailed in Table 6.3 below.

Table 6.3 Fields to study in higher education

No	Fields to study in higher education	Number of respondents	%
1	Medicine	7	22
2	English language	7	22
3	Engineering	6	18
4	Arabic language	2	6
5	Arts	2	6
6	Islamic education	2	6
7	Law	2	6
8	Social studies (History)	1	3
9	Translation	1	3
10	Pharmacy	1	3
11	Nursing	1	3

There were equal numbers of secondary school students who reported wishing to study **Medicine and English language** (22% for both fields). These two subject together account for nearly half of the number of secondary school students taking part in the semi-structured interviews. In the case of those who hoped to study medicine, most indicated that it has been a childhood dream. For example, interviewee 20 stated:

> *"I want to study Medicine to fulfil my dreams since early childhood"*

Although, also offering further explanations as to why he wanted to study medicine, such as that it is a 'humane profession' and a 'guaranteed job with high salary" student interviewee 14 stated

> *"I want to study Medicine because since childhood I have dreamed of being a doctor"*

Student interviewee 23 emphasized the likelihood of securing a job by studying Medicine. She maintained:

> *"I want to study Medicine because it is a humane profession, and also I can secure a job quickly after graduation, due to the pressing need for Omani doctors"*

In relation to studying **English language,** the reasons offered were generally job-related-on awareness that there is a demand for the language and that this opens opportunities in the labour market. For example, interviewee 13 stated;

> *"English is a universal language"*

And student interviewee 38 also stated:

> *'' I want to study English Language because it is a universal language, and because I can secure a job quickly, as many of the English teachers working in Oman are expatriates''.*

Student interviewees 21 and 35 respectively also linked English with the opportunities presented by the Omanisation policy:

> *"To replace non-Omani English Teachers",*
>
> *"Also, many of the teachers are expatriates, which means I can secure job quickly by replacing an expatriate"*

The third highest response (18%) was for studying **Engineering**. Typical reasons given included both personal interest and "family influence". For example, interviewee 6 commented as follows:

> *"I consider studying Architectural Engineering because I like Engineering. I might have been influenced by my uncle, who is an Architectural Engineer" (Student interviewee, 6).*

Another interviewee made a similar point, but also related his interest in Engineering to job opportunities in the field:

> *"I want to study Computer Engineering because I like Computers. My brother also has influence in encouraging me to study Computers, as he is a Computer Engineer. It is well known that Computers nowadays have applications in all aspects of life'' (Student interviewee, 41).*

These responses indicate that the secondary school students in this research were aware of the current and future needs of their country and therefore, the need for them to ensure that they gain appropriate qualifications in order to actively support their Government in its endeavours to compete in a global economy. Also the strong cultural values of obligation to family, the extended community and the country is demonstrated.

The expressed wish to study Medicine, English language or Engineering and the reasons for doing so, support the students' responses in the questionnaire (see Table 5.24 in the last chapter) particularly when it is borne in mind that English language is a significant component of the Education course which many questionnaire respondents gave as their preference.

The other subjects chosen, such as **Arabic language; Arts; Social studies; Translation; law; Pharmacy; Nursing; Islamic education,** were each mentioned by only a small percentage range of interviewees, from 3%-6% of the total number of secondary school students taking part in the semi-structured interviews, as detailed in Table 6.3 above. Since these percentages are low, the reasons given, although detailed in Table 6.4 below for interest, are not analysed

Table 6.4 Reasons for choosing to study a particular major or field in higher education

No	Field to study in higher education	Reasons for studying this field	Number of respondents
1	**Medicine**	Dreaming to be a doctor since childhood	**5**
		Humane profession	**2**
		Guaranteed job with high salary	**2**
		Replace non-Omani doctors	**1**
		Opportunity to pursue post-graduate studies	**1**
2	**English language**	To replace non-Omani English Teachers	**4**
		Universal language	**4**
		Brilliant in this subject	**3**
		Influenced by brother (English teacher)	**1**
		Can work as Teacher or Translator	**1**
3	**Engineering**	Interest in Computer Engineering	**2**
		Parents' and family influence	**3**
		Interest in Petroleum Engineering	**1**
		To replace non-Omani Engineers	**1**
		Secure a job quickly	**1**
4	**Arabic language**	Like Arabic language	**2**
		Brother's influence (specialises in Arabic)	**1**
		Brilliant in this subject	**1**
5	**Arts**	Like Arts	**1**
		Father's influence (Artist)	**1**
		Influenced by sister (Arts graduate)	**1**
6	**Islamic Education**	Try to explain and make others understand Islam	**1**
		Secure job quickly	**1**
		Work in female environment	**1**
7	**Law**	Like this subject	
		Interested in Law studies since childhood	**1**
		Dream to be a lawyer and jurist	**1**
8	**Social Studies (History)**	Like this subject	**1**
9	**Translation**	Because English is a universal language; secure good job and get a better employment opportunities	**1**
10	**Pharmacy**	Secure a job quickly by replacing non-Omanis in this field	**1**
11	**Nursing**	Strong wish to be a nurse	**1**

6.2.4 Question 4: Where do you intend to pursue your higher education? And why?

As can be seen from Table 6.5 below, the majority of interviewees (66%) indicated that they wished to continue their higher education studies in **Sultan Qaboos University,** Oman. One reason for this was that they would feel more secure; closeness to familiar people was a factor in this. For example, student interviewee 38 stated:

> *"In Oman, specifically at the Sultan Qaboos University, because I feel more secure in my homeland and close to my family and friends"*

Similarly, two students (number 10 and 25) each stated:

> *"My friends are currently enrolled in Sultan Qaboos University"*

For student interviewee 6, the sense of security was related to familiar customs and norms. She maintained that:

> *"In Oman, because I want to be close to my family and my country and because studying abroad would expose me to different customs and norms"*

Table 6.5 Place to pursue higher education

No	Place to Pursue Higher Education	Number of respondents	%
1	Sultan Qaboos University (Oman)	21	66
2	Abroad- Foreign countries	9	28
3	Abroad- Arab countries	1	3
4	Sharia and Law college (Oman)	1	3

Other students gave reasons related to the standing of the university itself; students 11, 12 and 29 all referred to:

> *"Good reputation and facilities"* (Student interviewee, 29).

For student interviewees 6, 20, and 23 the choice of university was related to the subjects they hoped to study. They point out that Sultan Qaboos University is:

> *"...the only public university in Oman which has particular major such as Engineering"* (Student interviewee, 6).

Finally, student interviewee 7 added another dimension regarding the university's reputation and the value of Sultan Qaboos University qualification, by remarking that it was a source of competitive advantage in the job market. She said:

> *"Even upon graduation, I think that my chances of getting a job are easier and quicker, being a graduate from the University in Oman (SQU) and not any other college in the Sultanate"*

However, over a quarter of the total number of secondary school students (28%) indicated that they would like to study **abroad in foreign countries**. For some students, the reason was related to the desire to specialise in English. For example, student interviewee 3 stated:

> *" I prefer to study abroad, in order to improve my English much more through daily practice in an English- speaking environment"*

Student interviewee 16 expressed an interest, also, in learning about the culture of other nations:

> *"Abroad because I want to better my English and learn about culture and customs of other nations"*

Other student interviewees preferred to study abroad because they thought scientific and technical disciplines were more advanced in the west. For example, interviewees 1 and 2 commented:

> *"More advanced to study scientific majors such as Medicine, Engineering and Computers"*

Similarly student interviewee 14 stated:

> *"I want to study abroad because I think Medical education abroad might be more sophisticated and advanced".*

Only one student (3%) indicated that he wanted to study **abroad in Arab countries** and particularly in Egypt for the reason given below:

> *"I want to pursue my higher education in Egypt because there are very old and well-established institutions for studying Arabic language there". (Student interviewee, 4).*

In addition only one student (3%) indicated that he wanted to study in Oman but in the **College of Sharia and Law,** he said:

> *"In Oman, because Oman is a favourable environment for the major I want to study, Islamic and Linguistic studies. I will join the Law and Sharia College in Oman to achieve my desire" (Interviewee 18).*

The reasons offered for staying in Oman or going abroad to study are consistent with the responses to the completed questionnaire (see Tables 5.22 and 5.23), in that most students wished to remain in Oman to study, and that choices were influenced by family

considerations, friends' influence, and the perception that their chosen institution was a route to a prestigious qualification and, in turn, a good job.

6.2.5 Question 5: When you graduate from higher education, in which sector do you want to work? And why?

Not surprisingly, given the reasons indicated earlier, nearly all (94%) of the 32 secondary school students interviewed indicated that they wished to be employed in the **Government sector,** after gaining higher education (See Table 6.6 below). This high response rate supports the finding of the questionnaire, in which the vast majority of students said they wished to be employed in Government sector (See Table 6.18 in the last chapter).

Table 6.6 Employment sector

No	Employment sector	Number of respondents	%
1	Government Sector	30	94
2	Private Sector	1	3
3	Set up own business	1	3

Table 6.7 below displays the reasons given for choosing a particular sector of employment. As can be seen from this table, there were two main reasons: pay and prestige. The reason given by 66% of the students for choosing the **government sector** was "higher salaries". Student interviewees 3, 7, 9, 20, 34 and many other students mentioned this reason.

Table 6.7 Reasons for choosing sector of employment

Sector of employment	Reason for choosing the sector	Number of respondents	%
Private Sector:	Many opportunities to gain experience due to the affiliation between some Omani companies with big and well-experienced international companies such as Shell and Schlumberger.	**1**	**3**
Set up own business:	Freedom, avoid mixing with other sex, self-controllable, convenient working hours	**1**	**3**
Government Sector:	Higher salaries	**21**	**66**
	Job security (private sector companies may go bankrupt	**17**	**53**
	Social prestige	**17**	**53**
	Better working hours	**7**	**22**
	Better annual leave and holidays	**7**	**22**
	Pension security	**7**	**22**
	Promotion prospects	**6**	**19**
	Opportunities for further study	**6**	**19**
	Not to be under control of non-Omanis in private sector	**1**	**3**

For instance, student interviewee 3 stated:

"I prefer the Government sector because of higher salaries"

And student interviewee 38 stated:

"In the Government sector because of higher salaries"

And 53% of the students indicated the reason of job security as student interviewee 13 put it:

"Private companies might well go bankrupt"

Indeed, interviewees saw the government sector as offering better terms and conditions in general: 22% of respondents, as student interviewees 3, 6, 8, 17, 26, 7, 8, 32, 38 and 41 mentioned "better working hours"; "better annual leave and holidays" and "pension security". Other material benefits perceived were more futured oriented: "promotions" and "opportunities for further study".

Students also saw less tangible benefits of working in the government sector. As can be seen also from Table 6.7, 53% of the students preferred the Government sector because of "social prestige", as student interviewee 18 emphasized when he stated:

> *"I want to work for the Government to have social status, and this can only be achieved by securing a good job in the Government sector"*

One interviewee raised a different point, that by being employed by the Omani government he would not to be under control of non-Omanis, as might be the case in the private sector. As student interviewee 1 stated:

> *"I want to work in the Government sector because it offers some more advantages. First, I don't want to be under control of an expatriate in the work"*

These results support the results of the completed questionnaire and repeat the reasons offered in the questionnaire as detailed in Table 5.19 in the last chapter. However, two more reasons have been raised by students in the interviews and these reasons are: 1) job security i.e. private companies may go bankrupt; 2) not to be under control of non-Omanis in the private sector.

Employment in the **private sector** and **setting up own business** were each preferred by just one interviewee. As regards the former, student interviewee 2 stated:

> *"I consider joining **private sector** because of too many opportunities to gain experience due to the affiliation between some Omani companies with big and well-experienced international companies such as Shell and Schlumberger"*

In the future, with Oman entering the global economy, more employment opportunities may be available within private international companies who may be encouraged to set up businesses in Oman and to work in conjunction with non-government Oman established companies. This comment, therefore, could be more significant than it is within the current employment climate of Oman.

Only one student, interviewee 28, stated that she preferred to **set up her own business.** This was because of:

> *"Freedom, to avoid mixing with the other sex, self-controllable, convenient working hours"*

Because there was only one response in the private sector and own business categories, there is no further analysis possible. However, the comments do give an insight into what one student in each response considered was important to him/her.

6.3 Results of Interviews with 10 Students who did not Want to Enter Higher Education

There were 10 students identified as expressing their view that they had no desire to enter higher education. So two questions were designed to investigate further the reasons and thinking behind these secondary school students' responses. Each question was sub-divided into various factors that were considered to discourage people from entering higher education.

6.3.1 Question 1: There are factors which may restrict or discourage people from enrolling in higher education. In your opinion, what are these factors?

As can be seen from Table 6.8 below, all the secondary school students taking part in these semi-structured interviews identified belonging to a **big family** and a **low income** are the main reasons why entry to higher education may be restricted or discouraged.

Table 6.8 Factors which discourage people from entering higher education

No	Factors which discourage people from entering higher education	Number of respondents	%
1	Big family size	10	100
2	Low family income	10	100
3	Lack of parent's and family encouragement	6	60
4	Restriction by admission system of higher education	6	60
5	Negative influence of Specialisation (limited chances for Arts or difficulty to study Science)	5	50
6	Weak scholastic ability	3	30
7	Lack of friends' encouragement	3	30
8	No brothers/sisters higher education graduated (No role model)	2	20
9	Lack of appropriate atmosphere to study at home	1	10
10	Lack of teachers' encouragement	1	10

This is indicated in the statements of student interviewees 5, 15, and 33, when they stated:

> *"We are a very big family of 23 brothers, father and mother. The family income is average, and there is not enough attention to every one of the sons." (Interviewee 5).*

> *"We are a big family, and have meagre income, which is not enough to meet family requirements" (Interviewee 15).*

> *"We have difficult economic conditions, a big family of 10 members and below average income" (Interviewee 33)*

Student interviewee 27 expressed the difficulty for a large family of managing on the salary of only one wage-earner:

> *"We have big family comprising 12 members, and family income is below average .I am the eldest son, and we all depend on my father's salary only"*

The comments indicating that big family size and low family income are factors preventing students from entering higher education are consistent with the results from the questionnaire, where the majority of students who indicated that they would decide to find employment after secondary school were from larger than average families, as detailed in Table 5.48 in the last chapter, and that the majority of students who indicated that they wished to find employment after secondary school rather than pursuing higher education were from low income families, as shown in Table 5.56 in the last chapter.

Lack of parents' and family encouragement (60%) ranked joint second among reasons cited for secondary school students not wishing to enter higher education. Student interviewee 5 stated:

> *"Frankly the lack of encouragement from my parents and the family as a whole"*

Student interviewee 22 also cited lack of encouragement, which he attributed to his parents' own lack of education and consequent unawareness of the importance of higher education. He maintained:

> *"I don't receive necessary encouragement from my parents. They are busy with plenty of things and the affairs of a big family. My parents are illiterate and I think they don't understand the importance of having a university degree"*

Student interviewee 30 similarly thought her parents' lack of encouragement stemmed from lack of awareness of the importance of higher education, but also illustrated how some parents may be too preoccupied with their own concerns to take an interest in their children's education. She said:

> *"Lack of parental encouragement and their ignorance of the importance of higher education. I don't receive encouragement whatsoever and my father is very busy, and he hardly knows that I am in secondary school"*

These comments on lack of parental encouragement, which might be due to lack of education and underestimation of the importance of higher education, support the results from the questionnaire. It was shown in the last chapter that students whose fathers or mothers only had some or no education were more likely to want to find a job than those whose fathers or mothers were highly educated (see Tables 5.50 and 5.51).

Another major source of constraints was thought to be institutional factors, specifically the **admission system of higher education**. Student interviewees 22, 27, 30, 33, 39, and 42 mentioned the difficult situation caused by the current higher education admission system, since competition for places is high, and only students who score high marks in secondary school will have a chance to enter higher education. For example, interviewee 22 said:

> *"An important matter here is that the admission system in higher education institutions in Oman is difficult and accepts only students with high marks. It is therefore a discouraging system for most students. A student who was not lucky to obtain high marks in the first term, he then gets discouraged and frustrated, and no matter what he achieves in the second term he will be outside the higher education. This enforced system is a restrictive factor for me and many other secondary school students during this year or in the past years. I have some friends and relatives who didn't obtain high marks and, therefore, they are at home now, with no chances of education or a job, after completing the secondary school certificate"*

Another student, interviewee 27, made a similar comment on the higher education admission system. He stated:

> *"Higher education admission in Oman is only available to students with very high marks, and we have no chances, which discourages me from going to higher education"*

Student interviewee 30 expressed the difficulty of the higher education admission system in Oman, to the extent that even when she obtained 70% in the first term, she could not feel confident of securing a place in higher education. She said:

> *"The admission system in Oman is quite difficult, and only considers excellent results. For example, I obtained 70% in the first term and if I do not manage to obtain higher marks, I then will be at home unless I study at my parents' expense. This is impossible due to our hard economic conditions."*

Student interviewee 33, who scored 65%, made a similar point and contrasted the limited opportunities for higher education in Oman with those in other countries, where such a mark was good enough to get access to higher education and preparation for a profession. She argued:

> *"Simply, the most important restriction is frustration resulting from the higher education institution's admission system. No matter what we do, despite hard working, if we don't obtain high marks, our chance to enter higher education isn't at all guaranteed. I obtained 65% in the first term, which will not do me any good in getting a chance to pursue my university education in Oman. However, it might be a good percentage in some countries of the world, and the student scoring such a percentage may become an Engineer, or a Teacher or even a successful Doctor, if given the chance''*

Similarly, student interviewees 39 and 42 emphasized the lack of opportunities in the higher education admission system in Oman for students with average abilities. They stated:

> *"Higher education institutions' admission system in Oman is difficult and doesn't allow for students with average abilities, so what about below average students! By the way, all students who have not been able to obtain high marks in the first term are going through frustration and hopelessness and have no desire to study in the second term.'' (Interviewee 39).*

> *"...my domestic problems and the too difficult admission system for higher education in Oman don't encourage me, and other students, to enter higher education. There are very limited chances, and these are for higher marks students. The bulk of secondary school students don't have a chance for university education, and unfortunately there are no employment opportunities for them as well'' (Interviewee 42).*

This factor was closely followed by what was perceived as **negative influence of specialisation, such as limited chances for Arts or difficulty to study Science**, which 50% of interviewed students mentioned. As student interviewee 15 stated:

> *"Being in the Arts section doesn't give me chance to enter higher education, unless I obtain high marks. I obtained only 54%, which doesn't give me a chance to enter higher education''*

Student interviewee 22 expressed the great difficulty of Science, to the extent that he had failed more than three times. He maintained:

> *"I am from Science section, which is difficult, and, therefore, I flunked more than three times. I think if I was in the Arts section, I might have passed with higher marks''*

Student interviewee 36 confirmed the difficulty of Science and he thought that if he was in Arts he would have improved and achieved better marks. He said:

> *"To me, I think science is too difficult a major and does not match my scholastic aptitude. This might have been one of the reasons for me not obtaining good marks in the first term. Perhaps if I was an Arts student, the situation would have improved a bit. I couldn't make anything above 45% in the first term''*

Table 6.8 above details also five other reasons identified: **weak scholastic ability** (30%); **Lack of friends' encouragement** (30%); **No brothers or sisters were higher education graduates so there was no peer role model** (20%); **Lack of appropriate atmosphere to study at home** (10%) and **Lack of teachers' encouragement** (10%). Student interviewees19, 27, 36, 15, 36, 22, 30 all mentioned problems of low scholastic ability. For example, interviewee 19 said:

> *"One of the factors that restricts me is the lack of **scholastic aptitude**. I am weak in school, and could not obtain good marks in the first term, where I scored only 57%"*

Similarly, student interviewee 27 admitted that he has low **scholastic ability.** He said:

> *"The biggest restrictive factor for me is my low scholastic aptitude and inability to comprehend lessons''*

With regard to the **Lack of friends' encouragement,** student interviewee 27 commented that he had received very little encouragement from his friends. He said:

> *"Very little... I have no friends enrolled in higher education''*

Student interviewee 36 also lacked encouragement from friends and asserted that some friends actually undermined his confidence. He commented:

> *"There is not much encouragement from my friends, rather I have some friends who put me down, and they are at the same educational standard as mine"*

In relation to **no brothers or sisters were higher education graduates so there was no peer role model,** student interviewee 15 stated:

> *"To me, frankly I have no model to follow. My parents are illiterate and also I have no brothers who entered higher education''*

The same reason was given by student interviewee 36 when he emphasized:

> *"I have no good example from my brothers, as there is not a single one of them who has completed his studies''*

With regard to the **Lack of appropriate atmosphere to study at home** student interviewee 22 maintained that:

> *"To me, lack of appropriate atmosphere at home to obtain good marks in the general secondary school''*

And finally, regarding the **Lack of teachers' encouragement,** student interviewee 30 expressed her opinion on some teachers who might put students down instead of encouraging them, as she emphasized that:

> *"To me, teachers and friends have a minimal role. I didn't receive encouragement from them, rather, some teachers put us down, especially when they knew of our low marks in the first term''*

As the questionnaire results showed, teachers' encouragement is an important influence on decisions to enter higher education, so if a teacher does not offer such encouragement, this could undermine the student's confidence and interest in pursuing higher education.

The interview results regarding the admissions criteria and the related issue of scholastic ability in the decision to enter higher education or find employment after secondary school support the results in the completed questionnaire. It was shown in Tables 5.59 and 5.60 that the majority of Arts and Science students who decided to find employment after secondary school were of low or medium ability. This might be because they are blocked from pursuing higher education by the fact that they are unable to achieve the high grades required for entry into higher education. The same can be said about the result in relation to the influence of siblings; the interview comments support the result in Table 5.49, where the majority of secondary school students who preferred to find employment after secondary school had no siblings' model to follow in deciding to enter higher education to gain graduation.

6.3.2 Question 2: When you finish your secondary school, in what sector do you want to work? And why?

When asked what sector they wanted to work in after finishing secondary school, and why, all except one of the 10 students chose the Omani Government sector: the sole exception wanted to set up her own business. Student interviewee 15 stated that she would prefer to **set up her own business** and she explained:

> *"I want to work in the private sector, and with this I mean to establish a small company with Government subsidy...I am considering to establish a small company specialising in female tailoring. This company will give me big profits and I think it is better than working for Government sector or other private companies. This will impose no restrictions on me, rather, I will be the boss"*

In relation to the Omani **Government sector** of employment, the principal reasons as detailed in Table 6.9 below were higher salaries (80%) followed by promotion prospects (60%). Indeed, the two reasons were often listed together, and some students additionally mentioned other material benefits such as pensions. For example, student interviewee 33 stated:

> *"In the Government sector, because of job security, higher salary, social status and pension security"*

Table 6.9 Reasons for choosing particular employment sector after secondary school. n=10

Sector of employment	Reasons	Number of respondents	%
Set up own business:	Freedom, self-controllable, convenient working hours and big profits.	**1**	**10**
Government Sector:	Higher salaries	**8**	**80**
	Promotions	**6**	**60**
	Social prestige	**4**	**40**
	Pension security	**4**	**40**
	Job security (private sector companies may go bankrupt)	**2**	**20**
	Better working hours	**1**	**10**
	Better annual leave and holidays	**1**	**10**

Similarly student interviewee 36 said:

> *"In the Government sector because of higher salaries, promotions and pension"*

Student interviewees 19 similarly expressed a wish to work for the **government sector,** saying:

> *"I want to work in the Government sector because of higher salary if compared with the private sector, and also because of pension security"*

One female student, while citing the same factors, added the proviso that she would want to work in a single-sex environment or at least one that did not require much mixing of the sexes:

> *"In the Government sector because of higher salaries, promotions and better pension security. However, I prefer to work in a single-sex Government work-place such as a girls school, or other Government establishments with minimal mixed sex" (Interviewee 30).*

Another major reason cited was the social prestige attached to government sector jobs. For example, interviewee 36 commented:

> *"Government employees in Oman are highly regarded by the community and well valued, I think"*

Another interviewee who mentioned social prestige did so specifically in relation to the armed forces:

> *"I want to work for the Government, specifically in the armed Forces, EME section, because I like this field. Also, there is good social regard to servicemen..." (Interviewee 22).*

Job security was mentioned by two students, who perceived that private sector companies may go bankrupt, whereas it is highly improbable that this would happen in the Omani Government sector. Student interviewee 27 stated:

> *"In the Government sector because of ... job security because a Government department could never go bankrupt"*

Finally, better working hours and better annual leave and holidays were identified as reasons for wishing to seek employment in the Government sector by Student interviewee 42 when he remarked:

> *"In the Government sector because the private sector has long working hours, lower salaries and fewer leaves"*

The results of the interviews with regard to the sector of employment indicated that among students who wished to find employment after secondary school, the vast majority of them wished to be employed in the Government sector, demonstrating their awareness of the advantages currently offered in this sector compared with the private sector. In this respect, they are consistent with the questionnaire findings.

6.4 Summary

The results of the semi-structured interviews have shed further light on the main reasons or factors influencing students to enter higher education. They showed, in particular, the importance of encouragement from significant others, especially parents, and the hope of material benefits in the short and long term. A number of students showed a high level of awareness of conditions in the labour market, such as the Omanisation policy and the job opportunities available. These considerations were also reflected in their choices of preferred location of higher education and choice of subjects, although the desire to pursue higher education within their own country was also motivated to a large extent by considerations of security and closeness to family and friends. In addition interviews revealed that the vast majority of students whether or not they aspired to higher education, wished to work in the government sector due to the material advantages which can be gained in this sector compared with the private sector in Oman, as well as the perception that social prestige is attached to this factor.

Further insight was also provided into the factors which may restrict or discourage students from enrolling in higher education. Predominant among these were large family and low income. Students were also deterred by the admission system of higher education which offers places only to students who obtain very high marks in secondary school. This in turn means that students of lower ability, and those struggling with difficult subjects, quickly become discouraged and see no prospect of pursuing their education. Other students were deterred from entering higher education by lack of encouragement from teachers, friends or parents, especially where the latter were themselves of low education.

Whilst the numbers of secondary school students who volunteered was smaller than the researcher had anticipated and had wished to be selected by unbiased empirical data collection means, he acknowledges that the responses to his semi-structured interviews give an insight into the thinking and reasoning behind the completion of his

questionnaire by these particular students. Their responses to the researcher's further investigations into how and why they responded are still valid, as they allow comparison with the main questionnaire. They validate and support the main issues raised in the questionnaire and elicited further details that could not be captured by the questionnaire.

Chapter seven will discuss the results detailed in this chapter and the previous one, and relate these to previous research findings and theories in the Literature.

CHAPTER SEVEN
DISCUSSION OF THE ANALYSIS OF DATA

7.1 Introduction

This chapter will present a discussion of the analysis of the data collected by the questionnaire, the semi structured interviews, and documentary data. The questionnaire and the semi structured interviews in each part have been designed and developed to address the serious problem facing Oman at the present time. There is a high increase in the numbers of secondary school students, although a similar increase in places within higher educational institutions has not kept apace with this growing demand. This has resulted in a limited capacity of places within the Omani higher education system which is not able to absorb or accommodate this high demand from secondary school students.

The existence of an extremely high number of foreign workers, who will eventually need to be replaced by well-qualified Omani citizens, further compounds this existing problem of higher education failing to meet the current demand. This is one of the reasons for the need for secondary school students to achieve higher educational level qualifications. This situation gave rise to the following research questions:

Q1. What are the main factors influencing secondary school students' decisions to enter higher education?

Q2. Are there differences in attitudes and aspirations between male and female secondary school students or between Arts and Science students?

Q3. Is there any influence of students' scholastic ability (academic attainment) on their decisions to enter higher education or to work?

Q4. Does the current capacity of higher education in Oman meet the aspirations of secondary graduates and labour market demand in relation to the findings of the study?

With this background, the following is a discussion into the factors that influence secondary school students when making their decisions to enter higher education, and its implications for higher education capacity in the Sultanate of Oman.

This chapter will conclude with a summary of the discussion, illustrating where this research supports the findings of previous research, as well as highlighting the differences from previous research into some of the factors investigated in this research.

7.2 The Role of Higher Education in National Development

"Those who complain about the price of education should consider the cost of ignorance" –Anon

The education of citizenry is an important component of an integrated and sustainable approach to national development. No nation can achieve its developmental aspirations without investing in educating its people, including the provision of tertiary education.

In recognition of the overwhelming importance of education in national and individual development, the United Nations General Assembly set up UNESCO (United Nations Educational, Scientific and Cultural Organisation) in 1945 with a specific mandate to contribute to peace and security by promoting collaboration among nations through education, science and culture. This role was further acknowledged in the Preamble to the UNESCO Constitution which stated that the States party to the Constitution believed in "full and equal opportunities for education for all …"

There is considerable evidence in the literature on the important role of higher education in national development (Human Development Report, 2001). At the global level, tertiary education contributes to sustainable development and improvement of society (UNESCO, 1998). At the national level, the World Bank (2000a) stated that many countries consider tertiary education as an important pathway to enhanced economic performance through optimal harnessing of potential human resources. Consequently, education is increasingly considered an investment in the collective future of societies and nations, rather than simply in the future success of individuals (OECD and UNESCO, 2002).

Many researchers, such as Menon, 1995/Cyprus; Al-Lamki, 2002/Oman; Albert, 2000/Spain; Jimenez and Salas-Velasco, 2000/Spain; Hayden & Carpenter, 1990/Australia, have examined the role of higher education in national development and the relevant strategies to improve capacity and access. These studies acknowledge the specific role of tertiary education in providing a highly skilled labour force. Other studies, such as Al-Maskery (1992) examined the motivations and expectations of university students in the Sultanate of Oman. Al-Hajry (2002) highlighted the financing

of higher education and the critical importance of tertiary education in overall national development of the Sultanate of Oman.

In the Sultanate of Oman, in pursuit of the developmental goals of the nation, the importance of education in general and tertiary education in particular is well recognised. His Majesty's Speech on the occasion of the Royal Visit to Sultan Qaboos University on 2 May, 2000 re-affirmed this commitment and conviction:

> *"This urgent need to spread education was based on our knowledge that learning is enlightenment and light is the opposite of darkness"*

Common examples, case studies, and statistical analysis in the literature (World Bank, 2000a) all highlight the fundamental importance of higher education to development. This is best achieved by promoting income growth, enlightened leadership, expanding choices and helping the talented to fulfil their potential, along with the training of scientists, engineers and other professionals to invent, adopt, and operate modern technology in all sectors.

Recognition of the importance of higher education in national development is particularly essential as countries like Oman strive to compete in the new global economy that is driven by information and communication technology. This new economy is dependent on the availability of educated and literate workers; and with respect to higher education, the new ideas fuelling this expansion have come from people with higher education degrees (World Bank, 2000a).

7.3 Discussion of the Results:

Q1.What are the main factors influencing secondary school students' decisions to enter higher education?

In order to answer the first research question and to make use of related data collated, for discussion purposes, in this study this question was broken down into four sub-questions. The first one is:

Q1.a Is there any influence of social factors (encouragement of parents, family and friends, family's socio-economic background) on secondary students' decisions to pursue higher education?

The issues of parents and family encouragement on secondary school students' decisions to enter higher education have been investigated by many researchers in the

past and present. The common findings suggested that parental encouragement was a stronger influence on school continuation decisions of secondary school students at higher levels of schooling. In particular, parental encouragement had the greatest influence on plans for higher education among high intelligence students from families with high socio-economic status (See for example, Mare (1980), Hayden and Carpenter (1990), Menon (1995), and Veen (2003).

Results obtained in the present study as detailed in Table 5.27 underscore the importance of **parents' and family encouragement,** along with their values, on secondary school students' decisions to pursue higher education and support the findings of earlier studies. These results demonstrated that social factors related to parents and family network influenced Omani secondary school students' decisions to pursue higher education. It was found that most parents encourage their children and are willing to invest in higher education to ensure a good future for their children and to enhance their family status, and this influences their decision to pursue higher education.

These findings are further supported by the evidence collected from the semi-structured interviews with secondary school students who wished to enter higher education. For example, the highest majority, a total of 97% of secondary school students, rated 'parents' influence' as the number one factor from a list of fourteen variables, as detailed in Table 6.1. From the transcription of the semi-structured interviews, student interviewee number 1, for example, stated:

> *"There is a strong social influence from parents' encouragement...*
> *My parents are very keen that I pursue my higher education..."*

Evidence from the literature showed that the reason parents frequently put forward was that they wanted their children to do better educationally than they themselves had done, and they wanted their children to have opportunities that they never had (Veen, 2003). The responses from some of the secondary school students who participated in the semi-structured interviews were similar:

> *"...in order to make good what they could not do because of the situation in Oman before 1970" (Student interviewee 41).*

In addition to the above, it can clearly be seen from Table 6.2 that there is a very strong desire by secondary school students to 'Satisfy parents' wishes'. When secondary

school students consider ranking the reasons which encouraged them to enrol in higher education, the data shows that this was the highest rank with 91 scores. Such responses also confirm the findings from the questionnaire where the very strong family orientated traditional culture in Oman resulted in a strong influence of parents who wished their children to achieve more than perhaps they had.

It can be concluded, therefore, that the influence of parents' and family encouragement in this study is in line with several studies' findings, such as Mare (1980), Hayden and Carpenter (1990) and Veen (2003). Further, as Menon (1995) recorded, parental encouragement had the greatest influence on higher education plans in the case of high intelligence secondary school students coming from high socioeconomic status families. So not only did she find that parental encouragement was greatly influential, but she included other factors such as the academic ability of the secondary school student and status of the family.

This was not entirely the result in this research because high intelligence secondary school students who did not necessarily come from high socioeconomic status families scored equally as well as those secondary school students who did fulfil the same criteria as cited by Menon (1995).

The influence of friends on students' decisions to pursue higher education:

It was found in the literature that secondary school students are more likely to go from school to higher education if their friends and peers are planning to go to higher education. On the other hand, however, some evidence in the literature suggests that there is little or no influence of peers on students' decisions to enter higher education (See for example, Davies and Kandel (1982), Carpenter and Western (1984), Hayden and Carpenter (1990), Taylor (1992), Menon (1995), Mangan, Adnett and Davies (2000), Thomas, Webber and Walton (2002), and Oliverira and Zanchi (2003).

In relation to the influence of **friends** on secondary school students' decisions to pursue higher education, the findings of this study, as shown in Table 5.32 regarding whose views students respected, suggest that friends' plans were not a strong influence on students' own decisions to enter higher education.

This is not in line with Harris (1998), who suggested that it was not the immediate family and its socio-economic background that had the most lasting influence on

secondary school students, but the influences of their immediate peer group (Harris, 1998, cited in Andrews, 1999). Moreover, it is not completely in tune with the findings of Hayden and Carpenter (1990) who found that a student was more likely to plan to go into higher education if his/her best friend planned to go.

However, in this study and from the data collated during interviews with secondary school students, it appeared that the influence of their friends on their decisions to pursue higher education was very mixed. For example, student interviewee 8 stated:

> *"There is also strong encouragement from friends. I have friends who are currently pursuing their higher education, and we keep regular contacts"*

On the other hand, some student interviewees offer the opposite opinion. For example student interviewee 28 stated:

> *"There is no significant influence by friends on me"*

Moreover, the findings of this research, which indicated that some secondary school students were not influenced by their peers on their decisions to enter higher education, are in line with the findings of Oliverira and Zanchi (2003) in Britain, who found that peer-group effect has little or no influence in participation in higher education.

On the other hand, the findings of this research which show that some secondary school students were influenced by their peers in their decisions to enter higher education are in line with the findings of Mangan, Adnett and Davies (2000) who found evidence that friends, along with brothers and sisters, were identified as useful sources of information and influence in students' decisions when attempting to decide to pursue higher education. Similarly, it is in tune with Thomas and Webber's (2001) findings in Bradford, England, where they found that peer groups were a significantly influential factor in students' decisions to pursue higher education.

Thus, while peer influence can be relevant and sometimes is significant (Hayden and Carpenter 1990), based on existing findings peer influence would appear to be secondary to parental or familial influences in the pursuit of higher education (although, Hayden and Carpenter warn that the extent of peer or family influence must vary across social systems and cultures). These results are supported by the findings of this research, where secondary school students identified a significant influence from their

friends and peers, but most stated that this was certainly over-ridden by parental wishes. Furthermore, the present findings support the results reported by Davies and Kandel (1982: 382) who stated:

> *"Although there is no doubt that peers can exert very strong influence in certain areas of adolescent behaviours, especially on those issues, such as the use of drugs, that are relevant to their current life-styles, on matters relevant to future life goals, parents are clearly of greater importance than peers"*

Thus, the strong influence of the family compared with the influence of friends on the demand for higher education among Omani secondary school students found in this study is consistent with previous studies reported elsewhere in the literature. Indeed, the power of family in influencing secondary school students' decisions to pursue higher education is much higher among the more educated families, who have themselves experienced post-secondary education and may have a clear understanding of what is involved in gaining higher education and less fearful of such an endeavour. Because of these experiences they may have more respect for tertiary institutions, and therefore be more encouraging for all their children to attend (Guppy and Pandakar, 1989).

The influence of family's socio-economic background on students' decisions to pursue higher education:

Literature findings demonstrate that students' socio-economic background played an important role when students planned for post secondary education (family income, parents' occupation and educational qualifications are usually seen as the three largest components of social standing). In addition, families of higher social status are thought to create a home environment that actively encourages their children to perform better at school and continue into post compulsory education when making decisions related to their future education and employment (See for example, Sewell, Heller, and Straus (1957); Williams and Gordon (1975); Carpenter and Western (1984); Hayden and Carpenter (1990); Menon (1995); Mangan, Adnett and Davies (2000); Ranasinghe and Hartog (2002); Tsai and Shavit (2003); and Oliverira and Zanchi (2003).

The present study demonstrates that there are several characteristics of the family's socio-economic background that have influenced secondary school students' decision to pursue higher education or to seek employment. For example, family size; few or no role models for higher education; low level of education of parents, particularly mothers; father/guardian's sector of employment; mother/guardian's sector of

employment; father/guardian's occupational status; mother/guardian's occupational status and the family's estimated monthly income.

It is important to acknowledge that in this study the tendency to aspire to higher education found among students from large families (Table 5.48) must be treated with caution, because most secondary school students in this study came from large families. Indeed, the average family size in Oman is 8 persons (Ministry of National Economy, 2002) and, therefore, this might reflect the nature of the population structure in Oman. This may explain why the finding of this study is contrary to what is reported in the Literature (for example, Rehberg and Westby (1967) in USA, Gayle, Berridge and Davies (2002) in England and Wales, and Averett *et al.* (2003) in USA, who found that young people from larger families are less likely to study for a degree.

Furthermore, the higher preference of secondary school students from big families to seek employment after secondary school, as detailed in Table 5.48, gives support to previous findings reported in the literature by, for example, Borus and Carpenter (1984:170) who maintained that:

> *"Home environment factors expected to limit economic ability to go on to college would include coming from a household whose income was below the poverty level... and having a large number of siblings, which requires families of equal income to divide that income among more children"*

The less demand for tertiary education found among Omani secondary school students (Table 5.49) who had siblings with higher education differ from the evidence found in the literature. For example, in Sri Lanka, Ranasinghe and Hartog (2002) found there was a positive effect between belonging to a family with more than one in higher levels of secondary education. Moreover, in a study of Turkish and Moroccan background students in the Netherlands, Veen (2003) found that the successful students often had brothers and sisters in higher levels of secondary education or tertiary education. It is conceivable that siblings in institutions of higher learning may act as role models for their brothers and sisters and other relatives. They may also provide assistance with homework, as well as general information on the pros and cons associated with the pursuit of higher education.

The results obtained in this study might also reflect the fact that higher education is recent in Oman and therefore, families who do not have graduates have a strong desire to see their sons and daughters achieve tertiary qualifications.

On the other hand, however, evidence from the semi-structured interviews in this study confirms the influence of siblings because, in general, graduates or undergraduate students in a family often act as role models to their siblings and other extended family members. For example, student interviewee 12 stated:

> *"Influence by my brothers who are currently enrolled in the Sultan Qaboos University"*

One interviewed student (No.14) was particularly inspired by the achievements of her senior brothers in higher education and was quick to point out:

> *"There is another big influence, i.e. my five brothers who have university degrees and encourage me to be like them. I, therefore, feel obliged not to be less than them"*

Furthermore, in this study, although students with educated parents and whose fathers have professional, technical or administrative jobs were more likely to demand higher education, neither parents' employment sector nor mother's occupation affected students' decision to pursue higher education or seek employment (See Tables 5.50, 5.51, 5.52, 5.53, 5.54 and 5.55).

This result might be partially explained by the fact that so few secondary school students in Oman had mothers who were employed outside the home. Obviously, within the quality of occupation and level of expertise attained by fathers and mothers the more influence the parent had, i.e. the more professional the occupation of the parent, the greater the influence seems to be on secondary school students' decision making.

The present study is also in line with the findings of Williams and Gordon (1975) in the United Kingdom, Albert (2000) in Spain, Ranasinghe and Hartog (2002) in Sri Lanka, Tsai and Shavit (2003) in Taiwan, who found that the higher the socioeconomic status of the family related to the father's occupation the more likely secondary school students were to stay on at school at the end of secondary school education and to pursue higher education. This research indicates similar findings. Also, the results confirm the influence of parental education generally and they support the findings reported by Hayden and Carpenter (1990:180) who stated that:

> *"parents who have themselves experienced the rewards provided by additional years of education are more likely to be willing and able to provide incentives and opportunities for a young person to go on to higher education"*

Moreover, evidence from semi-structured interviews in the present study support such influence of parental education as it was seen as providing a role model for students, as well as helping to provide conditions conducive to study. For example, interviewee 2 commented:

> *"...especially educated families who value higher education....the student himself has a feeling of belonging to this educated family and wants to follow suit of his educated parents..."*

While secondary school student interviewee 8 reflected:

> *"Being educated parents, they realize the importance of higher education, and encourage me and set good conditions and atmosphere for me to study and review lessons"*

In addition to the above findings, the influence of father/guardians' educational level has been demonstrated in this study (Table 5.50). While students who had an educated father/guardian were more likely to aspire for higher education, those whose father/guardian was less educated were more likely to leave school at an early age to seek employment. This finding was equally applicable to mothers/guardians' educational level (Table 5.51). Thus, the results of father and mother's educational level corroborate the findings reported elsewhere in the literature, such as Menon (1995), Tinklen (2000), James (2001), Knighton and Mirza (2002), and Chevalier and Lanot (2002).

However, further comments are warranted on the perceived influence of mother's education and occupational level on students' plan to pursue higher education. For example, although students with more educated mothers expressed a greater desire for higher education, the fact that most mothers in Oman are housewives (and their educational levels were generally low) suggests that other 'family' factors than parents alone also influence the students' decision to pursue higher education or seek employment. Omani citizens maintain a strong nuclear family culture, where children grow up among their grandparents and other members of the extended family. Thus, even where the educational or occupational level of one or more parent is low, students frequently interact with other extended family members with higher education

qualifications who may exert positive influences on their personal development and attitudes towards higher education.

There is evidence from semi-structured interviews that confirms the assertion of the influence of 'extended family' on students, not only for pursuing higher education but for studying a particular course. Student interviewee 6 aptly explained the influence of family and personal interest:

> *"I consider studying Architectural Engineering because I like Engineering. I might have been influenced by my uncle, who is an Architectural Engineer".*

In particular, although the educational level of most mothers in Oman is low, they spend considerable time in child-rearing activities, so that the mother's human capital would be expected to have an impact on her children's development (Edwards and Pasquale, 2002).

Of course, the influence of mothers who do not work is not in line with what been reported in the literature. For example, Rudd (1987) found that there was a strong positive relationship between the occupational and educational level of parents and the probability of their sons or daughters pursing higher education. However, the result of the present study (Table 5.55) is not surprising, given that over 94% of the mothers of secondary school students surveyed were full-time housewives, thus, underlining the significance of father's occupation as an influential factor (Table 5.54).

Similarly, the influence of family income on secondary school students' decisions to pursue higher education has been a topic of numerous studies. For example, Jimenez and Salas-Velasco (2000), Knighton and Mirza (2002) found that the family income was an important determinant to access post-secondary education. On the other hand, in the present study it was interesting to find that a substantial percentage (49%) i.e. almost half of secondary school students from low income families expressed desire to go to higher education as detailed in Table 5.56. This result deviates from popular evidence in the literature which indicates that secondary school students from low income families were less likely to pursue higher education (for example, Li and Min 2001; Chevalier and Lanot 2002; Edwards and Pasquale, 2002).

The present study's results may be explained by the free education policy for higher education in Oman in line with the government's aspirations towards equal opportunities. In order to allow any citizen who has achieved the entrance requirements for higher education to participate regardless of family background and family financial status, any government wishing to implement an equal opportunities policy will have to review education policies and education plans to accommodate anyone who is worthy through academic attainment of taking a place in higher education. This is not only possible and desirable, but it is an ideal that should be worked towards. Otherwise, disadvantaged secondary school students will be further disadvantaged through being penalised for not having sufficient financial support to achieve their full potential.

Conversely, in line with popular evidence in the literature, a high incidence of intention to find employment rather than pursue higher education was expressed by a higher proportion of secondary school students from low-income families than those in other groups. Thus, the results demonstrated that the higher the income, the less likely students were to prefer employment. Evidence from semi-structured interviews in the present study supports the idea of low income influence. Indeed, it was one of the main reasons why entry to higher education may be restricted or discouraged, as narrated by some students involved in semi-structured interviews. For example, student interviewee 33 indicated that:

> *"We have difficult economic conditions, a big family of 10 members and below average income"*

Student interviewee 27 expressed the difficulty for a large family of managing on the salary of only one wage-earner:

> *"We have big family comprising of 12 members, and family income is below average. I am the eldest son, and we all depend on my father's salary only"*

Furthermore, it should be emphasized that although higher education in public institutions in Oman is free, access to the limited capacity may favour secondary school students from more educated and affluent families, given the considerable influence of the family on academic attainment and desire to pursue higher education. For instance, such affluent families can afford additional tuition for their children, thereby enhancing their access in the secondary school exams. Thus, the free education policy in Oman is

not sufficient to guarantee access for bright secondary school students from low income families, especially when the overall capacity remains low.

Q1.b Is there any influence of psychological factors (students' self confidence in their ability and students' attitudes and perceptions towards higher education) on secondary school students' decisions to pursue higher education?

It was found in the literature that secondary school students' personal characteristics, such as self-confidence and perception of their ability, usually affect their decisions after secondary school with regard to pursuing higher education or finding employment. Students with high academic ability and who tend to have self-confidence in their ability are more likely to enter higher education than secondary school students with low academic ability and less self-confidence (See for example, Menon (1995), Connor (2001), Thomas, Webber and Walton (2003) and Averett *et al.* (2003).

Supporting evidence is found in the present study, where secondary school students were asked to identify levels of their perceptions of their scholastic abilities. The majority of the students believed that they had good scholastic abilities (Table 5.26). These results, taken together with those in Tables 5.59, 5.60, 5.61 and 5.62, suggest a correlation between students' academic attainment and their personal perceptions of their scholastic abilities in school. These results are similar to findings reported by Menon (1995), Connor (2001), Thomas, Webber and Walton (2003) and Averett *et al.* (2003).

Further supporting evidence comes from semi-structured interviews, where 88% of students identified that their own scholastic ability and self-confidence was an important factor for them to pursue higher education (Table 6.1). For example, interviewee 2 expressed this view in general terms, as follows:

> *"There are many reasons, but to me the most important reason is psychological influence and scholastic aptitude of the student, which enables him to pursue his higher education up-to post-graduate studies, in order to prove himself in his community. The brilliant student is very keen not to waste 12 years of education, and his scholastic aptitude drives him to go into higher education"*

Another student (No.28) suggested a definite link between high grades and aptitude for higher education:

> *"I obtained 97%, which was a result of my hard working, and I hope to obtain higher marks in the second term. I think that the scholastic aptitude is one of the prerequisites for higher education. No one can go beyond his capacities. A weak student will face great difficulties in obtaining university degree"*

Students also had their own **personal attitudes and perceptions towards higher education.** Research demonstrates that secondary school students are motivated by positive attitudes they attach towards the value of higher education and by the belief that higher education will link them to stable and secure future employment opportunities, plus a higher and a better social status once in employment (Williams and Gordon (1981), Al-Maskery (1992), and Hung *et al.* (2000).

The results obtained in the present study, as detailed in Table 5.28, indicate that overall, students attach positive attitudes towards the value of higher education. Moreover, students' attitudes and perceptions towards education seemed to influence their decision to pursue higher education studies, particularly the notion that obtaining a higher education degree will bring honour to their families, will get them respect/status and would be needed to get a good job. Thus, these results corroborate the findings reported by, for example, Williams and Gordon (1981), Furlong and Cartmel (1995), Makosana (2001), and Hung *et al.* (2000) who found that secondary school students' attitudes towards the importance of higher education were likely to affect their decisions in relation to educational choice and the fact that they tended to value the positive outcomes of participation in higher education with the belief that by pursuing higher education this would lead to social status and better employment prospects with better salaries.

Q1.c Is there any influence of economic factors (human capital theory and labour market conditions in Oman) on secondary students' decisions to pursue higher education?

A detailed review of the literature showed that the ***Human Capital Theory***, which dates back to the early classical economists, provides a valid theoretical framework for analysing the influence of personal, family background and labour market signals on demand for higher education in many countries (Albert, 2000). The idea of human capital theory is that people invest in education not for the sake of present enjoyment, but for the sake of future pecuniary and non-pecuniary returns (Blaug, 1976).

The human capital theory proposes that an important motivation for individuals to invest in education is that the acquired knowledge and skills tend to raise their productivity and hence earnings potential (OECD, 2001 and Siphambe, 2000). It also views education and training as the source of skilled manpower, which in turn leads to economic development (Menon, 1995 and Al-Hajry, 2002).

Based upon the above, the results obtained in the present study among Omani secondary school students showed that a very high proportion of students aspired to higher education, and the demand for higher education was similar among male and female secondary school students, and between those secondary school students specialising in Arts or Science.

The high demand for tertiary education found in this study has been reported elsewhere in the literature for many developed and developing countries (for example, Li, 1998, OECD/UNESCO, 2002 and Albert, 2000). Such a rise in the demand for higher education is often associated with population growth, high rates of secondary school completion and recognition of the positive gains to be realised from progressing to and completing tertiary education programmes implicit in the human capital theory (See for example, Blaug, 1976; Menon, 1995; Al-Maskery, 1992, and OECD/UNESCO, 2002).

Moreover, the human capital theory also provides a further theoretical framework to explain Omani secondary school students' motivations and expectations towards higher education found in this study. Specifically, career, economic and (to a lesser extent) personal development incentives were the secondary school students' reasons for pursuing higher education. This is in line with the argument of Human Capital Theory, which argues that people invest in themselves in the form of education and training, because they are motivated by Economic incentives; Career incentives and Personal Development incentives (See for example, Blaug, 1976, and Al-Maskery, 1992). So the influence of Human Capital Theory was strongly supported by secondary school students' responses, as shown in Table 5.25. They saw higher education as an investment: as a pathway to future job prospects and high salaries which offered a prosperous future for them individually and their families.

It should be noted that the responses of secondary school students in this study showed that there were significant differences between male and female students in the importance they attached to Economic Incentives and Personal Development Incentives

motivating them to enter higher education (Table 5.9). Male students attached more importance than female students to Economic Incentives, while for Personal Development Incentives, this position was reversed. However, the results show no significant difference in Career Incentives scale. The fact that male students were more motivated by economic incentives and female students motivated more by personal development to enter higher education in this study is consistent with the findings of Al-Maskery (1992), who stated that:

> *"The motivations of male students reflect the pecuniary incentives, such as better job opportunity financial security, and obtaining education as a means of an investment for the future. On the other hand, the motivations of female students reflect the non-pecuniary incentives, such as the desire to please their parents, future career opportunities, good employment opportunities, and social prestige"* (Al-Maskery 1992: 227).

Furthermore, the findings that male students were more motivated by economic incentives than female students are also in tune with the findings of Williams and Gordon (1981) who concluded that in England, boys expected to earn more than girls, regardless of their education.

In addition, the influence of Human Capital Theory was strongly supported by evidence of semi-structured interviews in this study when secondary school students explained their concern in terms of their current circumstances and a desire to contribute to the family's welfare. For example student interviewee 38 stated:

> *"The economic factor influence is great. I want to get money to improve my economic conditions and to repay what I owe to my parents, who spared nothing from me during the whole of my life"*

With regard to securing a highly regarded and well respected job student interviewee 18 argued that:

> *"I don't deny the economic factor, however, to me, securing a highly regarded and well-respected job is far more important than drawing a high salary".*

Self-development was also recognized and emphasized by the students when deciding to enter higher education, as student interviewee 28 narrated:

> *"What makes me enter higher education is my interest in education. Self-development, improving economic standards and aspiration for social status".*

The correlation between education and job opportunities is recognised by Omani citizens. Al-Maskery (1992:336) states that Omani secondary school students are motivated to invest in education:

> *"...People are motivated to invest in themselves in the form of education and training because they expect education will bring better job opportunities and higher salaries during their work life"*

Thus, clearly, students in this study were deeply aware of the economic, career and self-development benefits of gaining higher education. Indeed the sub-scale reflecting Human Capital Theory scores the highest among eight sub-factors, suggesting this factor was seen as most influential (Table 5.33).

Moreover, it was clear that students wanted to get a higher degree, for example, in order to have a better chance of getting a good job, and hence, in turn, to improve their future prospects. Thus, it was not surprising from the evidence of semi-structured interviews that human capital theory was reflected in their motivations. Items reflecting this theory (Obtain higher education degree; Get high salary; and Get good job) were ranked third, fourth and fifth respectively (Table 6.2).

The influence of the family structure in Omani culture was further evident when many secondary school students considered that securing a well-paid job after tertiary education would also bring honour to their families and enhance their social status.

Interestingly, there was a strong regional influence on the level of secondary school students' motivation for higher education. Students from the main economic regions in Oman (Muscat, Dhofar and Al Batinah) were more highly motivated to pursue higher education for economic reasons in comparison to their counterparts from Al Dahliliya and Al Sharqiyah regions. Furthermore, students from Dhofar reported greater desire to secure jobs of higher status as an influential factor in their desire to pursue higher education, while students from Al Dahira were less influenced by the benefits of individual gains and personal improvement (See Tables 5.11, 5.12, 5.14 and 5.15). These regional differences in attitudes towards higher education might be explained by socio-economic differences between the various regions; particularly Muscat (which also contains the capital city). People who live in such urban areas are more likely to experience a higher standard of living and are thus more sensitive to the associated economic pressures whereas people further away from the main economic centres are

often considered to be more relaxed in their approach/response to economic opportunities.

So these findings give support to previous findings reported by James (2001) who examined the effects of the socioeconomic status and residential location on the attitudes and aspiration of young people towards higher education in Australia. He found that the urban students are more likely than rural students to believe that their parents want them to do a university course.

A preference to seek employment instead of pursuing higher education by students living in certain rural communities or areas where employment opportunities are high has been documented in the literature. For example, James (2001:471) stated that:

> *"Some young people living in rural Australia make an early decision that there is a pleasant and rewarding life to be lived in the part of Australia they love, and employment may be available for which a university qualification is neither necessary nor seen as helpful. The decision not to pursue higher education may be made with no regrets and may not be perceived by them as a personal loss or a dream unfulfilled"*

Evidence in the present study gained from interviews with decision makers in Oman, related to the low motivation to pursue higher education by students from Al Dahirah region, confirms the above findings reported by James (2001). For example, one interviewee who was a decision-maker narrated that:

> *"Because Al Dahirah region is a border region and many of its population work in neighbouring countries, due to availability of job opportunities without looking into qualification, students from this region might, therefore, be influenced by their fathers and relatives who work in those countries. Also, their relatives do facilitate securing jobs for their students. In other words, the students have options, and hence do not make enough efforts to pursue higher education"*

When considering secondary school students' expectations from higher education in terms of income earning, it was found that the general expectation was that earnings would be higher after higher education, as can be seen from Table 5.17. Although both genders expected their income to increase if they gained higher education, male students had higher salary expectations. The influence of gender on family roles might explain this result. For instance, in Oman, men are generally responsible for paying bills and

record keeping in the family, thereby accumulating more experience on such issues than their female counterparts.

Therefore, the results of this study showing that education is seen as a route to higher earning appear to support human capital theory and are in line with several findings reported elsewhere. For example, they are in tune with Psacharopoulos (1977) in Morocco, Psacharopoulos and Sanyal (1981) in the Philippines, Al-Maskery (1992) in Oman, Dominitz and Manski (1996) in USA, Albert (2000) in Spain, Fazio and Dinh (2004) in China, and Chung (2004) in Malaysia.

Another aspect of secondary school students' expectations from higher education appeared when participants were asked in which sector of employment they would wish to pursue their career. Table 5.18 shows that a substantial majority of both sexes, irrespective of specialisation, looked to the government sector, where the advantages of job security, status and prosperity were seen as most readily available. In other words, Human Capital Theory was reflected in their motivations and expectations of higher education. Thus, the results of this study are consistent with the findings of Al-Maskery (1992) and Al-Lamki (1998), who found that students are more motivated to work for the government sector. These preferences, however, cannot be explained in terms of Human Capital Theory alone. The plans and expectations of Omani students must also be seen in light of the specific conditions of the Omani labour market.

The influence of labour market conditions in Oman:

The labour market is one of the most important sources of extrinsic incentives for participation in higher education, as emphasized by several studies in the literature. For example, OECD (2001) maintained that a further important motive behind acquiring more education is to lower the risk of unemployment. The reduction in risk is particularly large for those investing in upper-secondary education, whereas the gap in unemployment rates between upper-secondary and university-educated workers is comparatively small.

A positive correlation between unemployment and the numbers going on to further education suggests that further study is to some extent seen as a way to avoid unemployment, and that people expect that gaining a higher education qualification will increase their chances on the labour market (Heijke,1996).On the other hand, it was revealed in the literature that an increase in the overall rate of unemployment reduces

higher education demand and enrolment rates (See for example, Hayden and Carpenter (1990), Jimenez & Salas-Velasco (2000), and Petrongolo and Segundo (2002).

It is likely, therefore, that secondary school students' decisions to enter higher education are affected by the variety of opportunities available within their immediate local market and students will take into account labour market conditions, while the labour market itself will, in turn, adjust to the output of educated individuals (Menon, 1995).

Related to these factors labour market conditions in Oman were investigated in this study to see whether or not they influence secondary school students' decisions to pursue higher education. The current situation in Oman is that many jobs are occupied by non-Omani expatriate employees, who have and are contributing a great deal to the overall economy of the Oman. However, as in any other third world developing country, most Omani citizens wish to work towards qualifications, experience and expertise to enable them to be able to compete for the posts held by non-Omani citizens. Most would also acknowledge that there will always be a need for expertise from non-Omani experienced workers, but on the whole each generation will be raised in a culture that engenders loyalty to their country and a deep desire to do their best for their country.

The opportunity created by the Omanisation of the technical and specialist workforce represents an opportunity for young Omani citizens. Consequently, students' response on their reasons for deciding to pursue higher education reflected the above labour market conditions in Oman (Table 5.29). In particular, students demonstrated an awareness of a need for themselves and other students to pursue higher education in order to acquire the skills and knowledge needed to replace professional non-Omani citizens in the labour market. Many students also agreed that without higher education it is difficult to replace professional non-Omani employees.

Consequently, the semi-structured interviews with secondary school students who wished to enter higher education explored the reasons for students' interest to continue with higher education in order to replace non-Omani professionals. There was considerable interest expressed by the secondary school students in the continuing role of expatriate staff in Oman. While many were quick to point out their contributions in the country's development, other considered their possible negative influences on the socio-cultural life of Omani citizens. Obviously, education is critical in the successful

Omanisation of the positions currently held by expatriate staff. The responses provided by two interviewees summarize the general sentiments expressed by the secondary school students:

> *"One of the reasons for me to enrol in higher education is to contribute, along with my other colleagues, in replacing these expatriate labours. This should be achieved by qualification and education, not by merely replacing expatriates for the sake of replacement. As it is known, the expatriate labours are educated, qualified and widely experienced"* (Interviewee 29).

> *"I think the availability of expatriate labour in Oman should be an aspiration for each student to enter higher education in order to replace expatriates. Availability of expatriate is an instigating factor for me and others to pursue studies and prove that Omani citizens are well capable to build their country, if qualified and given the appropriate chance''* (Interviewee 35).

On the other hand, student interviewee 18 felt strongly that it was not yet the right time to Omanise all jobs currently held by expatriates:

> *"With regards to availability of expatriate labour, I personally think we have to have foreign expertise in Oman. USA, for example, is a highly advanced country but still has European and Arab experts amongst others. USA didn't close its doors before these experts, so what is wrong with countries like Oman, which is working hard to reach an advanced level, seeking big technical assistance from these expatriates? By expatriates, I mean here those with high educational degrees who can work as experts and advisors. Other jobs currently performed by expatriates, which can be filled by nationals, ought to be Omanised before long"*

The secondary school students' willingness to acquire higher education qualifications in order to get well-paid employment (by replacing non-Omani professionals) in this study corroborates the findings reported by Al-Maskery (1992).

The influence of the availability of employment (labour market conditions or signals) on students' decisions to enter higher education was found in this study to be positive. Students want to take advantage of the availability of employment filled currently by non-Omani employees, and to lower the risk of unemployment by acquiring more education. In this respect, they are affected by the variety of opportunities available within their immediate local market. Therefore, these findings are consistent with Hayden and Carpenter (1990), Menon (1995), Albert (2000), OECD (2001), and Petrongolo and Segundo (2002). Thus, it can be concluded that labour market

conditions in Oman have a strong influence on secondary school students' decisions related to higher education.

Q1.d Is there any influence of institutional factors (specialisation of the students and teachers) on secondary students' decisions to pursue higher education?

It has been reported in the literature that ***specialisation*** of the student was found to be an important factor in terms of influencing secondary school students' decisions to enter higher education, because studying certain academic subjects or specialisations may influence the secondary school students' decision on subsequent educational or career decisions and the type of programme selected by the student represents, in a sense, a prior commitment to a certain kind of future educational career (See for example, Kandel and Lesser (1970), McCreath (1970), Menon (1995).

As mentioned earlier, in Chapter Two, the current system applied by the Ministry of Education in Oman does not give secondary school students the opportunity to choose the programme of study (Science or Arts) they are interested in. Although secondary school students are selected to some extent for the appropriate type of secondary education in accordance with the results of their examination in first grade of secondary school, the Ministry of Education policy expects schools to have no more that 40% of their students in the Arts programme of study, and 60% in the Science programme of study (Ministry of Education, 2000). Consequently, when schools are attempting to meet Ministry of Education policy's requirements, Al-Adawi (2004) found that secondary school students sometimes find themselves in a compulsory programme of study that is contrary to their specific interests.

Therefore, in the present study, the influence of students' specialisation was examined and it was found that 47% of the secondary school interviewees (Table 6.1) considered that their chosen academic subject had a significant effect upon their decision making related to higher education. Therefore, the type and quality of education received in secondary school was a factor affecting secondary school students who would be willing and able to enter higher education. For example, Science secondary school students have more areas available for them to pursue higher education than in secondary school students in the Arts. This was eloquently articulated by student interviewee 3 who stated:

> *"Unfortunately in Oman the Science section opportunities are varied and extensive and its students have better chances than those of Arts section. We are therefore unable to compete except to a very limited extent and with really very high marks."*

The same sentiment was echoed by student interviewee 9 who said:

> *"Good influence because we can study both Scientific and Arts fields, whereas this is not true for Arts section students. I, therefore, think that Arts students are more worried and frustrated, particularly those who have not obtained high marks."*

From the above examples it seems that the way in which secondary school students choose their specialisation (Arts or Science) is not based on firm standards. Students' interviews revealed that some of them were struggling to study Science and they claimed that if they were in Arts they would achieve better grades. On the other hand, some Arts students claimed that they were unable to compete except for very limited chances and needed very high marks. This raises the question why they were allowed and directed to enter that particular stream. This issue should be considered, as students' specialisation is likely to have an effect on subsequent educational and career decisions.

The influence of specialisation in this study can be seen also in Table 5.4, where an overall percentage total of 79% of Arts students and 84% Science students demonstrate a very strong commitment to achieving entrance to higher education, as opposed to 16% of Science students and 21% Arts students who indicated that they would not strive for improvement, but would simply be content to achieve their secondary school certificate qualifications. This fact may be interpreted as meaning that Arts students were less motivated and may have been discouraged by their limited specialisation opportunities. This finding is consistent with Hayden and Carpenter's (1990:192) results in Australia when they stated that:

> *"Higher education institutions in Australia are generally selective in their admission practices, and year 12 examination results are the 'currency' used to gain admission to preferred courses. Year 12 students with good examination results have greater access to preferred courses within higher education, and students with good examination results in Science subjects have an added advantage because of their even wider range of access to such courses"*

In conclusion, therefore, the results obtained in this research related to the influence of specialisation are in line with Kandel and Lesser (1970) and Menon (1995) who found

that the type of programme selected by the student represents, in a sense, a prior commitment to a certain kind of future educational career. Some Arts or Science students who participated in this study might have been to some degree affected by the government policy, i.e. directing them to a stream not of their preference.

In addition, the results corroborate the findings of Borus and Carpenter (1984) in their study in the USA, when they found that the influence of school was relatively small and at times had no significant effect on secondary school students pursuing higher education. Whilst school can be relevant as an influence on pursuing higher education, various studies indicate that schools often appear to have less impact on the demand for higher education compared to other influences such as parental, familial and education of parents and financial status of the family. A similar finding was found in this study, that whilst specialisation was significant, its influence was not anywhere as strong as that of parents and family. There were, however, other school-related influences, in addition to that of specialisation, notably the influence of teachers, which is considered next.

Teachers' influence

Responding to the question of whether or not secondary school students' choices were strongly influenced by their teachers, it was found in the literature that encouragement by teachers can affect entry to higher education in many ways. For example, teachers can counsel students on what is involved in studying at the university or college, and thereby, draw the students' attention to possible incentives for pursuing higher education and the possible outcomes from doing so (Hayden and Carpenter, 1990). Furthermore, teachers can be a very important source of advice with regard to university choice (Taylor, 1992, Corner, 2001, and Thomas, Webber, and Walton, 2003).

On the other hand, the roles of teachers have been found to be small in influencing students' decision to pursue higher education (See for example, Borus and Carpenter (1984) and Kysel, West and Scott (1992).

It is important not to under-estimate the influence of teachers on secondary school students' decision to pursue higher education, despite the evidence from the questionnaires in the present study suggesting that such influence was minimal (ranked 6th among 8 factors; Table 5.33).

It was, therefore, not surprising that the impact of teachers' influence was rated very highly comparable to parents' influence and higher than scholastic ability, among Omani secondary school students who wished to enter higher education, as revealed by semi-structured interviews (Table 6.1). Obviously, the efforts of teachers in engaging in this function vary widely between individuals.

The positive influence of teachers on secondary school students' decision to pursue higher education, for example, was eloquently put by two interviewees during the semi-structured questionnaire follow-up study:

> *"Our teachers are good examples, and they always talk about their good times during higher education. They have positive role in convincing us to enter higher education, for our own good and for the best interest of our country". (Interviewee 38)*

> *"Teachers have a significant role, particularly proficient and widely experienced teachers. ... Many of the devoted teachers have become good models for us and our predecessors, and we try to follow suit" (Interviewee 20).*

Despite this evidence on teachers' influence on students' desire to pursue higher education, some students insisted that this did not apply to them:

> *"To me, my teachers have no effective role. I obtained high marks by virtue of my own initiative and hard work, and my teachers have had no role or influence. Also, my desire to enter higher education is self-originated and not teacher-induced'' (Interviewee 29).*

Overall in this study, as derived from semi-structured interviews it was found that teachers' influence was the second highest, with a score of 91%, and therefore, it was seen as highly significant (Table 6.1). This is very much in line with previous research such as Hayden and Carpenter (1990), Mangan, Adnett and Davies (2000), Connor (2001), and Thomas, Webber, and Walton (2003) who concluded that teachers were influential when secondary school students were considering educational career paths.

In relation to the findings of this research in Oman and set within the Omani culture, secondary school students identified the importance their teachers had in their decision making, but concluded that whilst such influence was important, their parents and family were much more influential. So, in conclusion, whilst having some effect, teachers did not have the same impact as parents or family in this research. This study

found, like that of Williams (1972) in Canada, that the influence of parents was much greater than that of teachers, who in turn, were more influential than peers.

In answer to Q1, therefore, this study established that Omani students' decisions to enter higher education are influenced by multiple factors, predominantly family influence and factors reflecting human capital theory, but also the influence of other significant individuals (peers and teachers) and institutional factors. We now turn to Q2, concerning possible gender and specialisation differences between students, with regard to their educational and occupational plans.

Q2. Are there any differences between male and female secondary school students or between Arts and Science students in:

Q2.a Their future plans and motivations to enter higher education or to work?

The gender issue is perhaps the one that has received the greatest attention among the demographic factors in the literature. According to Menon (1995) the under-representation of female secondary school students in post-compulsory education was a matter of concern in many developed countries in the 1960s. However, recent data indicates that the access to higher education by females no longer constitutes a major problem in most developed countries and in some developing countries. For instance, Egerton and Halsey (1993) found that the gender gap between male and female secondary school students had been reduced, whereas the pattern of social class disadvantages with respect to access to higher education remained unchanged.

From the results obtained in the present study among Omani secondary school students, a very high proportion of students aspired to higher education, and the demand for higher education was similar among male and female students, and between those specialising in Arts or Science. Table 5.4 shows that in total 1498 out of the whole sample 1830, i.e. 82% of the students who participated in this study, expressed a strong desire to pursue higher education, either by going directly after secondary school or as a part-time higher education. In contrast, only 332 students out of 1830 i.e. 18% decided to find employment after secondary school.

Irrespective of their areas of specialisation, most secondary school students preferred to repeat secondary education to improve their grades so that they could secure admission into higher education institutions. Similarly, these secondary school students would

seek other sources of funding, such as family or a loan to enable them pursue higher education, if they were not able to obtain a government scholarship. Overall, female secondary school students were more motivated than their male counterparts to explore these alternative avenues to enhance their admission prospects and alternative sources of funding for their education.

These results represent an important element in the changing roles of women and their participation in the wider economy. This is evidenced because over the past fifteen to twenty years there has been a dramatic change in the perceptions of the role of females in Islamic culture in Oman. At the present time, most families actively encourage their female members to gain as high an education as possible, because education is seen as absolutely essential for female Omani citizens. Obviously, this change in attitude has had a large impact on the quantity as well as the quality of education provision within Oman. Initially, education provision would have been at an elementary education level only. But then, once it had attracted more citizens of Oman to the necessity for females to be educated, more secondary educational level provision needed to be provided, until the present day situation where there is a strong large demand for higher education for females. This is very true, especially since, as stated earlier, before 1970, there were no schools for females; however, females now make up 48.4% of the student population (Ministry of Education, 2003/2004).

Further, within this greater demand for higher education for females, there has been an economic aspect that needs to be taken into account, i.e. the demand for female doctors, surgeons and nurses, primarily to fulfil Islamic religious demands, but also because females have demanded the same working conditions and pay as their male counterparts.

Equally of importance, there is likely to be a social impact by the fact that females are being actively encouraged to pursue higher education with a view to obtaining good, secure employment in whichever field of study that is chosen. Prior to the late twentieth century, Omani females usually married at a young age and produced many children, whereas in the twenty-first century, the average age of marriage is considerably older than it was even twenty to thirty years ago, and as such females are likely to produce fewer children. Similarly, males were able to obtain employment more easily, whereas now there is an increase in job demand resulting in more competition for employment

because of the influx of female competition for jobs, as well as the need to replace non-Omani employees. Such aspects impact upon the decision making of secondary school students wishing to enter higher education.

It is reported in the literature, for example, in Canada, by Guppy and Pendakur (1989), that women preferred part-time study, especially when they were from families with lower education levels. This was not an issue with females in this study and again families' lower education levels did not have a prominent standing.

So more in line with the findings of Menon (1995) in Cyprus, Robinson and Solongo (2000) in Mongolia, Mayer, Muller and Pollak (2003) in Germany, and Tsai and Shavit (2003) in Taiwan, who found that females were more ambitious than males in their pursuit of higher education, it would be true to say that females in Oman were equally, if not, more ambitious and keen to achieve higher education than their male counterparts (Tables 5.3 and 5.4). As described above, this can be accounted for by the historical fact that females were not actively encouraged to seek education until the past three decades, since when a strong change of attitude can be traced. Now females are given as many equal rights as their male counterparts.

However, these findings are different from the findings reported by Thomas, Alexander, and Eckland (1979) who found in the USA that male secondary school students were more likely to go on to higher education than females. Furthermore, these findings are not in tune with the results of Gayle, Berridge and Davies (2002) who found that young women were less likely to enter higher education than their male counterparts in England and Wales. The participation by young men was 17%, compared to the 13% entry rate for young women.

It can be concluded that the lack of a significant gender difference in students' interest to pursue higher education in Oman might be explained by the fact that both male and female secondary school students are equally aware of the importance of higher education and also there is a pay parity policy in the public and private sectors in the Sultanate of Oman (Ministry of Civil Service, 2003). Overall, the high demand for tertiary education found in this study is consistent with what has been reported elsewhere in the literature for many developed and developing countries (OECD/UNESCO, 2002; Albert, 2000) and in line with the recognition of the positive gains from completing tertiary education programmes implicit in the human capital

theory (See for example, Blaug (1976), Woodhall (1987), Al-Maskery (1992), Blundell et al. (2000), and Pereira and Martins (2004). This does not necessarily mean, however, that all students were equally interested in the various types of programme available. Differences in this respect are considered next.

Q2.b Their choice of the higher education programme, i.e. diploma or degree, they wish to attend?

Secondary school students' choices of higher education programme that they wish to attend, such as diploma or degree, were detailed in Table 5.20. Although there were no gender differences in high preference for degree programmes instead of diploma among the secondary school students, this study found that Arts female students were particularly more motivated to pursue a higher education programme at degree level than male students. This is an interesting fact to consider, because it is demonstrating that traditionally male secondary school students have perhaps not had to work too hard to achieve their expectations, whereas female secondary school students who do not have as a long a history of involvement in education, are demonstrating a stronger commitment and willingness to pursue higher education at its highest level.

Again, this fact can be explained in part by the historical background of females in Oman not having been given equal opportunities to their male counterparts. Perhaps in another twenty years after this research study, a similar study would reveal that there is no difference between the attitudes and aspirations of female secondary school students to achieving higher education levels of programmes of study, because by then females in general will have enjoyed a long stable history of equal opportunities. This in turn may cause a less concentrated desire to achieve the very best in higher education.

Another factor likely to have influenced preferences for programme type is that students who hoped to take a degree programme anticipated higher earnings than those who wanted to take a diploma programme, as detailed in Table 5.21. This finding is, again, consistent with Human Capital Theory in determining education as source of higher earning (See for example, Psacharopoulos and Sanyal (1981), Al-Maskery (1992), Dominitz and Manski (1996), Albert (2000), Fazio and Dinh (2004), and Chung (2004).

Q2.c Their choice of the higher education course, i.e. medicine, education etc., they want to study?

When considering secondary school students' choice of higher education course that they wished to follow, as detailed in Table 5.24, this research study uncovered a gender-sensitive preference for higher education courses among the secondary school students. Although both male and female Arts students preferred arts courses, female students particularly opted for Education and Islamic Studies. These findings reflect the common views held among many women in Oman on the need to pursue higher education which they believe will enable them also to participate fully in their families' affairs and meet the needs of women in general. Whilst female science students preferred courses in Education and the Medicine and Health Sciences, their male counterparts preferred Engineering and related industrial courses. This is not surprising, since in Oman it is culturally unacceptable to engage women in jobs that are physically challenging. This might also partly explain the total lack of interest in Agriculture-related courses among female secondary school students.

The demand for education in specific disciplines was found to be gender-sensitive. Most females (both Arts and Science oriented) showed high preference for higher qualification in the field of education. On the other hand, while male Science students showed a high preference for engineering and related degree programmes, male Arts students favoured business degree programmes. Thus, the results are consistent with Francis (2002:80) who found:

> *"...a gender dichotomy exists in secondary students' choices, manifesting in a tendency for girls to opt for creative or 'caring' jobs, and boys for scientific, technical or business-oriented occupations"*

Given that admission into Sultan Qaboos University (the only national university) is based mainly on high school grades, there is a tendency that the best overall students will always be 'bunched' into the same discipline in each year, starting perhaps from medicine, through engineering and so on. This approach to admissions into higher education institutions (particularly the premier national university) might not reflect current or future market demand to service the economy (both public and private sectors). This is a very serious matter given the current and future market demands required to bring the Sultanate of Oman in a positive position to compete in the global markets. Furthermore, and very importantly, this method of selection does not provide

for a 'normal distribution' of 'good quality' students across the various disciplines offered at the university.

The high demand for tertiary qualification in the field of education among secondary school female students might be explained by the perceived flexibility of the teaching profession that enables mothers to maintain an active role in bringing up the children. Given that there is a limit on the number of teachers that are required for the number of schools and pupils in Oman, there is a need for a strategic review of the medium- to long-term demand for teachers. Because of this situation, there is an urgent need for appropriate policy measures to be developed in order to guide the intake of students into the Colleges of Education in the country. If this matter is not addressed, the possibility exists for future high unemployment among female graduates with qualifications in education. As Albert (2000:148) asserted, the educational decisions of young people should determine future labour supply qualifications in the medium and long term. She maintained:

> *"If the behaviour of these young people and their families is very sensitive to market signals (such as employment opportunities or wage expectations) then market equilibrium will be easily reached. If, on the contrary, sociological variables are found to be the ones determining education demand decisions, then the mismatch between qualified labour demand and higher education demand will persist, and the adjustment in the long tem run will fall on the demand side and on the salaries"*

Much of the above is supported from the evidence of semi-structured interviews with the secondary school students. They displayed an understanding of labour market needs by identifying that there is a demand for higher education in specific disciplines such as Medicine, English language, which is part of the Education course, and Engineering. For example, Medicine, Engineering and English Language courses accounted for 62% of the students' preference for higher education (Table 6.3). Most students felt that these professions would enhance their employability and ability to contribute to the economy. This is demonstrated by student interviewee 23 who stated:

> *"I want to study Medicine because it is a humane profession, and also I can secure a job quickly after graduation, due to the pressing need for Omani doctors"*

English language was particularly considered useful in trade and to replace non-Omani citizens teaching English language in various levels in the education sector. For example, student interviewee 38 maintained:

> *"I want to study English Language because it is a universal language, and because I can secure a job quickly, as many of the English teachers working in Oman are expatriates"*

Additionally, with all the infra-structure development of road building, house building, and factory creation currently in Oman, it is essential to have as wide a variety of qualified engineers as is possible, for example, chemical engineers for the oil industry; mechanical engineers to maintain factory machinery and traffic; electrical engineers for the hydroelectric facilities and computer engineers to compete in the global markets.

Whilst a wide variety of reasons was given for studying the various fields of study indicated above, Engineering was perceived as absolutely essential from an economic point of view, as indicated by student interviewee 41:

> *"I want to study Computer Engineering because I like Computers... It is well known that Computers nowadays have applications in all aspects of life"*

As already indicated, students' educational aspirations were linked to their career aspirations. A significant factor in this regard was the perception of the difference in opportunities and working conditions between the public and private sectors, examined in Q2d.

Q2.d Their choice of employment sector they wish to join after graduating from higher education?

It was very clear from the responses to the question relating to choice of employment sector that the government sector is the main employer in Oman. Several factors explain this high preference for the government sector. These include higher monthly salary; social prestige; good working hours; promotion prospects; higher education opportunities; good annual leave and better retirement benefits (Al-Maskery, 1992). Therefore, most citizens would automatically wish to seek employment with the government sector. Any of these advantages should inevitably influence the decision making of secondary school students wishing to enter higher education.

The results obtained in this research show that the majority of secondary school students opted to work in the government sector (Table 5.18). These results support previous findings that secondary school students want to gain good educational qualifications in order to obtain employment within the Omani government, with all its advantages. In other words, Human Capital Theory is reflected in their expectations. Thus, Table 5.19 clearly demonstrated that the secondary school students in this research were fully aware of the advantages of employment in the Omani government sector. These advantages would naturally be strong incentives to anyone seeking employment.

These results are supported from the evidence of semi-structured interviews which confirms the secondary school students' awareness of the government sector advantages. 94% of the 32 secondary school students interviewed indicated that they wished to be employed in the Government sector, after gaining higher education (See Table 6.6). And interestingly, the reason given by 66% of the students for choosing the government sector (Table 6.7) was "higher salaries". For instance, student interviewee 3 stated:

"I prefer the Government sector because of higher salaries"

Furthermore, 53% of the students indicated the reason of ''job security'' as student interviewee 13 put it:

"Private companies might well go bankrupt"

In addition, 22% of respondents saw the government sector as offering better terms and conditions such as "better working hours"; "better annual leave and holidays" and "pension security". Other material benefits perceived were more future oriented: "promotions" and "opportunities for further study". 53% of the students preferred the Government sector because of "social prestige", as student interviewee 18 emphasized when he stated:

> *"I want to work for the Government to have social status, and this can only be achieved by securing a good job in the Government sector"*

The preference of a great majority of Omani secondary school students to seek employment in the government sector in this study is consistent with the findings of Al-Maskery (1992) and Al-Lamki (1998). The findings related to students who did not want to work in the private sector because of the job conditions in the this sector which

are unattractive to graduates are in line with the findings of Al-Maskery (1992), Al-Hinai (1998), Al-Lamki (1998), Rayan (1998), and Al-Maawali (2000).

In conclusion, the preference of a great majority of Omani students to seek employment in the public sector may be explained by their perceived expectations of better job security, higher social status and prosperity in government jobs compared with the private sector. While these may hold true in the near future, trends elsewhere in the international labour market suggest that as the economy diversifies in the long-term into other productive sectors (a goal of the 2020 Vision of Oman), coupled with a rise in the number of graduates seeking employment, the capacity of the public sector to employ more graduates will diminish. Correspondingly, more employment opportunities should exist in the private sector (such as heavy industries, service sector, and self-employment). Equipping young Omani citizens with the relevant tertiary education is vitally important to enable them to fully harness the opportunities that exist in the private sector.

Whatever their aspirations, however, Omani students may find that some educational and career paths require study abroad, given the relative newness of the country's higher education system, and its limited capacity. This may be an attraction or a deterrent, as will be seen.

Q2.e Their choice of country in which they wish to study?

The results related to choice of which country secondary school students wished to study, as detailed in Table 5.22, show that although both male and female students (irrespective of specialisation) prefer to studying in Oman. Female students identified a preference to study in Arab countries if they had to, while more males expressed interest to study in foreign countries. Again, this reluctance to study abroad, away from their immediate family, reflects the cultural influence on Omani women and their close relationship with the daily activities in the household.

It is clear that established traditions have influenced the responses of female secondary school students when responding to various factors in the questionnaire. This is because culturally in Oman female secondary school students were not and are not encouraged to travel abroad. In fact, although to a far lesser extent, male secondary school students, too are generally not encouraged to work or live abroad. Many Omani families ensure that they live in close proximity to one another in order that each member of the family

can support and be supported by the rest of the extended family. Because of this tradition, it is less likely that families will actively encourage their children to live, study and work abroad. Perhaps, once the secondary school students have obtained their first degree and/or have established themselves in their chosen careers, families would be more willing for them to continue their studies abroad, but not to live permanently abroad. Of course, there will be exceptions to this statement, but for the majority of the citizens of Oman it would be true.

The higher preference to study in Oman among the secondary school students as reported in the preceding section was supported by evidence from the semi-structured interviews (Table 6.5). Closeness to family and a greater sense of security were the main explanations for this preference, as articulated by student interviewee 38 who stated:

> *"In Oman, specifically at the Sultan Qaboos University, because I feel more secure in my homeland and close to my family and friends"*

Another example, student interviewee 6 thought that the sense of security was related to familiar customs and norms when she maintained that:

> *"In Oman, because I want to be close to my family and my country and because studying abroad would expose me to different customs and norms"*

For those choosing to study in Oman, various options would be available: Sultan Qaboos University, Colleges of Education, and a variety of state and private sector colleges. Preference among them is discussed next.

Q2.f Their choice of institution where they wish to study in Oman?

As can be seen from Table 5.23, regardless of gender and specialisation, most secondary school students, more than 55% of the overall total, responded that they wished to study at the Sultan Qaboos University, when asked in which institution in Oman they wished to study. The popularity of education courses among female students and engineering/technical courses among male students found in the questionnaire result were supported by evidence from the semi-structured interviews. The lower proportion of students choosing to study in technical colleges is attributable to the perceived low status and poor image of vocational jobs among Omani citizens compared to other technical/engineering jobs. Although female secondary school students expressed a

higher preference for Islamic studies, the same pattern did not apply towards Sharia and Law (Islamic Law), which is traditionally a male profession.

Evidence from the semi-structured interviews gave some reasons related to the students' desire to study at Sultan Qaboos University (Table 6.5). One example is the standing of the university itself as student 11 stated:

> *"Good reputation and facilities"*

Student interviewee 7 felt that the Sultan Qaboos University's reputation and brand was a strong source of competitive advantage in the Omani labour market. She said:

> *"Even upon graduation, I think that my chances of getting a job are easier and quicker, being a graduate from the University in Oman (SQU) and not any other college in the Sultanate"*

The findings found in this study in relation to students' tendency to choose a higher education institution because of its reputation is consistent with the findings reported by James *et al.* (1999) who found that among students in Australia, for a majority of students, the university's reputation had a great deal of influence in their choices.

Q3. Is there any influence of students' scholastic ability (academic attainment) on their decisions to enter higher education or to work?

It was found that secondary school students with higher ability were more likely to desire higher education rather than find employment after secondary school. This is supported by the proposition that students orient their choice in terms of their probabilities of success or failure (See for example, Jimenez and Salas-Velasco, 2000 and Oliverira and Zanchi, 2003). Further, Hung *et al.* (2000) found that students' ability had a significant effect on their intention to pursue higher education; a student with high ability was twice as likely to enter higher education than a student with low ability.

It has been demonstrated that students' academic ability was a significant factor among Omani secondary school students in deciding their future educational plans. Thus, students with higher ability (they also tended to have greater self-confidence in their ability) were more likely to desire higher education rather than find employment (See Tables 5.59, 5.60, 5.61 and 5.62).

Confirmation of the above is found from the evidence of semi-structured interviews where scholastic ability is seen as important, e.g. student interviewee 28 stated:

> *"I obtained 97%, which was a result of my hard work, and I hope to obtain higher marks in the second term. I think that the scholastic aptitude is one of the prerequisites for higher education. No one can go beyond his capacities. A weak student will face great difficulties in obtaining university degree"*

On the other hand, interviews with students who decided not to enter higher education, tended to emphasize the low scholastic ability they have as a factor that discouraged them from pursuing higher education. For example, student interviewee 27 admitted that he has low scholastic ability. He said:

> *"The biggest restrictive factor for me is my low scholastic aptitude and inability to comprehend lessons''*

Thus, the findings obtained by this research in relation to the importance of academic attainment on students' intention to pursue higher education are consistent with findings reported in previous literature (See for example, Michael (1961), Kodde and Ritzen (1988), Hung *et al.* (2000), Jimenez and Salas-Velasco (2000) and Oliverira and Zanchi (2003).

Furthermore, the findings are in tune with Jimenez and Salas-Velasco (2000:295) who emphasized the importance of scholastic ability and academic attainment when they maintained that:

> *"The choice of university degree course that individuals make on finishing their Secondary studies is determined by the expectations on their opportunities of academic success. The higher their school ability is at Secondary level, the greater the risk they will be prepared to take...those students with a lower scholastic ability will demand a lower quantity of education"*

However, it is not clear to what extent high demand for tertiary education among high scholastic achievers in Oman translates into high academic achievement when students enter higher institutions of learning. Further studies are required to elucidate this matter.

To summarise the discussion so far, the factors proposed in previous studies as influencing students' decisions to enter higher education, all were perceived by Omani students as influencing their decisions to pursue higher education. These findings are summarized in Table 5.33, which shows the score for all eight sub-scales (Human Capital Theory; labour market conditions in Oman; influences on my future plans (parents and family); following those 'whose views I respect (friends); students' self-

confidence in their ability; students' attitudes and perceptions towards higher education; teachers' influence; and specialisation of the students (Arts/Science), ranked in descending order according to the mean. Each factor had an influence on students' decision, but the Human Capital Theory appears to be the most influential factor, followed by students' self-confidence in their ability, parents and family influence, and students' own attitudes and perceptions. Overall, the external factors such as the labour market and school were seen as less influential and friends as least influential of all.

Thus, all the factors included in the theoretical framework (Chapter Two) have been validated as influencing students' higher education decisions in the Omani context. However, this study develops the framework by showing the relative importance of the various factors, and also the role of mediating variables such as gender.

Q4. Does the current capacity of higher education in Oman meet the aspirations of secondary graduates and labour market demand in relation to the findings of the study?

The findings of this study in relation to this question are answered under four sub-titles:

Q4.a Evolution of higher (tertiary) education

Firstly, very briefly a historical summary of higher (tertiary) education in Oman is given in order to set the research question into context as well as to highlight the problems related to the dramatic rise in the number of secondary school graduates that lead to this research. During the past three decades, following the accession of His Majesty Sultan Qaboos bin Said, Oman has developed a diverse and expanding public (government funded) higher education system. During the 1970s and 1980s, access to higher education for Omani citizens was mainly through scholarships in overseas tertiary institutions. The establishment of the first Teacher Training Institute in 1977 and the upgrade of these institutes in 1995 to Colleges of Education marked a turning point in the development of in-country tertiary education institutions in Oman. In November 1986, Sultan Qaboos University admitted its first cohort of students. Today, all the public institutions that offer tertiary qualifications in the Sultanate fall into one of the following nine broad categories or specific institutions: Sultan Qaboos University (SQU), Colleges of Education, College of Sharia and Law, Institute for Islamic Law, Technical Colleges, Technical College of the Oman Royal Guard, Health Institutes, Oman Academy for Tourism and Hospitality, and the College of Banking and Financial Studies. SQU continues to play a dominant role as the premier institution of higher

learning in Oman. In particular, it offers diverse degree programmes, including many discipline areas where some other institutions of higher education in Oman offer only sub-degree programmes.

More recently, efforts have been made by the Omani government to promote and support the establishment of private institutions of higher education, mainly in response to the limited capacity of public higher education and rapid increase in the number of secondary school leavers. Consequently, there are now three private universities and sixteen colleges of higher learning in Oman. Only two of these private colleges are located in areas outside of Muscat, its Capital City.

Q4.b Higher education capacity in Oman

As presented earlier, in Chapter Three, the limited capacity of public higher education in Oman is highlighted by comparisons of enrolments in Oman with those in other countries at the same level of development. For example, statistics revealed that the number of students enrolled in higher education in Oman was only 433 per 100,000 inhabitants, compared to, for example, 1,459 per 100,000 in Qatar, 1,530 per 100,000 in Saudi Arabia, and 2,543 per 100,000 in Jordan (UNESCO, 1998a). Moreover, Oman has one of the lowest rates of enrolment in tertiary education, at only 8% (UNESCO, 2003). Although Oman faces a serious problem related to the limited capacity of higher education, it spends only 7% of its public education expenditure on higher education (Human Development Report, 2001).

The problem of limited higher education capacity in Oman is further exacerbated by the dramatic rise in the number of secondary school graduates. For instance, during the 6-year period 1998-2004, the number of secondary school graduates doubled from 20,886 to 41,573 (Table 3.1). A recent report by the World Bank (2000), which examined the cost-effectiveness of education in Oman, underscores the importance of addressing this problem.

A review of the historical data on the number of secondary school students who graduated, enrolled and had no higher education opportunity in Oman during the period 1998/99 to 2003/2004, as well as analysis of statistical data on student enrolment in higher institutions during the same period, showed a huge deficit in the supply of placement opportunities (Table 3.1). The rapid growth in demand for higher education

in Oman, compared to other sectors of the education system, is similar to the trend reported elsewhere in other countries (Li, 1998).

Furthermore, the percentage of secondary school leavers that are not absorbed into the higher education system also increased from 64% to 69.9% during the period 1998-2003 (Table 3.2). Despite an overall increase in the total number of scholarships offered by the government annually, plus the emergence of private tertiary institutions in Oman during the past five years, the current higher education capacity still remains low.

In this regard, it is worth noting that the total number of students enrolled in private tertiary institutions during the period 1995 to 2003 as detailed in Table 3.3, was 28,402. This is about the same as the number of secondary school graduates with no opportunity for higher education in 2003/04, i.e. 29,096 (Table 3.1). The above information raises the question: What tertiary education opportunity exists for the 28,402 students (and many others before and after the period covered by the data) if the opportunity provided by the private institutions did not exist?

The problem of insufficient capacity for higher education is equally exacerbated by the apparent mismatch between labour market demand and types of courses offered to students in higher education institutions in Oman. As stated earlier, selection for courses of study is based principally on marks scored by students in secondary school certificate examinations. Consequently, a large number of students register for courses which are not their choice, and many end up requesting transfers into other programmes. Simultaneously, many potentially top quality students struggle with their studies and end up in probation, as Moosa (2004:1) asserted:

> *"In the fall of 2002, statistics of the Deanship of Admissions and Registration of Sultan Qaboos University indicated that about 12% of the undergraduate student population are in the status of academic probation...These observations are puzzling taking into consideration that students admitted into Sultan Qaboos University are high-achievers in secondary education since selection procedures adopted by SQU are extremely competitive"*

The current admission policy, which is strictly based on high school marks, also tends to disadvantage female students who generally obtain higher marks than their male counterparts in high school examination. Indeed, many institutions apply 50:50 quotas between the genders, and even less than 50% of study places may be made available to

females (Al-Ramadhani, 2003). This results in the situation whereby a male student, for example, scoring 70% is admitted to a course, but a female student is denied a place on the same course, although her marks are 80% or above. This situation arises simply because that particular institution has already filled its designated quota of places for females. Consequently, female students represent only 22% of all students enrolled in higher education in Oman according to UNESCO (2003/2004). Such a disparity is not only grossly unfair to females, but is not cost effective.

Much supporting evidence of strongly expressed discontentment about this strict admissions policy was collated from the semi-structured interviews. For example, interviewee 22 put it this way:

> *"An important matter here is that the admission system in higher education institutions in Oman is difficult and accepts only students with high marks. It is therefore a discouraging system for most students. A student who was not lucky to obtain high marks in the first term, he then gets discouraged and frustrated, and no matter what he achieves in the second term he will be outside the higher education. This enforced system is a restrictive factor for me and many other secondary school students during this year or in the past years. I have some friends and relatives who didn't obtain high marks and, therefore, they are at home now, with no chances of education or a job, after completing the secondary school certificate"*

Similar sentiments were expressed by high scoring students, as well as low scoring students. Student interviewee 33, who scored 65%, suggested that she could have secured admission with such a mark elsewhere, in other countries. She argued:

> *"Simply, the most important restriction is frustration resulting from the higher education institution's admission system. No matter what we do, despite hard working, if we don't obtain high marks, our chance to enter higher education isn't at all guaranteed. I obtained 65% in the first term, which will not do me any good in getting a chance to pursue my university education in Oman. However, it might be a good percentage in some countries of the world, and the student scoring such a percentage may become an Engineer, or a Teacher or even a successful Doctor, if given the chance"*

It is of much concern that this unwritten policy for accepting just 50% of female students in higher education institutions could lead to less educated women in Oman in the long term. This is a very serious matter when one bears in mind that female students constitute almost half of the Omani students' population: females now make up 48.4%

of the student population (Ministry of Education, 2003/2004). Based upon these facts and considering cultural aspects of Omani society, parents will give priority to male children's education rather than female children's education, when there is a limited amount of money in the household. As Guppy and Pandakar (1989:62) maintained:

> *"... It may be a function of resources in that less educated families can only offer financial help to one or two children, and males receive this help more often than females"*

It might be expected that parents in developing countries choose to invest more in the education of their male children than their female children, but even in some more developed countries, this might also happen. For example, Ono (2000, cited from Edwards and Pasquale, 2002) states that despite Japan being a vibrant, forward looking leading global economic society, this pattern of parents giving priority to male children holds for Japan. Thus, this issue in the Sultanate of Oman should be viewed as being even more problematic, as at present Omani culture and society does not adhere to the concept of equal education for all. Therefore, it is important that special attention is given to educating females, as emphasized by World Development Report (1995:38):

> *"Special efforts are often needed to offset the tendency for girls to receive less education than boys – beyond the benefits it offers women in the labour market, education is linked to lower fertility, lower maternal mortality, and better health, nutrition, and education of children"*

Not only for the above reasons, but equally importantly as Cochrane (2003) maintained when he emphasized the need for women to have education in Lebanon:

> *"When you educate a woman, you educate a whole family"*

Thus, the problem of inadequate capacity for higher education in Oman will remain for the foreseeable future unless urgent action is taken to systematically rectify the problem. Analysis of the population structure of Oman further highlights the need to expand the capacity for higher education in the Sultanate, because combined with a high population growth rate of 1.84%, the recent (2003) population data shows that Oman has a very young population, with 55% of its total population represented by those in the 0-19 year old category (Table 3.4). Perhaps, one way of reducing the population growth rate could be reduced by educating women. Al-Hajry (2002) points out that expansion in female

education reduces fertility substantially and he, therefore, suggested that one of the best policies to reduce fertility is through the expansion of female education.

Compounded with the above critical issues is the high cost of university level education in Oman, which is US $15,701 per student according to UNESCO (2002). Al-Ramadhani (2003) found that compared with other Arab countries in the Gulf States, this is the highest cost per university student despite Oman being a developing country. A possible reason for this could be that, like all the Gulf States, Oman spends generously on higher education by providing universities with high-technology teaching and training equipment, and by recruiting highly qualified, highly experienced well paid staff. Similar to other Gulf State universities, Sultan Qaboos University provides accommodation, catering, transport and a monthly allowance to students, all of which contribute to the University's total expenditure. This results in the cost of a Sultan Qaboos University student being four times above the world average of US $3,703 (UNESCO, 2002). The World Bank (2000) offered a solution for reducing such expensive costs by asking students to pay for their own accommodation and books. Such costs could be further reduced by the Omani government curtailing some of diverse welfare benefits currently offered to students and by reinvesting these savings to provide more places in existing tertiary institutions. The above high cost for each student is a further contributing factor in the problems that causes limited access to higher education in the Oman. Despite all of the above, 82% of the students who participated in this research expressed a great desire and motivation to enter higher education, although their ambitions are restricted by the limited capacity of higher education in Oman.

To conclude, based on the above findings, it is clear that the current public higher education capacity in Oman does not meet the aspirations of secondary graduates. With more than half of the population in Oman is under 19 years of age and more than 40,000 students graduating every year from secondary school, higher education capacity is not keeping pace with the growth in numbers of secondary school graduates. These facts are compounded with Oman being a developing country, the recent emphasis of education being focused on the pre-tertiary stage to combat mass illiteracy, the high costs per university student compared to the world average, and Oman's traditional society restrictions and preference for giving males priority in education over females, causing limited capacity and access to higher education. Al-Lamki (2002:82) maintained that:

> *"While the general education system in Oman has been successful in making pre-tertiary education available for all; public higher education in Oman has not been able to keep pace with rapid expansion of the basic education system"*

With regard to ***private higher education capacity in Oman***, the response of the private sector by establishing private universities and colleges to cope with the limited capacity of public higher education and rapid increase in the number of secondary school leavers, is most welcomed and appreciated by Omani citizens. However, it should also be noted that the establishment of private higher educational institutions alone does not provide a sufficient safety net to absorb the excessive demand for higher education, which currently outstrips the capacity of public sector higher education institutions.

Private higher education, therefore, should be viewed as complementary and not as a substitute for public higher education. Considerable differences in fee structure between both types of institutions exist, thereby making it nearly inaccessible to many families with government scholarship. Even those who can afford it may be reluctant to send their children to private institutions on the basis that their colleagues at Sultan Qaboos University or other public sector institutions are fully supported by the government. In this regard, a comparison between the number of students on government scholarships in private higher education institutions, i.e. 5765 in 2004, as can be seen in Table 1.3, and the annual intake of students at Sultan Qaboos University, approximately 2,500 per year, suggests that a strong case could be made for the establishment of another viable public university in the Sultanate of Oman. The benefits for establishing another university extend beyond addressing the problem of limited access to higher education in Oman. Other spin-offs include additional employment opportunities for academic and non-academic staff, research to generate and apply new knowledge, and community service to the Omani society in various disciplines and economic sectors.

Moreover, the concentration of private institutions in Muscat and the duplication of academic programmes offered (mainly in business studies) is a matter of concern in terms of geographical spread across the various regions in the country, along with the apparent lack of consideration of the strategic human resource needs of the various economic sectors of Oman. The concentration of these institutions in Muscat will also impact on the continuing pressure on existing social infrastructure, including unemployment.

The establishment of public and private institutions of higher education in Oman also resulted in the creation of the necessary administrative structures for co-ordination and supervision of higher education institutions. These include the Ministry of Higher Education, the Higher Education Council, and the Accreditation Council. Although the specific decree setting up each institution outlines its roles, ambiguities still arise in some areas, for instance, in data collection, analysis and storage to assist in future policy and system improvement. Furthermore, the current system of higher education in Oman is governed by a number of different government regulatory structures and authorities. The Ministry of Higher Education is responsible for the colleges of education, College of Sharia and Law, and private colleges and universities. The Ministry of Labour Force is responsible for technical colleges. The Ministry of Health is responsible for health institutions. The Central Bank of Oman is responsible for the College of Banking and Financial Studies. Oman Royal Guard is responsible for Technical College of the Oman Royal Guard. The Ministry of Endowments and Religious Affairs is responsible for the Institute for Islamic Law (Shariah). The Ministry of Trading and Industry is responsible for the Oman Tourism and Hospitality Academy. The SQU Council is responsible for the Sultan Qaboos University. Thus, the management of higher education by different government bodies causes competition for resources and affects the accessibility, quality and performance, as emphasised by Al-Lamki (2002:82):

> *"The current system of higher education in the Sultanate of Oman is managed by a number of ministries and government bodies. This creates competition for resources and limits consensus on system-wide approaches for improving accessibility, quality and performance. Consequently, this breeds duplication of administrative and financial resources. Consolidating all higher education facilities under the Ministry of Higher Education will result in a more focused and productive delivery system and allow matters of accountability and transparency to be better addressed and managed"*

The need to harmonise the overall management and supervision of higher education in Oman is particularly important in relation to the management of students' admission policies and processes in the public institutions, as well as quality assurance and audit of all tertiary institutions of learning. The establishment of an independent national agency or board with full responsibility for administering and co-ordinating admissions into all public higher education institutions will contribute to rectifying some of the difficulties identified and experienced by parents and students, who have to travel long distances in

different locations in search of admission when they are rejected from the institutions they have applied to.

Q4.c Labour market conditions in Oman

A review of the literature on the labour market conditions in Oman showed that the workforce has a large expatriate population in both the public and private sectors. In the public sector in 2002, the number of non-Omani citizens was 17,471, that is 19.2% of the overall workforce in all civil services, as detailed in Table 3.11, while the number of non-Omani citizens in the public corporations (Table 3.12) was 1,929 employees, that is 24% of the overall workforce. The total number of non-Omani employees in the private sector was 547,477 in 2002 (Table 3.17) which constituted 89.3% out of the total labour force of 613,355 in this sector.

In 2002, for instance, 24% of all employees in public corporations were non-Omani citizens as detailed in Table 3.12 (Statistical Year Book, 2003). The figure was much lower in the financial sector (over 10%) but higher at the national university (40.8%). Thus, technical jobs which require specialist expertise that is often acquired through higher education (first and higher degrees) are currently dominated by non-Omani citizens. Furthermore, it was notable that the majority of special group staff in the civil service is non-Omani citizens. They constituted 87.2%, compared to the total number of 12.8% of Omani citizens in the same grade. It is important to note that these are positions with higher salaries and more decision-making authority (Table 3.13). Consequently, it can be seen that non-Omani citizens are making decisions that affect Omani citizens, and are receiving much higher salaries than most Omani citizens.

Moreover, it can be seen that the distribution of civil service employees by educational level (Table 3.14) showed that the majority of the expatriate labour force are educated at diploma level and above. This fact reinforces the importance of the need for access to higher education facilities for young Omani citizens if successful Omanisation of highly technical positions that require tertiary education is to be achieved.

Examination of the educational level alone of the expatriate workers in the private sector suggest that there is a limited capacity (46,586) for well trained Omani technical personnel with higher education in this sector (Table 3.17). However, a critical review of the distribution of these expatriate workers by occupational groups shows that the majority of them are engaged in advanced engineering work which requires higher

education and training (Table 3.18). For example, a number of 185,172 non-Omani workers i.e. 33.8% of all expatriate workers employed in private sector in 2002, were classified under Principal and Auxiliary Engineering. These data suggest a possible discrepancy in the reporting of the status of Omanisation by some companies in the private sector. It is equally possible that whilst such companies are prepared to recognise and document the level of technical expertise provided by their expatriate workers, they may not be very willing to reveal their high educational level so as to reduce the pressure on them to Omanise these positions.

The presence of these expatriate personnel, who are undertaking highly technical work in the private sector, identifies and emphasises the future opportunities that exist for young Omani citizens in this sector, plus the need to expand the current capacity to provide them with the necessary technical qualifications and training. It is also important to note that educating young Omani citizens in higher institutions should not be considered only in the context of Omanisation. It should also include the overall strategy for educating the next generation of Omani citizens who can participate productively in an increasingly globalized world.

Government projections on labour market requirements to meet its "Vision 2020" for Oman's economy predicts a rise in the number of Omani citizens in the grades of specialists, technicians, skilled labour, semi-skilled labour and other skilled labour to increase from 35.7% in 1993 to 69.1% in 2020 (Table 3.19). The government has, therefore, embarked on a multi-sector programme of education and training and Omanisation to gradually replace expatriate workers with qualified and well trained Omani citizens. Importantly in this regard, efforts to address the issue of inadequate higher education capacity in Oman must include a detailed analysis and consideration of the related labour market issues. Admittedly, this is a complex proposition given the myriad of advantages and disadvantages of hiring expatriate personnel, as well as the socio-economic pressures on the government to replace them with Omani citizens.

Overall, from the perspective of increasing the capacity for higher education in Oman, it could be argued that the transfer of income of highly qualified expatriate workers to well-trained and qualified Omani citizens represents a reasonable return on any investment to increase the current limited capacity for tertiary education. For instance, during the period 1998-2002, a total of 2.88 billion Omani Rials was repatriated by

immigrant workers (Table 3.10). Considered in another way, if such money could be transferred to future well trained and qualified Omani citizens as salaried income, this would enhance their capacity to pay fees for their family members in private tertiary institutions, thereby increasing access to higher education in the country if the capacity is available. However, it should be noted that such a strategy requires a careful and detailed analysis of the labour needs of the civil service and private sectors to ensure a productive workforce. Hence, the Omanisation process must be considered as an evolutionary process, rather than a revolutionary one.

The vast majority of non-Omani professionals are concentrated in the private sector i.e. 89.3% compared with only 10.7% Omani employees. For example this study found that the largest concentration of expatriate employees was in engineering and its related fields, such as scientific, technical, human matters specialists, or subject technicians and industrial, chemical and food industries. Table 3.18 demonstrates that they constituted 294,697, that is 54% out of the non-Omani employees in the private sector, in 2002. Considering this fact, and looking back to Table 5.23, where it was found that only 49 Science students, i.e. 6% of the research cohort, expressed a desire to enter Technical Colleges, it is very clear that there is a gap between supply and demand in relation to the labour market requirement. This will continue to exist for a long time, as students demonstrate a disdain for technical and vocational work.

A further example of such a gap can be found in the Agriculture field, as detailed in Table 3.18, where it was shown that 67,708 of non-Omani employees from the private sector filled these posts in 2002. Yet, in Table 5.24, it was shown that only 5 Science students (0.6% of the research cohort) wanted to study Agriculture perhaps due to agriculture's poor image as a 'dirty' profession involving manual labour, disdained in Omani society.

From the above examples, there is obviously a mismatch between what students wish to study and what the actual needs of the labour market are. If it is accepted that higher education is intended to serve certain economic objectives for the state, then it appears that in some areas balancing supply and demand means not increasing supply, but reducing or diverting that demand. For example, student demand for disciplines such as education or medicine far outstrips what will be needed or can be accommodated in the labour market in Oman. A solution may lie in diverting demand to other options, such

as industrial, technical, vocational and agricultural rather than simply increasing the existing number of places of other courses. There is a need for a more equitable and balanced approach to establish an appropriate range of courses along with the admissions intake numbers to meet annually the changing development goals of Oman, as Al- Lamki (2002:83) points out:

> *"A clearly defined comprehensive national strategic plan is needed to cope with the challenge of an ever-increasing demand for higher education and the corresponding manpower needs of the national economy. In this regard, higher education policy and decision makers need to harness the higher education system in away that is closely linked to market forces and sensitive to specific needs of the national economy"*

Tribal values and general dislike of manual jobs might explain the high importance students give to job status in their decision making to pursue higher education. One interviewee who was a policy maker in Dhofar region stated:

> *"Most of the Dhofar population do not like to work in menial jobs..., which may not go with their feeling of being proud of their tribes and themselves"*

It is equally important to note that it is not sufficient for decision makers to link higher education policies to the needs of the market forces and the national economy. Working conditions and employment benefits in the private sector must not be overlooked. As stated earlier, such conditions and benefits available in the private sector organisations do not encourage nationals to prefer the jobs in this sector. In previous studies, for example, Al-Lamki (1998), Omani students have expressed their discontent with the low working conditions and remuneration in the private sector. Therefore, they viewed these as an impediment to rapid Omanisation. This suggests that there is a need for a major review of existing disparities between the private and public sectors in order to ensure that there are sufficient market forces to attract graduates to seek employment in the private sector.

Equally, compounding the above, it is possible that due to the strict admission criteria based on high school marks, Omani secondary school students may not be pursuing the courses that will improve their employment prospects in the private sector. Although the university courses/programmes at public and private institutions have been established based upon predicted labour market needs, the ability of those institutions to meet these

goals depends largely on the quality of the graduates produced. Obviously, secondary school students who are enrolled in courses that are not their first option and which they do not like to study, are more likely to perform poorly and be unable to acquire the necessary skills demanded by the labour market. This could also explain the relatively high number of students on probation each year, which Moosa (2004) puts at 12%, even though these secondary school students are ranked as the top achievers in the country.

Given the huge numbers of non-Omani employees in both the public and private sector, plus considering the total number of specialists, technicians and skilled labour required by 2020 is 697,900 (Table 3.19), and assuming that the current capacity of public and private higher education is no more than 20,000 secondary school graduates per year, the Omanisation task appears to be impossible and at best very difficult to achieve. This assertion is based upon the following: from this research results the maximum it is possible to enrol in higher education is 20,000 secondary school students per year, therefore, in 15 years (i.e. 2005 to 2020) the total will be 300,000 graduates. This is only 43% (less than half) of the target number required by 2020, i.e. 697,900. Based upon this fact, it is urgent and essential that access to higher education capacity is expanded rapidly in order to meet the Omani Government's Vision 2020, the labour market demands as well as secondary school students' aspirations.

In summary, from the findings of this research study, the current capacity of public higher education fails to meet the current and predicted labour market demands in Oman. These findings are consistent with the results of the First Human Development Report of Oman (2004), which clearly states that the Omanisation policy is affected by the gap between the number of graduates and the demands of the labour market sector. Nevertheless, these are not the only considerations which should affect policy, as higher education expansion typically has spin-off effects which should also be taken into account. These are reviewed next.

Q4.d Spin-off effects of expanding higher education

Whilst the above discussion is crucial and extremely important to future decision making within Oman, it is equally of importance that education should not be viewed for only supply and demand purposes, particularly in developing countries such as Oman. Such a limited perspective would overlook other important benefits of education.

A review of literature demonstrates that investing in education leads to direct and indirect benefits, although the indirect benefits are not easy to measure as Psacharopoulos (1982:154) points out that:

> *"The problem with education in general is that the benefits side cannot be made as explicit as the cost side; thus the Finance Minister is usually more articulate than the Education Minister in claiming funds"*

Nevertheless, it is widely recognised that investing in people can boost the living standards of households by expanding opportunities, raising productivity, attracting capital investment, and increasing earning power. Better health, nutrition, and education also have value in their own right, because they enable people to lead more fulfilling lives (World Development Report, 1995). Education, in particular, is important as a means of cultural and values transmission from one generation to the next, as well as helping to develop society through the role that education can play in expanding scientific knowledge and raising productivity (OECD, 1989).

In addition, the consumption benefits of higher education should not be ignored. As McMahon (1987) suggests some consumption benefits of education, such as less unplanned children, more efficiently run households and families, and increased opportunities for selecting the "right" spouse.

Investing in people should not be viewed solely in terms of meeting the local demand of the society. In the boom years of the development of the Gulf Arab States, for example, many experts such as engineers, teachers, and technicians, were recruited and employed from overseas to fill the existing gaps in the labour market, because at that time these experts could not have others to replace them.

The World Development Report (1995:37) confirms that:

> *"The Philippines and Vietnam did realise a return on their human resource investments. Many educated Filipinos took their skills abroad, and their remittances became the Philippine economy's largest source of foreign exchange earnings. In Vietnam today, past investments in human capital are contributing to improve economic performance now that the country has adopted a more market-based approach to development"*

Similarly, His Majesty Sultan of Oman emphasised the importance of investing in Omani people. He said:

> *"The human being, as we have always said, is the power, the instrument and the ultimate aim of national development. Thus, we exert every effort to provide him with these essential qualities so that we can all, together, build our nation. You are aware that there are countries in this world which do not possess rich natural resources, but nevertheless have cared for their people and directed them in the right direction, developed their skills and provided them with technological experience in order to face their domestic and international evolution. Therefore, their innate abilities have been realised and their inventions have been eagerly sought throughout the world. By this means they have taken their place in the forefront of the developed countries"* (Speech by His Majesty on the occasion of the 25th National Day Anniversary, 1995).

Al-Hajry (2002), mentioned that one of the important external benefits for both the individual and the society, is the positive impact of education on consumption behaviour. This benefit is more important in less developed countries, such as Oman and other Gulf States. He also argues that it is reasonable to suppose that education contributes to the creation of a more civilized and democratic society. This issue is important in the developing countries where the majority of people still do not participate in political development. Education creates an enlightened society which is more appreciative of the need for civil law and of civil life in general (Al-Hajry, 2002).

Furthermore, it was found that the level of education has a positive impact on the reduction of crime rates. Indeed, good evidence of this was gained in Oman by Al-Harthy (1999) who found that there was a negative relationship between the level of education and drug abuse in Oman.

Finally, youth without adequate qualifications and skills have less chance of gainful employment and are vulnerable to become more tempted to be engaged in social misconduct. The disaffected youth will become a burden to the society instead of being the most valuable resource for national development.

7.4 Summary

This chapter has discussed the findings from the questionnaires, interviews and documentary data, in relation to relevant theory and previous empirical findings. The discussion was organised around the four research questions.

Regarding Question One, the findings on the importance of social factors in influencing decisions about higher education were largely consistent with previous research. Students were influence in their choices by parental encouragement, friends, and socio-economic circumstances. The particularly strong influence of parents reflects the closeness of the Islamic family, and also the desire of parents to see their children benefit from opportunities that they themselves did not have. Moreover, parents' influence and students' aspirations were closely linked by the benefits in terms of occupation, salary and status, perceived to accompany higher education, thereby supporting the validity of human capital theory in the Omani context. In some respect, the findings reflect particular features of the Omani labour market, for example, the aim of replacing expatriate labour. Institutional (school) factors, although have some impact, were less influence than social factors, perhaps because of the standardization in the school system, although there were noticeable effects of specialisation which can be attributed to Oman's streaming policy and to the relatively limited opportunities available to Arts students.

Regarding Question Two, female students were more influenced than male students by social, economic and institutional factors, and also differed from males in being less willing to study abroad, reflecting the greater cultural constraints on girls. Nevertheless, perhaps as a reaction to a history of educational disadvantage, girls were keen to assert themselves and ambitious for educational attainment.

In answer to Question Three, it was shown that students' perceptions of their academic ability strongly influenced students' thinking about their academic future.

Regarding Question Four, consideration of the current capacity of higher education in relation to students' aspiration and labour market demand revealed some mismatches. Certainly, capacity is not sufficient to absorb the growing number of secondary school leavers wishing to pursue higher education. The situation is, however, more complex due to inequities in capacity. For example, the insistence on numerical parity between boys and girls in the places available, despite the higher examination achievement of girls, disadvantages the later and undermines the rationality of the examination grade criterion, which is not applied consistently. Private higher education is also disproportionately concentrated in Muscat, and suffers from high costs, duplication of programmes, and overlapping of administrative responsibilities, which would be

impediments to rational planning of capacity. Nor does the present and projected capacity appear likely to meet the needs of the Omanisation policy. Here, however, the problem is compounded by the traditional Omani disdain for certain types of labour. The result is that the courses needed to qualify Omanis to replace expatriates are not necessarily the ones favoured by students, so in some vocational areas, capacity may be available but demand low. Resolving the problem is, therefore, not simply a matter of across-the-board expansion. Measures will also be needed to reduce demand in over-subscribed disciplines, and increase it in those that have traditionally been undervalued.

As a final caveat, however, it was noted that education planning should not confine itself to simplistic supply and demand equation, but should take account of the spin-off effects likely to result from expansion of higher education, in terms of living standards, political development, and law and order.

The next chapter, Chapter Eight, will be organised into four main sections in order to provide [a] the conclusions of this study, [b] the contribution and implications of this research [c] recommendations based on the outcome of this study, and [d] detailed areas for further research based upon the findings of this thesis.

CHAPTER EIGHT
CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

8.1 Introduction

The primary aim of this research was to investigate the factors that influence secondary school students' decisions to pursue higher education, and to assess their implications for higher education capacity within the Sultanate of Oman.

An extensive literature review was carried out to develop a theoretical framework in which to set the research study. A combination of structured questionnaires and semi-structured interviews was used to study secondary school students' perceptions on a wide range of economic, social, psychological, institutional, and personal factors that influenced their decisions to pursue higher education. Results obtained from this research study have been presented and discussed in the relevant sections of the previous chapters.

This chapter will present the important conclusions gained from this research study and its contribution, implications, recommendations, and suggestions for further research. The purpose and framework of the study will be briefly outlined by restating the research specific objectives. This will be followed by a summary of the findings from the questionnaires and semi-structured interviews of male and female secondary school students from the surveyed six educational regions in the Sultanate of Oman, along with the conclusions from the analysis of documentary data. After these conclusions, the contribution and implications for higher education provision within the Sultanate of Oman will be detailed, along with recommendations to overcome the problem of limited higher education capacity, as well as other recommendations arising from emergent issues raised in this study. The chapter will conclude with suggested ideas for future research.

8.2 Purpose and Framework of the Study

The study was prompted by an awareness and realisation that in Oman, as in many countries worldwide, higher education is being identified as a tool for social and economic development, and therefore, is witnessing a tremendous expansion. At the same time, education planners face the dilemmas of increasing socio-economic

stratification; difference in educational opportunity, and the often uneasy balance between academic tradition and economic demand. An example is the increasing necessity to prepare individuals for specific academic and professional positions.

In Oman, in particular, higher education is a relatively new phenomenon, and access to it is still lower than in some other countries at a comparable level of economic development. However, demand for higher education places in Oman has increased dramatically in recent years. This can be attributed partly to Oman's rapid population growth; the need to develop a skilled indigenous workforce to reduce dependence on expatriates, and the increasing perception among the Omani population that education is the key to secure, well paid employment and a higher standard of living. As a result, current demand far outstrips the higher education places available, resulting in the implementation of a strict admissions policy. One effect of this strict admission policy is that a large number of secondary school students are unable to find places in their preferred courses and are, therefore, forced to register for alternative courses that do not necessarily meet their chosen career decisions.

Another effect is that female secondary school students are further disadvantaged, because although they tend to gain higher examination marks than male secondary school students, they may be unable to secure a university place, due to the current rigid application of a 50% male and female quota policy.

Given this current situation, it may at first seem that the solution is simply to expand higher education capacity. However, the reality is more complex, given that education must be matched not only to secondary school students' aspirations, but also to labour market demand, in order to meet the government's overall economic objectives. Thus, in some cases, it might be more appropriate to divert demand to other disciplines, rather than simply to increase higher education capacity. Decisions of this kind, nevertheless, need to be informed by an understanding of the factors influencing the social demand for education.

It was with a view to developing such an understanding that this research study was conducted. As explained in Chapter One, section 1.6, the objectives of this study were as follows:

1. To identify the main factors influencing the secondary school students' decisions in their final year at secondary school to enter higher education in Oman.

2. To investigate the influence of economic considerations (Human Capital Theory and labour market conditions as an influential factor in Oman) on the intention of secondary school graduates to continue into higher education.

3. To investigate the influence of psychological factors (students' perceptions and attitudes towards higher education, their self-confidence in their ability and their academic ability) on the intention of secondary school graduates to continue into higher education.

4. To investigate the social influences (parents and family, peers and family's socio-economic background) on the intention of secondary school graduates to continue into higher education.

5. To investigate the influence of demographic variables (students' gender and educational regions) on the intention of secondary school graduates to continue into higher education.

6. To investigate the influence of institutional factors (students' specialisation in secondary school, i.e. Arts or Science, and teachers) on the intention of secondary school graduates to continue into higher education.

7. To assess the adequacy of higher education provision in light of the aspirations of secondary school students and labour market demand from higher education graduates.

8. To provide some recommendations to policy makers concerning the factors influencing secondary school students' decisions to enter higher education and its implications for higher education capacity in Oman.

Based upon the evidence from the literature review (e.g. Carpenter and Western, 1984; Menon, 1995; Albert, 2000; James, 2001; Petrongolo and Segundo, 2002), a theoretical framework was developed for this research, whereby it was assumed that secondary school students' attitudes towards higher education are shaped by a range of inter-related factors. These include social factors, such as the influence of parents, family and

friends; economic factors such as expectations of higher earnings and better job opportunities (consistent with Human Capital Theory) and labour market conditions; psychological factors, such as secondary school students' self-confidence in their own ability; and institutional factors, such as the influence of teachers and type of secondary schooling (in the Omani context, this means Arts versus Science specialisation).

Furthermore, Carpenter and Western (1984) proposed the existence of temporal and causal relationships among the factors cited, whereby social origins affect school experiences and these together influence perceptions and expectations of significant others (parents, teachers, and peers). All these, in turn, influence secondary school students' academic self-concept, and their assessment of the likely benefits of higher education for their future life and career.

For the purposes of this research study, no such supposition was made. Rather, the above four sets of factors were approached with an open mind as to whether, and how, they might interact in the Omani context, along with what hierarchical relationship, if any, might prevail among them in terms of relative importance in influencing the decision of secondary school students to pursue higher education. The research was also open to the possibility that cultural factors in Oman, such as concepts of women's role in a traditional society, might have a bearing on secondary school students' aspirations for higher education. The findings of the research in relation to these issues are highlighted in the next section.

8.3 Summary of Findings:

Secondary school students' aspirations towards higher education were found to be influenced by social, psychological, economic and institutional factors. This was consistent with the theoretical framework based upon the review of the literature.

This research study found that among the social factors, the strongest influence was from the family, particularly parental encouragement and parental values. Omani parents are ambitious for their children's education, both to compensate for the limited educational opportunities they themselves experienced, and as a path to a secure, prosperous future and enhanced family status. In contrast to Western studies, the influence of such values was found to be of equal strength among secondary school students of low and high socio-economic status. Consequently, socio-economic status

had some influence, in that, although higher education is free in Oman and is available in the state sector, families with lower socio-economic status were identified as not being as easily able or readily willing to afford the opportunity cost of foregone earnings. Other social values which were influential were parental education and higher-educated siblings, both of which possibly provide role models for secondary school students in their pursuit of higher education. Parental education and higher-educated siblings also reflect family values that are supportive of education. In contrast, secondary school students' decisions to enter higher education were not significantly influenced by their friends or peers.

Regarding psychological factors, secondary school students' educational aspirations were found to be influenced by their positive attitudes towards higher education and their self-confidence in their academic ability. The fact that the latter correlated highly with actual attainment suggests that secondary school students were realistic about their prospects of securing admission into higher education institutions.

A strong influence from economic factors was found to be in line with the human capital theory. For instance, secondary school students' motivations and expectations towards higher education career, economic and (to a slightly lesser extent) personal development incentives, were all reflected in their reasons for pursuing higher education.

Equally, secondary school students' high aspirations were associated with motivations to secure sound employment and to earn a high salary after gaining higher education qualifications. Also, economic motivation was reflected in their aspirations towards employment in the government sector, where salary and employment conditions are generally better. Thus, while secondary school students' aspirations were consistent with the human capital theory, their specific motivation was shaped and largely determined by the characteristics of the Omani work environment.

It is worth noting that economic motivation was found to be closely related to the social factors, in that a major reason for seeking employment and high salary was that this would contribute to the honour and prestige of the family. Moreover, the influence of economic factors was found to be mediated by gender, i.e. male secondary school students attached greater importance to economic incentives than female secondary school students, and by educational region, i.e. these factors were less influential in the

border region where secondary school students could easily secure employment in neighbouring countries, as opposed to employment within the private or public sectors of Oman.

Another dimension of the influence of economic factors was secondary school students' awareness of local labour market conditions, specifically the need to replace expatriate workers with suitably trained Omanis, although their actual academic subject preferences were not always consistent with this need.

Finally, secondary school students' intentions in relation to higher education identified some influence of institutional factors, reflecting the wider range of educational and occupational opportunities available to Science rather than Arts specialists. The findings of this research study revealed also that teachers had some influence on secondary school students' decisions to enter higher education through providing encouragement, academic advising, boosting confidence and increasing secondary school students' awareness about future educational and career opportunities.

The second question posed by this research concerned the impact of gender and specialisation on secondary school students' choices. Both sexes were equally motivated to pursue higher education, irrespective of their specialisation, but female secondary school students were more motivated to explore alternative ways of gaining admission and securing funding than their male counterparts. This may reflect the impact of traditional and social change on the roles of women in Omani society, who are now marrying later and who are being encouraged to complete their education and pursue careers before considering marriage. It may also be a consequence of the discrimination in the current admissions policy, whereby the rigid 50% quota means that in practice, female secondary school students, who achieve higher scores in the Secondary Certificate, need higher marks than male secondary school students to secure a university place.

No differences were found in secondary school students' preference between pursuing degree and diploma education, except for female Arts secondary school students, who expressed a stronger interest for degree programmes. This was perhaps to overcome the double disadvantage of gender and specialisation outlined above.

Course preferences reflected specialisation, in that some courses are only open to Science stream secondary school students, whereas none are restricted to Arts secondary school students. Preferences were also gender-sensitive, reflecting conceptions of men's and women's roles. For example, Engineering and Agriculture were selected only by male secondary school students. In contrast, female secondary school students showed a strong preference for Education and health-related courses, thereby reflecting traditional ideas of women's nurturing role in Omani society. The findings also revealed that secondary school students' course preferences might be influenced by the importance they attached to job status in their decisions to enter higher education, in that they demonstrated a disdain for technical and vocational work. Secondary school students are influenced by their tribal values and general dislike of manual jobs, such as agriculture, which has a poor image as a 'dirty' profession that requires heavy manual work, in Omani society.

There were no gender or specialisation-related differences in preferred sector of employment; thus, the government sector was mostly preferred by all secondary school students. However, this preference may not be realistic, given recent government policies of economic diversification and privatization, which can be expected to reduce future opportunities in this sector.

Male secondary school students were more prepared to travel abroad to study than female secondary school students, thus reflecting cultural constraints on the movement of women, who traditionally stay close to home and family.

The widespread preference for Sultan Qaboos University as the institution of choice, irrespective of gender and specialisation, is attributable to several factors: the absence of fees, high academic standing, and the wider range of courses available, given that technical colleges often prepare students for employment in unpopular 'vocational' fields.

The third question posed by this research concerned the influence of secondary school students' academic ability on their decision to enter higher education. The findings revealed that secondary school students with higher academic ability were more likely to identify a desire to attend higher education.

It is worth noting that the effects of these factors, i.e. social, psychological, economic and institutional factors, were found to be much higher in female than male secondary school students (Table 5.36). Overall, there were no significant influences of these factors in relation to secondary school students' specialisation, i.e. teachers' influence was the only factor (among 8 factors) which significantly influenced secondary school students' decisions to enter higher education (Table 5.37), and this influence was greater among Arts secondary school students. However, the effects of educational regions on secondary school students' decisions to enter higher education were negligible (Table 5.38).

The fourth question posed by this research concerned the current capacity of higher education in Oman, vis-à-vis the aspirations of secondary school graduates and labour market demand.

Current enrolment in higher education in Oman is low at only 8% compared with other countries at a similar level of development (UNESCO, 2003). Moreover, the findings from this research revealed mismatches between higher education capacity and secondary school students' aspirations; between higher education capacity and labour market demand; and between secondary school students' aspirations and labour market demand.

a) Higher education capacity vs. students' aspirations. As secondary school graduate numbers increase, there is a growing deficit between these numbers and those absorbed by public higher education institutions. For example, more than two thirds of secondary school leavers are currently not absorbed into higher education. The Sultanate of Oman, in this respect, compares unfavourably with other countries at a similar level of development, as noted above. Another factor in the limited capacity of higher education is that Oman spends only 7% of its public education expenditure specifically on higher education (Human Development Report, 2001).

Moreover, as previously stated, the competitive admission criteria or process forces many secondary school students to enrol in courses that are not their first preference, thereby creating a situation which is likely to lead to low motivation and poor performance. Such a situation might make secondary school students unable to acquire the necessary skills demanded by the labour market, hence affecting the Omanisation policy. In addition, the quota system based on gender disadvantages female secondary

school students because they are higher achievers than their male counterparts. Although private tertiary institutions reduce the deficit in access to public sector tertiary institutions, a large majority of secondary school leavers are still not able to secure admission to higher education institutions to pursue further studies. In Oman, these private sector institutions of higher learning are less popular among secondary school students and their families, primarily due to several factors, which include high tuition fees, concentration of private institutions in Muscat Governorate, and duplication of academic programmes offered. On the other hand, the high cost of university education in Oman, which is four times higher than the current world average, compared with other countries, might be a deterrent to expand capacity, irrespective of whether the government or secondary school students bear the cost.

Thus, higher education capacity in Oman, is not keeping pace with the growth in numbers of secondary school graduates. It is expected that this problem will continue in the near future, bearing in mind that more than half of the population (55%) in Oman is under 19 years of age and more than 40,000 students graduate every year from secondary schools.

b) Higher education capacity vs. labour market demand. As stated previously, Oman currently has a large expatriate population. They constitute 19.2% of the overall workforce in public sector, and 89.3% out of the total labour force in the private sector.

Non-Omani employees dominate, in particular, in technical and managerial positions requiring special expertise, which at the present cannot be met by the limited current higher education capacity. At the same time, it is important to note that these positions held by non-Omanis, are positions with higher salaries and decision-making authority. So in effect, what is happening is that critical policy decision making is being undertaken by non-Omanis and such decisions by a limited minority are affecting the majority. Even with projected increases in higher education graduates, the number of Omanis in technical, specialist, skilled and semi-skilled categories by 2020 is expected to be less than half that needed to meet the government's developmental goals.

Equally important is the fact that the majority of non-Omanis dominate these skilled positions in the private sector, given that it is in this sector where global economic decisions related to Oman's economy are made, with little or no input from appropriately qualified Omani citizens: such a situation cannot continue if Oman is

anxious to compete in an increasingly global economy. It is, therefore, important that appropriate policies are put in place to enable the graduation of highly skilled Omanis, who will be able to contribute to effect self-rule and endogenous economic policy-making that reflect the socio-cultural and developmental aspirations of the country. Furthermore, this will assist in reducing some of the negative impacts in the social, political, cultural and economic aspects of the society due to over-reliance on non-Omani employees.

c) Students' aspirations vs. labour market demand. If replacing non-Omanis is an objective, some of the greatest needs in the labour market are in the fields of technical work and agriculture. Yet these disciplines were chosen by only 6% Science secondary school students (who expressed a desired to enter Technical Colleges) and 0.6% of secondary school students, respectively.

At the other extreme, demand for education and medicine far outstrip the absorptive capacity of the labour market in the medium to long-term. Part of the reason for this mismatch is the disparity between public and private sector salaries and working conditions. Therefore, secondary school students are more interested in courses that will qualify them for government sector employment, whereas a large part of the labour market need is in the private sector.

This research study clearly indicates that it is not only short sighted but totally ineffective, merely to strive to provide appropriate access to higher education in order that Omani secondary school students gain qualifications necessary to replace the non-Omani workers (Omanisation). This is because if macro economic problems, such as unattractive employment conditions in the private sector are not addressed, employment opportunities in the public (governmental) sector will become saturated, whilst the private sector will continue to function and depend heavily on non-Omani citizens.

Consequently, it should be emphasized that in such cases balancing supply and demand means not increasing supply, but reducing demand. As indicated in this research study, the problem cannot be solved simply by expanding higher education capacity. Rather, the decision-makers should consider what balance of academic courses should be offered and accordingly what numbers of secondary school students should be absorbed, in accordance with both the secondary school students' aspirations and also the labour market demand. In the medium term, one strategy to effectively address this

mismatch between secondary school students' aspirations and the labour market demand would be to divert some of the current capacity in some courses, such as education and medicine, to industrial and vocational courses, e.g. agriculture and technical education. At the same time and parallel to this, it should be emphasized that special inducements are needed for secondary school students to take non-traditional courses and to encourage secondary school students' interest in specialisations needed by the labour market, and particularly in the private sector.

These findings have important implications for both theory and policy, as will be demonstrated in the following section.

8.4 Contribution to Knowledge and Implications of Research

This is an extensive research study, covering a wide geographical area (six of Oman's eight educational regions) and a large sample (1,830), giving the research a high degree of representativeness and external validity. It, therefore, represents the first detailed research study that examines the range of factors influencing secondary school students' decisions to enter higher education, plus the problem of access and capacity for higher education in Oman.

Compared to previous research in this field, the present study offers a broader and more detailed consideration of a wide range of interacting variables, some of which have hitherto received comparatively little attention. Table 8.1 below provides a succinct comparison of the range of factors influencing secondary school students' decisions to enter higher education, based on literature evidence during the past 15 years. This clearly highlights a major contribution of the present research study in covering all the eleven factors identified. The results reported in this thesis, therefore, present valuable information for higher education planning in Oman. They also provide useful reference material to guide future research on the subject matter of higher education policy and administration in Oman and other countries at a similar level of development.

Table 8.1 Summary of studies investigating factors influencing secondary school students' decisions to enter higher education, 1990-2005

Continent / Country	Paper / Study	Factors Investigated											
		Human Capital Theory	Labour market conditions	Parents' encoura-gement	Friends	Students' ability	Students' attitudes towards HE	Type of school / specialisation	Teachers	Family's socio-economic background	Gender	HE capacity
USA and Canada	Altonji (1995)							✔				
	Dominitz & Manski (1996)	✔										
	Foley (2001)									✔	✔	
	Crosnoe et al (2002)									✔		
	Bui (2002)									✔		
	Knighton & Mirza (2002)									✔		
	Tobias (2002)					✔						
	Averett et al (2003)	✔	✔			✔				✔		
UK and Europe	Egerton & Halsey (1993)										✔	
	Furlong & Cartmel (1995)		✔				✔				✔	
	Menon (1995)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	
	Heijke (1996)	✔	✔									
	Jimenez & Salas-Velasco (2000)		✔			✔				✔		
	Albert (2000)	✔	✔							✔	✔	
	Tinklen (2000)									✔		
	Mangan et al (2000)				✔				✔			
	Thomas & Webber (2001)				✔							
	Connor (2001)					✔	✔		✔			
	Petrongolo & Segundo (2002)	✔	✔							✔		
	Gayle et al (2002)							✔		✔	✔	
	Chevalier & Lanot (2002)									✔		
	Thomas et al (2002)				✔							
	Pietro (2002)		✔							✔		
	Oliverira & Zanchi (2003)				✔	✔		✔		✔	✔	
	Veen (2003)			✔						✔		
	Thomas et al (2003)					✔	✔		✔			
	Gayle et al (2003)							✔				
	Mayer et al (2003)										✔	
	Iannelli & Smyth (2004)									✔	✔	
Australia	Hayden & Carpenter (1990)		✔		✔	✔		✔		✔		
	Andrews (1999)						✔			✔		
	James (2001)						✔			✔		
Asia	Ishida (1993)									✔		
	Hashimoto & Heath (1995)									✔		
	Ishida (1998)									✔		
	Robinson & Solongo (2000)										✔	
	Hung et al (2000)	✔				✔	✔					
	Li & Min (2001)									✔		
	Edwards & Pasqual (2002)									✔		
	Ranasinghe & Hartog (2002)									✔	✔	
	Hannum & Kong (2003)										✔	
	Tsai & Shavit (2003)									✔	✔	✔
	Chung (2004)	✔										
	Fazio & Dinh (2004)	✔										
Africa	Siphambe (2000)	✔										
	Makosana (2001)				✔		✔			✔		
Latin America	Psacharopoulos (1994)							✔				
Oman	Ali Hassan (1990)		✔									
	Al-Kharusi (1991)		✔									
	Al-Maskery (1992)	✔	✔				✔			✔		
	Al-Farsi (1994)		✔									
	Al-Dhahab (1997)		✔									
	Al-Hinai (1998)		✔									
	Al-Lamki (1998)		✔									
	Al-Mauwali (2000)	✔	✔									
	Al-Hajry (2002)	✔	✔									
	Al-Lamki (2002)		✔									✔
	The Present Study 2005	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Moreover, the triangulation of survey and interview methods of data collection, plus the analysis of documentary data, greatly adds to the reliability of the findings and allows a more sophisticated understanding of the complex interplay between the various factors and phenomena investigated. Furthermore, interviews with educational policy-makers provided valid explanations for some of the results obtained from the questionnaire-based survey of students.

The instrument used in this research study to measure the factors influencing secondary school students' decisions to enter higher education was extensively modified from the original scales in order to meet the needs of the research study. Factor analysis was used to confirm the validity of this scale and the reliability obtained for the scale was acceptable. Thus, this scale can be used in future research on the factors influencing secondary school students' decisions to enter higher education in Oman, in the Gulf Co-operative Countries (G.C.C.), and elsewhere, insofar as they have similar educational systems and have similar labour market situations, i.e. existence of professional expatriates.

Furthermore, this research derives additional importance from its contribution to both educational research theory and policy.

Theory:

The study validates the theoretical framework for Oman, i.e. it shows all factors are relevant. However, it also develops the framework for a hierarchical ranking of the factors in terms of relative influence (refer to Table 5.33). Moreover, the ordering of the factors suggests that the temporal and causal sequence proposed by Carpenter and Western (1984) may not be applicable in the Omani context. Notwithstanding this assertion, caution needs to be exercised here, because rank order is not the same thing as sequence; nevertheless, Carpenter and Western's explanation seems to imply a hierarchy of roles. For instance, peer influence, according to Carpenter and Western, has a bigger role than is suggested by the ranking 8 found in this research study. In addition, sometimes variables in the same category were found to have very different levels of influence, e.g. economic variables include Human Capital Theory (1) and labour market (5); social variables include parents and family (3) and peers (8); psychological variables include students' self-confidence in their ability (2) and students' attitudes and perceptions toward higher education (4).

The above examples demonstrate the danger of broad generalizations and the need to define factors much more precisely and to examine them separately and individually. Furthermore, this research study suggests that there is a mediating role of variables, such as (predominantly) gender, specialisation and (for labour market only) region.

Policy:

Mismatch of higher education capacity with both secondary school student aspirations and labour market demand appears to imply a need to expand public higher education capacity. However, this could be very costly unless both investment levels in higher education and support provided to secondary school students are re-assessed.

Application of the Human Capital Theory at the national level suggests that the provision of higher education is an investment for the economic future of the country. This makes it important that economic goals are also met, i.e. labour market needs fulfilled. If this is achieved, the transfer of income from expatriates to Omanis could be a return on investment in higher education. However, simply expanding higher education capacity alone will not achieve national economic development goals, unless the mismatch between secondary school students' aspirations and the labour market demand are adequately addressed. Consequently, educational demand must also be adjusted. This will mean changing traditional attitudes of unwillingness to study non-traditional courses and disdain towards certain kinds of occupations, such as perceived low status and poor image of vocational jobs and, indeed, reluctance to work in the private sector generally. Such attitudes, currently held by secondary school students or their families, could well distort the demand for higher education and, in turn, perpetuate the inability to meet the labour market needs. In addition, adjusting educational demand will also necessitate addressing the disparities between the public and private sectors in terms of salaries and employment conditions.

Based on the foregoing, therefore, this research study contributed to highlighting the following policy implications, which need to be addressed to ensure that higher education in Oman meets the needs of both the individual and society:

1) There is a need for far more places and better access to higher education in Oman, because of the increase in population, and because a very high proportion of secondary school students expressed their desire for higher education. This

high demand was very similar between male and female secondary school students.

2) There is a need to provide more places for female secondary school students, as they represent only 22% of all students enrolled in higher education (UNESCO, 2003/2004), and to rethink of rigid admissions policy of accepting just 50% of female secondary school students, thereby limiting the number of places available for females despite their attaining appropriate high scores. This leads to the rejection of many students who are highly motivated, well qualified to enrol and high secondary school achievers, and who could have contributed towards addressing the development challenges facing Oman. In the long-term, such a policy will inevitably lead to less educated females in Oman.

3) As a result of the high level of commitment and strong motivation among female secondary school students compared to male secondary school students, a far higher proportion of female than male secondary school students stated that they would repeat their secondary education in order to gain better grades and then pursue higher education. Furthermore, slightly more female than male secondary school students expressed a wish to pursue higher education by means of alternative funding. These findings reflect the frustration faced by many qualified female secondary school students who are not able to gain admission each year due to a strict admission policy that favours male secondary school students.

4) There is a need for more higher education institutions in Oman. Presently, Sultan Qaboos University is the only wholly government-funded university. This research study demonstrated that there was a strong preference for government rather than private higher education institutions. Also the majority of male and female secondary school students wanted to pursue their higher education in Oman in preference to studying abroad. Their principal choice was Sultan Qaboos University as opposed to other public and private institutions. An implication of this finding is that, perhaps grants or loans would encourage a better take-up of places in private colleges, as it is impossible at the present time to provide places for everyone in government institutions. Moreover, some institutions and academic subjects were found to be comparatively unpopular.

This raised the question of whether they can attract enough secondary school students to meet the country's needs.

5) Society needs both Arts and Science graduates for sustainable and balanced development. This study has revealed that the current system of streaming secondary school students into either Arts or Science specialisation based on quota might contribute towards exacerbating the mismatch between students' qualifications and labour market demand. Consequently, many secondary school students interviewed during this study reported that they struggled to complete their education, particularly in the Science stream. Furthermore, the competition for the limited opportunities available to Arts secondary school students resulted in very high marks needed to secure admission for higher education. This raises the question of why students were allowed and directed to enter a particular stream. There is a need for a policy to prevent secondary school students being directed into specialisations they do not wish to study, simply because the quota of places in their preferred specialisation has been filled. This issue needs to be addressed, as students' specialisation will likely affect their subsequent educational and career choices. Also, this is important because of the need for Omani citizens to become suitably qualified in specialist academic subjects in order to assist the Omanisation policy.

6) Measures will have to be put in place to counteract secondary school students' unwillingness to seek employment in the private sector, because the majority of students indicated a wish to work for government, and not the private sector where the majority of non-Omani professionals are concentrated.

7) The majority of secondary school students wanted to pursue Degree, not Diploma programmes of study. This raises the question of whether Diploma courses could be made more attractive to secondary school students in order to meet the country's needs for Diploma level education and related employment opportunities.

8) Equally, it is necessary to redirect demand into non-traditional areas of study, as secondary school students were more interested in professional-oriented courses, such as education and medicine, than technical academic subjects such as agriculture and engineering, both of which are urgently needed for Omanisation.

It was found that most employment available in these specialist and technical subjects was held by expatriates in the private sector, whereas, it was found that the majority of secondary school students wanted to work for the government sector. Hence, there is a need for assurances of better employment conditions in the private sector to attract students into employment, and thereby meet the needs of Omanisation.

9) The labour market conditions in Oman were an influential factor for secondary school students to enter higher education, as secondary school students are fully aware of the Omanisation policy. As stated above, they were willing to replace non-Omani professionally qualified employees; however, the most popular courses (e.g. education and medicine) were not only the ones that would fulfil this purpose. Secondary school students need to be encouraged to consider a wider range of specialisations when choosing their higher education courses of study.

10) Female graduates in Oman face practical obstacles in finding employment. For example, many are not able to find employment near their homes, which may pose difficulty for those who must combine work and family responsibilities, given that women have the main responsibility for housework and children. They are also constrained by the conservative attitude of some families that do not approve of women working alongside men. It seems that another obstacle is a preference in many public and private agencies to employ males because they are considered more productive, as females are expected to take time out from work due to their entitlement to maternity leave. Such factors could explain why it was found in this research study that female secondary school students preferred to study traditional areas of study such as education, which lead to employment in socially acceptable fields, in a single sex environment, and where hours and career structure are compatible with family responsibilities.

11) The influence of social factors (parents and family) ranked as the third factor which influences secondary school students to enter higher education. This must put more pressure on higher education capacity in terms of not just meeting the secondary school students' demand, but the need to satisfy the desire of parents and families to provide higher education for their children.

12) Secondary school students from the Aldahirah region indicated that they were less motivated to enter higher education for self development and their own improvement compared to secondary school students from other surveyed regions in Oman. It is not only important, but essential, to bring this fact to the attention of the Ministry of Education and Ministry of Higher Education so they can consider ways to encourage secondary school students from this region. There is a need to investigate in depth the reasons behind this low motivation to enter higher education in this region. Thus, this is an area for further research.

13) The implications of the current limited capacity of higher education might lead to the following consequences which will have to be addressed:

- Marginalization of the poor in terms of limited access to higher education.

- Delinquency among the majority of secondary school students who cannot get access to higher education.

- Social unrest, particularly among families who are disappointed by limited capacity of higher education and low morale or devaluation of education as a reaction to this situation.

- Inequity related to social unfairness of the current system capacity.
- Unemployment among secondary school students.
- Continuing dependence on non-Omani qualified employees.
- Some secondary school students who cannot get access to higher education in Oman might seek, in order to gain higher education qualifications, cheap and low quality private education abroad.
- The country indirectly loses its most valuable national resource, i.e. the youth of Oman.

In summary, this study has demonstrated clearly the need for a better understanding of the factors influencing secondary school students' decisions to enter higher education, as well as the social and economic considerations that underlie demand for higher education. It has also highlighted some important concerns which should be taken into account when expanding higher education capacity in Oman.

Specific recommendations to address the policy implications of this study follow.

8.5 Recommendations

In view of the above, the role of higher education cannot be ignored if Oman wishes to compete in the global market and meet the demand of its nationals for personal development. Moreover, in the light of the current limited capacity of higher education, the existence of a huge number of non-Omani workers in Oman and their impact on the society and national economy, as well as the obstacles to Omanisation, the following recommendations are made in three categories:

a) <u>Recommendations to improve/overcome the limited capacity of higher education</u>

1) There is a need for the reprioritisation of the overall government expenditure in order to put more emphasis on education so as to provide education for all sectors, plus all secondary school students who meet the minimum conditions of admission. This would allow the higher education of many secondary school students, whether the government financed them totally or partly, or they financed themselves, in order to close the wide gap needed to meet Omanisation: Vision 2020. This would require establishing other state universities.

2) In order to derive the full benefits of increased funding, there is a need for adequate supervision and monitoring without compromising the financial and administrative independence as well as academic freedom of higher education institutions. Furthermore, new initiatives and incentives are also needed to promote increased private sector contribution/investment in higher education.

3) Sultan Qaboos University and other public higher education institutions should focus on modest infrastructure and target more expenditure on expanding the existing academic programmes. It would be desirable for Sultan Qaboos University to introduce part-time studies and distance education to enable Omani citizens who at age 18 did not go to higher education to subsequently upgrade their skills and qualifications whilst in employment and working. The appropriate use of ICT to facilitate the incorporation of e-learning would be an important measure towards this goal, as would the introduction of part-time study courses so that those in employment, housewives and people with special needs would have an opportunity to further their education and broaden their

knowledge and experience. This might be a help to students from more remote arias such as Aldahira region as identified in this study.

4) In addition to the above, introducing an Open University System or Distance Learning to deliver high quality education at distance could help to solve the limited capacity of higher education in Oman.

5) A Multi-Campus University System for Sultan Qaboos University could be introduced, in order to offer specialised degree programmes in selected campuses in the country and thus help to increase the higher education capacity while improving access for communities outside the capital region.

6) Scholarships abroad should be supported financially and policy-wise by the government, and the number of available scholarships increased, so that more Omani citizens may study in overseas universities. This would allow them to learn from their experiences and to gain an appreciation of modern methods of learning in order to participate fully in Oman's national development. Private sector involvement should be encouraged and pursued through scholarship funds and endowments.

7) The private sector must participate more to overcome the problem of limited capacity of higher education by establishing private universities and colleges, along with providing financial support towards expanding selected programmes in the existing university. However, this must be viewed as complementary to the role of the public institutions.

8) There are some private colleges in Oman which provide diplomas and all of them are affiliated to international universities that have long experience in higher education. Consideration could be given to upgrading these colleges to university level in order to contribute in meeting the increasing demand for degree level programmes. The sample in the present study indicated that very few students wanted diploma level courses.

9) Related private higher education colleges could be merged into one university, thereby avoiding duplication of courses. This would encourage provision of high

quality education, besides reducing the tuition fees and increasing the capacity to enrol more secondary school students.

10) The expenditure on higher education per student should be reviewed, as statistics have shown that it is very much higher than the world average. Public higher education institutions should encourage reduction of the cost per student (unit cost) by economizing and increasing enrolment rates. The high cost of higher education might lead to lower rates of investing in education.

11) This could be achieved by establishing a funding agency (as an independent agency), which can be funded by various sources, such as the government, with contributions from citizens, private sector companies, government employees (e.g. by a levy of 1% of their basic salary), private sector companies (through a tax of at least 1% of their net profits), and any other grants.

12) To achieve greater efficiency and equity, it might be better to shift some of the cost of education to the individual degree students who are benefiting most from higher education. This could be achieved through a practical policy instrument that enables individual students to contribute to the cost of their education through a graduate income tax, or alternatively, a student loan scheme, without restricting their access to higher education.

13) In order to ensure the successful implementation of such a graduate tax or loan repayment scheme, there is a need for a coordinating agency to develop the appropriate policy and administrative guidelines. Such policies would allow students from relatively wealthy families to pay more for access to public academic institutions.

14) Private sector education foundations and endowments could be established to support secondary school students from low-income families. Similarly, the government could offer tax breaks or incentives to private institutions which offer fellowships to secondary school students from low-income families as a mechanism for increasing access to higher education.

15) In addition to access to public and private sectors funding, institutions of higher education in Oman can increase their financial resources by engaging in

commercial activities related to their core operations. These include renting infrastructure (such as buildings and land) to commercial businesses, trading products and technologies; and charging fees for services (such as information technology, publishing, research and study consultations, and advertising). Where there are sufficient resources, university departments or units could also produce materials which they can sell at a profit.

b) General recommendations for Policy-Makers:

1) Currently, the supervision of all higher education institutions in Oman is not under the Ministry of Higher Education. This creates the opportunity for duplication of responsibilities and sub-optimal resource utilisation efficiency. Centralised supervision under this Ministry (or equivalent) might assist in creating a unified vision and policy to improve the quality and quantity of higher education in Oman. The current situation of decentralization of authority on higher education might make higher education lose its identity towards drawing a national, educational and strategic long-term definite plan. A centralised agency that is solely responsible for quality assurance and supervision of higher education in Oman will have the additional potential benefit of reducing cost, which can be reinvested to expand educational capacity and access as outlined in the preceding section.

2) Given the limited capacity for higher education in Oman and the resulting high competition for admission, and because the supervision of all higher education institutions in Oman is not under the Ministry of Higher Education, there is a need to establish an independent national agency or board with the responsibility for administering and coordinating admission into all public higher education institution. This will contribute to rectifying some of the difficulties identified and experienced by parents and students, who have to travel long distances in different locations in search of admission when they are rejected from the institutions they have applied to.

3) A research foundation should be established to promote applied research in all aspects of development in Oman through provision of support and funding for university research programmes. Such a research foundation could contribute to greater understanding of higher education capacity and access in Oman through

medium to long-term education policy research that cuts across the entire education sector.

4) In parallel with the above suggestions and because of the diversity of institutions and the monitoring by many government departments, a statistics department should be established under the supervision of the Council for Higher Education, whose function would be the collection, analysis and storage of quantitative and qualitative data on higher education in Oman, which could be readily available to researchers and policy decision-makers.

5) Government Omanisation schemes and incentives need to be continued as a means of encouraging and promoting Omanisation in the private sector.

6) Special attention should be given to the technical education and vocational training in Oman, to make it more attractive for students, in order to qualify them to fill the very big gap in the private sector and public sector currently occupied by non-Omani technicians. The government and media should play roles here for adjusting higher education demand by giving students information and encouraging them to study non-traditional courses and take up non-traditional occupations. Similarly, special attention is required to encourage young Omanis to take up employment in the private sector, particularly in the agricultural and vocational sectors.

7) It is essential to raise public awareness through government and media of the importance of technical and vocational education and training to change people's perception toward these jobs in order to compete in the labour market.

8) The humanities must not be neglected in education policy, as they play a vital role in forming the culture of the individual and society and thereby contribute in maintaining the Omani identity. At the same time, there should be a focus on scientific and technical subjects needed for the labour market, where specialists in these areas are in short supply.

9) In a system where capacity is limited, it will be important to avoid waste through available drop-out. The current rate at Sultan Qaboos University of 12% seems too high, even though the best students are admitted according to the current

admission system. It is, therefore, suggested that an Entrance Qualification Exam for higher education institutions could be introduced to complement the Secondary School Certificate Result. Introducing a separate University Entrance Examination, in combination with Secondary School Certificate results, will assist in enhancing the quality of students admitted, and ensuring equity. Such an examination should be administered by a Board jointly composed of members from Sultan Qaboos University, the Ministry of Higher Education, and the private higher education sector.

10) Academic and professional counselling should be available within institutions of higher education, to enable secondary school students gain support and help to progress in their studies without being subject to academic probation. Access to such a service would help secondary school students to make informed choices of subjects and courses of study in line with their aptitudes, aspirations and future careers.

11) The results from semi-structured interviews suggest that the predominant factors which may restrict or discourage secondary school students from enrolling in higher education were large family and low income. It is, therefore, recommended that the government provide Homework Clubs for those secondary school students who find work at home very difficult, in order to help them to achieve their potential and score high grades.

<u>c) Recommendations for enhancing the private sector's role:</u>

1) In the light of the evidence that the private sector is not attractive for Omani graduates, partnerships between higher education and the private sector need to be fostered to ensure a good fit between labour market requirements and secondary school students' choice of academic discipline in higher education.

2) The public and private sector employment policies and practices, which induce Omani citizens to prefer to work for the government sector, should be bridged by initiating comparable employment conditions (or remuneration) in the private sector. To address this disparity between public and private sectors in Oman, there is a need for a regulatory agency (or body) to develop and monitor

appropriate guidelines for remuneration and working conditions in the private sector, especially when public sector companies are privatized.

3) A social security system and other benefits attached to public sector could be introduced for private sector employment to reduce the discrepancy as perceived by students in retirement policies between the public and private sector employees.

4) Since English is the operational language in Oman's private sector it is recommended that attention be paid to ensuring that English courses in schools and colleges are of appropriate types and standard, particularly, English is the international language of communication and is also the medium for international business transactions.

At this juncture, it is important to emphasize that the challenges and benefits of expanding higher education go beyond the traditional analysis of demand and supply, and should take account of the spin-off effects likely to result from expansion of higher education, in terms of living standards, political development, and law and order. For instance, an educated person has greater potential to be a responsible citizen and to contribute positively to national development through engagement in other economic activities apart of securing a job.

It is hoped that the findings, conclusions, implications, and recommendations presented in this thesis will contribute to the formulation of appropriate educational policy and management strategies with regard to the myriad of factors influencing secondary school students' decisions to enter higher education, and will help planners to adopt the most effective policies to expand the capacity of higher education in Oman.

8.6 Suggestions for Further Research:

The results reported in this research study have highlighted the need for further specific empirical research into the following issues and areas:

1) Because of the mismatch between the labour market demand and higher education provision highlighted by this study, empirical studies and surveys are needed to obtain accurate, up-to-date data on the actual requirements of public and private sectors for higher education students.

2) There is a need to investigate the funding of higher education and the ways in which the public sector could contribute more financial support.

3) Further research is required to elucidate to what extent high demand for tertiary education among high scholastic secondary school achievers in Oman, translates into high academic achievement when students enter higher institutions of learning, given that there is a significant number of secondary school students who fail to complete their higher education courses of study.

4) Because of the need for technically and vocationally trained personnel to serve Omanisation, there is a need to investigate the reasons for the lack of secondary school students' desire to study in technical colleges and to pursue vocational courses.

5) The reasons why secondary school students from Aldahirah region are less motivated to enter higher education for self development and their own improvement compared to secondary school students from other surveyed regions in Oman, needs to be investigated in depth.

6) To facilitate the successful implementation of the recommendations presented in this thesis in relation to improving higher education capacity and access in Oman, there is a need for an in-depth survey of educational policy/decision-makers to obtain their views on the resource implications and other factors, to ensure a balanced approach to both fiscal and development practice.

7) The present study was cross-sectional; therefore, it might be interesting to do a longitudinal study to follow up over time, e.g. secondary school students' aspirations, actual higher education and work outcome.

8) A longitudinal study of graduates' occupational destinations, salaries, working conditions of graduates from different institutions in Oman should provide a better idea of how higher education output matches the labour market demand. Further research is recommended in this area.

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Appendices

Appendix 1

Letter from the Ministry of Education to Director General of Education in Muscat Governorate asking for facilitation of the pilot study (written in Arabic)

بسم الله الرحمن الرحيم

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص.م.ع/ ١٤٢
التاريخ: ٢٥ ذو القعدة ١٤٣٢ هـ الموافق: ٢٠١١/١٠/٢٨م

الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمحافظة مسقط المحترم

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

سلطنة عمان
المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 2a

Letter from the Ministry of Education to Director General of Education in Muscat Governorate asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

بسم الله الرحمن الرحيم

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص.م.ع/ ١٤٢
التاريخ: ٢٥ ذو القعدة ١٤٢٥ هـ الموافق ٢٨/١/٢٠٠٥م

الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمحافظة مسقط المحترم

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

سلطنة عمان
المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 2b

Letter from the Ministry of Education to Director General of Education in Albatinah region asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص.م.ب/ ١٤٢
التاريخ: ٢٥/ ذو القعدة/ ١٤٢٦ هـ الموافق: ٢٧/١١/٢٠٠٥م

المحترم
الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمنطقة الباطنة جنوب

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

المكتب الفني للدراسات والتطوير

Appendix 2c

Letter from the Ministry of Education to Director General of Education in Aldakhiliyah region asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص م ع ق ١٢٢
التاريخ: ٢٥ ذو القعدة ١٤٣٢ هـ الموافق: ٢٠١١/١٠/٢٨ م

الفاضل / مدير عام المديرية العامة للتربية والتعليم لمنطقة الداخلية المحترم

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د . سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

سلطنة عمان
المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 2d

Letter from the Ministry of Education to Director General of Education in Aldahirah region asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص.م.ب/ ١٢٢
التاريخ: ٢٥ ذو القعدة ١٤٣٢ هـ الموافق: ٢٨/ ١٠/ ٢٠١١م

الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمنطقة الظاهرة جنوب المحترم

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 2e

Letter from the Ministry of Education to Director General of Education in Alsharqiyah region asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص م ع/ ت/ ١٢٢
التاريخ: ٢٥ ذو القعدة ١٤٢٢ هـ الموافق ٢٠٠٢/١/٢٨ م

المحترم
الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمنطقة الشرقية شمال

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور.

شاكرة لكم حسن تعاونكم.

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 2f

Letter from the Ministry of Education to Director General of Education in Dhofar Governorate asking for facilitation of the questionnaires and interviews in main study (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص.م.ف ١٩٢
التاريخ: ٢٥ ذو القعدة ١٤٢٣ هـ الموافق ٢٠٠٢/١/٢٨ م

الفاضل/ مدير عام المديرية العامة للتربية والتعليم لمحافظة ظفار المحترم

تحية طيبة وبعد ،،،

الموضوع: الطالب سالم بن زويد بن سليم الهاشمي

أود إفادتكم بأن الفاضل سالم بن زويد بن سليم الهاشمي (دراسات عليا) تخصص إدارة تربوية بصدد تطبيق الاستبانة المرفقة على طلبة وطالبات الثانوية العامة القسم العلمي والأدبي في مدارس التعليم العام وكذلك إجراء مقابلات في إطار البحث الذي يقوم بإعداده تحت عنوان "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عمان" ضمن متطلبات الحصول على درجة الدكتوراه.

يرجى التكرم بتسهيل مهمة المذكور.

شاكرة لكم حسن تعاونكم.

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

سلطنة عمان
المكتب الفني للدراسات والتطوير
وزارة التربية والتعليم

Appendix 3

Questionnaire after piloting (English version final form)

THE UNIVERSITY OF HULL
CENTRE FOR EDUCATIONAL STUDIES

Dear students,

I am currently conducting research on the "Factors Influencing Secondary Schools Students' Decisions to Enter Higher Education: Implications for Higher Education Capacity in the Sultanate of Oman".

I would be grateful if you would complete this questionnaire and add your comments where indicated. I can assure you that all information will be anonymous and confidential.

Thank you for your help.

Salim Al-Hashmi
Ph.D Student

Section A: About yourself

Please tick the box

1. Sex

1	Male	
2	Female	

2. What is your secondary school specialization?

1	Arts	
2	Science	

3. Registration Status

1	Repeater	
2	Pass	

4. What is your educational region?

1	Muscat	
2	Albatina	
3	Aldakhiliyah	
4	Aldahirah	
5	Alsharqiya	
6	Dhofar	

Section B: Your intention to study or work after secondary school:

5. If you do not get a free scholarship, what will you do ? (Tick one only)

1	Study supported at my parents'/guardian expense	
2	Get a loan in order to study	
3	Repeat secondary in order to get better grade and then pursue higher education	
4	Secondary school certificate will be sufficient for me	

6. Below is a series of options that you might consider after your final year of secondary school education

Please <u>tick one box only</u> from the options below :

1	Go to higher education	
2	Find employment and then participate in part-time higher education	
3	Find employment after secondary school	
4	Is there anything different from any of the above? Please specify details and reasons why : ……	

If you responded to options no. <u>1</u> or <u>2</u> please <u>complete the whole remaining questions</u> of the questionnaire.

If you responded to option no. <u>3</u> please <u>go directly to sections E and F of the questionnaire, (page 6)</u>

<u>Section C: (A)Your motivations</u>

7. What are the main reasons behind your decision to go to higher education?

Rate the degree of importance of each of the following reasons for your decision to go into higher education. Please circle the appropriate number for each reason:

Key: 1 = Not at all important
2 = Not very important
3= Somewhat important
4= Very important
5= Extremely important

	Reasons	Not at all important	Not very important	Somewhat important	Very important	Extremely important
1	To fulfill my parents' wishes	1	2	3	4	5
2	To get a professional qualification	1	2	3	4	5
3	Because I like studying	1	2	3	4	5
4	Because I can get a free scholarship	1	2	3	4	5
5	To get a better job	1	2	3	4	5
6	To set up my own business	1	2	3	4	5
7	To continue higher education	1	2	3	4	5
8	To earn a high salary	1	2	3	4	5
9	Personal development	1	2	3	4	5
10	Be able to do creative work	1	2	3	4	5
11	Apply my knowledge on the job	1	2	3	4	5
12	Future job prosperity	1	2	3	4	5
13	To be in charge of others	1	2	3	4	5
14	Financial security	1	2	3	4	5

15	To have more job opportunities	1	2	3	4	5
16	To have a better future	1	2	3	4	5
17	To work for the government	1	2	3	4	5
18	To provide a better standard of living for my own children	1	2	3	4	5
19	To help to develop the country	1	2	3	4	5
20	To get social prestige	1	2	3	4	5
21	To replace non-Omani professional employees	1	2	3	4	5
22	Other (if any specify)					

Section C: (B)Your expectations

8. If you were not going to higher education how much do you think your salary would be per month? (Tick one only)

A.

1	R.O 120-300	
2	R.O 301-400	
3	R.O 401-500	
4	Over R.O 500	

B. Consider the situation that after completing secondary school education there was no employment available, so you decided to go onto higher education.

Estimate the amount of money per month you would expect to earn after gaining a higher education qualification. (Tick one only)

1	R.O 300-400	
2	R.O 401-500	
3	R.O 501-600	
4	Over R.O 600	

9. If you were going onto higher education, in what sector would you want to be employed after completing your studies? (Tick one only)

1	Government sector	
2	Private sector	
3	Government owned companies	
4	Self-employed	
5	Work abroad	

10. In which of the following work sectors do you think each of the following advantages are most likely to be gained ?

Please <u>tick only one box</u> in front of each advantage

Advantages		Government sector	Private sector	Government owned companies	Self- employed
1	Higher monthly salary				
2	Social prestige				
3	Good working hours				
4	Promotion prospects				
5	Higher education opportunities				
6	Good annual leave				
7	Better retirement benefits				

Section D : Higher education programme

11- Please identify the programme you would like to attend after secondary school

(Tick one only)

1	Diploma (less than 4 years)	
2	Degree (4 years or more)	

12. Please identify the country where you intend to continue your higher education

(Tick one only)

1	Oman-government higher education institutions	
2	Oman-private higher education institutions	
3	Abroad-Arab countries	
4	Abroad –foreign countries	
5	Distance learning	

13.If you want to continue your higher education in Oman ,in which of the following higher education institutions you would like to go ? (Tick one only)

1	Sultan Qaboos University	
2	Colleges of Education	
3	The Technical Colleges	
4	The Health Institutions	
5	College of Sharia and Law	
6	The Institute of Banking and Financial Studies	
7	The private Universities and Colleges	
8	Other (if any specify):	

14. Which higher education course would you wish to study? (Tick one only)

1	Accounting	
2	Aeronautics	
3	Agriculture	
4	Arts	
5	Business and Commercial	
6	Computer	
7	Economy	
8	Education (including Fine Arts & Sport Science)	
9	Engineering	
10	Islamic Studies	
11	Languages	
12	Law	
13	Medicine	
14	Military Science	
15	Nursing	
16	Pharmacy	
17	Science	
18	Other (if any please specify):	

Section E: Attitudes towards Higher Education

Whether you want to pursue higher education or not please complete this section.

15. Below are some attitude statements on issue concerning factors influencing students' plans after secondary school education and you are requested to indicate your degree of agreement or disagreement for each statement.

Please tick one box only for each item below

Key: 1= Strongly Disagree
2= Disagree
3= Undecided
4= Agree
5= Strongly Agree

Item No	Statement	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
1	I am good at school work					
2	I believe that it is necessary to continue in higher education in order to improve as a person					
3	I think that economic benefits are the most important advantage of having higher education					
4	My parents/guardians influenced my future plan to continue onto higher education					
5	The subjects I study in secondary school encourage me to pursue higher education studies					
6	I think that even without gaining a higher education degree, I can get a good job					
7	My friends had a direct influence upon my future plans					
8	The existence of non-Omani professional employees in Oman is a motivating reason for me to pursue higher education studies					
9	My teachers persuaded me to go onto higher education					
10	I believe that if I get a higher education degree I will bring honour to my family					
11	A higher education degree would improve my chance of getting a good job with a high salary					
12	I am not good at school work					
13	The specialization I study at secondary school influenced my future plans					

14	I believe that higher education qualification will enable me to contribute to society and to help other people					
15	My friends influenced me to go onto higher education					
16	I am really keen to continue with my education in order to replace non-Omani professionals					
17	Labour market conditions (existence of non-Omani professionals) is one of my reasons for pursing higher education					
18	I believe that gaining higher education is an investment for my future					
19	My parents/guardians think higher education brings social status					
20	Many of my friends are doing higher education degrees					
21	My teachers encouraged me to aim for higher education					
22	I believe that I have the ability to pursue studies at higher education level					
23	It is my opinion that having a higher education degree is important for my financial security					
24	The educational system at the secondary school encourage me for higher education studies					
25	I believe that without higher education it is difficult to replace professional non-Omani employees					
26	I believe that I will get respect/status if I acquire a higher education qualification					
27	I believe that I have an aptitude for higher education studies					
28	My teachers influenced my future plan to continue onto higher education					
29	Many of my friends will not be continuing onto higher education					
30	I think that people ought to pursue higher education in order to develop as individuals					
31	I believe that only academically good students should continue onto higher education					
32	I think it is good to have non-Omani professionals in labour market					
33	I would wish to go onto higher education to improve my chance of future job prosperity					
34	My teachers usually emphasise the importance and benefits of higher education					
35	My parents/guardians believe that investment in higher education will ensure me a better future					
36	A higher education degree will improve my chances to obtain better job opportunities					
37	I am not a hard working student					

38	My parents/guardians have a direct input into my future plans					
39	I certainly would wish to get employment immediately after graduation from higher education in order to start earning money					
40	My teachers talk about their interesting experience of higher education life					
41	I believe that higher education does <u>not</u> necessarily bring higher social status					
42	I believe that students in higher education do <u>not</u> have interesting life					
43	The subjects I study in secondary school influence my future plans					
44	Most of my friends will probably go onto higher education					
45	I think that if <u>not</u> enough students go to higher education, the existence of non-Omani professionals will continue					
46	My parents/guardians do <u>not</u> encourage me to pursue higher education					
47	I believe that I have good intellectual abilities					
48	My parents/guardians believe in education for Its own sake					
49	I would wish to go onto higher education because it is possible to gain a free scholarship					
50	My wider family influence me to go onto higher education					

Section F: Information about your family

Whether you want to enter higher education or not please complete this section.

16. What is the size of your family? (father, mother, brothers, sisters) (Tick one only)

1	Less than 4 persons	
2	From 4 to 8 persons	
3	From 9 to 12 persons	
4	13 persons or more	

17. Please indicate the number of your brothers and sisters who are higher education graduates (diploma or degree and above) (Tick one only)

1	None	
2	1	
3	2	
4	3	
5	4	
6	5	
7	More than 5	

18. Please indicate the highest level of education completed by your father/guardian: (Tick one only)

1	No education (illiterate)	
2	Can read and write or Elementary education	
3	Some preparatory or Preparatory school	
4	Some secondary or Secondary school	
5	College (diploma)	
6	University (bachelor degree)	
7	Higher studies (Master)	
8	Higher studies (PhD)	

19. Please indicate the highest level of education completed by your mother/guardian: (Tick one only)

1	No education (illiterate)	
2	Can read and write or Elementary education	
3	Some preparatory or Preparatory school	
4	Some secondary or Secondary school	
5	College (diploma)	
6	University (bachelor degree)	
7	Higher studies (Master)	
8	Higher studies (PhD)	

20. Please identify your father's/guardian's sector of employment (Tick one only)

1	Public sector (government)	
2	Private sector	
3	Self-employed	
4	Works abroad	
5	Retired	
6	Does not work	

21. Please identify your mother's/guardian's sector of employment (Tick one only)

1	Public sector (government)	
2	Private sector	
3	Self-employed	
4	Retired	
5	Does not work (housewife)	

22. What is your father's/guardian's occupational status? (Tick one only)

1	Professional, technical or administrative Worker	
2	Owner or businessman	
3	Clerical worker	
4	Service worker	
5	Military /police service / security	
6	Fisherman/farmer	
7	Retired	
8	Does not work	
9	Other (if any please specify):	

23. What is your mother's/guardian's occupational status? (Tick one only)

1	Professional, technical or administrative worker	
2	Owner or businesswoman	
3	Clerical worker	
4	Service worker	
5	Police service / security	
6	Retired	
7	Does not work (housewife)	
8	Other (if any please specify):.....	

24. What is your family's total <u>estimated</u> monthly income? (father, mother, brothers, sisters, who are working and living at same house) (Tick one only)

1	Less than R.O 100	
2	R.O 100-399	
3	R.O 400-700	
4	R.O 701-1000	
5	R.O 1001 or more	

25. Please give your total secondary school scores last semester in the box provided:

Thank you for finding the time to complete this questionnaire.
Your responses will be valuable in this study.

Appendix 4

Questionnaire after piloting (Arabic version final form)

بسم الله الرحمن الرحيم

المملكة المتحدة

***(University of Hull)*جامعة هَلْ**

الدراسات العليا / الدكتوراه

الموضوع: استبيان بحث علمي

أعزائي الطلبة والطالبات الكرام ..

السلام عليكم ورحمة الله وبركاته .. وبعد ،،

يقوم الباحث بإجراء بحث لنيل درجة الدكتوراه حول: "العوامل المؤثرة في قرارات طلاب الثانوية العامة للالتحاق بالتعليم العالي ومضامين ذلك على الطاقة الاستيعابية للتعليم العالي في سلطنة عُمان".

تهدف الدراسة إلى المساهمة في اقتراح بعض الحلول المناسبة لمشكلة استيعاب الأعداد المتزايدة لمخرجات الثانوية العامة في ظل محدودية الطاقة الاستيعابية الحالية لمؤسسات التعليم العالي في السلطنة.

ولكون هذه المشكلة تهم الجميع وفي مقدمتهم أبنائنا الطلاب فإن الباحث يغدو شاكراً وممتناً على تعاونكم في إكمال هذا الاستبيان والإجابة عن الأسئلة حسبما هو مشار إليه في الموضع المخصص لذلك في هذا الاستبيان. كما يؤكد لكم بأن جميع المعلومات سوف تكون سرية وغير معروفة المصدر كما أنها لن تستخدم إلا لأغراض البحث العلمي. وشكراً لكم على تعاونكم الكريم في هذا الشأن.

طالب الدكتوراه :
سالم بن زويد الهاشمي

القسم (أ) : معلومات شخصية :

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع المناسب)

1- الجنس :

1	ذكر	
2	أنثى	

2- التخصص في الثانوية العامة :

1	أدبي	
2	علمي	

3- حالة القيد المدرسي :

1	معيد	
2	ناجح	

4- المنطقة التعليمية :

1	مسقط	
2	الباطنة	
3	الداخلية	
4	الظاهرة	
5	الشرقية	
6	ظفار	

القســـم(ب) : رغبـــة الطالب في إكمـــال الدراسة الجامعية أو العمل بعـــد الثانوية العامة :

5- إذا لم تحصل على فرصة دراسية مجانية ، فماذا ستعمـــل؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	الدراسة على نفقة الوالدين أو أولياء الأمر	
2	الحصول على قرض من أجل مواصلة الدراسة	
3	إعادة الثانوية العامة بهدف تحسين المجموع ومن ثم الالتحاق بالتعليم العالي	
4	شهادة الثانوية العامة ستكون كافية بالنسبة لي	

6- في أدناه مجموعة من الخيارات التي من المتوقع أن تكون قد فكرت فيها خلال السنة الأخيرة من التعليم الثانوي :

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	الالتحاق بالتعليم العالي.	
2	الحصول على عمل ، ومن ثم الالتحاق بالتعليم العالي بصورة دوام جزئي.	
3	البحث عن فرصة عمل بعد المرحلة الثانوية.	
4	هل هناك خيار آخر غير ما ورد أعلاه ؟ الرجاء ذكره بالتفصيل :	

ملاحظة مهمة:

1- في حالة إجابتك على الخيار رقم (1) ، أو (2) الرجاء إكمال جميع الأسئلة المتبقية من هذا الاستبيان.

2- أما في حالة أجابتك على خيار رقم (3) ، الرجاء الانتقال مباشرة إلى القسمين الأخيرين (هـ) و (و) من هذا الاستبيان ، أي الانتقال إلى الصفحة رقم (7).

القسم (ج) : أ – الدوافع أو الحوافز وراء قرارك :

7- ما هـــي الأسبـــاب الرئيســـة التي تدفعك إلى الالتحاق بالتعليـــم العـــالي؟

حدد درجة الأهمية لكل واحد من الأسباب المذكورة أدناه والتي تدفعك إلى مواصلة التعليم العالي بوضع دائرة حول الرقم المناسب لكل سبب :

م	الأسباب	ليس مهماً على الإطلاق	ليس مهماً	مهم إلى حد ما	مهم جداً	في غاية الأهمية
1	لأحقق رغبة الوالدين	1	2	3	4	5
2	للحصول على مؤهل مهني.	1	2	3	4	5
3	لأنني أحب الدراسة.	1	2	3	4	5
4	لأنني أستطيع الحصول على فرصة دراسية مجانية.	1	2	3	4	5
5	للحصول على وظيفة أفضل.	1	2	3	4	5
6	لتأسيس أعمال خاصة بي.	1	2	3	4	5
7	لإكمال دراستي العليا (الماجستير والدكتوراه).	1	2	3	4	5
8	للحصول على راتب مرتفع.	1	2	3	4	5
9	لتطوير الذات.	1	2	3	4	5
10	لأكون قادراً على العمل الإبداعي.	1	2	3	4	5
11	لأطبق معرفتي على الوظيفة.	1	2	3	4	5
12	للازدهار والرقي في الوظيفة مستقبلاً.	1	2	3	4	5
13	لأكون مسؤولاً على الآخرين.	1	2	3	4	5
14	للحصول على الضمان المالي.	1	2	3	4	5
15	للحصول على فرص عمل أكثر.	1	2	3	4	5
16	للحصول على مستقبل أفضل.	1	2	3	4	5
17	للعمل في القطاع الحكومي.	1	2	3	4	5
18	لخلق مستوى معيشي أفضل لأولادي.	1	2	3	4	5
19	للمساهمة في تنمية وتطوير البلد.	1	2	3	4	5
20	للحصول على مكانة ووجاهة إجتماعية.	1	2	3	4	5
21	للإحلال بدل الموظفين المهنيين الوافدين (غير العُمانيين)	1	2	3	4	5
22	**أسباب أخرى (إن وجدت يرجى تحديدها) : .....**					

القسم (ج) : ب – تـــوقعـــاتـــك :

8- فيما إذا لـــم تواصل تعليمك العالي ، كم تتوقع أن يكون راتبك الشهري ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

أ-

1	120 - 300 ريال عماني	
2	301 - 400 ريال عماني	
3	401 - 500 ريال عماني	
4	أكثر من 500 ريال عماني	

ب- إفتــرض أنه في حالة إكمالك للثانوية العامة ، قررت إكمال تعليمك العالي ، فكم تتوقع أن يكون راتبك الشهري بعد حصولك على مؤهل تعليم عال ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	400 - 300 ريال عماني	
2	500 - 401 ريال عماني	
3	600 - 501 ريال عماني	
4	أكثر من 600 ريال عماني	

9- إذا كنت ستلتحق بالتعليم العالي ، ففي أي قطاع ترغب أن تعمل بعد الانتهاء من دراستك ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	القطاع الحكومي	
2	القطاع الخاص	
3	الشركات المملوكة من قبل الحكومة	
4	أعمال حرة	
5	العمل خارج السلطنة	

تابع القسم (ج) :

10- في أي من قطاعات العمل التالية تعتقد بأنه يمكن تحقيق أكبر قدر من الفوائد والمزايا ؟

الرجاء إختيار مربع واحد فقط (القطاع الحكومي أو القطاع الخاص أو الشركات المملوكة من قبل الحكومية أو أعمال حرة) مقابل كل ميزة من المزايا السبع التالية وذلك بوضع علامة {✓}

م	المزايا	القطاع الحكومي	القطاع الخاص	الشركات المملوكة من قبل الحكومة	أعمال حرة
1	راتب شهري عالٍ.				
2	مكانة اجتماعية رفيعة.				
3	ساعات عمل جيدة.				
4	فرص الترقية				
5	فرص لإكمال التعليم العالي.				
6	إجازات سنوية جيدة.				
7	ضمانات تقاعد أفضل.				

القسم (د) : برنامج التعليم العالي :

11- الرجاء تحديد البرنامج الدراسي في التعليم العالي الذي تنوي الالتحاق به بعد الثانوية العامة :

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	دبلوم (اقل من 4 سنوات)	
2	درجة جامعية (4 سنوات أو أكثر)	

12- يرجـــى تحديـــد الجهة التي تعتزم مواصلة تعليمك العالي فيها :

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	إحدى مؤسسات التعليم العالي الحكومية في عُمان	
2	إحدى مؤسسات التعليم العالي الخاصة في عُمان	
3	خارج عُمان – في دولة عربية	
4	خارج عُمان – في دولة أجنبية	
5	التعليم عن طريق الانتساب (التعلم عن بعد)	

13- إذا رغبت في مواصلة تعليمك العالي داخل السلطنة ، ما هي المؤسسة التي ترغب الالتحاق بها ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

م	الجهة	
1	جامعة السلطان قابوس	
2	كليات التربية	
3	الكليات التقنية (الكليات الفنية الصناعية سابقاً)	
4	المعاهد الصحية ومعاهد التمريض	
5	كلية الشريعة والقانون	
6	معهد الدراسات المصرفية والمالية	
7	الجامعات والكليات الخاصة	
8	جهات أخرى (أذكرها إن وجدت)	

14- ما هــو التخصـــص الذي ترغـــب مواصـــلة تعليمك العالي فيه ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	آداب	
2	إدارة أعمال وتجارة	
3	اقتصاد	
4	تربية (بما فيها تربية رياضية ، تربية فنية)	
5	تمريض	
6	حاسب آلي (كمبيوتر)	
7	دراسات إسلامية	
8	زراعة	
9	صيدلة	
10	طب	
11	طيران	
12	علوم	
13	علوم عسكرية	
14	قانون	
15	لغات	
16	محاسبة	
17	هندسة	
18	غيرها (إن وجد الرجاء تحديدها)	

القسم (هـــ) : المواقف والاتجاهات النفسية نحو الالتحاق بالتعليم العالي:

سواء كنت ترغب في مواصلة التعليم العالي أم لا الرجاء إكمال هذا القسم من الاستبيان :

15- فيما يلي بعض المواقف السلوكية التي تدور حول العوامل المؤثرة على خطط الطلاب بعد مرحلة الثانوية العامة ، يرجى قراءة كل موقف قراءة دقيقة والإجابة عنها جميعها ، بوضع علامة {✓} في الحقل المعبر عن رأيك.

م	المواقف	1 لا أوافق بشدة	2 لا أوافق	3 غير متأكد	4 موافق	5 موافق بشدة
1	أنا جيد في الأعمال المدرسية.					
2	إن إكمال تعليمي العالي سيساعدني على تطوير قدراتي الشخصية.					
3	تُعد الفوائد المادية من أهم مزايا إكمال التعليم العالي.					
4	الوالدان أو أولياء الأمر لهما تأثير إيجابي على خططي المستقبلية في مواصلة تعليمي العالي.					
5	المواد التي أدرسها في الثانوية العامة تشجعني على مواصلة تعليمي العالي.					
6	يمكنني الحصول على وظيفة جيدة دون شرط حصولي على مؤهل تعليم عالٍ.					
7	لأصدقائي تأثير مباشر على خططي المستقبلية.					
8	وجود موظفين مهنيين غير عُمانيين في سلطنة عُمان يعتبر سبباً محفزاً لي على مواصلة التعليم العالي.					
9	أساتذتي في الثانوية العامة أقنعوني بالالتحاق بالتعليم العالي.					
10	إذا حصلت على مؤهل تعليم عالٍ سوف أجلب الفخر لعائلتي.					
11	أن مؤهل التعليم العالي سوف يفسح لي المجال للحصول على وظيفة جيدة مع راتب مرتفع.					
12	أنا ضعيف المستوى في المدرسة.					
13	التخصص الذي أدرسه في الثانوية العامة (علمي/أدبي) أثر إيجاباً على خططي المستقبلية.					
14	أن مؤهل التعليم العالي سوف يمكنني من المشاركة في تطور المجتمع وتقديم العون إلى الناس.					
15	أصدقائي أثروا عليّ للالتحاق بالتعليم العالي.					
16	أنا حريص حقاً على مواصلة دراستي بعد الثانوية للإحلال بدل الموظفين المهنيين غير العُمانيين.					
17	ظروف سوق العمل (تواجد موظفين محترفين غير عُمانيين) هو أحد الأسباب التي تدفعني على مواصلة تعليمي العالي.					
18	أعتقد أن حصولي على التعليم العالي هو استثمار لمستقبلي.					
19	يرى والديّ أو أولياء أمري أن التعليم العالي يجلب مكانة إجتماعية.					
20	العديد من أصدقائي يكملون تعليمهم العالي.					
21	يشجعني أساتذتي على مواصلة تعليمي العالي.					

22	أعتقد أن لدي القدرة على مواصلة الدراسة على مستوى التعليم العالي.					
23	برأيي الخاص أن مؤهل التعليم العالي يُعد ذو أهمية لتأمين وضعي المالي.					
24	إن نظام التعليم في الثانوية العامة يشجعني للدراسة على مستوى التعليم العالي.					
25	أعتقد أنه بدون تعليم عالٍ من الصعب استبدال الموظفين المهنيين الوافدين (غير العُمانيين).					
26	سيكون لي مكانة جيدة ومحترمة في حالة حصولي على مؤهل تعليم عالي.					
27	أعتقد أنه لدي الاستعداد والمقدرة العقلية لمواصلة التعليم العالي.					
28	أساتذتي لهم تأثير إيجابي على خططي المستقبلية لمواصلة التعليم العالي.					
29	العديد من أصدقائي سوف لن يكملوا تعليمهم العالي.					
30	يجدر بالناس مواصلة تعليمهم العالي لكي يتطوروا كأشخاص.					
31	الطلاب الجيدون دراسياً هم الذين يجب أن يواصلوا تعليمهم العالي.					
32	أعتقد أنه من الجيد وجود عمالة مهنية محترفة غير عُمانية في سوق العمل بسلطنة عُمان.					
33	أرغب في مواصلة تعليمي العالي لتحسين فرص عملي المستقبلية.					
34	يؤكد أساتذتي بإستمرار على أهمية وفائدة التعليم العالي.					
35	يرى والديّ أو أولياء أمري أن الاستثمار في التعليم العالي يضمن لي مستقبل أفضل.					
36	تعليمي العالي سوف يزيد من حظي في الحصول على فرص عمل أفضل.					
37	أنا لست بطالب دؤوب ومثابر.					
38	والديّ أو أولياء أمري لهما تأثير مباشر على خططي المستقبلية.					
39	أرغب بالتأكيد الحصول عل عمل فور تخرجي من التعليم العالي لكي أحصل على المال.					
40	يتحدث أساتذتي عن تجاربهم الجميلة والمثيرة خلال تلقيهم الدراسة في مجال التعليم العالي.					
41	أن التعليم العالي ليس بالضرورة يجلب وجاهة أو مكانة إجتماعية مرموقة.					
42	أعتقد أن طلاب التعليم العالي لا يتمتعون بحياة جميلة أو ملينة بالإثارة.					
43	إن المواد التي أدرسها في الثانوية العامة تؤثر على خططي المستقبلية.					
44	من المرجح أن معظم أصدقائي سيكملون تعليمهم العالي.					
45	إذا لم يذهب عدد كافٍ من الطلاب إلى التعليم العالي فإن وجود الموظفين المهنيين غير العُمانيين سيستمر.					
46	لا يشجعني والديّ أو أولياء أمري على مواصلة التعليم العالي.					
47	أعتقد أن لديّ قدرات عقلية جيدة.					

48	والديّ أو أولياء أمري يؤمنان بالتعليم من أجل التعليم فقط.					
49	أرغب في الالتحاق بالتعليم العالي لامكانية الحصول على فرصة دراسية مجانية.					
50	عائلتي بأجمعها تحفزني على مواصلة تعليمي العالي.					

القسم (و) : معلومات عن أسرتك :

سواء كنت ترغب في مواصلة التعليم العالي أم لا الرجاء كمـال هذا القسم من الاستبيان بإختيار جواباً واحداً لكل سؤال مما يلي :

16- ما عدد أفراد أسرتك ؟ (الأب ، الأم ، الأخوة والأخوات أشقاء وغير أشقاء)
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	أقل من 4 أفراد	
2	من 4 – 8 أفراد	
3	من 9 – 12 فرداً	
4	13 فرداً أو أكثر	

17-ما عدد أخوتك وأخواتك (أشقاء وغير أشقاء) من خريجي التعليم العالي الحاصلون على درجـة الدبلـوم فما فـوق ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	لا يوجد	
2	(1)	
3	(2)	
4	(3)	
5	(4)	
6	(5)	
7	أكثر من (5)	

18-مـا المستـوى التعليمـي لوالدك أو ولـي الأمر ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	غير متعلم	
2	يقرأ ويكتب أو تعليم إبتدائي	
3	بعض التعليم الإعدادي أو الإعدادية العامة	
4	بعض التعليم الثانوي أو الثانوية العامة	
5	كلية (دبلوم)	
6	جامعة (درجة بكالوريوس)	
7	دراسات عليا (ماجستير)	
8	دراسات عليا (دكتوراه)	

19-مـا المستـوى التعليمـي لوالدتـك أو ربة المنزل ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	غير متعلمة	
2	تقرأ وتكتب أو تعليم إبتدائي	
3	بعض التعليم الإعدادي أو الإعدادية العامة	
4	بعض التعليم الثانوي أو الثانوية العامة	
5	كلية (دبلوم)	
6	جامعة (درجة بكالوريوس)	
7	دراسات عليا (ماجستير)	
8	دراسات عليا (دكتوراه)	

20-مـا هـو القطـاع الـذي يعمـل فيـه والدك أو ولـي الأمر ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	القطاع العام (الحكومة)	
2	القطاع الخاص	
3	أعمال حرة	
4	يعمل خارج السلطنة	
5	متقاعد	
6	لا يعمل	

21-ما هو القطاع الذي تعمل فيه والدتك أو ربة المنزل ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	القطاع العام (الحكومة)	
2	القطاع الخاص	
3	أعمال حرة	
4	متقاعدة	
5	لا تعمل (ربة منزل)	

22-ما هي وظيفة والدك أو ولي الأمر ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	**وظيفة مهنية ، فنية أو إدارية** (مثال: طبيب ، مهندس ، طيّار ، مدرس ، ممرض ، فني ، سفير ، مدير ، مدير عام ، عضو مجلس الشورى ، عضو مجلس الدولة ، طالب دراسات عليا ...الخ)	
2	**رجل أعمال** (صاحب أملاك)	
3	**أعمال كتابية** (موظف ، منسق ، طباع ...الخ)	
4	**عامل خدمات** (سائق ، فراش ، عامل ، مراقب عمال ، نجار ، صباغ ، حارس ...الخ)	
5	**الشرطة / الأمن / القوات المسلحة** (الجيش ، الحرس ، البحرية ، سلاح الجو)	
6	**صياد سمك / مزارع**	
7	**متقاعد**	
8	**لا يعمل**	
9	عمل آخر (الرجاء تحديده) :.....	

23-ما هي وظيفة والدتك أو (ربة المنزل) ؟
(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

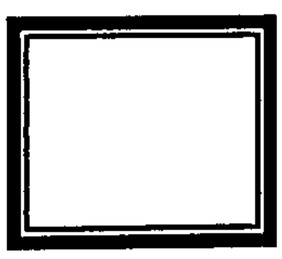
1	**وظيفة مهنية ، فنية أو إدارية** (مثال: طبيبة ، مهندسة ، طيّارة ، مدرّسة ، ممرضة ، فنية سفيرة ، مديرة ، مدير عام ، عضو مجلس الشورى ، عضو مجلس الدولة ، طالبة دراسات عليا ...الخ)	
2	**سيدة أعمال** (صاحبة أملاك)	
3	**أعمال كتابية** (موظفة ، منسقة ، طباعة ...الخ)	
4	**عاملة خدمات** (فراشة، عاملة، مراقبة عمال ... الخ)	
5	**الشرطة / الأمن / القوات المسلحة** (الجيش ، الحرس ، البحرية ، سلاح الجو)	
6	**متقاعدة**	
7	**لا تعمل** (ربة منزل)	
8	عمل آخر (الرجاء تحديده) :	

24- ما هو الدخل الشهري <u>التقديري</u> للأسرة (الأب ، الأم ، الأخوة والأخوات الذين يعملون ويسكنون في نفس المنزل) ؟

(أختر جواباً واحداً فقط بوضع علامة {✓} في المربع)

1	أقل من 100 ريال عُماني	
2	من 100 – 399 ريال عُماني	
3	من 400 – 700 ريال عُماني	
4	من 701 – 1000 ريال عُماني	
5	من 1001 ريال عُماني أو أكثر	

25-الرجاء كتابة مجموع درجاتك الحاصل عليها في الثانوية العامة خلال الفصل الدراسي الأول في المربع المرسوم أدناه:



<u>انتهى الاستبيان ...</u>

شكراً جزيلاً على وقتكم الثمين الذي بذلتموه في الإجابة على هذا الاستبيان. علماً إن إجاباتكم سيكون لها دور كبير ، وستكون ذات نفع وقيمة في هذه الدراسة.

Appendix (5)

Guide for semi-structured interviews with students

A. Interview guide with students who wanted to enter higher education:

(Q1): There are factors which encourage people to enroll in higher education; in your opinion what are these factors?

(Q2) Please put in order the reasons or factors which make you enrol in higher education, given their importance to you?

(Q3) What field do you want to study in your higher education? And why?

(Q4) Where do you intend to pursue your higher education and why?

(Q5) When you graduate from higher education, in what sector do you want to work and why?

B. Interview guide with students who did not want to enter higher education:

(Q1) There are factors which may prevent or discourage people to enrol in higher education; in your opinion what are these factors?

(Q2) When you finish Secondary School Certificate, in what sector do you want to work and why?

Appendix 6a

Letter from the Ministry of Education authorising the researcher to conduct an interview with a decision-maker in Muscat Governorate (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم ص.م.ت.ف ٤٦٠
التاريخ ٢٤ صفر ١٤٢٥ هـ الموافق ١٤/٤/٢٠٠٤

المحترم
الفاضل / مدير عام المديرية العامة للتربية والتعليم بمحافظة مسقط

تحية طيبة وبعد ،،،

الموضوع: تسهيل مهمة باحث

أود إفادتكم بأن الفاضل / سالم بن زويد بن سليم الهاشمي طالب دراسات عليا في جامعة هل بالمملكة المتحدة (بريطانيا) ، يرغب في أن يطرح عليكم عددا من الأسئلة ذات الصلة بالنتائج التي توصل إليها في دراسته حسب ما هو مرفق .

عليه يرجى التكرم التعاون مع الباحث ، وفي حالة وجود أي استفسار يمكنكم التنسيق معه على هاتف رقم (٩٣٨٧١٢٣) .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. ثناء بنت سييل البلوشي
مدير المكتب الفني للدراسات والتطوير

س/٤/٢٠٠٤

Appendix 6b

Letter from the Ministry of Education authorising the researcher to conduct an interview with a decision-maker in Albatinah region (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم: ص م ب ن/ ٤٦٠
التاريخ: ٢٤ صفر ١٤٢٥ هـ الموافق: ١٤/ ٤/ ٢٠٠٤

المحترم
الفاضل / مدير عام المديرية العامة للتربية والتعليم لمنطقة الباطنة جنوب

تحية طيبة وبعد ،،،

الموضوع: تسهيل مهمة باحث

أود إفادتكم بأن الفاضل / سالم بن زويد بن سليم الهاشمي طالب دراسات عليا في جامعة هل بالمملكة المتحدة (بريطانيا) ، يرغب في أن يطرح عليكم عدداً من الأسئلة ذات الصلة بالنتائج التي توصل إليها في دراسته حسب ما هو مرفق .

عليه يرجى التكرم التعاون مع الباحث ، وفي حالة وجود أي استفسار يمكنكم التنسيق معه على هاتف رقم (٩٣٨٧١٢٣) .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د. سناء بنت سيل البلوشي
مدير المكتب الفني للدراسات والتطوير

س/ ٢٠٠٤

Appendix 6c

Letter from the Ministry of Education authorising the researcher to conduct an interview with a decision-maker in Aldahirah region (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم ٤٦٠ /م ت ف/ ٥
التاريخ ١٤ /٤/ ١٤٢٥هـ الموافق

المحترم
الفاضل / مدير عام المديرية العامة للتربية والتعليم لمنطقة الظاهرة جنوب

تحية طيبة وبعد ،،،

الموضوع: تسهيل مهمة باحث

أود إفادتكم بأن الفاضل / سالم بن زويد بن سليم الهاشمي طالب دراسات عليا في جامعة هل بالمملكة المتحدة (بريطانيا) ، يرغب في أن يطرح عليكم عددا من الأسئلة ذات الصلة بالنتائج التي توصل إليها في دراسته حسب ما هو مرفق .

عليه يرجى التكرم التعاون مع الباحث ، وفي حالة وجود أي استفسار يمكنكم التنسيق معه على هاتف رقم (٩٣٨٧١٢٣) .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د . سناء بنت سبيل البلوشي
مدير المكتب الفني للدراسات والتطوير

س/ ٢٠٠٤

Appendix 6d

Letter from the Ministry of Education authorising the researcher to conduct an interview with a decision-maker in Dhofar Governorate (written in Arabic)

سلطنة عمان
وزارة التربية والتعليم
المكتب الفني للدراسات والتطوير

الرقم ..... صم ف ن/ ٤٦
التاريخ ١٤٢٥هـ الموافق ١٤/٤/٢٠٠٤م

الفاضل / مدير عام المديرية العامة للتربية والتعليم بمحافظة ظفار المحترم

تحية طيبة وبعد ،،،

الموضوع: تسهيل مهمة باحث

أود إفادتكم بأن الفاضل / سالم بن زويد بن سليم الهاشمي طالب دراسات عليا في جامعة هل بالمملكة المتحدة (بريطانيا) ، يرغب في أن يطرح عليكم عددا من الأسئلة ذات الصلة بالنتائج التي توصل إليها في دراسته حسب ما هو مرفق .

عليه يرجى التكرم التعاون مع الباحث ، وفي حالة وجود أي استفسار يمكنكم التنسيق معه على هاتف رقم (٩٣٨٧١٢٣) .

شاكرة لكم حسن تعاونكم .

وتفضلوا بقبول فائق الاحترام والتقدير ،،،

د . سناء بنت سيل البلوشي
مدير المكتب الفني للدراسات والتطوير

س/٢٠٠٤