INVESTMENT IN HUMAN CAPITAL

AMONG ADMINISTRATIVE STAFF:

CASE STUDY OF UNIVERSITI UTARA MALAYSIA

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INVESTMENT IN HUMAN CAPITAL AMONG ADMINISTRATIVE STAFF: CASE STUDY OF UNIVERSITI UTARA MALAYSIA

A master project submitted to the Graduate Studies Unit, Academic Affairs Department in partial fulfillment of the requirements for the Degree of Master of Economics,

Universiti Utara Malaysia.

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ABSTRACT

This study examines trends in participation among administrative staff of Universiti Utara Malaysia on investment in human capital. The sample was collected using self-administered questionnaire which collected 100 respondents. The respondent rates are 50% men and 50% women for the admin staff of UUM. The result shows that 15% of the respondents do the investment in human capital. However, relatively the women participation in higher education is higher than the men involvements. Result of regression analysis shows that the investment in human capital relationship with the leisure time is important determination for the decision of investing in human capital. However, comparatively, the significant determination of investment in human capital are varies. One of most important determinants is the income of the respondent with the negative relationship. Another determinants with negative relationship when investing in human capital is the time for caring the children and the time spend to teach other for educational . Other determinants include time spends on watch programs or movies consider as a positive relationship during the decision of investing in human capital. The implication of policy and suggestion are discussed on increase the number of participation on investment in human capital in Universiti Utara Malaysia.

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ABBREVIATION

ANOVA	**Analysis of variance**
d.f.	**Degree of Freedom**
OECD	**Organization for Economic Development**
OLS	**Ordinary Least Square**
R^2	**R square**
Sig.	**Significant**
SPM	**Sijil Pelajaran Malaysia**
SPSS	**Statistical Package for Social Science**
STPM	**Sijil Tinggi Pelajaran Malaysia**
USA	**United State**
USM	**Universiti Sains Malaysia**
UUM	**Universiti Utara Malaysia**
ROI	**Return in Investment**

CHAPTER 1

INTRODUCTION

Human capital studies were began in the late of 1950s and has yielded important research on the return on human capital investment activities (Emily and Gregory, 1997). No country can grow independently. Most nation in world realized that economic is moving fast forward in all countries of nations which operate in a global market environment. Thus, development in human resources is the key to developing any nation to enter the knowledge based economy and global environment. Since human resources are necessary condition for development in a country, heretofore, for sure the human capital play a huge role as it is a generator for all sectors. Hence, this chapter presents a brief knowledge of investment in human capital, education in Malaysia, public sector (administrative) in Malaysia and the leisure time. To begin with the project paper, this chapter demonstrates the problem statement faced by the administrative staff toward investing in human capital, objective and scope of the study, data uses in this study, and lastly the organization of the study.

1.1 Investment in Human Capital

Human capital refers to the stock of competences, knowledge and personality attributes embodied in the ability to perform labor. It is the attributes gained by a worker through education and experience whereby to produce economic value. Therefore, human capital is the set of skills which an employee acquires on the job,

through training and experience, as well in education to increases employee's value in marketplace. According early economic theories, human capital refers to workforce, known as one of three factors of production, and considers it as a fungible resource, homogeneous and easily interchangeable. Smith (1967) defined four type of fixed capital which is characterized as that which affords a revenue or profit without circulating masters. These capitals include the human capital whereby Smith defined it as:

> *"The acquired and useful abilities of all the inhabitants or members of the society. The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. Those talents, as they make a part of his fortune, so do them likewise that of the society to which he belongs. The improved dexterity of a workman may be considered in the same light as a machine or instrument of trade which facilitates and abridges labor, and which, though it costs a certain expense, repays that expense with a profit".*

The development of human capital is an integral component in the economic development of a country. Today's competitive global market environment brings steadily increasing pressure to improve return in investment (ROI). In the push for improvement, an organization's biggest investment and its primary assets are its human capital (Jim Pinto, 2007). Drucker (2007) in an article for Harvard Business Review observed and said that people are their greatest assets. In fact, investment in human capital are strongly suggested and supported by many countries and

government all over the world because human capital are the people which is assets that must be valued, measured, and developed.

More importantly, people are not hard assets that depreciate in value and can be written off but they are dynamic assets that can be increase in value with time. Therefore, people are known as primary assets. For an example, human capital represents the remaining assets of a business after everything else has been eliminated. Furthermore, the systems created to recruit, reward and develop people to form the major part of any company's value whereby it can be more than other assets such as cash, land, plants and equipment, and intellectual property (Pinto, 2007).

On the other hand, human capital is a leading public policy theme in Organization for Economy and Co-operation Development or famously known as OECD countries. Its main reason for the theme is to reduce unemployment and income inequality and to improve productivity as well in economic growth (Jérômo-Forget, 1997). This issue became more reliable when Reich (1990) wrote in Harvard Business Review that a nation's most important competitive asset becomes the skills and cumulative learning of its work force. Robert was then popular and appreciated by the economists since Adam Smith theory of modern human capital trace its origin to the 1960s. Next, the work of Theodore Schultz, Jacob Mincer and Nobel laureate Gary Becker and their theoretical and empirical work on the relationship between human capital investment, such as education, and earnings.

Human capital is likely determinant of economic growth. There is a growing interdisciplinary consensus on the critical importance of the first few years of childhood to the formation of intelligent, well adjusted adult (human capital). Clearly,

human capital must extend far beyond formal education as it's also spans family, social, health, training, and industrial matters. Education does, however, remain at the core of human capital formation. Much of the research in the field of human capital has involved gathering and analyzing data, over many years and across different countries or jurisdictions, to discern what is effective in generating desirable educational outcomes.

1.2 Leisure time

Leisure time or free time is a period of time spent out of work and essential domestic activity. It is also the period of recreational and discretionary time before or after necessary activities such as eating and sleeping, going to work or running a business, attending school and doing homework, household chores, and day to day stress. In sum, leisure is the freedom from time consuming duties, responsibilities, or activities. It is also the amount of time people spend away from work varies significantly across populations and regions. Differences for leisure time exist within the developing world. In developing country populations, mean tend to have significant more leisure time than do women, as the latter spend more time in household labor than do their male counterparts. In developed world, about half of America people's waking hours are free, and European seem to have about the same or slightly less leisure time, while Asian people appear to have a quarter to third of their time for leisure.

Relatively, meaningful leisure means different things in different countries whereby no matter what form is the holidays take, the benefits of leisure time can be

powerful while a simple activities at home can be just as meaningful and satisfying as an exotic vacation.

1.3 Education in Malaysia

Education as a fundamental human right considered very important and strategic for developing the needed human resources. The right to education imposes an obligation upon countries to ensure that all citizens have the opportunities to meet their basic learning needs. Certainly, promoting quality and equity educations is a common policy for many developing countries regardless of their different levels of development. The countries which made education a fundamental right has been marching ahead than the others in economic development. It can be seen as most important factors contributing to social and economic development of any country is education.

People tend to understand and develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value oriented and nation building progress with a purposeful education (Myers and Harbison, 1965; Mingat and Tan, 1986). In conduct, it provides the technical skills needed for the implementation of the country development plan as well as improving the quality of programs. Therefore, the attention to the technical and educational training is necessary requirement for social and economic development in order to improve the level of production. Indeed, The World Bank (2000) acknowledged the important of technical and higher education for countries should not be left behind in a global economy based on knowledge.

Fifty three years, since Malaysia independent in 1957, education in Malaysia can be said has undergone tremendous changes and development during the years. Educations based upon communal needs is a diverse and fragmented system which has evolved into a cohesive national education system, national aspirations responded, economic progressed and transforming its philosophy with technological developments and stay focus over the years (Ministry of Education Malaysia, 2001).

Vision 2020 initiated in the early 1990s may be perceived as Malaysia's first step into the information age and a globalised world. As an effect to enable Malaysia make a quantum leap towards an industrialized nation status and eventually into a knowledge economy, as the country needs to build a world class education system dedicated to producing a world class workforce. This national aspiration is reflected in the mission statement of the ministry of education. Thus, Malaysia believes that education plays a vital roles in achieving the country's vision of attaining the status of fully developed nation in term of economic development, social justice and spiritual, moral and ethical strength, towards creating a society that is united, democratic, liberal and dynamic (Ministry of Education Malaysia, 2001).

1.4 Public Sector in Malaysia

The public sector is that portion of society controlled by national, state or provincial, and local governments. The Malaysia public service formerly known as the Malayan Civil Service (MCS) has assumed a significant key role in the economic and social development of the country (Chief Secretary of Malaysia, 2010). The public service in Malaysia continuously played an important role in the years following independent

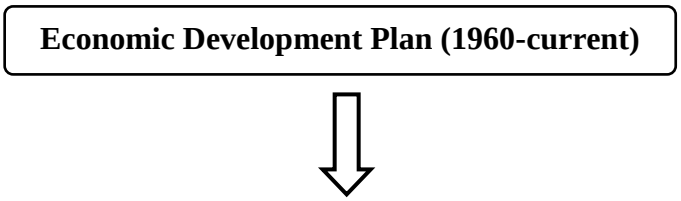
as it has a strong implementation in the economic growth as well other sectors. Through the difficulties following the earlier years after independence such as Emergency, the troubles in the 1969, and accommodating the needs of racial diversity of population, the public service has been the steady guiding hand planning, maintaining, and executing government policies and programs aimed at achieving economic growth and social equity in the nation's journey towards development and modernization.

In fact, the public service has a strong role in policies introduces and implemented in the industrial, agricultural and social sectors through the various 5 year plans and the New Economic Policy introduces in 1970 which helped maintain the balance between rural and industrial development, provided the impetus for further economic growth while managing the social implications of an ethnically diverse nation (Chief Secretary of Malaysia, 2010).

As Malaysia progresses significantly towards a developed nation 2020, there are high regards to its people and has special emphasis on human development aspect. In the Malaysian Business Council, the Honourable, Tun Dr Mahathir Mohamad quoted that:

> *"in our drive to move vigorously ahead nothing is more important than the development of human resource. Previous experience in last two decades, the government has acknowledge that the most important resource of any nation must be the talent, skills, creatively and the will of its people."*

Figure 1.1: Economic Development Plan of Malaysia



1st Phase (1956-1970)	2nd Phase (1971-1990)	3rd Phase (1991-current)
1st Malaysia Plan (1956-1960) *rural development 2nd Malaysia Plan (1961-1965) *DEB: solution to the Racial economy 1st Malaysia Plan (1966-1970) *economic, social & people development	**2nd Malaysia Plan** (1971-1975) * to eradicate poverty level **3rd Malaysia Plan** (1976-1980) * restricting the society, create employment **4th Malaysia Plan** (1981-1985) * heavy industry, capital investment, high tech and privatization **5th Malaysia Plan** (1986-1985) * industrialization, research and innovation	**6th, 7th, 8th, 9th Malaysia Plan** is a continuous from previous plans. **Current** *Vision 2020 - to develop nation *1Malaysia Concept -to achieve the vision 2020 *Four core pillars 1. People first, performance now (people needs) 2. Government Transformation Program (talent, skill) 3. New Economic Model (high income nation)- 10th Malaysia Plan 4. Privatization and globalization economic transformation Plan (2010)- Budget 2011

Source: Ministry of Malaysia, 2011

Based on Figure 1.1, our country's mission to achieve Vision 2020 can seen so encourage as the motive all base on the way to four pillars. "People first and performance now" which means our public sector must be ready to lead the

transformation process in all level of services. Thus, human capital in public sector much important as other sector and the investment on it should bring growth not only to the person them self but also to the country and involve sector.

1.5 Problem Statement

Although it is obvious that people acquire useful skills and knowledge, it is not obvious that these skills and knowledge are a form of capital, that this capital is in substantial part a product of deliberate investment, that it has grown in Western societies at a much faster rate than conventional (nonhuman) capital, and that its growth may well be the most distinctive feature of the economic system. It has been widely observed that increases in national output have been large compared with the increases of land, man hours, and physical reproducible capital. Investment in human capital is probably the major explanation for this difference. Economists have long known that people are an important part of the wealth of nations. Measured by what labor contributes to output, the productive capacity of human beings is now vastly larger than all other forms of wealth taken together. What economists have not stressed is the simple truth that people invest in their self and that these investments are very large.

Therefore, the issue here, does citizen especially administrative staff in Universiti Utara Malaysia (UUM) tend to invest their self for better educational level as it will increase not only their knowledge and academic quality but also lead to increases in salary and better position in the place they work in the future. It is as committed in Tenth Malaysia Plan (2011-2015). This plan mentioned that the quality

of the nation's human capital will be the most critical element in the achievement of the National Mission, and thus human capital development will be holistic; encompassing the acquisition of knowledge and skills or intellectual capital including science and technology (S & T) and entrepreneurial capabilities as well as the internalization of positive and progressive attitudes, values and ethics through education, training and lifelong learning.

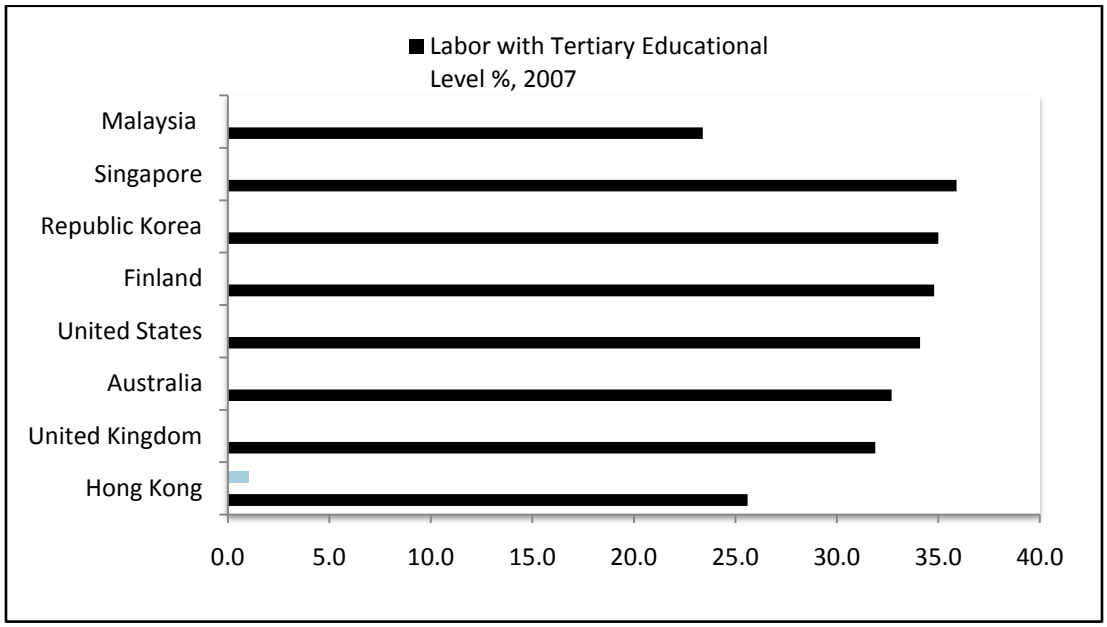
Another problem that is going to be concern in this study is the leisure time that performs by admin staff who works in Universiti Utara Malaysia. Leisure consider as the timing should emphasize by all the population no matter what kind of work they are involving. Quality leisure enforcement leads to better employee in work place and a better family member in the home. But does it still bring the same person in same quality during his or her replacement of leisure time to the education? What are the effect of the person who involve in process of academic while working going to be as he or she own a family that consist of wife or husband, the children and also the caring to their old folks at home?

Besides that, staff daily working hours which only take 8 hours each day leave 16 hours of leisure time. Thus leisure time allocation of each individual become a question as investment in human capital should be consider for nowadays live. Thus, this study explore the time allocation of administrative staff either they invest or not investing in human capital.

The education status of population especially nowadays, become in lower level even there are government and private academic center offers to further the higher education. This is because the facilities offered are not known by the

individual who interested or perhaps less promotion on the part of further education with proper. For instant, in University Utara Malaysia, the staff will be offered of discount price of 50 percent to 70 percent for the fees of the courses they take for further study in UUM. Thus, if the administrative staff chooses to do the investment in human capital especially in UUM, there will be no difficulties for them to travel and trouble of academic problem, but is there people do investment in UUM?

Figure 1.2: Percentage of Labor by the Tertiary Educational Level for the year 2007



Source: Teeth Malaysia Plan 2011-2015 (Academic Statistic World, Economic Intelligence Agency, International Labor Foundation and Korea International Labor Foundation, Singapore Ministry of Manpower, US Bureau of Labor Statistics)

The case involving Malaysia education population in 2007 whereby seen in the table 1.1. Table 1.1 shows the labor with tertiary educational level in the year of 2007 for human capital with the average OECD 27.4%. From the table, it is seen that percentage of labor with tertiary education in Malaysia is the lowest compared to the

other countries such Malaysia neighbor Singapore, Hong Kong, Republic Korea, Finland, United States, United Kingdom and Australia. The highest number of labor by tertiary educational level is Singapore and next is the Republic Korea, followed by Finland and United States. Then, before Malaysia are Australia, United Kingdom and Hong Kong. Even Singapore is a small country compared to others but its encouragement in investing in human capital is higher and thus, this country known as with high human capital.

1.6 Objective of the Study

The general objective of this study is to analysis the involvement of administrative staff in UUM of their leisure and investment in human capital which this study consist of 100 respondents. The specific objectives of this study are as follow:

a) To investigate the determinants of investment among administrative staff;

b) To identify time of leisure allocation by administrative staff for the decision of investment

1.7 Scope of the Study

This study focuses on the investment in human capital by administrative staff. The location of the study took place in University Utara Malaysia. There are 100 respondents from different department such as staff from undergraduate unit, postgraduate unit, computer center office, library office, University film office unit, faculty office, registration and record unit, and also staff from student affair department. This study include all the ages of staff as investment in human capital

can be done in any age and the leisure needed for all kind of ages. This study also focuses on single person compared to married person as their willingness to spend leisure time to invest in human capital. Married person with child compared to married person without child as they have different expenses to spend among the household member. Other than that, male and female contribution in labor market may survive different life style in their home management and also educational attractiveness. Each person in study tends to have amenability toward their couples, childcare, and the parent's care which are factor to their involvement in any field of work and investment.

1.8 Data of the study

Information for this study is collected from each respondent by questionnaires. This questionnaire consists of five parts. First part represents respondents' demography information such as gender, age, marriage status and etc. Second part is the time allocation and the leisure time spent by the respondents each day. Third part questioning investment in human capital and the next part is the question regards respondents' perception in doing household among different gender and the equality. The last part as the supporting question is about couple, children and the parent's demography. Other data sources include Tenth and Ninth Malaysia's Plan and also data regressions by Statistical Package for the Social Sciences (SPSS).

1.9 Organization of the study

The outline of this study start with the chapter one whereby the introduction on the investment in human capital, education in Malaysia, and public sector in Malaysia. Next chapter provides a review of the existing literatures by theoretically and empirically which relevant to investment in human capital. Chapter three present the data and methodology of the study whereas describe the theoretical consideration and the data source. Chapter four will show the result and last chapter is the discussion of the research.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the previous studies, involving the leisure time and investment in human capital. Generally, a literature review is an account of what has been published on a topic by accredited scholars and researchers. Thus, this chapter is organized to two sections. First at all, this part will touch the theoretical and concept of investment in human capital and also leisure time. Second part is the literature review on the empirical studies of investment in human capital and leisure time.

2.1 Theoretical and Concept

This part of literature is to review on the part of theoretical on investment in human capital and leisure time which is study in this paper.

2.1.1 Human Capital

Name of human capital theory called by the economist as it is education and training effects to the labor market. The essence of human capital theory is that expenditure on education and training are investments individuals make in themselves to increase their market skills, productivity, and earnings. In explaining earnings differentials, therefore, human capital theory focuses on individual differences in years of schooling and length of on-the-job training, and the factors that cause some

individuals to invest in more human capital than others do (Kaufman & Hotchkiss, 2006).

The role of human capital formation in the growth process has been extensively analyses in the literature. According to the theoretical literature, human capital would affect economic growth in two ways. First, human capital directly participates in production as a productive factor and the accumulation of capital directly generates output growth. This is the so-called level effect. Second, human capital can contribute to raising technical progress through increased innovation, diffusion and adoption of new technologies. From this indirect channel, human capital influences growth through increases in productivity (Mankiw, 1992)

Observed that human capital as when any expensive machine is erected, the extraordinary work to be performed by it before it is worn out, must be expected. Then, it will be replace the capital laid out by it with least the ordinary profits. A man educated at the expense of much labor and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those expensive machines. The work which he learns to perform, it must be expected, over and above the usual wages of common labor, will replace to him the whole expense of his education, with at least the ordinary profits of an equally valuable capital (Smith, 1976).

Nevertheless, human capital is the activity that entails a cost in the current period and raises productivity in the future which can be analyses within the framework of investment theory. With respect to human beings, a number of

activities that individuals undertake fit this conception of an investment; education, training, migration, health care, and job search are examples (Becker, 1975).

2.1.1.1 Investment in Human Capital

Investment in human capital depends on the decision of each individual in labor market. To make the decision more concrete, attention focuses on one particular type of human capital investment which is whether or not do the investment in human capital. From a human capital perspective, the decision depends on the monetary benefits relative to the costs. The costs here for investment are two types. The first is the direct cost or out-of-pocket cost, which includes payments for tuition, books and other fees. The second type of cost for investing in human capital is the opportunity cost, the earning received by high school graduate that college student could also be making. And the monetary benefits are the benefits obtained only in the future for the investment in human capital (Kaufman & Hotchkiss, 2006).

2.1.2 Leisure Time

Leisure is the remainder of time used for all other activities while work is all hours devoted to a paying job. Leisure is used in a very broad sense to cover non market activities as diverse as watching a movie, going to school, or working in the home. Meanwhile, for simplicity, since there is fixed biological needs for sleeping, eating and so on, thus, there are fixed needs of 68 hours per week for leisure. Hence, in a week, there are 100 hours is remain to work and other choices of activities to be

made. According to the theory of leisure choice, there are three possible uses of time: market work, non market work, and leisure (Kaufman & Hotchkiss, 2006).

2.2 Empirical

This part of literature is to review on the part of empirical on investment in human capital and leisure time which is study in this paper.

2.2.1 Human Capital

The study of human capital began in the USA in the late 1950s and has yielded important research on the rates of return to schooling, on-the-job training and other human capital investment activities (Emily and Gregory 1997). Human resources development is a key to developing any nation to enter the knowledge-based economy and global environment. Many nations have realized that the world is moving fast forward in which all countries of nations operate in a global market environment. No country can grow independently. The convergent effects of globalization, the rising important of knowledge which serves as a principal driver of growth coupled with the information and communication technology revolution have brought unavoidable challenges to all nations.

Education as a fundamental human right is considered very important and strategic for developing the needed human resources. The right to education imposes an obligation upon countries to ensure that all children and citizens have opportunities to meet their basic learning needs. Promoting quality and equity education is a common policy for many developing countries regardless of their different levels of

development. The countries which made education a fundamental right has been marching ahead than the others in economic development. One of the most important factors contributing to social and economic development of any country is education. Purposeful education enables the individual to understand and study the real life situation and to develop an opportunity for creating confidence in the minds of younger generation, and provide a strong base for rational and value oriented and nation building progress (Myers and Harbison, 1965; Mingat and Tan,1986) It provides the technical skills needed for the implementation of the country development plan as well as improving the quality of programmes. Therefore attention to technical and educational training is necessary requirement for social and economic development in order to improve the level of production. The World Bank (2000) acknowledged the importance of technical and higher education for countries not to be left behind in a global economy based on knowledge.

Human resources are necessary condition for development. Development is a broad term which is always associated with change whereby changes in desirable and positive direction. Development as a special case of change in development is brought about not only by the availability of passive entities, such as natural resources and material capital, but by human resources which are the active agents of change and bring about production of physical resources (Donald, 1969). For the achievement of political, social and economic goals in a society, development is a necessary condition. The wealth of a nation depends ultimately on the productive skills and the levels of education of its people. Education is here in seen as a panacea

for development, which in increasing human capital will lead to other developmental gains (Muller, 2004).

Education is often regarded as an investment in human capital, which in turn raises the productivity of the labor force. Though productivity is determined by a host of other factors, persistent gaps in female-male educational attainments may partly explain the gender differences in employment participation (Aminah. A, 2009).

Human capital investments include schooling, on-the-job-training (OJT), routine medical exams, healthy diets, etc.-in other words, anything that can help increase worker productivity. Schooling is a unique type of investment in that it affects not only current day consumption but also future earnings potential as well. Individuals choose to invest in schooling until their marginal rate of return equals their discounting rate of interest. More practically speaking, they operate in such a way so as to maximize their expected (discounted) future earnings stream. Social and intellectual interest in income disparities, primarily stemming from differing schooling levels, has generated an enormous amount of attention across disciplines (Tracy, Ronald, & Galen, 2003).

In its effort towards shifting to knowledge based economy, Malaysia's main responsibility lies with the development of human and intellectual capital to produce adequate supply of, support and sustain a flexible, agile, and mobile workforce with relevant knowledge and skills. One important if not the most important variable of human capital is education and training which can be measured in several ways including expenditure on education and training, years of schooling, number in enrolment and level of education of the labor force. Government expenditure on

education and training as a representative of human capital variable is significantly related to economic growth variable represented by Growth Domestic Product (Ismail and Jajri, 1998).

There is a relationship between the amount of investment in human capital to improve the level of schooling and training, medical services and childcare; and the quality of the workforce which ultimately contributes towards economic progress within a country. Economists often regard expenditures on education and medical care as investments in human capital. The term "human capital" is used because people cannot be separated from their knowledge, skills or health in the way they can be separated from their financial and tangible assets (Becker, 1993). Human capital investments are of wide ranging interest because they can be used to explain income disparities across people, over space, and over time (Becker, 1962).

2.2.2 Leisure Time

Most of labor, doesn't not matter either they work as office staff, professional staff, agency staff, commission staff, academic staff, or any other style of work, they tend to ignore the leisure time as to perform very well in their job to ensure their current income and also the future development in their income and life settlement. Throughout history the amount of time spent at working has never consistently been much greater than that spend at other activities. Even a work of eight hours a day for five days and four to five hour on weekend still leaves half the total time for sleeping, eating, and other activities. As said by Alberto Alsenia (2005), people may have a

more society wide influence on leisure patterns because of a social multiplier where the returns to leisure increase will lead more people to take longer vacations.

The issue how women's leisure valued is compared to men's? Henderson's (1990) indicates that women tend to have leisure that consists of activities near or at the home because it can be infused with household chores and because few opportunities for leisure exist outside the home. Kane (1990) argued that many women consume within the family and home context based upon the assumption that women tend to define themselves in terms of human relationships (Gilligan, 1982). Many researchers such as Allison and Duncan 1987; Chambers 1986; and Shank 1986 found that the leisure of the dual career women is largely associated with family environments, particularly children. Henderson (1996) notes that meanings of women's leisure means women tend to use the home as the primary place and means for leisure. Shaw (1994) said: "women fear violence outside as well as inside the home, which may also restrict leisure choices". In cases where nontraditionally female leisure opportunities do exist outside the home, they have often been offered in such a way as to not interfere with household responsibilities. In this case, leisure itself can be seen as problematic or constraining, as it reinforces gender appropriateness (Shaw 1994).

Plus, desire for leisure among working men is more of a motivator than it is for working women because working women must contend with housework first (Henderson, 1996). Firestone and Shelton's (1994) work on the "double day" shows that paid work affects women's non domestic leisure more than it does men's, but the opposite was true for the impact of paid labor on domestic leisure. Women, in this

case, had more domestic leisure time because they combined it with household chores.

2.3 Conclusion

From the previous studies, many important factors on determining the decision on investing in human capital can be identify. Among these factors are family conflict or encouragement; income and financial; marital status; life style; and leisure measurement. Investment in human capital especially nowadays is relatively very important and encouraging all over the world. Thus, it is very important to know the level of staff joining in investing in human capital as they are the most important economic growth. Hence, this project paper aims to determinant the decision on investing in human capital by the administrative staff in UUM.

CHAPTER 3

DATA AND RESEARCH METHODOLOGY

Data and research methodology are discussed in this chapter. This chapter presents the sampling design and model specification of this project paper. In particularly, this chapter had focused on how the detail and questionnaire been collected. Indeed, it is also to identify the research methodology to examine the model of this paper.

3.1 Data

This part consist of sampling design which introduce the target of the population to be examine, kind of sampling been choose to be used and the advantages of using questionnaire survey method.

3.1.1 Target

Target populations for this study were all administrative staff in Universiti Utara Malaysia (UUM) which compiled from various departments in Universiti Utara Malaysia. The departments include office of postgraduate studies and undergraduate studies, register office for faculties, office of College Arts and Sciences, office for College of Business, office of academic affairs department, library administrative office and; the unit admission, records and campaigns office.

3.1.2 Sampling Method

In University Utara Malaysia, there is more than 1,700 administrative staff who with the status of permanent, contract, borrowed or part timer staff. Thus, the sampling frame for conducting the principal component analysis focuses on a convenience sample of group which 100 respondents chosen from the population of administrative staff in UUM to be the candidate. They are 50 men and 50 women with the mixing status of job as there are permanent, contract and part timer staff and the borrow staff are not involve as the data gained. Even there is also staff of academic but as the project entitle of administrative staff, hence, focus on administrative staff is preferred.

Convenience is a type of sampling that is non-random sampling whereby involves using results that are readily available. This sample had been chooses as it is most suitable with the title which concentrate on administrative staff of Universiti Utara Malaysia. Thus, data collected shows that data examined consist of 93 permanent, 3 contract and 4 part time staff. It is means that a total of 100 staff from 1 757 administrative staff of UUM, Kedah.

Table 3.1: Status Job of Administrative Staff in UUM

Job Status	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Permanent	93	93	93	93
Contract	3	3	3	96
Part time	4	4	4	100
Total	100	100	100	

N=100

3.1.3 Data Collection Method

In this paper, survey method using questionnaire was selected as a method to collect the data. Accordingly, this method has been choosing as it has several advantages (Milne, 1999) as following:

a) Survey is relatively cheaper.

b) We can decide any question to ask to the respondent whereby survey is more flexibility as it can be administered by questionnaire, interview, telephone, oral survey and etc.

c) Survey is very useful when we want to describe about characteristic in a large or a specific number of population.

3.1.4 Questionnaire

Questionnaire for this paper are divided into five sections. Whereby asking about the administrative staffs demography, time consuming, investment in human capital, perception on doing household, and the information of respondent families demography.

3.1.5 Data Collection Process

A total of 130 questionnaires were distributed to the administrative staffs of Universiti Utara Malaysia. Ideally, 50 questionnaires for male staffs and another 50 questionnaires were for the female staffs. Then, another 30 questionnaire distributed as well to balance the result which will be getting as the examination only need 50 males and 50 females. This is because usually there are more women in

administrative department than the men, thus, more questionnaires supplied as the backup of result.

3.2 Pilot Test

This part discussed about the questionnaires for the project paper which will be examined. By that, there are exposure of the pilot test that been done for confirmation of questionnaires. Accordingly, the modification from the pilot test also included in this part.

3.2.1 Questionnaires

The questionnaires were administered to ten administrative staffs as a pilot test. The main objective of this pilot test is to ensure that the questionnaires are readable and practical. Since the questionnaires were distributed to the admin staff, thus, the questionnaire prepared in English as it is best media language that suits the project paper. It is expected that UUM staffs should not have any problem to understand and answering the questionnaires in English Language.

3.2.2 Result from Pilot Test

Results from the pilot test enhance to the modification of the questions and also the language of the questionnaire to easier the respondent's wants'.

3.2.2.1 Modified

After the pilot test, a few questions were improved. Questions part B, about time consuming by the respondents were change from table type

questionnaires to scale type as respondent much familiar with scale type of questionnaires (Appendix 1).

3.2.2.2 Language for Questionnaire

It is found that most of the staffs have problem to understand the questionnaire as in English. Thus, for better way, the questionnaire has been changed to Malay language and distributed to the staffs. Hence, soon get the response from respondent whereby they consider the language is clear and easy to answer (Appendix 1).

3.3 Research Methodology

Research methodology of this part includes the modeling for the investment and non investment. Whereby, both investment and non investment will be the dependent variable while rest other will show as the independent variable.

3.3.1 Investment in Human Capital

Model of the investment are as following:

$$Inv = \beta_0 + \beta_{1i}\, Edu_i + \beta_{2i}\, Sjb_i + \beta_{3i}\, Inc_i + \beta_{4i}\, Mar_i + \beta_{5i}\, Ccf_i + \beta_{6i}\, Bgs_i + \beta_{7i}\, Ted_i + \beta_{8i}\, Pra_i + \beta_{9i}\, Tnf_i + \beta_{10i}\, Pcr_i + \beta_{11i}\, Spo_i + \beta_{12}\, Tvc_i + \beta_{13i}\, Onl_i + \beta_{14i}\, Edo_i + \beta_{15i}\, Sim_i + \beta_{16}\, Vdo_i + \beta_{17i}\, Iwh_i + \beta_{18i}\, Spl_i + \beta_{19i}\, Rec_i + \beta_{20i}\, Nur_i + e_i \quad \ldots(1)$$

Whereby,

Inv = Investment among administrative staff in UUM

Edu_i = Education

Sjb_i = Status of job

Inc_i = Income

Mar_i = Marital status

Ccf_i = Caring for the children and family members

Bgs_i = Buy goods and services

Ted_i = Eating and drinking

Pra_i = Praying or religious activities

Tnf_i = Spending time with non family members

Pcr_i = Personal cares

Spo_i = Sports and recreation

Tvc_i = Television program or DVD movies or cinema

Onl_i = Online/ chatting/ net surfing

Edo_i = Educational to others

Sim_i = Self improvement

Vdo_i = Video/ computer games

Iwh_i = Income of the wife/ husband

Spl_i = Support parent's living cost

Rec_i = Received help from others to take care of the children

Nur_i = Send the children to nursing house

e_i = Error term

3.3.2 Non Investment in Human Capital

Model of the non investment are as following:

$$NInv = \beta_0 + \beta_{1i} Edu_i + \beta_{2i} Sjb_i + \beta_{3i} Inc_i + \beta_{4i} Mar_i + \beta_{5i} Ccf_i + \beta_{6i} Bgs_i + \beta_{7i} Ted_i + \beta_{8i} Pra_i + \beta_{9i} Tnf_i + \beta_{10i} Pcr_i + \beta_{11i} Spo_i + \beta_{12} Tvc_i + \beta_{13i} Onl_i + \beta_{14i} Edo_i + \beta_{15i} Sim_i + \beta_{16} Vdo_i + \beta_{17i} Iwh_i + \beta_{18i} Spl_i + \beta_{19i} Rec_i + \beta_{20i} Nur_i + e_i \ldots.(2)$$

Whereby,

NInv = Investment among administrative staff in UUM

Edu_i = Education

Sjb_i = Status of job

Inc_i = Income

Mar_i = Marital status

Ccf_i = Caring for the children and family members

Bgs_i = Buy goods and services

Ted_i = Eating and drinking

Pra_i = Praying or religious activities

Tnf_i = Spending time with non family members

Pcr_i = Personal cares

Spo_i = Sports and recreation

Tvc_i = Television program or DVD movies or cinema

Onl_i = Online/ chatting/ net surfing

Edo_i = Educational to others

Sim_i = Self improvement

Vdo_i = Video/ computer games

Iwh_i = Income of the wife/ husband

Spl_i = Support parent's living cost

Rec_i = Received help from others to take care of the children

Nur_i = Send the children to nursing house

e_i = Error term

Table 3.2: Independent Variables

Independent Variables	Definition	Measurement
Education	Status of education of admin staff (current level of education)	Nominal scale: 1.SPM 2.STPM/Matriculation 3.Diploma/Certificate 4.Degree
Status of job	Status of job of each admin staff in UUM	Nominal Scale: 1.Permanent 2.Contract 3.Part time 4.Temporary/Borrowed
Income	Admin staff income per month in Ringgit Malaysia (RM).	Ordinal Scale: 1 to 6 with 1.being '<1000' 2.being '1001-1500' 3.being '1501-2000' 4.being '2001-2500' 5.being '2501-3000' 6.being '>3000'
Marital status	Marital status of admin staff (currently)	Nominal Scale: 1.Single 2.Married 3.Widow/widower 4.Others
Caring for children/family	Time of admin staff spend on caring the children/ family needs per day	Ordinal Scale: 1 to 8 with 1.being '0 hour' 2.being '1/2 hours'

		3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Buy goods and services	Time admin staff spend to buy goods and services for them self and also for the families per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Eating and drinking	Leisure time which spend on eating and drinking by the admin staff per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Praying and religious activities	Leisure time which admin staff spend on praying and religious activities per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Spending with non family members	Leisure time which admin staff spend with the non family members like	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’

	friends, colleagues and etc per day	3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Personal cares	Leisure time which admin staff spend on them self to care their health, beauties and etc per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Sport and recreation	Leisure time which admin staff spend with sports and recreation per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Television program ,DVD movies or cinema	Leisure time which admin staff spend to watch movies or media programs per day	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’ 2.being ‘1/2 hours’ 3.being ‘1 hour’ 4.being ‘1 ½ hours’ 5.being ‘2 hours’ 6.being ‘2 ½ hours’ 7.being ‘3 hours’ 8. being ‘>3 hours’
Online/chatting/internet surfing	Leisure time which admin staff spend to net surfing,	Ordinal Scale: 1 to 8 with 1.being ‘0 hour’

	chatting and etc per day	2.being '1/2 hours' 3.being '1 hour' 4.being '1 ½ hours' 5.being '2 hours' 6.being '2 ½ hours' 7.being '3 hours' 8. being '>3 hours'
Educational for others	Leisure time which admin staff spend to teach others for the educational such as give tuition to own children or siblings per day	Ordinal Scale: 1 to 8 with 1.being '0 hour' 2.being '1/2 hours' 3.being '1 hour' 4.being '1 ½ hours' 5.being '2 hours' 6.being '2 ½ hours' 7.being '3 hours' 8. being '>3 hours'
Self improvement	Leisure time which admin staff spend on improving their self, such as go for language repairing class, cooking class and so on per day	Ordinal Scale: 1 to 8 with 1.being '0 hour' 2.being '1/2 hours' 3.being '1 hour' 4.being '1 ½ hours' 5.being '2 hours' 6.being '2 ½ hours' 7.being '3 hours' 8. being '>3 hours'
Video/computer games	Leisure time which admin staff spend to play game in video or computer as an interest or spending time per day	Ordinal Scale: 1 to 8 with 1.being '0 hour' 2.being '1/2 hours' 3.being '1 hour' 4.being '1 ½ hours' 5.being '2 hours' 6.being '2 ½ hours' 7.being '3 hours' 8. being '>3 hours'
Income of wife/husband	Admin staff's wife's or husband's income per	Ordinal Scale: 1 to 6 with 1.being '<1000'

	month in Ringgit Malaysia (RM)	2.being '1001-1500' 3.being '1501-2000' 4.being '2001-2500' 5.being '2501-3000' 6.being '>3000'
Support parent's living cost	Admin staff's cost to support their parent's living per month	Direct measurement with ratio scale
Received help from other to take care of the children	Admin staff received help from family member, relative or neighbor, or maybe friends to take care of the children with no costing	Nominal Scale: 1.No 2.Yes
Send children to nursing house	Admin staff tend to send their children to the nursing or childcare houses during working hour with a cost of payment	Nominal Scale: 1.No 2.Yes

The detailed measurements are as provided in the questionnaire (Appendix 1).

3.4 Conclusion

This chapter presents the data and research methodology for the model of this paper. Data of the frame work had discussed about the population and the sampling been used in this project paper. Thus, the self administered questionnaire been choose as the best method to collect the data.

CHAPTER 4

RESULT

Result of descriptive statistics is discussed in this chapter. The chapter presents the administrative staffs' investment in human capital and their spending of time on leisure. Statistic analysis describes the characteristic of sample and leisure time; correlation between leisure time and the continuous variable. Next, result from the modeling of this paper whereby involves the investment and also non investment presented.

4.1 Analysis Statistic

This part of result consist of the socio-demographic characteristics and investment which shown in table 4.1. Another topic is the correlation between leisure time and continuous socio-demographic variables whereby can be refer to table 4.2

4.1.1 Socio-Demographic Characteristics and Investment

This part is to discuss the result of socio-demographic characteristic during the investment in human capital by the administrative staff in UUM. Mean of investment by the category of socio-demographic characteristic shows in the table 4.1. It is also represent standard deviation of the administrative staff in investing human capital. The characteristic divided into four categories which is gender, marital status, education and the job status.

Based on the gender, there are 50% is male and 50% is female. Investment between male and female are not much different as the mean for male is 0.1000 while for female is 0.2000. Then, the standard deviation for the male is 0.3031 while for female is 0.4041. This result tends to be as shown in table because the female administrative staff dominated in UUM for administrative position than the male staff.

Next, the marital status which is in four types and the first is the single people are 20%, married are total of 78%, and the widow in this research are 2%. Thus, from the result shows that the most of the staff are married and having family. Mean for single status is 0.1000 while for married is 0.1667 but for widow the investment is constant when the marital status is equal to widow as it is been omitted.

Table 4.1: Characteristic of Sample during Administrative staff on Investment

Characteristic	Percentage (%)	Investment	
		Mean	**Standard Deviation**
1.Gender: Male	50	0.1000	0.3031
Female	50	0.2000	0.4041
2. Marital status: Single	20	0.1000	0.3078
Married	78	0.1667	0.3751
Widow	2	Investment is constant when marital status = widow. It has been omitted.	
3. Education: SPM	55	0.0545	0.2292
	11	0.0909	0.3015
STPM/Matriculation	10	0.4000	0.5164
Diploma/Certificate	24	0.2917	0.4643
Degree			
4. Job status: Permanent	93	0.1505	0.3595
Contract	3	Investment is constant when job status = contract. It has been omitted.	
Part time	4	0.2500	0.5000

N=100

Status education of administrative staff can be categories into Malaysian certificate of education (SPM), Malaysia higher school certificate (STPM) or Matriculation, Diploma or Certificate and level of degree. Each of the status of education consist of 55%, 11%, 10%, 24% whereby most of the candidate of the survey had studied until level of SPM and till in such level of education. Mean for SPM is 0.0545 while for STPM or Matriculation is 0.0909, and for Diploma or Certificate is 0.4000 but for Degree is 0.2917. Further, the standard deviation for the SPM leavers staff is 0.2292, for STPM or Matriculation is 0.3015, and for the Diploma or Certificate Holder is 0.5164 while for the Degree studied staff is 0.4643.

Then, the job status of the administrative staff in UUM either they are permanent, contract or part timer. Percentages of each status are as 93, 3, and 4. Here, the result of characteristic point out that most of the staff is permanent. Therefore, the mean and standard deviation for the permanent staff is 0.1505 and 0.3595. Contract staff facing the mean and standard deviation determinant as investment to be constant when the job status is equal to contract whereby it is been omitted. Job status of part time consists of mean 0.2500 and standard deviation is 0.5000.

4.1.2 Correlation Between leisure time and continuous socio-demographic variables

This part of discussion id to present the result of the correlation between leisure time and the continuous socio-demography variables in investing human capital by the admin staff of UUM. Table 4.2 shows the mean and standard deviation of the continuous variables of socio-demographic for the investment and also for the non

investment in human capital. There are twenty three item of independent variables been correlated to determinant the signification of the independent variables. Based on the table, there are six independent variables are the correlation significant to the model.

Table 4.2 Continuous Variable of Socio-Demography and the Correlation

Independent Variables	**Mean**	**Standard Deviation**	**Correlation**	
			investment	**Non Investment**
Age	**35.98**	**7.366**	**-0.205 ***	**0.205 ***
Duration of service	**12.38**	**8.532**	**-0.255 ***	**0.255 ***
Income	3.56	1.585	0.321	-0.321
Hour of working	41.32	4.890	0.013	-0.013
Hour of part time working	10.70	27.960	-0.156	0.156
Sleeping time	6.54	1.573	0.159	-0.159
Office work after office hour	1.29	2.056	0.018	-0.018
Households	3.82	2.376	0.068	-0.068
Caring for the children/ family	3.97	2.158	-0.046	0.046
Buy goods and services	**4.05**	**1.850**	**-0.240 ***	**0.240 ***
Spending time for eating and drinking	2.50	1.829	-0.054	0.054
Praying and religious activities	3.18	1.956	0.033	-0.033
Spending time with the family member	2.57	2.271	-0.056	0.056
Personal cares	2.05	1.654	-0.047	0.047
Sports and recreation	1.88	1.665	-0.015	0.015
Watching television program/DVD/ cinema	**2.87**	**2.183**	**0.029****	**-0.029****
Online/chatting/internet surfing	2.11	2.008	-0.063	0.063
Education for others	2.83	2.000	0.008	-0.008
Self improvement	**1.62**	**1.973**	**0.324****	**-0.324****
Video/computer games	1.34	1.771	-0.049	0.049
Income of the wife/husband	3.86	1.872	0.085	-0.085
Support parent's living cost	1.34	0.476	-0.006	0.006
Quantity of children	3.14	1.493	-0.196	0.196

Notes:

**, * is the correlation significant at 0.01 and 0.05 level respectively.

N=100

The significant independent variables includes age, service duration, income, time for buy goods and services, time spend to watch television program/ DVD/ cinema and self improvement of the respondent.

Using correlation, the mean of the age of respondent is 35.98 while its standard deviation is 7.366. Moreover, correlation shows that this variable has significant relationship with the investment. Whereby, the value of correlation for age is at 0.205 with negative relationship. Next, the service duration of the administrative staffs, the mean is 12.38 and the standard deviation is 8.532. The correlation significant level for this independent variable is 0.255 whereby has a negative relationship.

Income which is a very important independent variable for respondent of admin staffs. Income has the mean at 3.56 and its standard deviation is 1.585. As the relationship of this variable to the dependent variable is positive, thus, the significant level is at 0.321 respectively. Then, the time which respondent spend time for buy goods and services identify mean at 4.05 and 1.850 as the standard deviation. The significant level of correlation for the buy goods and services is at 0.24 with a negative relationship.

Fifth, the time respondent spend to watch television program/ DVD/ cinema shows mean at 2.97 and 2.183 as standard deviation. Thus, the relationship of this independent variable toward investment is positive at 0.291 significant levels. Lastly, the self improvement of this model has the mean at 1.62 and standard deviation 1.973. The relationship between self improvement and the investment is positive at significant level of 0.324.

Subsequently, the mean and the standard deviation for the non investment in human capital is same as the investment as both using the same kind of independent variables. But, the correlation significant level of each significant independent variable is different. Thus, correlation for the age shows that variable has significant relationship with the investment. Whereby, the value of correlation for age is at 0.205 with positive relationship. Next, the service duration of the administrative staffs with correlation significant level for this independent variable is 0.255 whereby has a positive relationship.

Income, independent variable for respondent of admin staffs with the relationship of variable to the dependent variable is negative, thus, the significant level is at 0.321 respectively. Then, the time which respondent spend time for buy goods and services identify the significant level of correlation for the buy goods and services is at 0.24 with a positive relationship.

The time respondent spends to watch television program/ DVD/ cinema shows the relationship of this independent variable toward investment is negative at 0.291 significant levels. Last but not least, self improvement of this model has the negative relationship between the investments at significant level of 0.324.

4.2 Modeling

The result of multiple regression model (OLS) are discussed in this chapter. Since the model is examined by two ways as investment and non investment, thus both known as dependent variable for the research and each with independent variables which is significant and the result of the R square gained in this section.

4.2.1 Investment in Human Capital

A result of multiple regression achieve with consider the Heteroscedasticity-robust standard errors. Thus, this result is by sort out the errors may occur. Hence, the value of R square for the model of decision in investment is 0.6999 which means implies of 69.99 percent of the proportion dependent variability in investment can be explained by the estimated multiple regression model of independent variables. Thus, the estimated multiple regression models are fits into data statistically.

In this model, dependent variable is the investment among administrative staffs in University Utara Malaysia. Provided the independent variables are education, status of job, income, marital status, caring for the children or family, buy goods and services, spending time for eating and drinking, praying or religious activities, spending time with the non family members, personal cares, sports and recreation, watching television or DVD or cinema, online or chatting or net surfing, educational for others, self improvement, video or computer games, income of the wife or husband, supporting parent's living cost, receive others help to take care of children, and send children to nursing house. Therefore, the model of investment in human capital generated as:

$$Inv = 1.0905 - 0.09967\ Inc_i - 0.0756\ Ccf_i + 0.07377\ Tvd_i - 0.0570\ Edo + 0.7182 \ldots\ldots\ldots (1')$$

Based on table 4.2, the significant independent variables been determine according to the model of investment among administrative staff in Universiti Utara Malaysia.

There are four item out of twenty independent variables are significant to model with the level of respectively 1%, 5% and 10%.

The status of income for admin staffs in UUM is significant statistically between investments at 0.00565 which the hypothesis of no relationship between investment and income of admin staffs is rejected at 1% significant level. Here, means that the decision to invest in human capital tend to reduce the level of income to be use at RM0.099. The relationship of income toward investment is negative as income will be decrease in consuming for own utility because some of the income will be use to do the investment of human capital

Next, the hypothesis of no relationship between investment and caring for the children and family members of admin staffs is rejected at 5% significant level. Therefore, statistic signification for the time whereby administrative staffs spend to take care of their children and family members is 0.05421. Investing in human capital by the administrative staffs lead to decreases the time spend to take care of the children and the family respectively as the decision to invest tend to reduce time for 0.0755 hours.

As the significant level of watching television program or DVD or cinema toward involves in investment of human capital is 0.00436. Thus, hypothesis of no relationship between investment and watching television program or DVD or cinema of admin staffs is rejected at 1% significant level. There are positive relationship between investment and spending time in watching television program or DVD or cinema. The decision to do the investment in human capital lead to increases the time spend on watching television programs or DVD or cinema at 0.0737 hours.

Table 4.3: Multiple Regression Model with *Heteroscedasticity-robust Standard Error* for investment in human capital

Independent Variables	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**
Education	0.0175	0.0514	0.3400	0.7353
Job Status	-0.2997	0.3030	-0.989	0.3274
Income	**-0.0997**	**0.0345**	**-2.8896**	**0.0056*** **
Marital status	-0.0208	0.1862	-0.1115	0.9117
Caring for the children/ family	**-0.0756**	**0.0383**	**-1.9706**	**0.0542***
Buy goods and services	-0.0504	0.0395	-1.2783	0.2069
Eating and drinking	0.0535	0.0337	1.5847	0.1192
Praying and religious activities	0.0090	0.0269	0.3349	0.7391
Spending time- non family member	-0.0238	0.0318	-0.7500	0.4567
Personal cares	0.0108	0.0357	0.3011	0.7645
Sports and recreation	-0.0254	0.0375	-0.6759	0.5021
Television program/DVD/ cinema	**0.0738**	**0.0247**	**2.9840**	**0.0044*** **
Online/chatting/internet surfing	0.0131	0.0346	0.3793	0.7060
Education for others	**-0.0570**	**0.0266**	**-2.1363**	**0.0374** **
Self improvement	0.0303	0.0312	0.9691	0.3370
Video/computer games	0.0108	0.0272	0.3980	0.6922
Income of the wife/husband	0.0490	0.0349	1.4011	0.1672
Support parent's living cost	-0.1338	0.1142	-1.1715	0.2468
Received help from others to take care the children	-0.1019	0.1944	-0.5244	0.6022
Send child to nursing house	0.1090	0.0932	1.1689	0.2478

Notes:
***, **, * represent significant at 1%, 5% and 10% level respectively
N=100

Then, the hypothesis of no relationship between investment and educational for teach others by admin staffs is rejected at 5% significant level. Therefore, statistic signification for the time whereby administrative staffs spend to educational for teach others is 0.03747. Investing in human capital by the administrative staffs lead to deceases the time spend to educational for teach others respectively as the decision to invest tend to reduce time for 0.057 hours.

4.2.2 Non Investment in Human Capital

A result of multiple regression achieve with consider the Heteroscedasticity-robust standard errors. Thus, this result is by sort out the errors may occur. Hence, the value of R square for the model of non investment is 0.6999 which means implies of 69.99 percent of the proportion dependent variability in non investment can be explained by the estimated multiple regression model of independent variables. Thus, the estimated multiple regression models are fits into data statistically.

In this model, dependent variable is the investment among administrative staffs in University Utara Malaysia. Provided the independent variables are education, status of job, income, sleeping time, household, caring for the children or family, buy goods and services, spending time for eating and drinking, praying or religious activities, spending time with the non family members, personal cares, sports and recreation, watching television or DVD or cinema, online or chatting or net surfing, educational for others, self improvement, video or computer games, income of the wife or husband, supporting parent's living cost, quantity of children, receive others

help to take care of children, and send children to childcare houses, others activities. Therefore, the model of non investment in human capital generated as:

$$NInv = -0.0905 + 0.09967\ Inc_i + 0.0756\ Ccf_i - 0.07377\ Tvd_i - 0.0570\ Edo + 0.7182\ldots\ldots\ldots (2')$$

Based on table 4.4, the significant independent variables been determine according to the model of non investment among administrative staff in Universiti Utara Malaysia. There are four out of twenty independent variables are significant to model with the level of 1% and 5% respectively.

The status of income for admin staffs in UUM is significant statistically between investments at 0.00565 which the hypothesis of no relationship between non investment and income of admin staffs is rejected at 1% significant level. Here, means that the decision to invest in human capital tend to increase the level of income to be use at RM0.099. The relationship of income toward no investment is positive as income will be increase in consuming for own utility because some of the income are not use for the investment of human capital

Next, the hypothesis of no relationship between investment and caring for the children and family members of admin staffs is rejected at 5% significant level. Therefore, statistic signification for the time whereby administrative staffs spend to take care of their children and family members is 0.05421. Not investing in human capital by the administrative staffs lead to increase the time spend to take care of the children and the family respectively as the decision to invest tend to increase the time for 0.0755 hours.

Table 4.4: Multiple Regression Model with *Heteroscedasticity-robust Standard Error* for Non Investment in Human Capital

Independent Variables	**Coefficient**	**Std. Error**	**t-ratio**	**p-value**
Education	-0.0174	0.0513	-0.3400	0.7352
Job Status	0.2997	0.3030	0.9890	0.3273
Income	**0.0997**	**0.0344**	**2.8896**	**0.0057*** **
Marital status	0.0208	0.1862	0.1115	0.9116
Caring for the children/ family	**0.0756**	**0.0383**	**1.9706**	**0.0542***
Buy goods and services	0.0504	0.0395	1.2783	0.2069
Eating and drinking	-0.0535	0.0337	-1.5847	0.1192
Praying and religious activities	-0.0090	0.0269	-0.3349	0.7390
Spending time with non family member	0.0239	0.0318	0.7500	0.4566
Personal cares	-0.0107	0.0357	-0.3011	0.7645
Sports and recreation	0.0253	0.0375	0.6759	0.5021
Television program/DVD/ cinema	**-0.0737**	**0.0247**	**-2.9840**	**0.0043*** **
Online/chatting/internet surfing	-0.0131	0.0346	-0.3793	0.7060
Education for others	**0.0570**	**0.0267**	**2.1363**	**0.0374** **
Self improvement	-0.030313	0.0312	-0.9691	0.3370
Video/computer games	-0.0108366	0.0272	-0.3980	0.6923
Income of the wife/husband	-0.0489726	0.0349	-1.4011	0.1672
Support parent's living cost	0.13381	0.1142	1.1715	0.2469
Received help from others to take care the children	0.101971	0.1944	0.5244	0.6022
Send child to nursing house	-0.108987	0.0932	-1.1689	0.2479

Notes:
***, **, * represent significant at 1%, 5% and 10% level respectively
N=100

As the significant level of watching television program or DVD or cinema toward involves in investment of human capital is 0.00436. Thus, hypothesis of no relationship between investment and watching television program or DVD or cinema of admin staffs is rejected at 1% significant level. There are negative relationship between non investment and spending time in watching television program or DVD

or cinema. The decision not investing in human capital lead to decreases the time of spend on watching television programs or DVD or cinema at 0.0737 hours

Then, the hypothesis of no relationship between investment and educational for teach others by admin staffs is rejected at 5% significant level. Therefore, statistic signification for the time whereby administrative staffs spend to educational for teach others is 0.03747. Not investing in human capital by the administrative staffs lead to increases of the time spend to educational for teach others respectively as the decision to invest tend to increase the time for 0.057 hours.

4.3 Conclusion

In sum, this chapter had briefly shows the result of the research according its analysis statistic and modeling of the case. The result of the characteristic of the sample of research contributed the percentages of respondent and their mean and standard deviation which this only consist of non continuous variables. Meanwhile that, the correlation of the leisure time and the continuous variables been correlated in such way to identify the significant variables for the model. From the result of modeling in this chapter, the main purpose is to identify and get the most significant variables which the R square plays a very important roles to recognize either the model proportion dependent variability is explained by the estimated multiple regression model of independent variables and it's fitness to fit the data statistically.

Yet, from the data, the independent variable which is significant to the investment and non investment model is same. The independent variable include the income, caring for the children and families, time on watching television program or

DVD or cinema and spending time on educational for others. As a conclusion, the respondent examined shows that the leisure time will be sacrifice for investing is not much as most of the leisure time activities like sleeping, praying, personal cares, sports and so on are not affected even there are investment decision by the administrative staff.

Other than that, people who do the investment no need to afraid of the cost of the education as the result also shows that income of partner is not significant to the decision of investment in human capital by the admin staff. Furthermore, respondent till able to support their parent's living cost and send their children to the nursing house either they are investing or not investing in human capital. Thus, the administrative staffs are strongly recommended to do the investment in human capital as sort by the government in Malaysia Plan.

CHAPTER 5

DISCUSION

Individuals educate themselves for a number of reasons. One is personal satisfaction: education as consumption good. However, since Becker (1964) and Schultz (1961) introduced the concept of human capital in the 1960s, education has mainly been seen as an investment. Education increases the stock of skills and productive knowledge embodied in people, and is thus considered to be an investment in human capital. It is concluded that education is a very profitable investment. It is common knowledge that people from better-educated and wealthier families occupied the larger proportion at the highest levels of education, and this challenges the fairness and efficiency of public subsidies for education, in particular for students who attempt the tertiary school.

5.1 Human Capital

This study had found the determinant for the investment in human capital by administrative staff in UUM. The determinant of independent variables for the dependent variables of investment and non investment in human capital are both same. Most important determinant which will be having changes when a decision of investment took place is the income of respondents, caring for the children, the time spends on watch movies and the time spends to teach other in education.

Income has a negative relationship to the decision of investing in human capital as investing in expenses to the respondent. Whereby that expenditure on education and training are investments individuals make in themselves to increase their market skills, productivity, and earnings. However, the decision to the expenses of education is based on the cost and benefits to do investment in human capital. This is because the investment in human capital today will be raises productivity and the income in the future. Indeed, the negative relationship because respondent have to sacrifice or spend their income in the present for investing in human capital with the hope of gaining profit or benefit in the future.

Other than that, another determinant is the time respondent spends to caring their children. This independent variable also has a negative relationship to the decision of investing in human capital. Thus, respondent has to sacrifice the time for their children as to do the investment in human capital. This is because, educational involve need space of time for the learning. As a reward, the respondent will gain the profit of the investment in the future, which emphasizes them to spend more time with their children, and at the same time better finance level achieve to support the family living cost.

Moreover, respondent and most of the person who are working usually have a limited time in a day to spend with their families. As a proof, married staff from the study shows that they have a greater responsibility than the staff who is not married toward their family and their leisure activities. It is because respondent need more time to managing the household, especially to educate their children. Typically, from the study, staffs are busier with careers or in studying (investment in human capital),

thus, does not have a lot of time to spend on educate the children as usual. Such cases enhance most of the people to have a family planning which consider to not producing more children, so that the child they have would get a full attention and better cares. At the same time, this issue likely encourages the parent's (staffs) to send their children to a boarding school to get a better education without worries.

Time to watch movies become more attracted to the person who involves in the higher education or investment in human capital as they much more relaxing in front of television programs or movies to entertain their self while avoid the tenses of study. Positive relationship to the movies if the decision of investing in human capital believed is a correct sign of approaching into the investing. Besides entertainment, actually watching television programs tend to help the staff continuously do learning in get more knowledge. For instant, knowledge of current development issues such as news of economic, sports, and social, also about the political reports in the news. Religious knowledge through the forum of religion, program of documentary and so on. Here, to be said that knowledge not only can be derived from a reading but also can be gain from watching television program.

Investor of human capital feel better to study for their self than spend time to teach other for educational as their own result much more important as it is and investment of long term. Even there is no time to teach the children, the respondents usually have the choice to send their children to the tuition center for the extra educational. This happen as usually people who is parent's and do investing human capital would have a limited time in their daily life. Accordingly, responsibilities of a

married staff are weighted than a single staff as no consideration on childcare involvement.

While the respondent need more time to handle the household, particularly to educate their children. However, the busier life with the careers and education lead the staff to do not have much time to educate their children as should be done in the position of parent's. Hence, this brings to the decrease of population in the number of each family of staff. The main motive is to concern the child in the hand as good as can to produce a better investment of family member. To give a proper education and a well bring up to the children, staffs prefer to send their children to the extra classes rather than leave them without education caring.

Determinant for the investment in human capital involving the income of respondents, caring for the children, the time spends on watch movies and the time spends to teach other in education. However, changes in the workplace and demography of the employees have made studying the relationship between work and family more important (Aminah A, 1998). Thus, as shown in result, most respondent do not attempt to do the investment even it is a long term profitable because most of them give priority for their own family. The first objective to determinant of investment among admin staff in UUM achieved.

5.2 Leisure time

Leisure time can be measure by its length and quality for each individual of respondent. Length of leisure time can be determinant in two ways. According to the investment and non investment in human capital which there is statistically

significant sub independent variables identified. Length of the leisure time is the time taken by the respondent includes the one involves in investment not invest in human capital. Time allocation of respondent is very important especially they choose to do the investment in human capital. This is because, after minus all the fixed need time for an individual for week, there is 100 hour remaining. And assume that working hours 44 per week, means there are still have 66 hour of leisure time per week. Consider there is balance of around 9 hour of leisure time to spend for each day by a respondent if there is no investment in human capital.

Allocation of time of respondents in between the decision on investment in human capital is almost same as only the little time of three activities affected such as the time to care the children, time to watch movies and programs, and the time spend to teach educational for others. However, one of the commonly measured forms of work-family conflict is time-based conflict, defined as that occurs when the amount of time devoted to one role makes it difficult to fulfil the requirement of another role (Greenhaus & Beutell, 1985). Thus, respondent role as a worker and as family person already heavy to carry which mean the investment do not take place or the role of student as it may become a burden to the respondent as most of the respondent choose to not invest in human capital. Hence, second objective to identify the time leisure allocation by the admin staff also been achieved.

5.3 Decision to an investment

Education and training may provide positive production externalities especially to the individual to improve not only their own productivity but also those of the less

educated individual with whom they work. But, the existence of high rates of private return to the education and training provides and incentive for individuals to invest in human capital. However, the benefits of education and training may not be restricted to the individual, but could spill over to others as well so that the gains to the economy as a whole could exceed the return obtained by the individual in human capital (private return). When justifying public support for education or training, the distinction between the private and social return becomes crucial.

5.4 Conclusion

Education is often regarded as an investment in human capital, which in turn raises the productivity of the labor force. Though productivity is determined by a host of other factors, persistent gaps in educational attainments may partly explain the differences in employment participation. The human capital theory suggests that education and employment are the two most important determinants of individual earnings in that equalization of education and employment opportunities tends to equalize individual earnings (Becker, 1993). A possible explanation for this association is that although education is not very productivity enhancing in itself since substantial learning of work skills occurs at work place, it acts as a useful sorting or screening device for employers. For example, those with education have demonstrated their ability to conform to standards, be punctual and be conscientious. Although the use of education as a screening device for employment may partially imply greater employment opportunities for males and females, it may not do so entirely. Increased education may make confident in seeking employment, increase

their abilities to search for employment and present themselves well in seeking employment. The human capital theory would then anticipate that employers would value these qualities.

Overall the trend in the participation of women in education was very encouraging since the percentages of females in the different levels of education and income were in the higher than that of males. Since most of the independent variables are not significant to the investment and non investment, thus, most of the variables will not effect if respondent choose to be on invest in human capital. And the eight independent variables are significant is showing a small amount influence if invest in human capital. It can be said that it is normal and would not bring to any negative effect to the family relationship. Hence, public staffs should enhance to do investment in human capital as it is mostly supported by the government and encourage by worldwide education society.

5.5 Suggestion

Investment decision in human capital is assumed to depend on the anticipated benefits of education, anticipated cost of education, and the expected duration of time for the reception of benefit. Therefore, how much to invest in education is one of the most important economic decisions that individuals and policy maker have to face (Sanroman, 2006).

Measuring the impact of education and training shows several problems that arise when trying to estimate the true causal effect of education on individual earnings. The most discussed of these is the issue of whether the higher earnings that

are observed for better educated by their higher education or whether individuals with greater earning capacity and ability choose to acquire more education.

This project is not free from the constraints as the study uses the OLS models which are some disadvantages. This is because of the data used in the study were a linear data. To the future study on this topic, recommended model of Odered Logit as this model using the type data of cross section (Wooldridge, 2009).

Plus, this study uses sample group of data from UUM administrative staff and none other public servant are related to the study. Thus, this study proposed in the future to be taking of the many major departments in the government to be studied. At the same time, the sample of the study should consist of varies information such as different ethnic involvement, staff from different state, and so on.

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APPENDIX 1

UNIVERSITI UTARA MALAYSIA

COLLEGE OF ART AND SCIENCE

Survey Form

This survey form design as a study needs for the project paper

of the Master of Economic entitiled:

"Investment in Human Capital
for Administrative Staffs
in the Universiti Utara Malaysia"

I'm greatly appreciated for your kindly cooperation on the information provided.
Thank you

☺ ☺ ☺

By: Ambigah a/p Sandran (806399)
Program: Master of Economics
College: CAS

PART A: DEMOGRAPHY (PERSONAL INFORMATION)

Please complete the following questions by ticking [√] or fill in the blank space provided.

a) Gender

1. Male	[	]	2. Female	[	]

b) Age ..... Years

c) Marital Status

1. Single	[	]	2. Married	[	]
3. Widow/er	[	]	4. Others	[	]

d) Race

1. Malay	[	]	2. Chinese	[	]
3. Indian	[	]	4. Others	[	]

e) Education Status

1. SPM	[	]	2. STPM/Matriculation	[	]
3. Diploma/Certificate	[	]	4. Degree	[	]

f) Duration of service in UUM so far: **.....** Years

g) Name the position now taken up in UUM

.....

(State Full Name of the Position and Summary of calls, ie Assistant Manager [AS])

h) Service Status

1. Permanent	[	]	2. Contract	[	]
3. Part time	[	]	4. Temporary	[	]

i) Income per Month

1. below 1000	[	]	2. 1001-1500	[	]
3. 1501-2000	[	]	4. 2001-2500	[	]
5. 2501-3000	[	]	6. 3000 above	[	]

PART B: TIME CONSUMING

Please complete the following questions by ticking [√] or fill in the blank space provided.

a) The number of hours worked for UUM - (per week): ..... Hours
(Including overtime hours, if paid, i.e. 44jam)

b) The number of hours worked not for UUM - (per week): ..... Hours
(Including part-time employment, private business / partner / family, if paid, i.e. 20jam)

c) The distance taken to travel one way from home to work: ..... km

d) The time taken to travel one way from home to work: ..... minutes

e) The number of hours of sleep each day: ..... hours

** Answer of this section should be based on the 24-hour day (including working hours and after work). Mark [√] for the relevant answers on questions provided.*

f) Make the office work at home after work

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

g) Household (i.e. cleaning, preparing meals, washing and ironing clothes)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

h) caring for the children/families (health / education / transportation)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

i) Buying goods and services (self/ family members / children)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

j) Total time spent eating and drinking

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

k) Participate in religious / prayer

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

l) Spending time with non family members (friends / acquaintances)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

m) Personal care (barber / body massage / skin care body, etc.)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

n) Sports or recreation (gym / aerobic / ball game / kayak, etc.)

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

o) Watching television programs / CD / DVD / cinema

0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

p) Navigating the internet site ("chat" / air "email", etc.)
0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

q) Making learning activities (teaching the child / nephew / brother / younger brother)
0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

r) Improve the performance of the self (i.e. English language, cooking classes)
0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

s) Video / computers / internet games
0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

t) Other activities, state.....
0 hr [ ] ½ hrs [ ] 1 hrs [ ] 1 ½ hrs [ ]
2 hrs [ ] 2 ½ hrs [ ] 3 hrs [ ] > 3 hrs [ ]

PART C: INVESTMENT IN HUMAN CAPITAL
Please complete the following questions by ticking [√] or fill in the blank space provided.

a) Human capital (Current)
1. Not continue study [ ] to be continue in part I
2. Continues study [ ]

Part I: (choose THREE MOST ACCURATE answer in the order, i.e. 1, 2, 3)
b) Reason not further study
1. Family, time, pair's constraints, [ ]
2. Not interested, no need [ ]
3. Not eligible [ ]
4. Satisfied with the current level of life [ ]
5. Requirements housework / child care / parent [ ]
6. Involved performance of own business / partner / family [ ]
7. Part Time work [ ]

Please go to Section D: Perceptions of working households

Bahagian II:
c) status
1. Part time [ ]
2. Full time [ ]

d) Studies informatin

1.Education level is being followed (i.e. Certificates, diploma)
....

2. Pursued a course of study (i.e. management, economics)
.....

3. Duration of study (i.e. 4 years)
..... Years

4. Location or institution (i.e. UUM, USM)
.....

5. Total fees per semester
RM .....

6. other relevant cost for study
RM .....

Bahagian D: Perception on household

Please complete the following questions by ticking [√] or fill in the blank space provided.

a) Equality in homework between women and men

1. Not fair [ ] ***(sila ke soalan b)***
2. Fair [ ] ***(sila ke soalan d)***

b) The highest participation

1. Male [ ]
2. Female [ ]

c) The reason (choose the ONE best answer)

1. Responsibility of women [ ]
2. Such family upbringing [ ]
3. Habit [ ]
4. Responsibilities have been distributed since the beginning of [ ]

d) Taking maid for homework

1. No [ ] 2. Yes [ ]

e) If yes, state the cost of maid (per month): RM .....

Part E: Partners / Family / Children

a) Income of wife/husband per month (RM)

1. below 1000 [ ] 2. 1001-1500 [ ]
3. 1501-2000 [ ] 4. 2001-2500 [ ]
5. 2501-3000 [ ] 6. 3000 and above [ ]

b) Have to support parent's living cost

1. No [ ] 2. Yes [ ]

c) Total Funding per month for parents of RM .....
(Including meals, drinks, medical care costs and compensatory)

Questions c and d are including children, stepchildren and adopted children

d) Total of childred .....
e) Number of your dependent children under .....
f) Average cost per month for a child aged 0-6 years RM.....
g) Average cost per month for a child aged 7-12 years, RM .....
h) Average cost per month for children over the age of 12 years RM .....
i) Receiving member / non-family members to keep the child without payment

1. No [ ] 2. Yes [ ]

j) Sending a child to pay nursing home

1. No [ ] 2. Yes [ ]

THANK YOU

APPENDIX 2

Model 1: OLS, using observations 1-100 (n = 72)
Missing or incomplete observations dropped: 28
Dependent variable: Dinvest
Heteroskedasticity-robust standard errors, variant HC1

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
const	1,09052	0,718222	1,5184	0,13510	
statusJOb	-0,299662	0,303008	-0,9890	0,32735	
income	-0,0996689	0,0344921	-2,8896	0,00565	***
education	0,0174723	0,0513896	0,3400	0,73525	
caringForChildr	-0,0755537	0,03834	-1,9706	0,05421	*
buyGoodAndServi	-0,0504354	0,0394543	-1,2783	0,20692	
eatDrink	0,0534763	0,0337445	1,5847	0,11921	
religiousOrPray	0,00900719	0,0268939	0,3349	0,73906	
spendTimeWithNo	-0,0238276	0,0317686	-0,7500	0,45668	
personalCares	0,0107642	0,0357441	0,3011	0,76453	
sportOrRecreati	-0,0253636	0,0375242	-0,6759	0,50214	
tvCdDvdCinema	0,0737682	0,0247211	2,9840	0,00436	***
onlineChattingE	0,0131324	0,0346244	0,3793	0,70605	
educationalForO	-0,0570024	0,0266824	-2,1363	0,03747	**
selfImprovement	0,030313	0,0312797	0,9691	0,33707	
VideoGame	0,0108366	0,0272267	0,3980	0,69228	
supportParentLi	-0,13381	0,114223	-1,1715	0,24685	
ReceivingHelpOf	-0,101971	0,194437	-0,5244	0,60224	
SendToChildcare	0,108987	0,0932363	1,1689	0,24786	
marriageStatus	-0,0207681	0,186245	-0,1115	0,91165	
incomeWifeHusba	0,0489726	0,0349532	1,4011	0,16724	

Mean dependent var	0,138889	S.D. dependent var	0,348257
Sum squared resid	2,583528	S.E. of regression	0,225072
R-squared	0,699977	Adjusted R-squared	0,582321
F(20, 51)	7,843389	P-value(F)	1,49e-09
Log-likelihood	17,62680	Akaike criterion	6,746408
Schwarz criterion	54,55640	Hannan-Quinn	25,77971

APPENDIX 3

Model 2: OLS, using observations 1-100 (n = 72)
Missing or incomplete observations dropped: 28
Dependent variable: DNotinvest
Heteroskedasticity-robust standard errors, variant HC1

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
const	-0,0905215	0,718222	-0,1260	0,90020	
marriageStatus	0,0207681	0,186245	0,1115	0,91165	
statusJOb	0,299662	0,303008	0,9890	0,32735	
income	0,0996689	0,0344921	2,8896	0,00565	***
caringForChildr	0,0755537	0,03834	1,9706	0,05421	*
buyGoodAndServi	0,0504354	0,0394543	1,2783	0,20692	
eatDrink	-0,0534763	0,0337445	-1,5847	0,11921	
religiousOrPray	-0,00900719	0,0268939	-0,3349	0,73906	
spendTimeWithNo	0,0238276	0,0317686	0,7500	0,45668	
personalCares	-0,0107642	0,0357441	-0,3011	0,76453	
sportOrRecreati	0,0253636	0,0375242	0,6759	0,50214	
tvCdDvdCinema	-0,0737682	0,0247211	-2,9840	0,00436	***
onlineChattingE	-0,0131324	0,0346244	-0,3793	0,70605	
educationalForO	0,0570024	0,0266824	2,1363	0,03747	**
selfImprovement	-0,030313	0,0312797	-0,9691	0,33707	
VideoGame	-0,0108366	0,0272267	-0,3980	0,69228	
incomeWifeHusba	-0,0489726	0,0349532	-1,4011	0,16724	
supportParentLi	0,13381	0,114223	1,1715	0,24685	
ReceivingHelpOf	0,101971	0,194437	0,5244	0,60224	
SendToChildcare	-0,108987	0,0932363	-1,1689	0,24786	
education	-0,0174723	0,0513896	-0,3400	0,73525	

Mean dependent var	0,861111	S.D. dependent var	0,348257
Sum squared resid	2,583528	S.E. of regression	0,225072
R-squared	0,699977	Adjusted R-squared	0,582321
F(20, 51)	7,843389	P-value(F)	1,49e-09
Log-likelihood	17,62680	Akaike criterion	6,746408
Schwarz criterion	54,55640	Hannan-Quinn	25,77971

APPENDIX 4

Mean and Standard Deviation for Investment in Human Capital

	Gender			Statistic	Std. Error
Dinvest	male	Mean		.1000	.04286
		95% Confidence Interval for Mean	Lower Bound	.0139	
			Upper Bound	.1861	
		5% Trimmed Mean		.0556	
		Median		.0000	
		Variance		.092	
		Std. Deviation		.30305	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		2.750	.337
		Kurtosis		5.792	.662
	female	Mean		.2000	.05714
		95% Confidence Interval for Mean	Lower Bound	.0852	
			Upper Bound	.3148	
		5% Trimmed Mean		.1667	
		Median		.0000	
		Variance		.163	
		Std. Deviation		.40406	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		1.547	.337
		Kurtosis		.407	.662

	marriageStatus			Statistic	Std. Error
Dinvest	single	Mean		.1000	.06882
		95% Confidence Interval for Mean	Lower Bound	-.0441	
			Upper Bound	.2441	
		5% Trimmed Mean		.0556	
		Median		.0000	
		Variance		.095	
		Std. Deviation		.30779	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		2.888	.512
		Kurtosis		7.037	.992
	married	Mean		.1667	.04247
		95% Confidence Interval for Mean	Lower Bound	.0821	
			Upper Bound	.2512	
		5% Trimmed Mean		.1296	
		Median		.0000	
		Variance		.141	
		Std. Deviation		.37509	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		1.824	.272
		Kurtosis		1.362	.538

a. Dinvest is constant when marriageStatus = widow. It has been omitted.

	education			Statistic	Std. Error
Dinvest	spm	Mean		.0545	.03090
		95% Confidence Interval for Mean	Lower Bound	-.0074	
			Upper Bound	.1165	
		5% Trimmed Mean		.0051	
		Median		.0000	
		Variance		.053	
		Std. Deviation		.22918	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		4.034	.322
		Kurtosis		14.811	.634
	stpm/matrikulasi	Mean		.0909	.09091
		95% Confidence Interval for Mean	Lower Bound	-.1116	
			Upper Bound	.2935	
		5% Trimmed Mean		.0455	
		Median		.0000	
		Variance		.091	
		Std. Deviation		.30151	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		3.317	.661
		Kurtosis		11.000	1.279

			.4000	.16330
diploma/certificate	Mean			
	95% Confidence Interval for Mean	Lower Bound	.0306	
		Upper Bound	.7694	
	5% Trimmed Mean		.3889	
	Median		.0000	
	Variance		.267	
	Std. Deviation		.51640	
	Minimum		.00	
	Maximum		1.00	
	Range		1.00	
	Interquartile Range		1.00	
	Skewness		.484	.687
	Kurtosis		-2.277	1.334
degree	Mean		.2917	.09478
	95% Confidence Interval for Mean	Lower Bound	.0956	
		Upper Bound	.4877	
	5% Trimmed Mean		.2685	
	Median		.0000	
	Variance		.216	
	Std. Deviation		.46431	
	Minimum		.00	
	Maximum		1.00	
	Range		1.00	
	Interquartile Range		1.00	
	Skewness		.979	.472
	Kurtosis		-1.145	.918

	statusJOb			Statistic	Std. Error
Dinvest	permanent	Mean		.1505	.03728
		95% Confidence Interval for Mean	Lower Bound	.0765	
			Upper Bound	.2246	
		5% Trimmed Mean		.1117	
		Median		.0000	
		Variance		.129	
		Std. Deviation		.35954	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		1.987	.250
		Kurtosis		1.989	.495
	partime	Mean		.2500	.25000
		95% Confidence Interval for Mean	Lower Bound	-.5456	
			Upper Bound	1.0456	
		5% Trimmed Mean		.2222	
		Median		.0000	

	Variance	.250	
	Std. Deviation	.50000	
	Minimum	.00	
	Maximum	1.00	
	Range	1.00	
	Interquartile Range	.75	
	Skewness	2.000	1.014
	Kurtosis	4.000	2.619

a. Dinvest is constant when statusJOb = contract. It has been omitted.

APPENDIX 5

Mean and Standard Deviation for Non Investment in Human Capital

	Gender			Statistic	Std. Error
DNotinvest	male	Mean		.9000	.04286
		95% Confidence Interval for Mean	Lower Bound	.8139	
			Upper Bound	.9861	
		5% Trimmed Mean		.9444	
		Median		1.0000	
		Variance		.092	
		Std. Deviation		.30305	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-2.750	.337
		Kurtosis		5.792	.662
	female	Mean		.8000	.05714
		95% Confidence Interval for Mean	Lower Bound	.6852	
			Upper Bound	.9148	
		5% Trimmed Mean		.8333	
		Median		1.0000	
		Variance		.163	
		Std. Deviation		.40406	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-1.547	.337
		Kurtosis		.407	.662

	marriageStatus			Statistic	Std. Error
DNotinvest	single	Mean		.9000	.06882
		95% Confidence Interval for Mean	Lower Bound	.7559	
			Upper Bound	1.0441	
		5% Trimmed Mean		.9444	
		Median		1.0000	
		Variance		.095	
		Std. Deviation		.30779	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-2.888	.512
		Kurtosis		7.037	.992
	married	Mean		.8333	.04247
		95% Confidence Interval for Mean	Lower Bound	.7488	
			Upper Bound	.9179	
		5% Trimmed Mean		.8704	
		Median		1.0000	
		Variance		.141	
		Std. Deviation		.37509	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-1.824	.272
		Kurtosis		1.362	.538

a. DNotinvest is constant when marriageStatus = widow. It has been omitted.

	education			Statistic	Std. Error
DNotinvest	spm	Mean		.9455	.03090
		95% Confidence Interval for Mean	Lower Bound	.8835	
			Upper Bound	1.0074	
		5% Trimmed Mean		.9949	
		Median		1.0000	
		Variance		.053	
		Std. Deviation		.22918	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-4.034	.322
		Kurtosis		14.811	.634
	stpm/matrikulasi	Mean		.9091	.09091
		95% Confidence Interval for Mean	Lower Bound	.7065	
			Upper Bound	1.1116	
		5% Trimmed Mean		.9545	
		Median		1.0000	
		Variance		.091	
		Std. Deviation		.30151	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-3.317	.661
		Kurtosis		11.000	1.279
	diploma/certificat	Mean		.6000	.16330

	e	95% Confidence Interval for Mean	Lower Bound	.2306	
			Upper Bound	.9694	
		5% Trimmed Mean		.6111	
		Median		1.0000	
		Variance		.267	
		Std. Deviation		.51640	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		1.00	
		Skewness		-.484	.687
		Kurtosis		-2.277	1.334
	degree	Mean		.7083	.09478
		95% Confidence Interval for Mean	Lower Bound	.5123	
			Upper Bound	.9044	
		5% Trimmed Mean		.7315	
		Median		1.0000	
		Variance		.216	
		Std. Deviation		.46431	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		1.00	
		Skewness		-.979	.472
		Kurtosis		-1.145	.918

	statusJOb			Statistic	Std. Error
DNotinvest	permanent	Mean		.8495	.03728
		95% Confidence Interval for Mean	Lower Bound	.7754	
			Upper Bound	.9235	
		5% Trimmed Mean		.8883	
		Median		1.0000	
		Variance		.129	
		Std. Deviation		.35954	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.00	
		Skewness		-1.987	.250
		Kurtosis		1.989	.495
	partime	Mean		.7500	.25000
		95% Confidence Interval for Mean	Lower Bound	-.0456	
			Upper Bound	1.5456	
		5% Trimmed Mean		.7778	
		Median		1.0000	
		Variance		.250	
		Std. Deviation		.50000	
		Minimum		.00	
		Maximum		1.00	
		Range		1.00	
		Interquartile Range		.75	
		Skewness		-2.000	1.014
		Kurtosis		4.000	2.619

a. DNotinvest is constant when statusJOb = contract. It has been omitted.