AN EXPLORATORY STUDY OF PARENTAL SAVINGS FOR HIGHER EDUCATION

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ABSTRACT

The cost of higher education (HE) has increased dramatically in recent years especially in private universities. At the same time, very limited amounts of government's scholarships and loans available for pursuing HE. One of the alternatives for financing sources is parental saving. However, it has been reported that there is low awareness level among parents on the importance of saving for their children HE. This study attempts to explore on parental saving for children's HE among parents based on their different demographic characteristics. A convenient sampling method was applied to conduct a survey among parents in Pahang. This study measures two variables: first, parents' savings behavior, and second, savers' confidence level in continuing their savings for their children's HE. The findings of this study revealed that many parents aware of the importance to start saving for their children HE since their early childhood. There is a positive correlation between savings behavior with respondents' income level, value of assets owned, occupation, level of education and confident level. The results also revealed that the savers' confidence level is positively correlated with income level, occupation, saving behavior, education level and value of assets owned. It is hoped that the findings from this study will give directions for additional research on parental savings for HE, of which there is currently very little especially in Malaysia.

Keywords : Higher education savings, parents, saving behavior.

Introduction

Education is an important form of human capital investment. The development of human capital through education improves individual productivity as well as economic status. Education has been proved to be an important device to enhance the quality of life and eradicate poverty (UNESCO, 2003). Hence, many countries have been emphasizing on the importance of education as one of their national missions. In its 10th Malaysia Plan (2011-2015), Malaysia focuses mostly on improving the quality of institutions and teaching, so that schools, universities and colleges can play their part in honing human capital.

Despite the importance of education in the development of human capital, financing a higher education (HE) is a major family undertaking, and the burden of paying for university is heavier than it used to be, especially for private universities. Unfortunately, the government funding for scholarships and loans are very limited and not compatible with the demands. Therefore, the alternative way to face this situation is to start saving up as early as possible.

People have been investing in youth directly or indirectly through monetary contributions to education (Chang, 1995). Lunt and Livingstone (1992) found evidence that parents do highly value their children's education attainment. Parents who save for their children's education are, therefore, investing in the children's future. As parents, we need to take responsibility for our children's HE into our own hands because the government can no longer be our one and only resort. As parents, we are entrusted with helping our children to learn and grow. This means we need to reorient our priorities and start saving up for their HE.

In Malaysia, the emphasis on saving up for children's HE is relatively new. Nowadays, lots of education savings plans have been introduced by financial institutions and the government in order for parents to prepare for their children's HE expenses in the future. It is a big problem in Malaysia for having a low level of awareness on saving for children's HE (Utusan Malaysia, 15 June. 2006). There is a lack of responses from parents especially among Bumiputera on those plans even though some of the plans only require a very low monthly payment. The low level of awareness might be resulted from the feelings of comfort among parents as they have long been provided with all sorts of education subsidies by the government since their children's primary and secondary schools. Furthermore, with the increasing cost of living, it might hinder parents to start savings for their children's HE purpose. Mostly, the Malaysian's culture depends on government funding for scholarships and loans, whereas the aid available from the National Higher Education Fund Corporation (PTPTN), Majlis Amanah Rakyat (MARA), Jabatan Perkhidmatan Awam (JPA) and the like is getting scarcer. This situation can affect the ability of children from low and middle income families to get HE, especially in the Science and Technology field. In reality, the cost of HE is high, and we need to bear in mind that it is increasing year after year and the cost is even higher if the children intend to seek education abroad (Utusan Malaysia, 25 Apr. 2008). Nevertheless, financial constraints should not be the barrier if parents are willing to initiate a saving culture.

The objectives of the study are as below:

1. to analyze the demographic profiles of the parents who save money for their children's HE.
2. to investigate the parents' preferences in choosing the types of saving plans for their children's HE.

3. to identify the significant difference between parents saving behaviors and their confidence level in education savings with regard to their demographic characteristics.
4. to examine the correlation between parents' saving behaviors and their confidence level in education savings with regard to their demographic profiles.

Literature related to parents' saving behavior for children's HE are very limited in this country. Therefore, apart from achieving the above objectives, this paper also aims to bridge the gap. This study is organized as follows; the first section is the introduction, followed by literature review, research methodology, analysis and results. The last section is the conclusion and policy implications.

Literature Review

Higher education (HE) in most countries, rich and poor alike, is suffering from soaring tuition fees. The willingness to make financial contributions to support the children's HE may be a function of culture as well as of affluence. Swedes for example, have become accustomed to pay very heavy taxes, to enjoy the benefit of 'free' HE for their children. In contrast, the Chinese parents are apparently willing to make considerable personal financial sacrifices for their children to go for HE. Furthermore, parents may be thought to be more willing to pay in countries with substantial private education, where people are more used to paying for their children's HE, and sometimes as early as from the secondary education (Johnstone, 2006).

Perna (2000) found that families who lack access to financial resources are less likely to pursue their study in Higher Education Institutions (HEI). With the costs of

attending HE has increased, it is becoming more difficult for families to pay for HE expenses out of accumulated assets. Starting an early savings plan is a fundamental strategy to help pay for children's HE (Chang, 1995). Those who advocate savings, point out that HE costs continue to increase faster than inflation as the populations of university-aged students grow. Therefore, we need to start saving up when our children are young and continue with the savings until they enter HEI. A number of tax-advantaged savings vehicles are specifically designed for this purpose (Crane, 2007). Another study suggests that since saving up for college is a difficult investment challenge, as few families can afford to invest large lump sums early, so the most common investment plan consists of periodic investments over a relatively short time period (Hanna and Chen, 1996).

Several studies focused on demographic factors contributing to the decision on savings for HE. Lee et.al (1997) found that having HE savings as a goal generally increased with age. In addition, the predicted savings rate was higher for respondents with at least a high school degree. In other words, it is likely that highly educated parents are likely to want their children to attend HEI. Those with a retirement account were also more likely to have a HE saving goal than otherwise similar households. According to a study by Yilmazer (2008), parents' support for each of their children's HE expenses decreases with the number of children. Furthermore, an interview data suggests that middle and high-income families were more likely to be saving up for HE. The result appears to confirm previous econometric research which reports that saving behavior is associated with family income (Hossler and Vesper, 1993).

Although most parents hope their children will attend HEI, most are worried about whether they will be able to afford it. Parents who rent their homes are more likely to

be very worried than parents who own their homes. The percentage of parents who are very worried about affording a HE for their child declines as income and education levels rise.When it comes to the progress they have made in savings to help pay for their children's college education, most parents feel they are behind in their efforts to save money (Baldassare et.al, 2007). According to Cha et.al (2005), parents with smaller household size and those being HEI graduates borrowed greater amounts. Greater HE costs significantly increased parents' decision to borrow, as well as the borrowed amounts. Similarly, greater amounts of grants significantly reduced the amount borrowed.

From the findings revealed in the above discussion, it is evident that there are many factors contributing to the level of savings for HE among parents around the world. Parents from many countries are now facing the same problem of rising in HE cost of their children. To help facing the increasing cost, parents are urged to save money as early as they can and continue saving until the time their children enter the HEI.

As the literature on education savings is limited, this study will provide insights into the body of knowledge as this study examines parents' saving behaviors and their confidence level toward saving up for children's HE in a variety of contexts. The findings will also provide a basis for the government to review the suitability of current policy implementation whichever appropriate and for financial institutions to react for the effective promotion of the education schemes and plans offered by them.

Methodology

The data of this study were obtained using self-administrated questionnaire which was distributed among parents that have children below 18 years old and have already

started saving money for their children HE. A sample of 509 respondents from Pahang had responded to the questionnaire. The research focused on factors attribute to parents' saving behavior and their confidence level towards saving for children's HE base on different demographic characteristics of the parents that adopted from the studies by Lee et al. (1997), Lefebvre (2004), and Zhan and Schreiner (2005).

The self-administrated questionnaire was divided into three sections. The first section is on the demographic profiles of the respondent, followed by the second section on parents' saving behavior and the third section on parents' confidence level on HE saving. The Likert scale was used to measure the respondent's opinion, with 1 is for strongly disagree and 5 for strongly agree.

The descriptive analysis is used to examine the demographic profiles of the parents and their preferences in choosing types of savings plan. One-way ANOVA and correlation test are used to analyze the significant difference and correlation test respectively between parents' saving behaviors and their confidence level in education savings with regards to the parents' demographic characteristics.

The hypotheses of this study are as below:

H_1: There is a significant difference between saving behavior with parents' demographic variables such as age, parents' education and occupation level, income level, asset owned, financial obligation and the resident area

H_2: There is a significant difference between savers' confidence levels with parents' demographic variables such as age, parents' education and occupation level, income level, asset owned, financial obligation and the resident area

H_3: There is a correlation between saving behavior with parents' demographic characteristics such as age, gender, parents' education and occupation level, income level, asset owned, financial obligation and the resident area.

H_4: There is a correlation between savers' confidence level with parents' demographic characteristics such as age, gender, parents' education and occupation level, income level, asset owned, financial obligation and the resident area.

Findings and Discussion

Respondent Profile

From Table 1, generally most respondents' age are between 26 to 35 years old (32.4%); 57.6 % of them are female and 96.3% are married. The respondents came from various education levels whereby 23.6% of respondents have a diploma and 17.7% have a degree meanwhile 0.6% parents have no formal education.

Table 1: Profile of respondents

Profile	Categories	Frequency	Percentage
Age	25 or below	29	5.7
	26-35	165	32.4
	36-45	162	31.8
	46-55	128	25.1
	> 55 years old	25	4.9
Gender	Male	216	42.4
	Female	293	57.6
Marital Status	Married	490	96.3
	Divorced	19	3.7
Level of Education	Post graduate	31	6.1
	Degree	90	17.7
	Diploma	130	23.6
	Secondary School	239	47
	Primary School	26	5.1
	No formal education	3	0.6

HE. Meanwhile, working parents' that have stable income whether they are working at the professional level, executive or non-executive levels also save some of their income in these saving plans. For example, 45% of non-executive respondents save their money in their children's saving accounts. Parents with income and assets prefer to save their money for HE. This shows that every parent realize on the importance of educational saving. Meanwhile, referring to the location of the respondent's residential area, it shows that parents in urban and rural area prefer to save their money for HE in children's saving accounts.

Table 2: Saving plan and demographic variables

	SSPN	Education Insurance	Unit Trust	Saving Acc.	Education Saving Acc.	Others	Total
Gender							
Male	61(28.2%)	37(17.1%)	20(9.3%)	81(9.3%)	8(3.7%)	9(4.2%)	216(100%
Female	70(23.9%)	53(18.1%)	18(6.1%)	135(46.1%)	9(3.1%)	8(2.7%)	293(100%
Education Level							
Post Graduate	11 (35.5%)	9(29%)	2(6.5%)	7(22.6%)	0(0%)	2(6.5%)	31(100%
Degree	28 (22.6%)	28(31.1%)	7(7.8%)	28(31.1%)	1(1.1%)	0(0%)	90(100%
Diploma	55(45.8%)	20(16.7%)	7(5.8%)	55(45.8%)	3(2.5%)	2(1.7%)	120(100%
Secondary School	110(46.5%)	32(13.4%)	17(7.1%)	110(46%)	10(4.2%)	12(5%)	239(100%
Primary School	14(53.8%)	1(3.8%)	5(19.2%)	14(53.8%)	2(7.7%)	1(3.8%)	26(100%
No formal Education	0(0%)	0(0%)	0(0%)	2(66.7%)	1(33.3%)	0(0%)	3(100%
Occupation							
Professional	23(23.5%)	34(34.7%)	7(7.1%)	32(32.7%)	1(1%)	1(1%)	98(100%
Executive	32(41%)	15(19.2%)	6(7.7%)	21(26.9%)	2(2.6%)	2(2.6%)	78(100%
Non-Executive	44(29.5%)	20(13.4%)	9(6%)	67(45%)	4(2.7%)	5(3.4%)	149(100%
Self Employed	14(18.4%)	9(11.8%)	4(5.3%)	42(55.3%)	4(5.3%)	3(3.9%)	78(100%
Retired	1(12.5%)	3(37.5)	2(25%)	1(12.5%)	1(12.5%)	0(0%)	149(100%
Housewife	14(17.3%)	7(8.6%)	7(8.6%)	44(54.3%)	5(6.2%)	4(4.9%)	76(100%
Others	3(15.8%)	2(10.5%)	38(7.5%)	9(47.4%)	0(0%)	2(10.5%)	8(100%
Income Level							
RM1000 or less	15(17%)	4(4.5%)	4(4.5%)	53(60.2%)	3(3.4%)	9(10.2%)	88(100%
RM1000-RM2999	46(27.1%)	27(15.9%)	14(8.2%)	71(41.8%)	10(5.9%)	2(1.2%)	170(100%
RM3000-RM5999	46(27.2%)	41(24.3%)	11(6.5%	66(39.1%)	1(0.6%)	4(2.4%)	169(100%
RM6000-RM8999	19(33.9%)	10(17.9%)	6(10.7%)	20(10.7%)	0(0%)	1(1.8%)	56(100%
RM9000 and more	5(19.2%)	8(30.8%)	3(11.5%)	3(11.5%)	3(11.5%)	1(3.8%)	26(100
Asset Owned							
RM50,000 or less	40(19%)	29(13.8%)	17(8.1%)	106(50.5%)	9(4.3%)	9(4.3%)	210(100
RM50,000-RM150,000	42(28.4%)	30(20.3%)	7(4.7%)	66(44.6%)	1(0.7%)	2(1.4%)	148(100
RM150,000-RM250,000	26(28.9%)	15(16.7%)	10(11.1%)	34(37.8%)	3(3.3%)	2(2.2%)	90(100
RM250,000-RM350,000	20(55.6%)	7(19.4%)	2(5.6%)	5(13.9%)	1(2.8%)	1(2.8%)	36(100
More than RM350,000	3(12%)	9(36%)	2(8%)	5(20%)	3(12%)	3(12%)	25(100
Residential Area	76(25.8%)	55(18.6%)	24(8.1%)	119(40.3%)	9(3.1%)	12(4.1%)	295(10C
Urban	55(25.7%)	35(16.4%)	14(6.5%)	97(45.3%)	8(3.7%)	5(2.3%)	214(10C
Rural							

Savings Plans

Table 3 shows the types of saving plans that preferred by the parents. The results in Table 3 show that 42.4% of the respondents preferred to save for HE using regular savings deposit that had been registered under their children's names. SSPN become the second highest saving scheme chosen by the parents which consists of 25.7%. Meanwhile, education saving account is the least preferred scheme by 3.3% demand. This means that most parents prefer to save for HE using the children's saving accounts. This is because it is easier to open this type of account that mostly offered by the financial institutions with no fixed period required. Another reason is because the money that has been saved in this account is not only for the purpose of HE but also for other unexpected motives that can be occurred in the future.

Table 3: Saving plan

Saving Plan	Frequency	Percent
SSPN	131	25.7
Education Insurance	90	17.7
Unit Trust	38	7.5
Child's Saving Account	216	42.4
Education Saving Account	17	3.3
Others	17	3.3

Reliability and Validity of the Instrument

Coefficient alpha is used to estimate the degree of reliability with estimates that can be range anyway between 0 to 1. The closer the coefficient is to 1, the stronger the linear relationship of the items being correlated and the higher the internal consistency. The results in Table 4 shows that parent's saving behavior has coefficient of 0.858 and 0.883 for saver's confident level which is above usual recommended alpha score of 0.7 for the establishment of an internal consistency for the scale (Black, 1999)

Table 4: Reliability test and factor analysis

Variable	No. of Item	Cronbach's Alpha	KMO	Bartlett's Test of Sphericity	Eigenvalue	%Variance
Saving Behavior	9	0.858	0.899	1564.74; p=0.00	4.25	47.20
Saver's Confident Level	6	0.883	0.850	1664.09; p=0.00	3.80	63.37

The Barlett's test of sphericity is significant and the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) test shows that the factor analysis could be done because it is more than 0.5. Therefore no variables would be excluded in the analysis.

ANOVA Analysis

Analysis of variance was conducted using one-way ANOVA to determine the significant difference in means between saving behavior and confidence level of the parents and their demographic profiles. The results in Table 5 indicates that there are differences in means between saving behavior with regards to parents' occupation level (significant at 1%), income level (significant at 1%) and asset owned by the parents (significant at 5%). These results indicated that parents' with occupational level especially from professional employment, parents' with income level more than RM9000 and have owned assets with the value more than RM350, 000 considered HE saving is very important investment for their future.

Meanwhile, there are also significant differences between saver's confidence level with parents' age (significant at 10%) and occupation level (significant at 1%). These findings revealed that the confidence level of parents' in continuing their savings for HE is influence by the level of maturity level of the parents with the parents' age range between 36 and 45 years old and the parents' occupational level especially those involved in professional employment.

Table 5: Results of Analysis of Variance (ANOVA)

Variable	Saving Behavior	Saver's Confidence Level
Age	26-35 yrs old; mean=4.32; F=1.151	36-45 yrs old; mean=3.95; F=2.133*
Education level	Post graduate; mean=4.38; F=1.801	Postgraduate; mean=4.11; F=1.801
Occupation level	Professional; mean=4.46; F=6.226***	Professional; mean=4.10; F=3.452***
Income level	>RM9000; mean= 4.41; F=3.465***	>RM9000; mean=4.17; F=1.948
Asset owned	>RM350,000; mean=0.678; F=3.282**	>RM350,000; mean=4.10; F=1.319
Financial obligation	RM1500-RM2000; mean= 4.29; F=0.972	RM1000-1500; mean=4.00 ; F=0.575

+ highest means are shown
***significant at 1% **significant at 5% *significant at 10%

Correlation Analysis

Correlation analysis was conducted to determine which demographic characteristics of the parents have significant correlation with savings behavior and confidence level. The results are reported in Table 6 and indicated that there is a positive correlation between savings behavior with respondents' income level, occupation level, education level and confidence level at 1% significant level and asset they owned (significant at 5%), The positive correlation showing that parents' with higher and better income, assets owned, level of employment, education level and confidence level in children's HE saving will have higher saving behavior. These results are consistent with the finding from Lee et al. (1997) and Baldassare et al. (2007).

The results also revealed that the savers' confidence level also positively correlated with the income level, occupation and saving behavior at 1% significant level. Meanwhile, the savers' confidence level correlate positively with education level and asset owned at 10% significant level. The positive correlation also interpreted that higher income level, occupation level, saving behavior, education level and asset owned by the parents, the higher this parents' confidence level in continuing to save their money for HE.

Table 6: Correlation analysis

	Income Level	Asset Owned	Financial Obligation	Saving Behavior	Confident Level	Education Level	Occupation
Income Level	1						
Asset Owned	.626**	1					
Financial Obligation	.638**	.509**	1				
Saving Behavior	.166**	.155**	.055	1			
Confident Level	.115**	.085*	-.017	.431**	1		
Education Level	.598**	.389**	.482**	.143**	.081*	1	
Occupation	.583**	.436**	.446**	.180**	.118**	.681**	1

**Correlation is significant at the 1% (2 tailed) * Significant at the 10kkjbn% (2 tailed)

Conclusion

Parental saving for HE is seen as a new issue to be reviewed in line with the rising tuition fees, especially in private colleges and universities. The level of parental awareness on the importance of HE saving is still very low because of their dependence on external scholarship or loans either from the federal government, state, or from the private institutions such as PTPTN. Generally, the saving behavior of the parents on HE arise only at the last minute when they need to send their children to the universities. With the insufficient funds from the parents, students have to rely on external funding especially from loans that charge high interest rate. Currently, the number of parents who had saved for HE is still low and encouragement should be given to increase the figure. Thus, this study took the initiative to investigate the characteristics of parents who had been started to save for HE in Pahang. The results found that there is a positive correlation between savings behavior with respondents' income level, the value of assets owned, occupation, level of education and confident level. The results also revealed that the savers' confidence level also positively

correlated with income level, occupation, saving behavior, education level and value of assets owned. It is hoped that the findings from this study will give directions for additional research on parental savings for HE, of which there is currently very little especially in Malaysia.

Several policy implications can be drawn from this study. First, in order to promote parental savings for HE, the government should implement tax relief not only for those parents who save their money in National Education Saving Scheme (SSPN) but also to other education saving scheme offered by the banking and financial institutions. Second, to encourage parental saving, more awareness program should be implemented especially for those parents that live in rural areas. Finally, government should subsidize higher education especially for those children that come from lower income level families.

References

Baldassare, M., Bonner, D., Paluch J., & Petek, S. (2007). *Californians and Higher Education in Collaboration with The William and Flora Hewlett Foundation*, Statewide Survey, Public Policy Institute of California.

Cha, K.W., Weagley, R. & Reynolds, L. (2005). Parental borrowing for dependent children's higher education. *Journal of Family and Economic Issues*, 26(3): 299-321.

Chang, Y.R. (1995). The effect of children's educational expectation on non-retirement financial asset accumulation. *Journal of the Family Economics and Resource Management Division of AAFC*, pp.57-62.

Crane, A.B. (2007). The case against saving for college. *Better Investing*, 57(4): 28.

Hanna, S., & Chen P. (1996). Efficient portfolios for saving for college. *Financial Counseling and Planning*, 7: 115-122.

Hossler, D. & Vesper, N. (1993). An exploratory study of the factors associated with parental saving for postsecondary education. *Journal of Higher Education*, 64(2): 140-165.

Johnstone, D.B. (2006). Financing higher education: cost sharing in international perspective. *Global Perspectives on Higher Education*, Centre for International Higher Education, Boston College, 3: 18.

Lee,S., Hann, S., & Siregar M.(1997). Children's college as a saving goal. *Financial Counseling and Planning*, 8(1): 33-36.

Lefebvre, S. (2004). Saving for postsecondary education. *Perspectives, Statistics Canada, Catalogue no. 75-001-XIE*. Canada.

Lunt, P. K. & Livingstone, S.M. (1992). *Mass Consumption And Personal Identify*. Buckingham: Open University Press.

Perna, L. (2000). Differences in the decision to attend college among African Americans, Hispanics and Whites. *Journal of Higher Education,* 71(2): 117-130.

Regina C. (1995). The Effect of children's education expectation on non-retirement financial asset accumulation. *Family Economics and Resource Management Biennial*, 1: 57-62.

UNESCO (2003). *Poverty Eradication through Education: Breaking the Poverty Cycle for Children*. Ministry of Education, Uganda, Ugandan National Commission for UNESCO, published in Paris, France.

Utusan Malaysia (2006). 'Menabung Demi Pengajian Universiti Anak', June 15.

Utusan Malaysia (2008). 'Peka Tabungan Pendidikan', April 24.

Yilmazer, T. (2008). Saving for children's college education: an empirical analysis of the trade-off between the quality and quantity of children. *Journal of Family and Economic Issues*, 29(2/June): 307-324.

Zhan, M. & Schreiner, M. (2005). Saving for post-secondary education in individual development accounts. *Journal of Sociology and Social Walfare*, 32(3): 139-163.