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*Globalizing Asia: Integrating Science, Technology and Humanities for Future Growth and Development*

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### **THE EFFECT OF SEX PREFERENCE TO THE DESIRE TO HAVE ANOTHER CHILDREN IN INDONESIA**

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Previous studies found that sex preference influenced fertility preference and family size, particularly in patrilineal culture. Although Indonesia is patriarchal society, the sex preference is rarely discussed among the researcher. Therefore, this study aims to explore the pattern of sex preference in Indonesia and its effect to the desire for additional children by controlling with desire particular sex of children, sex composition of children, demographic characteristics and social-economic factors. This study employed a secondary data of Indonesia Demographic Health Survey 2012. The sample size was 4,885 15-49 years women respondent who already had at least two children and none of them were infecund or sterilized. Univariate and Multivariate analyses were carried out. It was found that more than 79% of Indonesian women had no sex preference for their children. However, sex preference still existed, especially among women and their husbands that preferred sons over daughters. The multivariate analysis show that sex preference had effect on desire to have another children. Women with son preference were 1.9 times more likely to have another child than those who had no sex preference. The variable desire particular sex of children, sex composition of living children, wealth status and region help to explain that ideal number family size in more important and more effected women to have another child. The results suggest that son preference, ideal family size and complete family formation in women who has two children or more is more important and driven them to have another child. Majority of Indonesian women found to be have no preference toward their child but son preference proved still exist. Thus, policy to encourage two children is enough and improve the quality of children through education in Indonesia is needed.

**Keywords:** Sex Preference, Fertility, Indonesia

### **1. INTRODUCTION**

Population growth is becoming a challenge globally and does not exclude Indonesia. Based on data from the Indonesian Central Statistics Bureau, Indonesia is the fourth largest population in the world after the United States of America with a population of 237.6 million people or 3.49% of the total world population in 2010 (Central Statistic Bureau, 2010). The population of Indonesia experienced a baby boom from 1971 till 1990 and consequently nearly doubled in size from 119.2 million to 237.6 million and continues to grow to date. Data from the 2010 Indonesian census show that the population has increased by 32.1 million within one decade that equals the total population of Canada (33.7 million) or Morocco (31.5 million) (Suhaimi,2010). The Indonesian population growth rate has reached 1.49% per year which means that the Indonesian population increased by

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3.5 million people per year. With this level of growth, the Indonesian Central Statistics Bureau has estimated that the population of Indonesia will reach 270 million people in 2025 (Central Statistic Bureau, 2010)

There are three main factors that contribute to population growth, (1) fertility, (2) mortality and (3) migration. Population policies in Indonesia focus mainly on fertility rather than on mortality or migration policies. The Indonesian government has set the target total fertility rate (TFR) at 2.1 to be reached by 2015 and a family planning program has been implemented since 1980. As a result, Indonesia's TFR decreased from 3.0 in 1991 to 2.6 in 2002-2003. However, since 2002 the TFR has remained stagnant at 2.6. This result is important for project planning and evaluation of population policy in Indonesia. The objective for population policy makers is to affect fertility rate stagnation. Hereby, the TFR also serves as performance indicator for some of the respective governmental bodies in charge. Examples are employment policy or education policy where the stagnated TFR show that there is much to do in population management and policy in Indonesia.

Ideally, a fertility rate consistently less than two children per woman would lead to a declining population. The program of two children per woman has become one of the Millennium Development Goals for Indonesia in section 5b. To decrease population growth, many variables can affect fertility as it is the key to the population control. Some previous research found that child mortality and the use of contraception has become the determinant of fertility in Indonesia (Arsyad & Rahardja, 2014; Iswarati, 2009). Some variables such as sex preference and sex composition of living children were considered to have an impact on the fertility rate. Sex preferences in families may be plausible, and previous findings suggested that sex preference can affect the fertility rate through attaining the preferred sex for their children (Arsyad & Nurhayati, 2013). In Indonesia a family with a large number of children of the preferred sex is still widely culturally desirable. The reason behind this is the common idea that having many children will give rise to wealthy families (Arsyad & Rahardja, 2014). As a consequence, the actual and the ideal sex composition of the children becomes important for the family conception.

Sex preference is also referred to a reproductive behavior that based on the societal context or culture. There are three types of sex preference that exist in the world, that is son preference, daughter preference and bilateral preference. Son preference is common to many cultures in South Asia, East Asia, Southeast Asia and North Africa. A son preference where son is the parent favorable sex of children to the family ideal composition. Daughter preference is the opposite of son preference where the number of daughters determines the ideal family size. This culture is common in the South America region where parents tend to prefer girls. Bilateral sex preference is synonymous with no sex preference where the families tend to have an equal number of sons and daughters.

Regarding sex preference of children, there is diversity in sex preference in different family system and ethnic groups. For instance, one of anthropological research finds that ethnic groups in Indonesia like Batak, Minahasa, and Ambonese are adopting the patrilineal system and prefer their children to be son (Koentjaraningrat, 1998). The reason of this is because of son will inherit the family lineage and give the men have a higher position than women. While matrilineal system which is found in a few societies such as Minangkabau ethnic group prefers to have daughter. Apart from patrilineal and matrilineal system, some of other ethnic groups such as Javanese are adopting the bilateral kinship system which they have both sex preference. With respect to equality in treating boys and girls, there is a contradictory result. One research finds that boys and girls receive the same treatment in Indonesia even though the families have a preference for son (Kevane & Levine, 2003). While one of anthropological research illustrates that the unequal treatment has been practiced in the Indonesia where the treatment itself is bias to the boys. It can be noted that the

social context has an effect on sex preference in the family as well as social pressure that pushes the family to have a son in Indonesia. (Kevane & Levine, 2003).

Sex preference can be seen as cultural influence to the population growth where it can make a dynamic demographic transition. The social context also has a major role on the sex preference. The discussion of sex preference topic in the contemporary society is concerning about how much the sex preference in Indonesia can be an obstacle to the fertility decline (Pong, 1994). In the Indonesian context, sex preference can be assumed as a factor that makes fertility has been stagnated for a decade. Therefore this study uses the sex preference as a main predictor to find and describe why woman who already have two children or more in Indonesia want to have another children by controlling for socio-demographic.

## 2. RESEARCH METHODOLOGY

The study is based on a nationally representative data from Indonesian Demographic Health Survey (IDHS) 2012 which was collected from May to July, 2012. The unit analysis is women who are at reproductive age (15-49). The sample size is 4,885 with specific criteria. The inclusion criteria are woman who have at least two children, none of them are infecund and sterilized. This study applies sampling weight in all statistical analyses.

In this study, the sex preference is divided into desire, actual sex composition and fulfilled desire. The desire is represented on sex preference, the actual sex preference represented by sex composition of living children and fulfilled desire is defined as achieving the wanted sex composition of living children. The desired sex preference describes the ideal composition of children that includes the number and the sex of their children. This ideal family composition can reflect the parents' sex preference as well as it may reflect the actual sex composition of living children. These concepts describe the reality of parental efforts to achieve their ideal family formation. The achievement of the desired composition of living children is based on the accomplishment of sex preference. Parents who have not achieved their "son or daughter target" are likely to continue to procreate. The desired sex preference is likely to be re-evaluated after having had the desired children. Therefore, sex preferences may change throughout the parents reproductive age (Bairagi, 2001).

The socio-demographic characteristics, social-economic factors and exposure to family planning program are used as control variables. The socio-economic demographic factors consist of women education, wealth status, place of residence and region in Indonesia. The place of residence are consisted of urban and rural areas. The education variable is referred to the level of schooling of women that they attained at the time of survey. Wealth status is constructed by using household ownership, consumer goods, dwelling characteristic, toilet facilities, drinking water source and other characteristics related to socio-economic status. The variable is recoded and categorized into low economic status, middle economic status and high economic status. The region variable is the number of province that grouped based on geographical place and propensity to have same ethnicities culture. Regional background factors can help to explain the cultural and geographical setting of the women to fertility preference.

Fertility preference is the desire of the couples to the childbearing. The variable is generated from the question "Does the respondent want more children". The variable is consisted of three categories, namely, wanting more, undecided, and not wanting more. These categories are recoded into two category that is not wanting more and wanting more. Univariate, and Multivariate analyses (logistic regression) are carried out.

### 3. RESULT AND DISCUSSIONS

Table 1 shows the respondent characteristics with selected variables. The majority of the women who has already two children or more in Indonesia has no sex preference for their children (79%) but the sex preference still exists in Indonesia with 10 percent of son preference and daughter preference, respectively. For the fertility preference, almost 78 percent of the women do not want to have another child and 22 percent of them want to have more children even though they already have two children or more. In association of sex composition the living children the woman had, most of respondent had a boys over daughter with 36%, followed by 33% of daughter over boys and 31% have balanced sex composition. Regarding the desire particular sex of children, Most of women that already have two children in Indonesia is at reach both of boy and girl ideal number (53%) followed by reach boy but not girl (18%), reach girl but not boy (14%) and not reach both of boy and girl ideal number (14%), respectively. Slightly more than half of women completed secondary and higher education (52%). Majority of respondent reported that they were at high wealth status (42%) followed by below average (37%) and average (21%).

**Table 1. Percentage distribution of characteristics (n=4885)**

Variable	Frequency	%	Variable	Frequency	%
<b>Fertility preference</b>			<b>Women education</b>		
Do not want another children	3,626	77.9	Primary and less	2,239	47.5
Want another children	1,259	22.1	Secondary and higher	2,646	52.5
<b>Women sex preference</b>			<b>Wealth status</b>		
No preference	3,836	79.1	Low	2,221	37.0
Son preference	547	10.4	Middle	936	20.9
Daughter preference	502	10.5	High	1,728	42.1
<b>Sex composition of children</b>			<b>Place of residence</b>		
Balanced	1,441	31.3	Urban	2,204	49.2
Boys over daughter	1,819	35.9	Rural	2,681	50.8
Daughter over boys	1,625	32.8	<b>Region</b>		
<b>Desire particular sex of children</b>			Sumatera	1,520	23.3
Reach both of boy and girl	2,532	53.4	Java and Bali	1,418	57.4
Reach boy but not girl	847	17.8	Nusa Tenggara	249	3.9
Reach girl but not boy	712	14.5	Kalimantan	480	5.9
Not Reach both of boy and girl	794	14.3	Sulawesi	767	7.1
			Maluku & Papua	451	2.4

Considering sex preference for their children of women by controlling for other independent when no sex preference is defined as reference group, women with son preference are 1.9 times more likely to have another child than women with no sex preference (p value <0.001). Women with daughter preference are 1,5 times more likely to have another child than women with no sex preference (p value <0.05) Meanwhile, other independent variables helped in explaining fertility preference. They are desire particular sex of children, sex composition of living children, wealth status and region. It is indicated that sex composition of living children has a negative effect on fertility preference. Women who has number of boys over daughter are 60% less likely to have another child than women who has balance children (p value <0.001). Similarly, women who has number of daughter over boys also 62% less likely to have another child than women who has balance children (p value < 0.001).

Desire particular sex of children have a very strong relationship with fertility preference. Women who reach the ideal number of boy and girl are defined as the reference group. Women who not reach the ideal number of boy and girl are 5.5 times more likely to have another child. Women who reach the ideal number of boy but no girl are 6.9 times more likely to have another child and

women who reach the ideal number of girl but not boy are 6.6 times more likely to have another child.

The wealth status of the women also has significant relation with fertility preference. Women with high wealth status are 38% less likely to have another child (p value <0.001). This study also found that all of region also becomes a significant predictor for fertility preference. When Java and Bali region used as reference, women who lived in Nusa Tenggara region are 2.8 times more likely to have another child. Furthermore, women who lived in Sulawesi are also 2.4 times more likely to have another child than those who lived in Java and Bali. Women who lived in Maluku & Papua are 2.2 times more likely to have another child. Women who lived in Sumatera are 1.6 times more likely to have another child. Women who lived in Kalimantan are 1,5 times more likely to have another child (p value < 0.01)

**Table 2. Logistic regression for Desire to Have Another Children with control variable**

Dependent variable : The Desire to Have Another Child					Dependent variable : The Desire to Have Another Child				
	Odd Ratios	95% Confidence Interval		p-value		Odd Ratios	95% Confidence Interval		p-value
<b>Women sex preference</b>					<b>Wealth status</b>				
No preference (Ref)					Low (Ref)				
<b>Son preference</b>	<b>1.89</b>	<b>1.4</b>	<b>- 2.6</b>	<b>0.001</b>	Middle	0.8	0.6	- 1.1	0.121
<b>Daughter preference</b>	<b>1.46</b>	<b>1</b>	<b>- 2</b>	<b>0.027</b>	<b>High</b>	<b>0.62</b>	<b>0.5</b>	<b>- 0.8</b>	<b>0.001</b>
<b>Sex composition of living children</b>					<b>Place of residence</b>				
Balance (Ref)					Rural (Ref)				
<b>Boys over daughter</b>	<b>0.4</b>	<b>0.3</b>	<b>- 0.5</b>	<b>0.001</b>	Urban	1.06	0.8	- 1.3	0.618
<b>Daughter over boys</b>	<b>0.38</b>	<b>0.3</b>	<b>- 0.5</b>	<b>0.001</b>	<b>Region</b>				
<b>Desire particular sex of children</b>					Java and Bali (Ref)				
Reach both of boy and girl (Ref)					<b>Sumatera</b>	<b>1.58</b>	<b>1.2</b>	<b>- 2</b>	<b>0.001</b>
<b>Reach boy but not girl</b>	<b>6.87</b>	<b>4.9</b>	<b>- 9.5</b>	<b>0.001</b>	<b>Nusa Tenggara</b>	<b>2.76</b>	<b>1.9</b>	<b>- 4</b>	<b>0.001</b>
<b>Reach girl but not boy</b>	<b>6.64</b>	<b>4.7</b>	<b>- 9.5</b>	<b>0.001</b>	<b>Kalimantan</b>	<b>1.53</b>	<b>1.1</b>	<b>- 2.1</b>	<b>0.007</b>
<b>Not reach both of boy and girl</b>	<b>5.55</b>	<b>4.2</b>	<b>- 7.3</b>	<b>0.001</b>	<b>Sulawesi</b>	<b>2.37</b>	<b>1.8</b>	<b>- 3.1</b>	<b>0.001</b>
<b>Women education</b>					<b>Maluku &amp; Papua</b>				
Primary or less (Ref)						<b>2.21</b>	<b>1.6</b>	<b>- 3.1</b>	<b>0.001</b>
Secondary and higher	1.09	0.9	- 1.3	0.434					

The finding in this study specifically find that there are two things can affect women who already has two children to decide to have another child in Indonesia, first is the son preference, second is the ideal family size and complete family formation.

The regression showed that son preference has higher significance after controlling for sex composition of living children, desire particular sex of children and socio-economic demographic variables. Although the majority of women in Indonesia had a tendency to no sex preference based on univariat analysis. The women who has two children in Indonesia that have son preference will be the one that more likely to have desire for another child. In other words, to get son in the family is important and it more desireable than girl in Indonesia family. This explanation can be related to the region variable. The region variable can represent the major culture of ethnicities that exist in every region itself. As example when region and sex preference are being analyzed, it is found that son preference are strong in Sumatra, Kalimantan, Maluku and Papua. Daughter preference also found strong in Nusa Tenggara and Sulawesi. In this case, son preference is strong in Indonesia because the kinship system. The kinship system is part of the cultural heritage in every region of Indonesia (Koentjaraningrat,1998). In the kinship system, parents prefer sons in order to continue

the family name in regions. The Indonesian term is 'Marga' or 'Famili' or 'Klen' which is the concept of family names. It is important that sons carry on the family name and some ethnic groups in Indonesia perform ritual ceremonies in this tradition. The society perceives the man as the leader of a family who ensures the continued lineage of the family name.

The ideal family size and complete family formation is important for women who already has two children to decide for additional children. This fact can be seen from variable sex composition of living children and desire for particular sex of children. The results show that the majority of Indonesian women that fell under the specific criteria for this study had more sons than daughters as a slight difference between sons over daughters, daughters over sons and a balance between sons and daughters could be found. This finding shows that women who have balanced number of son and daughter can encourage them to have additional children. One possible reason is that the women try to achieve their ideal family size before ceasing to bear children.

The variable desire for particular sex of children shows that most of the women who had two children or more are already met their ideal number of sons and daughter. This means, achieving the desired number of sons and daughters is important for the Indonesian women. Their desired number of sons and daughters reflect their ideal complete family formation. These findings attest that the desired number of a particular sex of children must be met for Indonesian women who already have two or more children.

The economic status also have a significant status to the desire to have another children. Children are seen as wealth for their parents. Previous reports found that the economic perspective on children is the regulator for the fertility (Uddin, Bhuyan & Islan,2011). Families are seen as production units and the flow of wealth is from children to parents. Children are expected to work for their parents and support them. In rational choice perspective, parents are using their children as a man-power to help them whether in business or farming. The particular sex utility is one basic reason for women and their husbands having particular sex preference toward their children especially son. Children of a particular sex can provide financial, social or psychological benefits (Rajaretnam & Deshpande,1994). Sons are perceived as greater gain in assistance to some jobs such as agriculture or sales where they serve as a simple "social security system" (Rajaretnam & Deshpande,1994). Parents may benefit from daughters that assist at old age, help with household tasks or care for young siblings. Most important is certainly the function of children as an economic utility and safe haven at old age. Mursyida (2015) found that parents in Indonesia hope that the son or daughter will assist with the family's economic condition and also the household chores.

Throughout development history, economic development in Indonesia has been more focused on the regions of Java and Bali. The region focus has resulted in an economic gap between Java and Bali region and the other regions to the point of creating a major problem of asymmetric development. This asymmetric development has led to another population problem with a migration towards Java and Bali of Indonesians seeking a better life. As a result, Java and Bali became the two most populated regions in Indonesia. Some evidence from previous research find this norms still believed in every ethnic in Indonesia. Some of the family think that have a many children will guaranteed the life of parent in older age. The Indonesia parent think if they have a lot of children, it will increase the chance of natural winners than can support the life of parents later.

#### 4. CONCLUSION

This study reveals that son preference, ideal family size and family formation effected the decision of woman who already has two children to have another child. This finding also proved that the norms of "Many Children Will Bring A Lot of Sustenance" still believe in Indonesia.

Children are seen as wealth for their parents where they are expected to work for their parents and support them, especially in the province that outside of Java and Bali. The regional differences are based on the economic condition. This norm still believe strongly in the province that the economic condition still low. The Indonesian family seek their children as the economic utility and the old age security. Furthermore, the achieved sex composition of living children revealed that complete family formation is important for Indonesian women and a stimulus for additional children. Thus, policy to improve the quality of children through education is needed. There is a need of socialization about the quality of children where is more important than the children quantity. Education also hold the important variable to change the economic status and the mindset of the women and their husband who already have two children. It is need for the women to think the opportunity cost of having a lot of children.

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