Does Women's Fertility Intention Predict Fertility Behavior? A Panel Study in Contemporary China

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Abstract

This study exams how Chinese women's fertility intention predicts their fertility behavior in contemporary China by using three waves of panel data from the China Health and Nutrition Survey (CHNS). Demographers have long been interested by the predictability of fertility intention on fertility behavior. Specific social contexts are found to have different influences on the predictability of fertility intention. The tremendous economic and social changes caused by China's rapid economic development and the one-child policy together make China a unique place to study the predictability of fertility intention on fertility behavior. Using a sample of 418 married women who were 20 to 35 years in 1997 from the CHNS, I find that fertility intention can predict women's fertility behavior in contemporary China. Women's intention of having more than one child has a strong predictability on their future behavior of having more than one child. Furthermore, female empowerment weakens the predictability of fertility intention.

Introduction

Whether women's fertility intention predicts their fertility behavior has interested demographers for several decades. Previous research results on fertility intention's predictability are not consistent that some found fertility intention has a strong relationship with fertility behavior while some found fertility intention fails to predict fertility behavior (Quesnel-Vallee and Morgan 2003). Furthermore, previous researches are situated in specific contexts and at

specific historical moments, so the findings cannot be easily generalized into other contexts. Researchers found that in Taiwan, women's fertility intention was a much more important determinant of their future fertility behavior than other demographic and social characteristics (Hermalin et al. 1979). In India, when women reached or closely approximated their ideal number of sons they would stop their reproductive activities even when they have fewer children than they desired (Vlassoff 1990).

Comparing with other countries in the world, China's context is unique. In early 1980s, the Chinas government introduced the one child policy, which is the only population policy in the world limit women's reproductive behavior; meanwhile, after the market reform in the beginning in the late 1970s, China has gone through huge economic development along with huge social reforms. Some demographers believe that the one Child policy and economic development simultaneously affecting Chinese women's fertility behavior (Cai 2010, Morgan, Guo and Hayford 2009). The uniqueness of contemporary China introduced the necessity of assessment of fertility intention's predictability in China's context. In this research, three waves of panel data from the China Health and Nutrition Survey is used to exam the predictability of fertility intention on fertility behavior.

Fertility Intention's Predictive Validity

Fertility intention is the number of children a woman plans to have during her reproductive years. Past research suggested that fertility intention is strongly and consistently related to future fertility behavior(Schoen et al. 1999). In the theory of reasoned action, intention is defined as a combination of attitudes about an action and perception of likely responses to that action to perform a behavior(Schoen et al. 1999). Fertility intention can be seen as women's attitudes of

having children and their estimates of the consequence of having children. However, research also found that intention could be as volatile as other period measures of fertility behavior, for example, women may misestimate the future condition and make wrong assumption of the number of children they want have, so when facing hardship in life, women may fail to realize their fertility intention (Westoff and Ryder 1977).Further, fertility intention does not remain unchanged through women's life. Fertility intention can be contingent because period factors in the history interact with individual's life course, for example when economic condition worsens women will re-estimate their fertility intention(Goldberg, Sharp and Freedman 1959). It can also be constrained by sub-or infecundity, structural obstacles and social norms(Quesnel-Vallee and Morgan 2003). Women can also adjust their fertility behavior according to the changes in fertility behavior determinants, such as the change of economic condition and female empowerment(Aarssen 2005).

China's Context

China is a unique context to study the relationship between fertility intention and behavior. This topic has been rarely studied in the literature, partly because fertility behavior was conceived as highly constrained in China. Although the so-called one-child policy has been initiated since 1979, regional variations exist in the implementation of the policy. In 1984, due to the public resistance, the central government released Document 7, which is more permissive for having a second child in rural China (Bongaarts and Greenhalgh 1985). Couples in rural areas were allowed to have two children, even three, if certain criteria were met, while the one-child policy continued to be strictly reinforced in urban China (Gu et al. 2007). In addition, many couples are now eligible to have two children, if they are both the single child themselves. Many

of these eligible couples are now entering reproductive years and will soon have their own children. The variation of the one-child policy gives many Chinese women opportunities to make their own fertility decisions. Furthermore, son preference in China, especially in rural China still persists (Das Gupta et al. 2003). The one child policy has undermined the notion of descent line and threatened the source of old-age security (Bongaarts and Greenhalgh 1985). Many Chinese families still desire at least one son in the family. They are willing to take the risk of violating the one child policy. An earlier research paper suggested that the one child policy does not affect fertility preference (Freedman 1997).

Meanwhile, rapid economic development in China created tremendous economic opportunities for men and women in China, and was accompanied by changes in social norms. On the one hand, abundance of economic resources could make it easier for the woman to achieve her fertility intention, if she desires more than one child. On the other hand, economic development has also created barrier for women to achieve their fertility intention for a second child. In earlier Maoist era, most working-age women worked in state owned enterprises which provided a wide range of social services and benefits including maternal leave and childcare; but after the market reform, in order to pursue more profits, enterprises are reluctant to accommodate employees' care-giving needs, this led to a re-emergence of traditional patriarchal values and increasing pressures on women to return to the home (Cook and Dong 2011). In sum, the changing social norm, dramatic economic development as well as uneven implementation of the family planning policy, makes China a fascinating context to study the relationship between fertility intention and behavior.

Fertility Determinants

Female Empowerment

Female empowerment is the increase of bargaining power of wives relative to their husband Past research suggests it to be a strong predictor of n fertility decline when women have more decision making power (Eswaran 2002, McDonald 2000). Gender equity is constituted by increase of women's education and labor market participation in (Dey and Wasoff 2010, McDonald 2000). In the US, employed mothers have lower fertility than those who are not in the labor force, and women with gainful employment tend to have fewer children than others (Brewster and Rindfuss 2000, Engelhardt, Kogel and Prskawetz 2004). When highly educated women become mothers, they avoid having to sacrifice labor market opportunities and usually face the challenge and the cost of making child care arrangements (Joshi 2002). However, women with high earning power are more likely to be able to afford to invest in unsubsidized private child care services (Joshi 2002).

Female empowerment in China has its special importance. Researchers found that Chinese women are still in the disadvantaged status in the Chinese labor force. They have higher probability to be laid off and receive lower income than their male counterparts in the work place (Liu 2011). Researchers found under the classical patriarchy, young Chinese women are subordinate not only to all the men but also to the more senior women, especially their mothers-in-law (Shen 2011). With low status in the household, women cannot fulfill their own fertility intention, but rather bear the number of children based on family's decision.

Child Care and Family

Childcare is the most common strategy used to by women to enable them to combine the role of mother and worker. When childcare is available and acceptable, decrease in child care cost will increases fertility (Rindfuss and Brewster 1996). 90% of the employed women in a US study had regular child care arrangement of child rearing with others, and lessened the conflict between familial and non-familial roles(Powers and Salvo 1982). The availability of childcare reduced the negative relationship between women's employment and fertility(Engelhardt, Kogel and Prskawetz 2004). Higher child-care costs would act to reduce employment and birth rates (Blau and Robins 1989). But relative's support reduced the conflict between women's participation in the labor force and childcare (Del Boca 2002). Chins has an above world-average female labor participation and vast majority of Chinese women are working as full-time employees, while part-time work is rare (Cooke 2006).Child care in China has its own special characters. Grandparents sometime are the primary caregivers of the family. In China, women's parents or parent in-laws are the primary resource for informal childcare and co-residency can be used as a proximate measure of the availability of informal childcare support (Chen, Liu and Mair 2011). Help from grandparents or family will help to ease of burden on adults' parents' burden on child care. In the major cities of China, even when the parents are not living in the same household, face to face contact are regular between parents and their adult children, and parents provide help on a regular basis (Bian, Logan and Bian 1998).

Family Economic Resources

Household is important to consolidate or enhance members' economic situation; members of the household contribute the income of the household through contribution towards work within the household and work outside the family and pool income (Moen and Wethington 1992).

Economic strain was found to be the main reason of downward adjustment of fertility behavior (Goldberg, Sharp and Freedman 1959). The cost of childrearing is constrained the by the family resources and consumption behavior, that families decide to spend money according their economic condition and consumption behavior] (Bourguignon 1999). The number of the children a family can have is also restrained by family economic condition. Reducing later age childbearing would benefit the economic status of the current children for most of the normal families (Macunovich and Easterlin 1990).In Italy some researcher used amount of family transfer as indicator of potential family support and found a positive effect on the likelihood of women having children (Del Boca 2002) .

According Rinfuss, the same factors that predict fertility behavior predict fertility intention(Schoen et al. 1999) . Fertility intention as what women have planned comes before fertility behavior in most of the cases. The lag between intention and fertility leaves the space for women to alter their fertility behavior based on their current life situation. In the current literature, not much attention bad been paid to the connection between fertility intention and fertility behavior in the China context. Most researches focus on China's fertility behavior and how Chinese women's fertility behaviors change during the past decades. Two questions are asked in the study. Frist, can women's fertility intention predict women's behavior in the China's context? Second, which factors influence the predictability of fertility intention on fertility behavior? And how are these factors influencing the predictability? This study helps to shed light on the interplay between human agency and changing socioeconomic and life circumstance, and fills an important gap in the literature on fertility intention's predictability on fertility behavior in the China context.

Hypotheses

The main hypothesis is that fertility intention has a strong predictability on fertility behavior in China. Fertility intention is a goal that women want to reach by the end of their reproductive years. Chinese women who intend only one child are more likely to have only one child, while women who intend to have more than one child are more likely to have more than one child.

The next four hypotheses focus on the moderating mechanisms on the predictability of fertility intention on fertility behavior. The first hypothesis is that being more empowered can affect women's likelihood to achieve their fertility intention in both negative and positive ways. First, empowerment increases the likelihood of women achieving the number of children they intend. With more bargaining power in the family, women are more likely to have the number of child they intend. More empowered women also earn more personal income which can be used as a form of resource to achieve their fertility intention. On the other hand, empowerment increases the opportunity cost of childbearing, and women would adjust the number of children they intend downwards and eventually have less children than they originally intended.

The second hypothesis is that better family economic condition increases the likelihood of women who intend more than one child achieving their fertility intention. Better economic condition can either mean fewer children needed for contribution to the family labor participation and better quality of children are desired, but at the same time, better economic condition can also mean greater ability to afford having more children. Improvement in

economic condition will remove some constraints for women who want more than one child and help them to achieve their fertility intention.

The third hypothesis is that the when informal childcare assistance is available, women who intend more than one child are more likely to achieve their fertility intention. Childcare assistance reduces the opportunity cost of child bearing for women, and minimizes conflicts between family and career. When childcare is available, part of childcare burden can be share by the parental generation who is available for help. And for women who want more children, they can use the assistance from their parents and parent in-laws to share the work of child caregiving.

The fourth hypothesis is that local one child policy will restrain women's fertility behavior and keep them from achieving their fertility intention. Because the regional variation on the one child policy, women who intend more than one child but living in regions where only one child is allow for each family have to restrain their fertility behavior in order to avoid the punishment of having the out of quota child. Each province in the sample has its specific conditions allowing a family to have the second or third child (Gu et al. 2007). If a woman is allowed to have the second child, she does not need to be afraid of consequences of violating the one child policy, which including monetary find, forced sterilization and abortion (Greenhalgh 1994).

Data and Measurement

Data: the China Health and Nutrition Survey

The data of China Health and Nutrition Survey is used to test the predictability of fertility intention in this study. The CHNS was conducted by the Carolina Population Center at the

University of North Carolina at Chapel Hill and the National Institute of Nutrition and Food Safety at the Chinese Center for Disease Control and Prevention. The CHNS is a longitudinal panel data and 8 waves of data have been collected between 1989 and 2009. A multistage, random cluster process is used to draw a sample of about 4400 households with a total of 26,000 individuals in nine provinces. The adult and household surveys are used for data analysis. In the study, the data of the 1997, 2004 and 2006 wave from Guangxi, Guizhou, Heilongjiang, Henan, Hubei, Hunan, Jiangsu and Shandong province are used. In 1997, Heilongjiang is used to replace Liaoning province, in order to keep the maximum amount of eligible sample, 1997 is chosen as the beginning year for this study. The sample includes about 418 married women who were 20-35 years old in 1997, and is selected based on a CHNS sub-group of ever married woman between age 20 and 52. The original plan was to select women age between 20 and 30 years old in 1997, because they were in their early reproductive age in 1997 but due the limitation of sample size, the age ranged has been widened to 20 to 35. By2006, most of women would have finished or almost finished their reproductive activity. And none of these women were childless in 2006.

Measurement

Fertility Behavior

The dependent variable is based on the number of children women have in 2006. The 2006 survey has recorded women's birth history and the total number of children women have. It is dichotomized into two groups; with a group of women who have only given birth to one child and the other group of women who have given birth to more than one child. In the sample, there are about 9.57% of the women who have three children, and less than one percent has more four

or five children. These groups are not big enough for the purpose of data analysis, so making a dichotomized group has become a better choice. Table 1 presents the summary statistics of the variables. In the sample about 42.8% of the women only had one child, while 57.18% have more than one child in 2006. More than half of the women in the sample have at least 2 children by the 2006 survey.

Table 1 about here

Fertility Intention

The key independent variable is constructed by the number of children women intended in 1997. In the survey, skipped pattern questions are designed asking women who is currently pregnant, women using rhythm or withdraw as contraception method and women are not currently pregnant and not using any contraception. Currently pregnant women were asked "Do you want to have another child, in addition to the child you are expecting?" and "How many more children do [you] want to have?". Women using rhythm or withdraw as contraception method and women are not currently pregnant and not using any contraception are asked "Do you want to have either a child or another child sometime?" and "How many children or how many more children do [you] want to have?". By adding the number of children a woman already had to the number a woman wanted to have is the intended number of children a woman wants to have. Then it is recoded into a dummy variable: a group of women wanting only one child, and the other group of women wanting more than one child. In the sample, about 43.54% of the women intended only one child, and 56.46% intended more than one child. The proportion of women intending more than one child in 1997 is similar to the proportion of women had more

than one child in 2006. Table 2 is a cross tabulation of fertility intention and fertility behavior. Among women intended on child in 1997, 81.97% of them had only child in 2006, and the other 18.13% of the women have more than one child. 87.29% of women who intended more than one child in 1997 have more than one child in 2006; and 12.71 of women who intended more than one child in 1997 had only one child in 2006.

Table 2 about here

Women's Empowerment

The first key moderating variable is women's empowerment. In the study women's empowerment is measured by women's education in 1997 and differences between women's income of 1997 and 2004 by quartile. Education is measured by the highest level of education women received in 1997, including no degree, primary school, lower middle school and upper middle school and higher. Most of the women in the sample did not receive higher education. Only 15.55% of women had a degree of upper middle school or higher, and 16.75% of women do not have any education degree, which means they either never went school or did not finish elementary school. Personal income change is measured by change of total individual income differences between 1997 and 2004. Individual income will also be inflated using the 2009 inflation index. Data of 2004 is chosen as the approximate measurement of women's personal income in the process of women finish their fertility behavior between 1997 and 2006. Income is transformed in to quartiles, and then the 1997 income quartile is used to minus the 2004 income quartile. A categorical variable is created including a group of women with personal income decreased at least one quartile, a group of women with income remain in the same quartile and a group of women with personal income increase at least one quartile. Personal

income change and household income change are measured by the change of women's personal income quartile change between 1997 and 2004. The mode of personal income change is personal income decreased at least one quartile group. About 34% of sample had experienced personal income decreased at least one quartile.

Family Economic Resources

The second key moderating variable is the change of family economic condition between 1997 and 2004. Family economic condition is measured by per capita household income inflated according to the 2009 inflation index. Data of 2004 is chosen as the approximate measurement of the family economic resource in the process of women finish their fertility behavior between 1997 and 2006. Income is transformed in to quartiles, and then the 1997 income quartile is used to minus the 2004 income quartile. A categorical variable is created including a group of women with household income decreased at least one quartile; a group of women with household income remain unchanged by quartile and a group of women with household income increased ate least one quartile. The mode of distribution is the group of women with household income quartile remained unchanged. About 38.3% of the women's household income quartile remained unchanged in quartile between 1997 and 2004.

Availability of Informal Childcare

The third key moderating variable is the availability of informal childcare assistance in 1997. Because informal childcare assistance usually comes from women's parental generation, the living arrangement of the parental generation is used as a proximity measurement of availability of informal childcare assistance. In the survey, a question first asks whether women

mother, father, mother in-law and father in-law is still alive. Then next question asks where the living mother, father, mother in-law and father in-law lives, with the options of in the same household, next door or adjacent to household, same neighborhood/village, outside neighborhood but in same city/county, other city or county and don't know. A dummy variable is generated to measure the availability. With one person of the parental generation living in the same household or next and in the same household, childcare is code as available. And the rest of the women are coded as childcare unavailable. 81.1% of sample had at least one of her parents or parent in-laws living in her house, indicates that 81.1% of the sample have available childcare assistance from their families.

Local Family Planning Policy

There are no direct measurements of local family planning policy in the ever-married women survey, so *Hukou* and province of residence are the proximate measurement of local policy. Families with urban *Hukou* are allowed to have only one child country wide, but families with rural *Hukou* are not under the strict one child policies in most of provinces, but rather the "1.5 children" or two children policy. Province will also be used as a categorical variable to test the regional variation of the one child policy and how the policy moderating between fertility intention and fertility behavior.

Control variables

Respondents' age is the main control variable. Though the age of the respondents are restricted that in 1997 that they were between 20-35 years old, and differences between ages

groups could exist. Marital status is controlled, that the entire sample only includes married women. Divorced or widowed women are excluded.

Analysis

A logistic regression model is used to model the probability of a woman having more than one child. The model will include seven independent variables and interaction terms of the key dependent variable and each key moderating variable. In the logistics regression:

$$\log\frac{p}{1-p} = \beta_0+\beta_1 I+\beta_2 H+\beta_3 E+\beta_4 P+\beta_5 C+ \beta_6 R +\beta_7 S+ \beta_8 I\times H+\beta_9 I\times E+\beta_{10} I\times P+\beta_{11} I\times C+\beta_{12} I\times R$$
$$+\beta_{13} I\times S+\text{age}$$

where I is fertility intention, H is per capita household income change between 1997 and 2009, E stands female empowerment of women's education, P stands for personal income, C is the childcare availability, and R stands for women's *Hukou* and S stands for the province where women's Hukou is. And age is the control variable.

Logistic regression results show that there is a significant correlation between fertility intention and fertility behavior. Table 3 presents the result of the logistic regression. In all six models, the coefficients between fertility intention and fertility behavior are significant. The coefficients have the same direction and similar magnitude. In model 1, women who intend more than one child is 27.59 times more likely to have more than one child comparing with women who intend one child. And the coefficients between fertility intention and fertility behavior are increased slightly in latter models, which suggests that there is a strong relation between fertility

intention and fertility behavior. The results support the main hypothesis that fertility intention predicts fertility behavior.

Table 3 about here

The first hypothesis is that increased bargaining power within family increases the likelihood of women achieving their fertility intention of more than one child, but was not supported by the analysis. Female empowerment is measured by women's education and personal income. Education has a negative effect on the number of children women have in 2006, but it does not affect fertility intention's predictability on fertility intention. The interaction term of education and fertility intention are not statistically significant, and is dropped from the model. The coefficient for education is statistically significant only when women have an upper middle school degree or higher. Figure 1 is the predicted probability of women having more than one child by women's education. Regardless the difference between women who intend to have one child and women who intend to have more than one child, the probability of women having more than one child decreases as women's education degree increases.

Figure 1 about here

Personal income change is another measurement of female empowerment. Personal income change does not have statistically significance effect on fertility behavior, but the effect of fertility intention is conditioned on women's personal income change. When women's income remained unchanged in quartile between 1997 and 2004, the probability of women having more

than one child increases, but when women's income decreases, the probability of women having more than one child decreases. However, the interaction between fertility intention and personal income has negative correlation with fertility behavior, which supports the hypothesis that empowerment decreases the likelihood of women intending more than one child to achieve their fertility intention. In model 2, 3 and 4, when women's income remains unchanged, the probability of women having more than one children decreases. Figure 2 demonstrate the how women's personal income change moderate between women's fertility intention and fertility behavior. For women who want to have more than one child, and their personal income remain unchanged, they are less likely to have more than one child. When women's personal income increases, it weakens the predictability of fertility intention on fertility behavior.

Figure 2 about here.

The second hypothesis is not supported by the finding of the analysis, that better family economic resources increase the likelihood of women achieving their fertility intention. The coefficient in model 4 shows a positive correlation between fertility behavior and family economic resources, but the coefficient is statistically insignificance. And family economic resources change has no statistically significant effect on the predictability of fertility intention on fertility behavior either. The third hypothesis on the availability of childcare assistance is not supported by the regression result. Model 5 shows the relationship between fertility behavior and availability of childcare assistance is positive, but has no statistically significance. And childcare availability has no statistically significant effect on the predictability of fertility intention on fertility behavior.

Model 6 show each province has different coefficient with fertility behavior. The coefficients are significant in Henan, Hunan and Guizhou Province. Women in these three provinces have higher probability of having more than one child in 2006. And Hukou also has a positive correlation with fertility behavior with statistical significance. Having a rural Hukou, a woman has a probability of 0.7766 of having more than one child while all other variables remain constant. However, regional differences do not affect fertility intention's predictability on fertility behavior, the interactions term between fertility intention and Hukou and fertility intention and provinces are not statistically significant. Thus, the finding does not support the last hypothesis that local one child policy will restrain women's fertility behavior and keep them from achieving their fertility intention

Conclusion

This study suggests that fertility intention can predict fertility behavior in contemporary China. Female empowerment has significant influence on both fertility behavior and predictability of fertility intention on fertility intention. It supports previous research findings that education has a negative correlation with fertility behavior. Women with higher education degree have smaller probability of having more than one child. In this study, I have found that women's personal income has a negative correlation with the predictability of fertility intention on fertility behavior. Improvement in women's personal income weakens the predictability of fertility intention on fertility behavior. Family resources change and availability of childcare assistance do not impact women's fertility behavior; neither do they influence the predictability of fertility intention on fertility behavior. Regional difference of the one child policy is

significant when predicting fertility behavior, but it does not influence the predictability of fertility intention.

This study has several limitations. The first limitation is that the study did not have a measurement for husband's fertility intention. The CHNS does not have question designed on husband's fertility intention. Childbearing is a family affair which is usually decided by both the husband and wife. Previous research has found that husband's intention has the equal importance as wife's intention and has a significant influence on women's fertility behavior (Thomson 1997). The second limitation is that the analysis' lack of measurement of the availability of public childcare services. Formal child care is an important resource which is used by women to reduce opportunity cost and family friendly public childcare service also reduce childcare burden from mothers (Hofferth and Collins 2000, Ribar 1992). The third limitation in the study is the failure of distinguish the difference between women who had no child in 1997 and women who already had at least on child due to small sample size. Previous researches show that birth order matter. Education, employment and financial condition influence each birth in a different way (Dey and Wasoff 2010). Future studies should remove the limitations in this study. Period parity progression measure is another way can be used to study the predictability of fertility intention on fertility behavior in the future. By recording the factors moderating between fertility intention and fertility behavior at the time of the birth can measure the change of these moderating factors more precisely.

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Table 1:Summary Statistics of Variables in CHNS, 1997, 2006, N=418

Variable	Mean	Std. Dev.
Fertility Behavior in 2006		
Have One Child	0.428	0.495
Have More Than One Child	0.572	0.495
Fertility Intention in 1997		
Intend One Child	0.435	0.496
Intended More Than One Child	0.565	0.496
Women's Education in 1997		
No Education	0.167	0.374
Elementary School Degree	0.328	0.470
Lower Middle School Degree	0.349	0.477
Upper Middle School Degree or Higher	0.156	0.363
Women's Personal Income Change Between 1997 and 2004		
Income Decreased at Least One Quartile	0.340	0.474
Income Unchanged in Quartile	0.325	0.469
Income Increased at Least One Quartile	0.335	0.473
Household Income Change Between 1997 and 2004		
Income Decreased at Least One Quartile	0.294	0.456
Income Unchanged Quartile	0.383	0.487
Income Increased at Least One Quartile	0.323	0.468
Childcare Proximity in 1997		
Parents/In-Laws Live Away or Unavailable	0.189	0.392
Parents/In-Laws Live in Same Household or Nearby	0.811	0.392
Hukou in 1997		
Urban	0.263	0.441

Rural	0.737	0.441
Province of Women's Residence in 1997		
Heilongjiang	0.227	0.420
Jiangsu	0.129	0.336
Shandong	0.089	0.284
Henan	0.098	0.298
Hubei	0.153	0.361
Hunan	0.072	0.258
Guangxi	0.105	0.307
Guizhou	0.127	0.333

Table2:Percentage of Fertility behavior by Fertility Intention

	Fertility Intention in 1997	
Fertility Behavior in 2006	Intend One Child	Intend More Than One Child
Have One Child	81.87%	12.71%
Have more Than One Child	18.13%	87.29%
Total N	182	236

Table 3:Logistic Regression on Women Having More Than One Child In CHNS

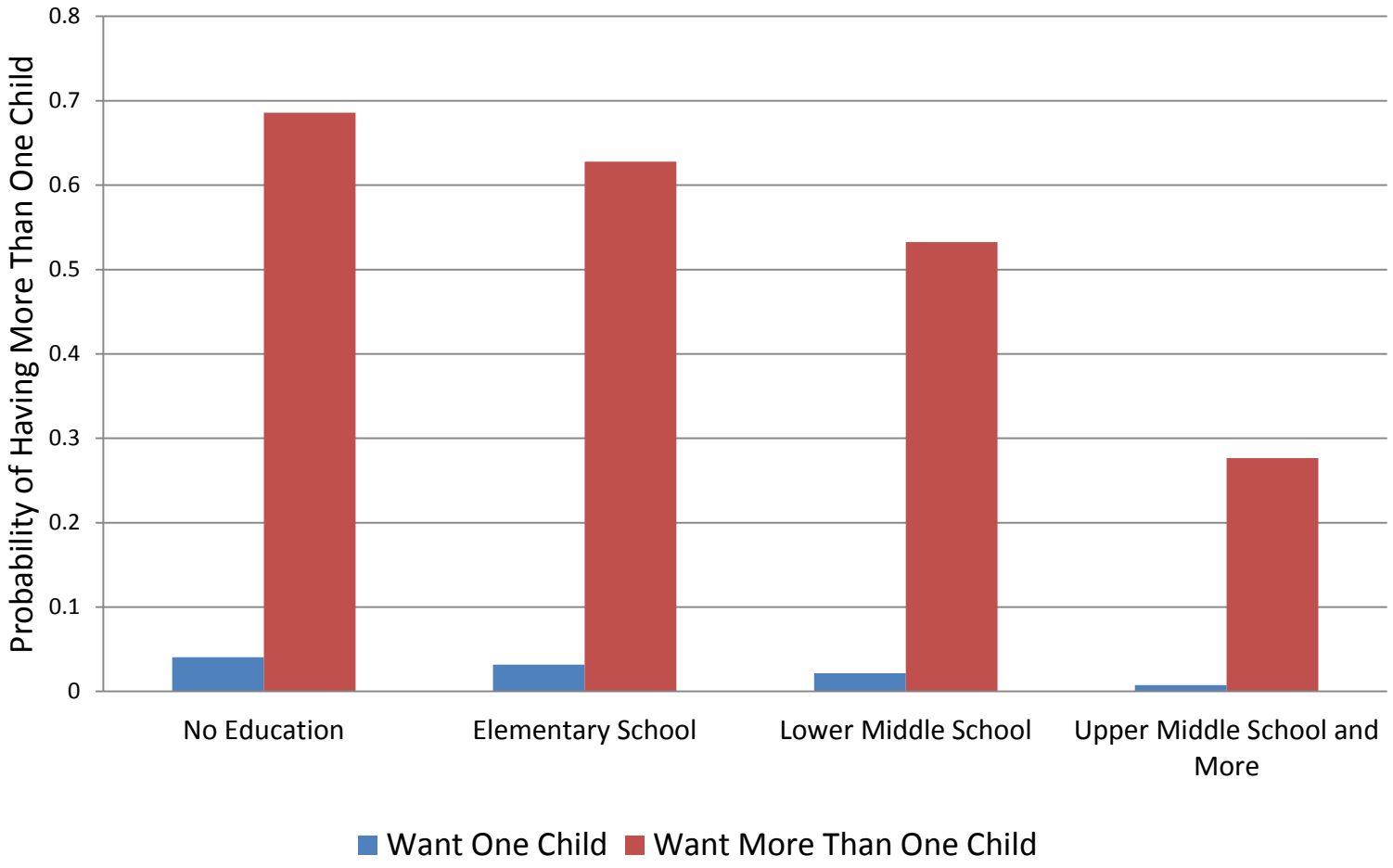
Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Fertility Intention						
Intend More Than One Child in 1997	3.353***	3.952***	3.947***	3.943***	3.942***	3.748***
(Ref: Intended One Child in 1997)	(-0.281)	(-0.560)	(-0.570)	(-0.574)	(-0.574)	(-0.614)
Control						
Age in 1997	0.047	0.04	0.074	0.075	0.077	0.092
	(-0.042)	(-0.042)	(-0.044)	(-0.044)	(-0.044)	(-0.049)
Female Empowerment						
Personal Income Change in Quartile Between 1997 and 2004						
Personal Income Unchanged in Quartile		0.44	0.679	0.514	0.515	0.491
		(-0.505)	(-0.519)	(-0.537)	(-0.537)	(-0.574)
Personal Income Increased at Least One Quartile		-0.263	0.065	-0.398	-0.389	-0.262
(Ref: Personal Income Decreased at Least One Quartile)		(-0.537)	(-0.556)	(-0.612)	(-0.613)	(-0.651)
Education Level in 1997						
Primary School			-0.277	-0.267	-0.258	-0.367
			(-0.447)	(-0.450)	(-0.451)	(-0.476)
Lower Middle School			-0.655	-0.658	-0.65	-0.529
			(-0.446)	(-0.445)	(-0.445)	(-0.484)
Higher Middle School and More			-1.807**	-1.776**	-1.742**	-1.601*
(Ref: No Education)			(-0.568)	(-0.567)	(-0.576)	(-0.632)
Family Economic Resources						
Household Income Change in Quartile Between 1997 and 2004						
Household Income Unchanged in Quartile				0.248	0.254	0.387

	(-0.379)	(-0.379)	(-0.414)
Household Income Increase at Least One Quartile	0.786	0.792	0.818
(Ref: Household Income Decreased at Least One Quartile)	(-0.436)	(-0.437)	(-0.468)
Parents/in-law's Proximity in 1997			
Parents/In-Laws Live in the Same Household/Next Door		0.13	0.159
(Ref: Parents/In-Laws Live Away or Died)		(-0.396)	(-0.423)
Regional Differences			
Hukou in 1997			
Rural Hukou			0.879*
(Ref: Urban Hukou)			(-0.374)
Province in 1997			
Jiangsu			-0.793
			(-0.545)
Shandong			-0.301
			(-0.590)
Henan			1.364*
			(-0.563)
Hubei			0.352
			(-0.507)
Hunan			1.581*
			(-0.757)
Guangxi			0.691
			(-0.549)
Guizhou			1.580**

(Ref: Heilongjiang)						(-0.599)
Interaction						
Intend More Than One Child × Personal Income Unchanged in Quartile between 1997 and 2004		-1.3	-1.630*	-1.607*	-1.597*	-1.402
		(-0.702)	(-0.721)	(-0.725)	(-0.725)	(-0.777)
Intend More Than One Child ×Personal Income Increased at Least One Quartile between 1997 and 2004		-0.427	-0.849	-0.737	-0.736	-0.844
		(-0.737)	(-0.758)	(-0.768)	(-0.768)	(-0.809)
(Ref: Intend More Than One Child× Personal Income Decreased at Least One Quartile between 1997 and 2004)						
Constant	-2.866*	-2.762*	-3.251*	-3.453*	-3.624*	-5.192**
	(-1.258)	(-1.332)	(-1.412)	(-1.422)	(-1.515)	(-1.664)
AIC	0.859	0.887	0.874	0.88	0.885	0.856
BIC	-2147.8	-2099.7	-2088.7	-2074.2	-2068.3	-2040.1
Wald Test	142.19***	2.59	12.32*	3.53	0.11	95.65***
Likelihood Ratio Test	219.95	226.13	239.33	242.95	243.06	275.21
Observations	418	418	418	418	418	418

Standard errors in parentheses: ***p<0.001,** p<0.01, * p<0.05

Figure1: Predicted Probability of Having More than One Child by Women's Education



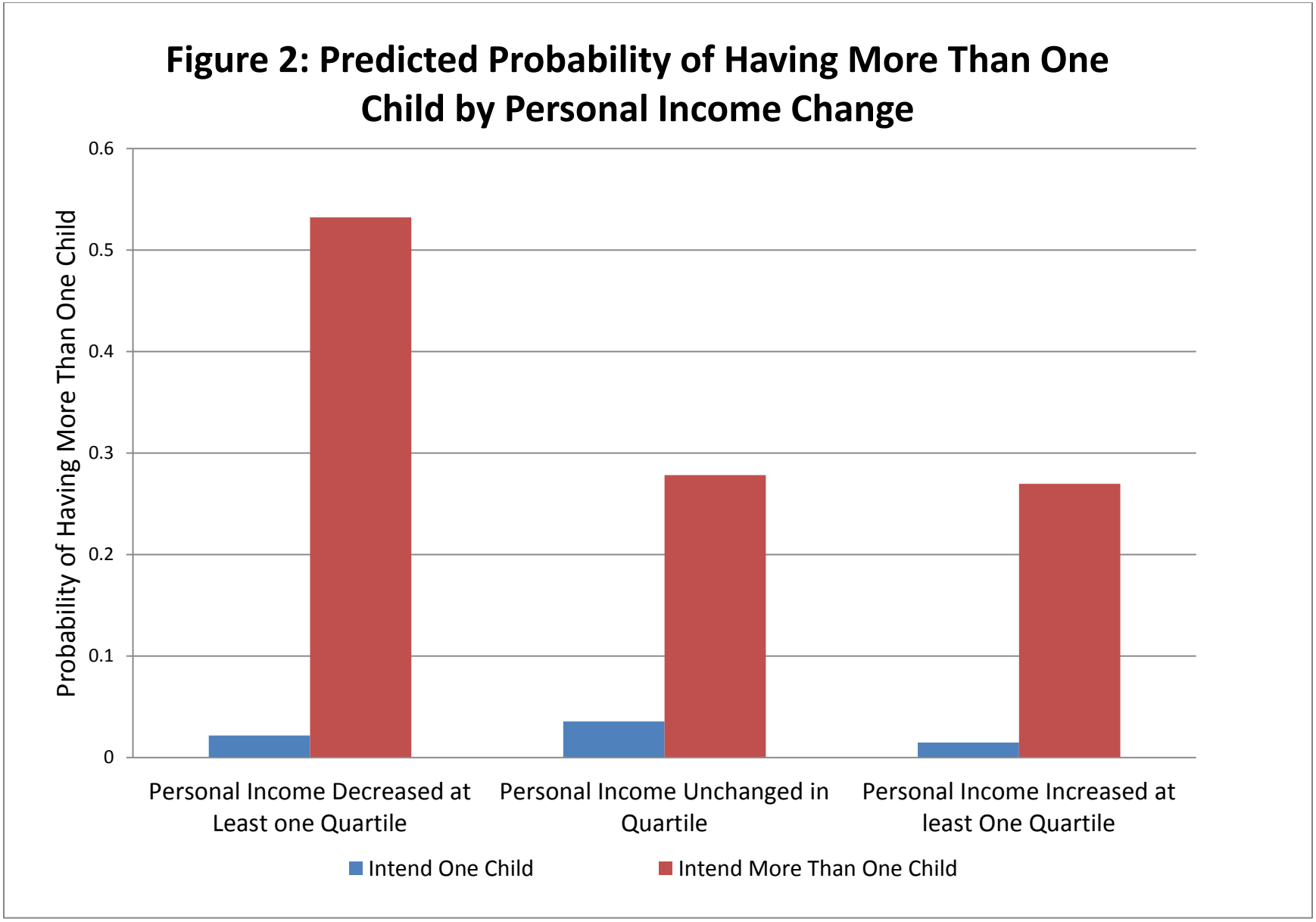


Figure 2: Predicted Probability of Having More Than One Child by Personal Income Change
Probability of Having More Than One Child
0.6
0.5
0.4
0.3
0.2
0.1
0
Personal Income Decreased at Least one Quartile
Personal Income Unchanged in Quartile
Personal Income Increased at least One Quartile
Intend One Child
Intend More Than One Child