

## LABOUR SUPPLY AMONG EDUCATED MARRIED WOMEN INFLUENCED BY CHILDREN

Suhaida Mohd Amin <sup>1\*</sup>  
Mohd Faizal P. Rameli <sup>2</sup>  
Norafifah Ab Hamid <sup>2</sup>  
Abdul Qayyum Abdul Razak <sup>2</sup>  
Nor Azlina Abd Wahab <sup>3</sup>

### *Abstract*

*Previous studies showed that married women spent more years out of the labour force. This phenomenon accentuated if children were present. The presence of children make the opportunity in making the decision to work will increases or vice versa. This paper examined to what extent the “number of children” and “age of children” influenced participation of educated married women in labour market. The information is from 419 women with children, collected via online survey. The Binary Logistic Regression analysis found that both variables are significant and has negative influences. The results showed that the educated married women have a similar tendency to withdraw from labour market as other women. Corresponding, research also acknowledges that there are many other variables could influence the participation in labour market. However, to increase labour supply among educated married women, the issue of child care should be given more attention in government policy.*

**Keywords:** *labour supply, educated married women, children*

2016 GBSE Journal

### **Introduction**

Based on Malaysian achievement in Millennium Development Goals (MDGs), more than half of the women in the working age group were outside the labour force with around 70.0 percent of these women cited housework as the main reason (UNDP, 2011). In fact, it was reported that married women who left the workforce did not return to work due to difficulties in reconciling work and family responsibilities (World Bank, 2012). The most cited reason for women to choose to withdraw or stay out of the market had been due to work-family conflict especially concerning the issue related to children. For that reason, the aim of this paper is to examine; to what extent the factors of “number of children” and “age of children” determine participation of educated married women in labour market.

When a person makes a current expenditure on education, it is anticipated that the individual’s knowledge and skills will enhance the future earning (Ehrenberg & Smith,

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<sup>1</sup> Lecturer, Faculty of Business Management, UiTM Melaka, Kampus Bandaraya, 75300 Melaka, Malaysia. Tel : +606-2857214. E-mail: suhaida294@bdrmelaka.uitm.edu.my (corresponding author)

<sup>2</sup> Lecturer, Academy of Contemporary Islamic Studies (ACIS), UiTM Melaka, Kampus Jasin, 77300 Merlimau, Melaka, Malaysia. Tel : +606-2645125 / 5356 / 5358. E-mail: faizal061@rmelaka.uitm.edu.my / norafifah@melaka.uitm.edu.my / qayyum@melaka.uitm.edu.my

<sup>3</sup> Lecturer, Academy of Contemporary Islamic Studies (ACIS), UiTM Melaka, Kampus Alor Gajah 78000 Melaka, Malaysia. Tel : +606-5582058. Email: azlina406@melaka.uitm.edu.my

2015; Borjas, 2010; McConnell, Brue, & Macpherson, 2010). On the top of that, Theory of Investment in Human Capital (Becker, 1962, 1994) also suggested that participation in the labour market will increase with the rising level of their education level.

However, statistics show that the majority of employed females in Malaysia were made up from those with secondary education (Department of Statistics Malaysia, 2012). There are also an increase in the unemployment rate among those with tertiary education explains the situation of the diminishing participation rate of educated women in the Malaysian labour market (Department of Statistics Malaysia, 2011). This low participation rate was caused by a lot of educated women who were not in the labour market (Suhaida & Mohd Faizal, 2014).

## Literature Review

### *Educated married women*

An educated person is the one who has undergone a process of learning that results the enhancement in mental ability to function effectively (Mohanani, 2013). Hence, usually, those who have completed their tertiary education are categorized as educated people. As it had been indicated that women have an extra role in the household especially with the presence of children, the scope of the study focused on **married women with children** and those who have **completed any academic education in tertiary institution**. From the existing studies, it was observed there is lack of studies in Malaysia that focused on labour supply among educated married women.

Based on the statistics, the total population for all educated women in Malaysia was about 1.5 million (Ministry of Education Malaysia, 2010); a total of 1.46 million were in the category of employed, while 61.76 thousand were unemployed. This means; for the composition of educated women, about 95.9 percent of educated women were employed, whereas the other 4.1 percent were unemployed.

### *Number of children*

Ackah, Ahiadeke, & Fenny (2009) and Chaudhry & Jabeen (2010) emphasised that the larger the **number of children** a woman had, the less likely she would participate in paid work. Spencer (1973) proved that a larger number of children reduced the probability that a wife would be in the labour force. Women with many or young children around, can profit less from their education, which one could attribute to the fact that these women would still have to take responsibility for their children, which could hamper the effect of education (Spierings & Smits, 2007).

However, there had been two competing effects of increase in number of children on the female labour force participation decision. On another hand, married women living in families with a large number of children and the other dependents have greater economic pressure that can push them into the labour market. In contrast, increased number of children could result in higher level of activities at home and women may be inclined to stay at home to fulfil the increased commitments at home (Ahmad & Hafeez, 2007).

For developed economies, clear evidence of an inverse relationship between fertility and female labour force participation had been discovered. The presence of high-level childcare centres outside home may explain the likelihood of a positive relationship between fertility

and female labour supply. However, in some confessional societies, the worth of a woman is attached to the number of children she bears, the number of children in the household, and certainly this will give impact on the mother's labour force participation (Khan & Khan, 2009).

### *Age of children*

Many studies have linked **age of children** with the participation of women in the labour market (Yamamura & Mano, 2010; Cebula & Christopher, 2007; Ejaz, 2007; Nor'Aznin & Norehan, 2007; Diah, 1998; Tienda & Glass, 1985). They emphasized that the presence of children under five or six years old decreased the LFPR. This is because, management of infants or young children is not easy and it requires extra care and patience. For example, health concerns of the child and a problem to get people to take care of their children could increase the exit chance (Hotchkiss, Pitts, & Walker, 2008, 2010; Ejaz, 2007; Mahoney, 1961).

Euwals et al. (2007) found that participation hiked once the youngest child attended primary school, and once again when the child attended secondary school. The probability of female participation rose for those with children from 7 to 11 years of age (Faridi, Chaudry, & Anwar, 2009). Besides, Ntuli (2007) found that the presence of children aged below 15 years old in the household harmonized with the theoretical assertion that the age of children had the tendency to increase the housewife's value of time at home. Thus, it negatively affects the prospects of participating in the labour market where the need for childcare or housework is high.

### **Methodology**

As this study described the decision to work or not to work by educated married women, the population used was **married women with education up to tertiary level**. However, there is no such data had been available. In order to represent the real number of educated married women in Malaysia with more than 1,000,000 people, the number of respondents should about 384 (Krejcie & Morgan, 1970). Therefore, **at least 384 educated married women** as respondents should be obtained as sample survey.

For the **online survey**, respondents were selected from Tracer Study (Subsequent) 2008/2009 conducted by the Malaysian Ministry of Education. With cooperation from the ministry, approximately 7,000 women with tertiary education were identified. However, in order to protect the confidentiality of the information provided by the respondents, only email addresses were supplied to the researcher for the purpose of this study.

This study employed **Logistic Regression** to test the hypotheses. Logit analysis (a.k.a. logistic regression analysis) is an optimal method for the regression analysis of dichotomous (binary) dependent variables. Logistic regression assumes that the independent variables need not to be interval, nor normally distributed, nor linearly related, nor of equal variance within each group (Hosmer & Lemeshow, 2000; Allison, 1999).

The mathematical relation between the dependent (participation of educated married women in labour market) and the independent variables (number of children and age of children) of this study is given as:

$$EMWP\_WC = \beta_0 + \beta_1 N\_Chil + \beta_2 HC\_B6Y + \varepsilon$$

Where

- $\beta_0$  : Coefficient of the intercept
- $\beta_{1-2}$  : Coefficient of independent variable
- $\varepsilon$  : Error
- EMWP\_WC : Educated Married Women's with children participation in Labour Force
- N\_Chil : Number of children
- HC\_B6Y : Having children aged less than six years old

As this study wanted to determine EMWP\_WC; either working or not working; '1' is for educated married women with children who participated in labour force, while '0' reflected those who did not work in the labour force. For reference category, women with 1 & 2 children and those who did not have children below 6 years of age were selected as reference category.

## Findings

Based on the total number of female respondents from the Tracer Study, only 6,534 respondents received the email and were linked to answer the online survey. Among them, 30 were disqualified and another 45 chose to opt out. Therefore, the final number of respondents who received the questionnaire was about 6,459 women with education. A total of 1,187 had responded. However, only 1,015 educated women (85.5 percent) completed the questionnaire. Of this, only 626 women (61.7 percent) were married.

However, early screening dropped 33 respondents due to doubtful answers and identification of outliers. Consequently, the number of responses that were analysed with logistic regression was **419 educated married women with children** and the rest had at least one child.

Out of the 419 respondents, 349 women (83.3 percent) were employed and 70 women (16.7 percent) were unemployed. According to Allison (1999), disproportionate stratified random sampling will not bias the coefficient estimates although there is a different ratio between the group of sample.

From Table 1, in terms of number of children that the respondents had, the percentage of respondents with one or two children has been higher (79.0 percent) than those with at least 3 children (21.0 percent). Moreover, 81.4 percent for working women and 67.1 percent for non-working women had 1 & 2 children. The number of these children depended on the age of the respondents, mostly in the range of 25-34 years.

Similarly, the percentage of respondents with children less than 6 years old was higher than those whose children which have been admitted in school. Accordingly, 9.5 percent of the respondents who worked and 4.3 percent of women who did not work have children aged more than six years old.

The variables of *number of children* and *having children below six years old* were tested using logistic regression analysis. The full model that contained all predictors was

statistically significant,  $\chi^2 (2, N=419) = 10.515$ ,  $p < 0.05$ , indicating that the model was able to distinguish between respondents who chose to participate in labour force against those who chose not to participate. Therefore, a significant value of  $\chi^2 = 10.515$  with degrees of freedom at 2.

**Table 1: Cross tabulation of the respondents by characteristics variables**

		Educated married women working status		Total
		Not working	Working	
		100.0%	100.0%	100.0%
No. of children	1 & 2 children	47 67.1%	284 81.4%	331 79.0%
	3 children or more	23 32.9%	65 18.6%	88 21.0%
Total		70 100.0%	349 100.0%	419 100.0%
Children below 6 years	Without children below 6 years	3 4.3%	33 9.5%	36 8.6%
	With children below 6 years	67 95.7%	316 90.5%	383 91.4%
Total		70 100.0%	349 100.0%	419 100.0%

The non-significant value of the Hosmer and Lemeshow Test ( $p = 0.779$ ) and significant Omnibus test ( $p = 0.005$ ) showed good performance of the model. As a whole, the model itself explains between 2.5 percent (Cox and Snell  $R^2$ ) and 4.2 percent (Nagelkerke  $R^2$ ) of the variance in choosing to take part in labour force.

Table 2 shows that the logistic regression analysis found that both had a negative relationship with the dependent variable. With  $B = -.871$  for *number of children* and  $B = -1.110$  for those *having children below six years old*, this research suggested that both variables led to a negative correlation with participation in the labour force.

**Table 2: Variables in the Equation**

	B	S.E.	Wald	df	Sig.	Exp (B)
Num. of children	-.871	.296	8.677	1	.003	.418
Child below_6years	-1.110	.631	3.099	1	.078	.329
Constant	2.863	.635	20.356	1	.000	17.522

For variables of *number of children*, the *P-Value*, was 0.003 (significant at *P-value* less than 0.05). The odds ratio indicated that women who have three or more number of

children are 0.418 times less likely to participate in labour market compared to those who have 1 & 2 children (reference category).

While *having children below six years old*, the *P-Value* was 0.078 (significant at P-value less than 0.1), showed that it was significant and contributed to the model. Women who have children below than 6 years are 0.329 times less likely participated in labour market compared to those who did not have children below than 6 years (reference category).

## **Conclusion and Discussion**

Factors affecting participation rates especially for married women were varied and complex, where single variable usually would not make a significant impact upon women's decision to work. In fact, many studies related to the participation of women showed the presence of children, the number of children, and their age had been closely related to their decision to work.

This study showed that the participation of educated married women in the labour market had been influenced by the presence of children. The number of children, mothers go to work and children are less than six years old who have not reached the age of compulsory schooling in Malaysia will be require caregivers. Therefore, for those with children below six years old, and have more than two children were found more likely not to participate in the labour market, even if the mother was an educated person.

For married women with a family, they have an additional burden in term of childcare. Finding of this research supported the idea that women with children generally showed lower participation rates than women without children. This is because, according to Ejaz (2007), greater number of people with younger age in a household would lead to higher workload for the female members as they would be involved in household activities, such as fetching water, doing the laundry, preparing food, and looking after the family members.

From the aspect of childcare, if childcare cannot be arranged either because of higher cost of care or difficulty in getting care centres that meet the prerequisites of the mothers, as social norms which stated that household is women responsibility (Noraini & Nor Diana, 2015; Rahmah & Noorasiah, 2014), they would prefer to quit their job and take care of their own children.

As specified in the Theory of Investment in Human Capital, women with tertiary education have invested her time and financial aspects for better income earning. However, if the problem of childcare arrangement cannot be solved, married women, especially with young children, will maximize utility by choosing to manage their own children compared to their careers. This will cause the amount of labour supply and the participation rate of married women to decrease.

## **Acknowledgements**

This research work has been funded by the Ministry of Higher Education, Malaysia and supported by MARA University of Technology.

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