

Human Capital Investment Expenditures of Women of Female-Headed Household in Peninsular Malaysia

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Abstract

This study aims to investigate the human capital expenditure, expenditure share of human capital investment expenditure and the probability of having human capital investment among women of female-headed households. The data were obtained from a nationwide study on "Economic wellbeing and human capital investment of female-headed household" funded by the Ministry of Science, Technology and Innovation (MOSTI), government of Malaysia, under the e-Science Grant. Four states (Kedah, Pahang, Negeri Sembilan and Selangor) represents four zones were selected using simple random technique with 68% of response rate. The study found that women of female-headed household spent about 21% of their yearly income in reading material followed by health (18%) and personal care (15%). Similarly, expenditure share about 67% of their yearly income was spent on reading materials followed by health (63%) and personal care (58%) Further analysis revealed that those who have a higher household income ($OR = 0.023$; $P < 0.05$) and smaller household size ($OR = 0.028$; $P < 0.05$) were found to be significant invested part of their household expenses for their own human capital purposes.

Keywords: Human capital, Human capital investment expenditure, Female-headed households

1. Female-headed households

There are many ways in defining female-headed households (FHH). Some researcher (Katz, 1991) referred FHH as a woman who is raising a child on her own without a husband or partner. Meanwhile, Muthwa (1994) defined FHH as the woman who became legally the head of the household, when there is no permanent male partner, due to death, desertion, divorce, separation or single motherhood. In this study, FHH was defined as women whose

husbands had passed away (widower), divorced them (divorce), was institutionalized for a long period (e.g. incarcerated or in rehabilitation), had left or abandoned the family or went missing without legally divorcing them. It becomes a arising issues as the number of FHH has been growing rapidly in every country and its impact on the social and economic aspects to a country are apparent and real.

1.1 Malaysia Female-headed households

In 1995, there were 653,500 (18.47%) female-headed household among 3,537,600 households in Malaysia (DOSM, 1995). This figure had increased to 711,000 women in year 2000 (DOSM, 2000) and further increased to 800,000 in year 2005 (Ministry of Women, Family and Development, 2006). Bumpass and Sweet (1989) in their study explained that the increasing trend of FHH was due to the transition changes among the women when she get into widowhood as women live longer than man in Malaysia based on their life expectancy. Besides, the divorce or separated scenario was also contributed to the increasing trend of FHH. Later, three studies on FHH (Mencher, 1993; Muthwa and Sibongile, 1994; Tan and Ng, 1995) the main contributing factor to FHH was increase in the 1st of the century, due to the death of the breadwinner, but from the late 1950s onward, divorce or separated matter becomes the modal event giving rise to single mother families in almost all the societies in the world. This implies that single member households or female-headed households are emerging in line with the trend that nuclear households now predominate in place of extended households.

2. Literature Review

2.1 Previous studies on female-headed households

Previous studies found that increasing number of FHHs was associated with higher incidence of poverty. For instance, Sen (1991) concluded that households headed by female have been found to be among the poorest of the poor and that they require special and urgent government attention and assistance. Sen (1991) urged that such households to be more vulnerable to poverty because single mothers usually retain the primary responsibility for child care and home maintenance tasks, in the absence of a male breadwinner. They also faced additional challenge of making market-oriented activities compatible with domestic responsibilities, having less access to financial resources and land ownership compared with men (Merrick and Schmink, 1983). Moreover, deprivation among female-headed households has increased despite the economic gains made by many developing countries in the Asia-Pacific region over the past two decades (Merrick and Schmink, 1983). Specifically, female-headed households in general do not enjoy the same level of health, nutrition, education and access to productive resources as men do.

A study on six African countries found that the poorest of the poor did not benefit from economic growth and their prospects were not rosy unless there was more investment in human capital and a better targeting of social spending (Demery and Squire, 1996). Thus, it is important to a female-headed household to enhance their skills and add up more knowledge which helps them to be a person who is independent and knowledgeable.

2.2 Female-headed households and Poverty

The rapid increase of FHH in the past decades and higher poverty rates among these families have been widely recognized (Fields and Casper, 2001). Notably, FHH with children tended to have a higher poverty rate than male-headed households (Katz, 1991). This is be caused when a women become the head of the household, she had a higher tendency to face financial difficulties as they have to play the dual roles of provider and caregiver on top of their low earning capacity, have lack of knowledge and skills, have low job opportunities in economically depressed areas, and public benefits. Thus, FHH tend experience lower upward economic mobility then male-headed households (Bird, 1997; Gindling and Oviedo, 2008).

In a social point of view, a sociological theory or perspective expounded by Collins (2000) on the “matrix of domination” can be used to understand the phenomenon of social oppression faced by many female-headed households in society. As a component of a larger Black Feminist framework, this intersectional theory suggests that there are various axes of oppressions such as race, class, gender and sexuality. Albelda and Tilly (1996) discuss about the issue of the welfare of female-headed households. After examining the role of the financial support provided by the State welfare system which is supposed to help the female-headed households, they come to the conclusion that the welfare system actually imposes certain difficulties on the lives of many of the female-headed households.

2.3 Human Capital and Female-headed households

The concept of human capital has been familiar in economics for at least the past thirty years (Schultz, 1961; Becker, 1964). Some traced it back to the work of Adam Smith in the 18th century. It is useful to distinguish between the different forms of “capital” employed in economic activity in particular physical and human. An

important means of optimizing the value of each is through understanding the interaction of different forms of capital in complex production functions. Later in twenty century, human capital was defined as the aggregation of investments in such areas as education, health, on-job training and migration that enhance an individual's productivity in the labour market and also in non-market activities (Sharpe, 2001). When apply to the FHH population, schooling, a computer training course, expenditures of medical care, and lectures on the virtues of punctuality are the so-called capital for a FHH because they did made these investment to enhance their productivity in the labour market and also in non-market activities over much of her lifetime. Therefore, Becker (1964, 1993) in his scholar paper defined human capital as the expenditures spent on education, training, skills, medical care and so on. Becker (1964, 1993) linked the expenditure with the capital as human capital because people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets.

The quantity of human capital investment can most readily be measured through two resources devoted to learning namely money and time. The amount of money spent by individuals on training and education, and the time spent by participants in courses of study, serve as useful approximation of human capital formation (Black and Lynch, 1996). Normally, education capital was measured by the number of years of formal schooling of the average person. Sometimes researchers take into accounts a few specific indicators such as test scores in various subject areas and for different age groups, high school completion rates, university and community college completion rates, educational completion rates by socio-economic characteristics and others (Sharpe, 2001). Health capital can be measured by both a total population and average person basis. It also can be measured by life expectancy at birth of the population at the household level.

When looking into the scenario of FHH in Malaysia, a study by Tan and Tey (1993) found that female household heads are more prevalent amongst those older, and those who are widowed, divorced or separated, and hence many of them have poor education and do not work and are likely to remain in poverty. Ghazali, Arang, Yaakob, Mohamed and Jaafar (2006) concluded that the majority of the female heads in North Western Malaysia were poor and that the government and non-government agencies remain the most important source of support to many women. The same study also pointed that inaccessibility to training centres have resulted in the aids becoming inefficient in improving the socioeconomic condition of households headed by females.

3. Research Justification

However, these two studies viewed the FHH as a homogenous group during the analysis and did not go further to examine the socio-demographic by difference status like those FHH die to "divorce", "separated" or "Widower". In order to contribute to the body of knowledge in this field, this study aims to investigate the human capital expenditure, expenditure share of human capital investment expenditure and the probability of having human capital investment expenditure of women in female-headed household in Peninsular Malaysia.

4. Research Methods

The data were obtained from a nationwide study on "Economic wellbeing and human capital investment of female-headed household," funded by the Ministry of Science, Technology and Innovation (MOSTI), Malaysia, under the e-Science Grant. The sampling technique utilized in the data set was systematic random sampling. In the first phase, four zones namely North (consisted of Penang, Kedah and Perlis), East (consisted of Kelantan, Terengganu and Pahang), South (Johor, Melaka and Negeri Sembilan) and West (Wilayah Persekutuan, Selangor and Perak) were identified. Then, female-headed households within these areas were identified. A state randomly selected to represent in each zone. The following was randomly choose Kedah (Alor setar), Pahang (Kuantan), Negeri Sembilan (Seremban) and Selangor (Shah Alam). The data was collected using a set questionnaire that contained three sections, namely the women and her family's profile, household expenditure, resources and human capital expenditure.

Single mothers with at least one child in primary school were chosen. The lists of single mothers were obtained from primary schools within the capital city of each state. In each state, schools with higher concentration of female-headed households were selected until the list reaches a total of 250 (potential) respondents. About 1000 potentials respondents (from the list) were approached by trained enumerators, but only 681 respondents agreed to participate in the study. Thus, the overall response rate was 68.1%. As the outcome variable is dichotomous in nature, logistic regression seems to be the most appropriate method for analyzing data in this case. This method can be used to model the odds of measuring human capital investment expenditure. The model included only socio-demographic variables to test a probability between human capital investment expenditure.

4.1 Data Analysis

Descriptive analyses by SPSS version 13.0 were used to analyze frequencies, percentage, means and standard deviations. The analysis of frequencies and percentages is used to identify the distribution of respondents in term of their socio-demographics factors. Logistic regression model were applied to examine the extent to which the selected independent variables could explain the probability to invest in human capital investment among the FHH.

4.2 Variable Definitions and Measurement

4.2.1 Dependent variable

The socio demographic variables are household income, length of being female headed, household size, education level, age and marital status. The education level and marital status variables were treated as category while household income, length of being female headed household size and age variables were treated as continuous.

4.2.2 Independent variable

Socio demographic characteristics in this study are age, ethnic, education level, current employment status, occupational status, homeownership and household size. The age of the respondents was categorized into four age-groups namely; 20-29 years, 30-39 years, 40-49 years and 50-59 years. Ethnicity refers to three ethnic groups namely Malay, Chinese and Indian. For educational attainment, levels attained by the respondents were categorized in four categories; primary school or less, LCE/SRP/PMR, SPM and STPM and above. Current employment status was divided into two categories; working or not working. Occupation status in this study was grouped into four categories; employee, self employed, employer and unpaid family worker. Homeownership was divided into two, either owner or non owner. The total numbers of people who reside in a housing unit were considered to count the household size. There are five types of human capital investment in this study namely (1) reading material, (2) training fees, (3) health care, (4) personal care expenditure and (5) others. Each respondent was asked whether they have spared certain amount of their household expenses for these five items or not in the past six months. The summation amount of the five items above was referred to total human capital investment for the FHH.

5. Findings and Discussion

Table 1 showed the selected variables by marital status of female headed household. In this nationally representative sample, the majority of respondents were in the 40 to 49 age group (37%). Divorcees were higher in the 30 to 39 age group (44%) whereas Widowers were higher in the 40 to 49 age group (58%). These finding could agree with the findings of crosstabs analysis for age and marital status was found to be correlated [Pearson $\chi^2 = 53.946$, $df = 3$, $p < 0.01$, Cramer's $V = 0.282$], the pattern of relationships reveals widowers were older person than divorcees. Most have achieved an educational attainment of secondary school (34%). The findings of crosstabs analysis for education and marital status was found to be correlated [Pearson $\chi^2 = 15.868$, $df = 3$, $p < 0.01$, Cramer's $V = 0.153$], the pattern of relationships reveals the divorcees more educator than widower in this studies. Working women are higher in number than not working women (56% versus 19%). The findings of crosstabs analysis for current employment status and marital status was found to be correlated [Pearson $\chi^2 = 18.384$, $df = 1$, $p < 0.01$, Cramer's $V = 0.165$], the pattern of relationships reveals the divorcees have job related income compares widowers. The divorcees have higher proportion in employee than widower in contrast, the widower 1.5 more likely self-employed than divorcees [Pearson $\chi^2 = 14.033$, $df = 3$, $p < 0.01$, Cramer's $V = 0.164$]. The findings of crosstabs analysis for home ownership and marital status was found to be correlated [Pearson $\chi^2 = 28.184$, $df = 1$, $p < 0.01$, Cramer's $V = 0.203$], the pattern of relationships reveals the widower are the more proportion which owns a home compares with divorcees.

Table 2 showed annual human capital expenditure of female-headed households. Women in this study spent about RM 338.85 annually on human capital related expenses. The divorcees spent about RM 316.79 annually whereas widowers spent about RM 358.59 annually. When specific categories of human capital related expenditure were examined, the study found women allocate above 21% annually for reading materials, followed by expenditure on health (18%). Similar expenditure patterns were observed for the divorcees and widowers group. However, there were no significant differences between human capital investment expenditures and marital status.

Table 3 showed the expenditure shares of each human capital investment expenditure categories by the female headed household. It shows the similar patterns of the result shows it share the same result of table 2, whereby the women spent most of their expenditure on reading materials which about RM 66.82 from their whole human capital expenditure. The next greatest expenditure on health which about RM 63.22 out of their whole human

capital expenditure. These findings shows that strongly agree with Table 1, women spent their expenses more on reading materials to enhance their skills and also upgrade themselves.

Table 4, summarize the finding of multivariate logistic on human capital investment expenditure of women in female-headed household. Two variables were found to be significance namely household income and household size it means that the odds for women who have higher household income is 1.000 times as high as the odds for women with lower household income to spend in human capital investment expenditure. In other words, female-headed family who earn more invest more in their human capital. The odds for the small household size family are 1.105 times as high as the same odds for big household size family. That is women of female headed family who has fewer members in the family intend to invest towards human capital. In a study, Robin A. Douthitt *et.al* (1992) also found that household income and household size plays important role for an individual to spent out their expenses.

6. Conclusion

This paper examined the human capital investment expenditure of women of FHH. The focus of the discussion were on identifying the human capital expenditure, determined the female-headed households' expenditure share of human capital investment expenditure and assessing the probability of human capital investment among them. In conclusion, a woman who head the family were more likely spent a portion of their income on human capital. Reading material was one of the most highly spent human capitals by the women. The motivation of own self become the major factor for them to improve in their life. Apart from, family size and family income became cause factors that influence their human capital investment decision. Overall the study indicates that as a single mother, a woman always wants to gain some efforts to invest in human capital which gives some improvement in their living conditions or enhancement to their skills. Through that they could face and continue their life as a single mother with more courage. There is no a specific programme or policy for the single mothers to spend on their reading materials. Hence, development policies and programmes need to provide more opportunity and accessibility for the single mother to improve or enhance themselves since the women like to spend on reading materials.

On a final note, this research was clearly based on the female-headed households with cohort aged 20 – 59 and thus the results did not represents the Malaysia female headed-households in general. Other segments such as FHH in East Malaysia, who may have difference human capital investment expenditure should be investigated in future.

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Table 1. Selected variables by marital status of female headed household

Variable	ALL SAMPLE n=681		WIDOWERS n=358		DIVORCEES n=323		Pearson Chi-Square
	Freq	%	Freq	%	Freq	%	
Ethnic							
Malay	602	66.8	316	88.3	286	88.5	n.s
Chinese	54	6	24	6.7	30	9.3	
Indian	20	2.2	14	3.9	6	1.9	
Age							
20 – 29	38	4.2	9	2.5	29	9	$\chi^2 = 53.946$ df = 3 p < 0.01 Cramer's V = 0.282
30 – 39	229	25.4	86	24	143	44.3	
40 – 49	331	36.7	206	57.5	125	38.7	
50 – 59	82	9.1	56	15.6	26	8	
Education Level							
Primary school or less	146	16.2	96	26.9	50	15.5	$\chi^2 = 15.868$ df = 3 p < 0.01 Cramer's V = 0.153
LCE/SRP/PMR	143	15.9	73	20.4	70	21.7	
SPM	306	34	152	42.5	154	47.7	
Diploma and above	81	11.9	35	9.2	48	14.8	
Current employment status							
Not working	171	19	114	31.8	57	17.6	$\chi^2 = 18.384$ df = 1 p < 0.01 Cramer's V = 0.165
Working	505	56	241	67.3	264	81.7	
Work status							
Employee	29	3.2	12	3.4	17	5.3	
Self employed	137	15.2	83	23.2	54	16.7	$\chi^2 = 14.033$ df = 3 p < 0.01 Cramer's V = 0.164
Employer	341	37.8	143	39.9	198	61.3	
Unpaid family worker	13	1.4	6	1.7	7	2.2	
Home ownership							
Owner	347	38.5	217	60.6	130	40.2	$\chi^2 = 28.184$ df = 1 p < 0.01 Cramer's V = 0.203
Non owner	216	24	103	28.8	113	35	

Table 2. Human Capital Expenditure of Female Headed Household

	ALL SAMPLE			DIVORCEES			WIDOWERS				
Human Capital	n=681			n=323			n=358				
	Mean	N	%	Mean	N	%	Mean	N	%	t	p
Reading Materials	163.27	143	21	159.71	69	21.4	166.59	74	20.7	0.238	0.812
Training Fees	291.00	18	2.6	289.09	11	3.4	294.00	7	2	0.029	0.978
Health	231.07	119	17.5	204.59	61	18.9	258.93	58	16.2	0.691	0.492
Personal care	231.55	99	14.5	187.90	43	13.3	265.07	56	15.6	1.371	0.174
Other	124.40	5	7	134.66	3	0.9	109.00	2	0.6	0.204	0.854
Total HCIE	338.85			316.79			358.59				

Table 3. Expenditure share of Human Capital Investment Expenditure (In percentage)

HUMAN CAPITAL	ALL SAMPLE		DIVORCEES		WIDOWERS	
	n=681		n=323		n=358	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
Reading Materials	66.82	35.02	67.53	35.30	66.16	34.99
Training Fees	27.02	16.42	25.73	15.92	29.04	18.26
Health	63.22	31.92	61.02	31.17	65.53	32.81
Personal Care	58.24	31.07	53.75	29.37	61.69	32.15
Other	33.54	26.94	40.90	35.25	22.50	3.53

Table 4. Result of Logistic Regression on the probability of human capital investment expenditure

Variable	β	SE	Odds Ratio	p
Education (0 = Less than SPM, $^{ref}_1$ = SPM and above)	.055	.055	1.057	.838
Marital Status (0 = Widowed, $^{ref}_1$ =Divorced, Separated)	.055	-.090	.914	.607
Age	-.090	.014	1.014	.291
Household Income*	.014	.000	1.000	.023
Length of being female head	.000	-.003	.997	.838
Household Size*	-.003	.100	1.105	.028
Log Likelihood ratio	851.596			
$R^2 = 0.023$, $df = 6$; $\chi^2 = 11.143$; $p = 0.084$				