

Identifying Potential Factors of Ideal Childbearing among Malay Women in Terengganu

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Abstract

This study focuses on the various factors that led to the ideal child ownership among Malay women in the state of Terengganu who have undergone marriage. Direct ownership of children is associated with a woman's fertility level and pattern of population growth in a sample area. The main data for this study are based on various reports of population and housing census of Malaysia since the 1950s to 2010. Followed by a field study and based on the questionnaire to the targeted population. Factor analysis was used to cluster variables to key factors and then evaluated based on the significance of regression analysis as appropriate. The study found that the level of education is not the most significant factor influencing the ownership of children as educated Malay women still have a lot of children in the study area. Instead, the main factor is the later age at first marriage followed by health factors and type of work are the most significant factors influencing the ownership of the ideal child. Thus to ensure that the trend of the population in Terengganu is not impaired too high, then the government or interested parties should take precautionary measures to ensure that there is more encouragement to women in the area to experience the marriage process in the younger age or not delay their age at first marriage.

Keywords: development, census data, fertility, demographic, population

1. Introduction

1.1 World Population Fertility Trends

World fertility trends have shown 30 to 60 percent decline from the year 1950 to the year 2015 (United Nations, 2002a) may be associated with a precondition to the fertility decline in the Classical Theory of Transition change the economic value of children and the associated reduction in demand for children (Teitelbaum, 1985; Freedman, 1975; Malthus, 1978). As indicated in table 1 by the year 2000, there are 64 countries in the world have been or above replacement level (the lower level of Fertility: 23 columns (4) and 41 columns (5) due to baby boom and bust (United Nations Population Division, 2002). This declining data is also associated with ideological ideal son used to say, many children will no longer be the main choice for a large family these days, is considered non-consistent with good parenting (Blake, 1972; Giddens, 1991; Friedman, Hechter & Kanazawa, 1994; King 2000; Morgan & King, 2001).

Table 1. Stages of the transition to low fertility in 187 countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	No. Transition	Declining With TFR>5	Declining With 5<TFR<2.1	Declined To TFR≤2.1	Early Transition and Baby Boom TFR<2.1	Early Transition and 2.1<TFR<3	Total
Number of Countries	16	32	73	23	41	2	187
Percentage of Global Population Living in Countries at Selected Stages of Transition	3.0	9.5	42.6	24.6	19.6	0.7	100.0

Sumber: United Nations Population Division (2002: Table 1.1)

Even the large number of children does not promised happiness at old age, on the other hands old-age social savings should be enough for couples or individuals in their old age (Nentwig, 1999) as experienced in rich countries of the world. The options to have few children or not to have children voluntarily is a rising trend (Lam, 2003) in an effort to improve the health status of the individual and meeting basic needs such as education and employment (Lonnie, 2005; Sanderson & Dubrow, 2000).

Analysis of fertility trends in developed countries and the developing world in the same period also show declining fertility, respectively 55.3 percent and 55.2 percent. In the developed countries the birth rate is from 22.4 to 10.0 per thousand of the population and in developing countries from 44.6 to 21.3 per thousand women (United Nations, 2002, Philip, 2003; Burch, 1980). Eggert and Sundquist, 2006 in Sweden has shown that fertility decline and the delay of the first birth is a major concern for improving the health status of the population. Even the effect of the postponement of the first born child (Sobotka, 2004) will lead to an increase in the number of absence of children and infertility. In 1998, the total fertility rate (TFR) of the society in Sweden has dropped to its lowest level ever recorded in the country that is at the level of 1:53. This situation is is shown by the average number of the first-born Swedish women increased from 23 years in 1970 to 29 years in 2002. Ideal family trends also led to the decision not to have children by future couples. Consequently, a drastic change in fertility in European countries is very significant with the increase in the number of women at the birth of their first child (Kohler, Skytthe & Christensen, 2001).

While the population history of Southeast Asia showing signs of decline in several countries in the 1960s, and then declining further at varying speeds across the region from the 1970s to the 1990s.

Although fertility in Southeast Asia may reach replacement level in the early twentieth century, but the demographic momentum and power of compound growth rate will continue to grow in population growth in Southeast Asia compared to Europe (and North America) (Hirschman, 2001). Analysis of fertility trends in South-East Asian Nations (United Nations 2001; World Population Prospect, 1988, 1998) from 1950 to 2015 show the trend of declining in fertility in all countries in the period. Singapore showed the highest decline of 74.8 per cent followed by Thailand and Brunei respectively 69.5% and 66.6%. Deterioration in Singapore since the 1960s can be attributed to the major factors that have contributed to the rapid decline in the fertility of family planning policies and the services provided by the board of the National Population of family planning; abortion law's legitimacy, voluntary sterilization campaign, incentive measures that affect the income tax, public housing, school selection, work permits, accouchement fees, and duties on childbirth (Sing, Viegas & Ratnam, 2011). The process which accelerated Singapore under replacement level is actually followed in four other countries in the world such as South Korea, Taiwan, Indonesia and Thailand and is due to the factor of rapid socio-economic change and population policies of respective countries. National commitment to voluntary family growth, contributes to the environment which proved very successful. In these five countries, rapid fertility decline has resulted in a significant impact on economic growth and standard of living (<http://www.eastwestcenter.org>, 2011)

The population growth in Malaysia actually showed the same trend experienced by most developed countries in the past, through the transition from the birth rate and high mortality to low rates (Weeks, 1992; World Bank, 1974; Asmah, 1979, 1983) based on the Theory of Demographic Transition. The theory has shown that socio-economic development plays an important role in influencing the fertility and mortality of the population (World Bank, 1974). In Peninsular Malaysia, Hirschman (1980) view that the demographic transition of the birth rate and high mortality to low occurs especially among the ethnic Chinese and Indian cities. Population growth rate continues to

decline was associated with a decrease in Total Fertility Rate (TFR) and it in turn will affect the gross birth rate (CBR). However, the trend of early marriage began to decline seen over the years led to delayed marriage among Malay women. In 2000, the average Malay women aged 25 to 29 years have had 2.3 children, which is lower when compared with the data in 1970 of 3.2 children (Poo, 2003; Abdullah, 1981). This phenomenon has been influenced by many factors and among them is the increase in education (Cochrane, 1975) for the women who have 12 years of education for 12 years (until high school) or higher of 15 years (was educated to tertiary level). Obviously, this situation illustrates that education factor has caused women to marry at later ages and in turn affect fertility (Abdul et al., 2002).

2. Data and Methods

2.1 Data Source

The Population and Housing Census of Malaysia, Malaysia Vital Statistics and Population Data Bank Malaysia multi-year (1911 to 2010) were used in this study as well as the main source of data through a survey conducted on the field in January to March 2012 in the district Besut Rajasthan. The total sample size was 348 of which were involved three distinct areas of population socio-economic background and geographical resource, that involved Kampung Raja (n = 125 / 36.90%); Jerteh (n = 129 / 36.0%), and Kuala Besut (n = 94 / 27.10 which includes 95 percent or significant degree of reliability (.95). The multiple sampling selection is by taking into account various aspects such as the sex ratio in the study area. Generally, Besut population represents the majority of men and women in the ratio of 104. This situation looks similar to the men-women ratio in Malaysia in the previous census (2000). The ratio of males compared to females is relatively high for Kemaman (111), Dungun (106), Marang (106), Hulu Terengganu (106), Setiu (103) as shown in Figure 1.0. However, in the aspect of employment the study has shown that in practice the women have begun to dominate men in all aspects except for a job such as a tourist guide (Rosniza Aznie, 2012).

2.2 Methodology

The analysis of the data uses a multivariate analysis which is a statistical technique to analyze the relationship between an independent variable or criteria and a set of independent or predictor variables (Jae-On, Kohout, 1975). Sub programs which will be used is the factor analysis. Stage 1: The bi-variate analysis (chi-square test) is used to discover the initial factors that are related to the ideal childbearing pattern (McCullagh and Nelder, 1983; Everitt, 2003). In general, the distribution is translated as:

$$\Pr(y) = \frac{\exp - u(u^y)}{y!}$$

Stage 2: factor analysis (Berry, 1960) is used to study the basic dimensions of regional economic development and to make classification based on many variables. Through observation, the characteristics of individuals, households, housing units and many more references based on many more studies to be carried out to various key considerations such as:

- 1) Theoretical framework of a process (problem) to be examined.
- 2) The data available for the selected variables.
- 3) Researchers' stance on issues to be studied.

3. Variables and Operationalization

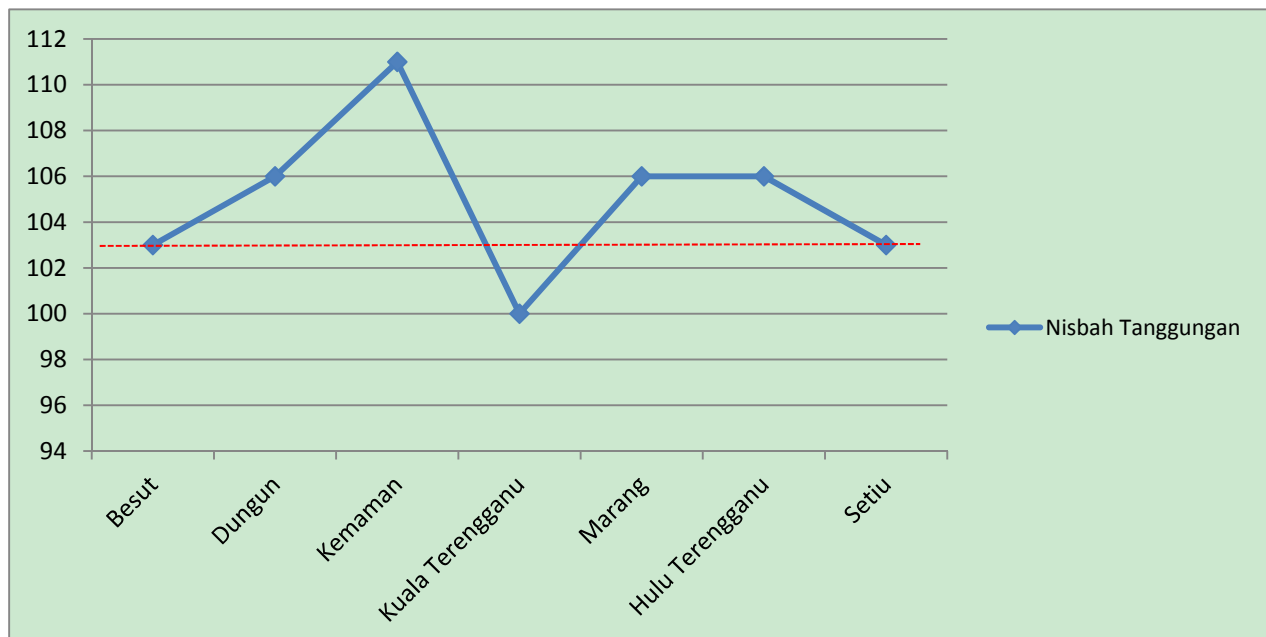
To analyze the questionnaires SPSS 11 were used, there were many variables that the researchers could use such as the dependent variables and independent variables. Among the dependent variables are the mean age at first marriage and the practice of family planning. While the independent variables were age group, educational level, employment status, income, number of children. It is the frequency, percentage, mean, mode, standard deviation.

Variables	Operasionalization
Mother's Age	Measurements of mother's age are based upon per year of age (18, 19, 20 and so on). Mother's age is measured by the 5-year groups (15-19, 20-24, 25-29 and so on). Maternal age below 20 years is considered low, while maternal age above 35 years are considered high.
Parity	Parity is measured based on the total number of children calculated according to birth order. Their first child was named first parity (parity low) and five named children to fifth parity (parity high)

Birth spacing	Birth spacing is measured according to the count of months between then and the previous birth. For example, the difference between the date of birth of the second child birth onwards.
Sex	Male and Female
type of birth	Ukuran sifat-sifat bayi berdasarkan. kelahiran cukup bulan atau tidak. Kelahiran sebelum minggu ke 37 dianggap kelahiran tidak cukup bulan atau pramatang. Manakala kelahiran pada minggu ke 37 dan ke atas dianggap kelahiran normal. Measurements are based on the conceptional period of the baby. Birth before 37 weeks is considered premature birth or preterm. While birth in 37 weeks and longer is considered normal birth.

4. Results

The correlation coefficient is an index or value that describes the relationship between two variables. The index ranged from -1 to 1. The coefficient of +0.1 indicates a very strong positive relationship. The value of -0.1 correlation showed an inverse relationship or very strong negative. Correlation index value can be zero (0) and this shows that the two variables are not related. Two variables, which are not related is said to be independent of one another (Iran, 1994). Thus, the correlation is a quantitative method that aims to get the idea the relationship between the variables. In this study, a total of 12 major variables were created to determine their influence on fertility. According to statistics, the coefficient for a sample size of 200 requires at least $\pm .19$ to 1.0 per cent level; $\pm .14$ to $\pm .18$ for the level of 5.0 percent and $\pm .13$ to 10.0 per cent level. This is very important for determining just significant statistical correlation are taken into account in the discussion. The results of from the analysis of the first cumulative group found the highest correlation between employment and home ($r=.75$; $p=0.02$), breast milk ($r=.63$; $p=0.02$) and vehicle ownership ($r=.56$; $p=0.02$) and between vehicle ownership and income ($r=.41$; $p=0.02$). High correlation .6 - .75 is reasonable because the increment and the employment status will increase earnings that also improve accommodation, basic needs and also nutrition for infants and mothers. In this table there are lots of statistical significant correlations of 95.0 percent. For example, the factor of education and family planning (.13), the home (.14), environment (.16), WC (.16). In general, each variable except for gender are correlated with one or more variables. This shows that there is a close and complex relationship due to the influence of variables, these variables on fertility.



Sourcer: Department of Statistic, Malaysia (2010).

Figure 1. Gender ratio in district of Terengganu, 2010

While the second shows the cumulative group of fertility correlation of 198 cases birth. In this sample correlation $\pm .20$ required for the level of 1.0 percent and for correlation $\pm .14$ 10.0 percent. While for high fertility correlation, environmental factors seem to have a higher correlation with home factors (.76), environment (.54), and toilets (.50). In this correlation, the experience of having children have the highest correlation with social factors (.24). And so also the highest value of the correlation between family planning and home factors (.21) and between physiology and the home (.22). The correlation values mean the residents in rural areas are largely do not practice family planning and many pregnancies occur with low space between them have affiliations with any of the variables. In general it is found, the value of high fertility correlation has much in common with low fertility correlation with factors of family planning.

Low fertility is a guide to selection of ideal small family that only has 56 cases. Degree of correlation has a similarity with high fertility correlation and low fertility. High correlation is caused by environmental factors with home factors (.72), WC (.65) and the environment (.48). This correlation pattern is desirable for improvement in the quality of water supply, toilets and home will improve the quality of the environment. Physiological factors have a high correlation with childbirth experience factor (.37). In addition, the high correlation also exists between the breast feeding to the practice of family planning (.34), and health factors periodically with toilet factors (.32), and pregnancy screening factor with home factor (.37). Relatively, a complete awareness of health care knowledge will affect women and their spouses in order to maintain good health and a healthy birth. So far, the three components of fertility correlates with the 12 factors discussed earlier.

5. Discussion and Proposed Implications Policy

In a factor of analysis, only two models are made the bases in determining loading factor. These models are for the study of fertility. However, for high fertility and low fertility, This is because, the loading factors of the two high fertility and low fertility are expected to have similar fertility value. Therefore, the two models are sufficient to study the fertility of women in the study area. In this article only the first model will be discussed which includes 10 social variables, family planning, and the selected environment to undergo backward stepwise. The variables are the number of children born (X1), the number of living children (X2), age at first marriage (X3), wife education (X4), education of husband (X5), birthplace (X6), type of water supply (X7), type of toilet (X8), type of home (X9), and family planning (X10). Referring to the loading factor coefficients (varimax) generated, eigenvalues and percentage differences explained by each factor showed that only three factors alone are created with eigenvalues greater than 1. While for the factors that have eigenvalues less than 1 are ignored. In principle, the three factors accounted for 57.68 percent of the difference. Factor 1 accounted for 27.90 percent, the second and third factors of 17.84 and 11.94 percent. In analysis factor, it is necessary to first determine the minimum value of the coefficient to make any interpretations and reviews of such factors. According to Child (1970) just the loading factor greater than ± 0.3 alone will be used. Therefore, in the discussion later, the coefficient used is based on the value and the lower value may be used if necessary and reasonable.

One question that can be posed here is to what extent the established model can explain the variables that affect fertility? So, to determine whether the model is appropriate or not then it is necessary to calculate the variance of each of the provisions of the variables used in the three factor model. It was noted, Factor1 has a high positive loading with variable number of children born (X1) and the number of living children (X2), each having the value 0.82554 and 0.81963. Two other variables that have a high correlation coefficient is the wife's education (X4), and husband's education (X5), each of 0.7835 and 0.70487. This means that these four variables have positive loading. The number of children ever born is an ideal child desired by the couple who lived in Besut Terengganu which prefer large or medium sized family. A son is considered an award by Almighty ALLAH and serves to give happiness and joy in their household. Although this study showed the same trend as the decreasing fertility trend, but the decrement is still low compared with other states in Malaysia that can be associated with religious factors and the negative response of women to the family planning practices. Factor 2 has a high correlation with the three variables of type of water supply (X7), type of toilets (X8), and type of houses (X9). The value of the coefficient for each variable is 0.62573, 0.711623 and 0.60216. Factor 3 also has a high correlation with three variables, namely the age of first marriage (X3), birthplace (X6), and attitudes towards family planning (X10) with a value of 0.56788, 0.70405 and 0.56744. The practice of family planning is a method generally known to the women in the study area, however the practice was greatly reduced due to the negative attitude received by them, especially by couples towards family planning practices to ensure effectiveness to have an ideal family. In fact, there are nearly 89 percent of the respondents who have yet to undergo papsmear tests even though they have undergone repeat pregnancy more than three times. According to the principle of analysis factor, the total variance explained by each factor that created it, can be a measure of the

suitability model. For the variable number of children born (X1), Factor 1 explained by 68.66 percent, Factor 2, 10.40 percent and Factor 3 by 5.27 percent. This percentage value is obtained by times 2 of the correlation coefficient variables, ie $(0.82866)^2 = 0.6866$ or 68.66 percent $(0.32262)^2 = 0.1040$ or 10.40 percent $(0.22976)^2 = 0.0527$ or 5.27 percent. The result of this calculation shows the amount of variance allocation to the three factors contributed by the variable of the number of children born was 84.35 percent.

Thus, based on this study clearly shows that the factors that influence children's ownership is not significant for education, but rather is influenced by the delay in age at first marriage, employment and health factors. A delay in first marriage age will also delay the first pregnancy and health factors is increasingly affecting the ability of a woman to achieve parity in the near future in marriage. Although not studied in detail, but one big issue that arises from this study is the delay in first pregnancy age even without the use of traditional and modern contraceptive devices. Can this be attributed to the use of various chemical tools available either in domestic appliances, beauty or equipment at work? It is still can not be answered from this article because it is far beyond the limitations of the scope of the study. However, probably exists and according to Penn (2003), harmful chemicals in the environment may cause reduced sperm count and other reproductive abnormalities. Environmental factors indirectly influence the child's wishes and ownership ideal for couples vulnerable to emotional distress and psychological effects of health changes are inconsistent. Ability to give space and time to their children lead to young couple (aged 20 hingga 30 years) already began to choose to have children ideally between two to four people compared to older couples (aged 30 years and above choose more than 4 people to 6 children) as the ideal number of children. Adjusting for 70 Million Population policy in Malaysia has been recommended by the Chief Prime Minister Dr. Mahathir Mohammad in 1982 that expressed a view that Malaysia will be more successful with a population of 70 million by the year 2097 to 2102. According to the World Development Report published by the World Bank in 1983, the people of Malaysia are expected to be 33 million in 2120. These projections are based on population growth rate of 2.0% per year (1980-2000) on the assumption that fertility rates decreased moderately. This report further demonstrates Malaysia's population will increase to 17 million in 1990 and reach 21 million in 2000. World Bank projections are not in line with the population of 70 million now as expected to reach in the year 2100. This means that the two main components of the population and a fertility rate and the birth rate should be increased accordingly. Even the ongoing population studies and publications surge is important in providing knowledge about the development trend of the past and present. Fixing a large projection which have a direct impact on national development planning depends on an understanding of the facts on the overall population dynamics, especially regarding patterns of fertility, mortality and family.

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