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The Number and Gender of Children and Parental Gender Ideology in China: Income Level, Regional, and Generational Differences

Xiaoquan Gao[1,a,*]

[1]*The High School Affiliated to Renmin University of China, No.37 Zhongguancun Street, Haidian District, Beijing, China*
a. gaoxiaoquan07@outlook.com
**corresponding author*

Abstract: The relationship between number of children and parental gender ideology in China has receive much attention in previous research. However, little is known whether this relationship varies by income levels, regions, and generations. Drawing upon the CGSS 2021, this study found that more children usually associates with a more traditional gender ideology, while the extent of this relationship varies by region, income, and generation. Specifically, the relationship between number of children and parental gender ideology is similar across income levels and geographic locations. However, there is statistically significant variation in this relationship by generation. Compared to individuals born before 1949, all later generations show a stronger effect of number of children on parental gender ideology, and the effect size is the largest for the generation born in the cultural revolution period. This study add nuances to the understanding of how the relationship between fertility structure and gender ideology is moderated by contextual factors and provide important implications for future research.

Keywords: Number of children, gender ideology, regional variation, socioeconomic, generational variation.

1. Introduction

Previous research has found a notable relationship between the number and gender of children and parental gender ideology. Sun and Lai found that parents, particularly mothers of sons, exhibited more traditional beliefs [1]. Their research, using data from the 2013 Chinese General Social Survey (CGSS), highlights that in a Confucian cultural context with a strong son preference, having sons reinforces patriarchal views and deepens traditional gender ideology. However, this research has not adequately accounted for the heterogeneity of this relationship across generation, region and economic status. It is essential to further explore this variation as these aspects have been revealed to bring important variation in individuals' gender ideology.

Hu and Scott found significant geographic differences in gender ideology. In western towns and villages, individuals adopt a more traditional stance and individuals in the central and metropolis or major cities are less traditional [2]. Anne de Bruin and Na Liu found that urbanization and migration reduce gender differentials in paid work, while traditional gendered time-use patterns persist among

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rural households [3]. This regional disparity suggested that modernization and exposure to different cultural values play a role in shaping gender ideologies.

Moreover, Pimentel explored generational differences in gender ideology and behaviors, finding that While women have increasingly adopted egalitarian ideologies, the study found the percentage of men who held egalitarian gender ideology declines significantly across cohorts [4]. However, the study is limited to urban areas and outdated data. In addition, Hu and Scott found women of the Reform and Opening-up generation (born since 1978) display least support for patrilineal beliefs [2]. Just as Ji et al. 's research shows, the market transformation led to the collapse of Danwei system, and along with the ideological transformation, gender inequality increased [5]. These research suggest that generational shifts in attitudes are crucial in understanding how gender ideologies evolve.

Additionally, studies indicate that traditional gender role attitudes have a strong negative effect to the earnings of women but have no significant effect on men's incomes [6]. This study will build on this by examining how the number of children may influence parents' gender ideologies. Also, how can income level, regional variations, and generational differences further moderate this relationship, offering a comprehensive analysis of how these factors interact to influence gender ideologies in contemporary China. This contributes to a more nuanced understanding of how family situations and societal structures shape gender ideology across different socio-economic and cultural contexts.

This study uses CGSS 2021 data with a sample size of 6854 to explore how the relationship between number and structure of children and gender ideology is moderated by regional, generational and economic status. Using linear regression model, the findings suggested the number of children significantly affects parental gender ideology; the more children there are, the more traditional the parental gender ideology. This relationship is further influenced by regional, income and generational differences. Specifically, income, in this context, does not substantially alter parental beliefs about gender roles when the family size remains constant; whereas parents in the west and central regions have a more traditional gender ideology, parents in eastern and northeastern families are more egalitarian than traditional. In addition, the younger generation, especially those born after the reforms, usually show more progressive gender ideology than the older generation, given the same number of children.

2. Research hypothesis

As argued by Sun and Lai, the number of children played a crucial role in shaping Chinese parents' views on gender [1]. Furthermore, China's social values, deeply rooted in Confucian traditions, have developed into a longstanding structure. In this system, male authority and female dependency have been firmly established and institutionalized across various spheres, including the economy, politics, family life, and cultural settings. Building on this argument, the following hypothesis is proposed:

H1: The number of children positively correlates with the parents' traditional views on gender roles. Parents with more children tend to hold more conventional gender beliefs than those with fewer children.

Given the literature that documented the heterogeneity in gender ideology by generational, regional and economic status [2, 4, 5, 6], it is likely that the association between number and gender structure of children and gender ideology also varies by these structural variables. Therefore, this study explored this heterogeneirty by the following hypotheses:

H2: Income levels modify the link between family size and parental gender ideology, with lower-income families demonstrating more traditional beliefs, regardless of the number of children.

H3: Regional differences affect the relationship between the number of children and parental gender perceptions, with traditional gender perceptions being more prevalent in western than in central and eastern or northeastern.

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H4: Generational differences impact the relationship between family size and gender ideology, with parents from the reform generation (born after 1978) displaying less traditional views than earlier generations.

3. Data and method

This study employed the 2021 data from the Chinese General Social Survey (CGSS) to investigate how the number of children influences parents' gender beliefs. The CGSS is a nationwide, comprehensive and continuous large-scale social survey project jointly conducted by the Department of Sociology of Renmin University of China and the Survey Research Center of the Hong Kong University of Science and Technology. The CGSS is a nationwide, comprehensive and continuous large-scale social survey jointly conducted by the Department of Sociology of Renmin University of China and the Survey Research Center of the Hong Kong University of Science and Technology. Since it is a nationwide survey, the outcomes derived from CGSS data are representative at the national level. The CGSS 2021 uses continuous cross-sectional surveys, and its data was collected through multistage stratified sampling with a total of 8148 valid samples. For this study's purpose of examining the relationship between number of children and gender ideology, this study limited analysis to married couples with at least one child, which resulted in a final sample size of 6854 participants.

3.1. Dependent variables

The "social attitude" section of the CGSS includes five specific questions related to gender ideology: (1) "Men are more career-oriented, while women are more family-focused"; (2) "Men are naturally more capable than women"; (3) "A successful career is not as valuable as a successful marriage"; (4) "In times of economic downturn, women should be the first to lose their jobs"; and (5) "Husbands and wives should share household duties equally." The respondents were asked to give answers to the above statements using a five-point Likert scale indicating their level of agreement. Among the statements, questions 1, 5 explore the differences in the division of labor between men and women at work and at home. The view that men's main social function is work and career development, while women's main responsibility is the home and child rearing is a traditional conception of the division of gender roles. And supporting equal participation of men and women in family affairs is a more egalitarian conception of gender. Question 2, which is on gender competence bias, deals with stereotypes about the innate competence of men and women. Questions 3 and 4, which are career and marriage concepts, reflect attitudes about women's status in the workplace and the importance of marriage. The belief that women's success depends more on marriage and the social status of their spouses than on their individual professional accomplishments is a traditional conception of women's value in life, highlighting their subordinate position in Chinese culture.

In this analysis, the responses were categorized based on the 5-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree (with the reverse coding applied to the statement on equal household responsibility). Higher scores reflect stronger support for traditional gender ideologies. This study computed an overall average across the five items to serve as an indicator of respondents' gender ideologies. The reliability coefficient for the scale measuring gender ideology is 0.6198, which is considered acceptable in psychological measurements.

3.2. Independent variables

This study used a sample of married couples with children, with a total sample size of 6,854. In the CGSS survey, this study analyzed the impact of children on parents' gender awareness using the question "How many children" (number of children). The question was "How many children do you

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have (including stepchildren, adopted children, and deceased children)? ” After measuring “number of sons” and “number of daughters,” this study labeled having sons and daughters = 1, i.e., at least one son and one daughter; having only daughters = 2, i.e., at least one daughter and no sons; and having only sons = 3, i.e. there is at least one son and no daughter. This study obtain that the number of those with sons and daughters is 2,954, which is 43.10% of the sample of married couples with children; the number of those with only daughters is 1,443, which is 21.05% of the sample of married couples with children, and the number of those with only sons is 2,457, which is 35.85% of the sample of married couples with children. By counting the number of sons and daughters, this study constructed a continuous variable “number of children” with minimum value = 1, maximum value = 7, Mean = 1.9635, SD = 1.0442.

For generational difference, this study used the question “What is your date of birth?” . This study constructed categorical variables, those born before 1949 = 1, number 1071, defined as “before 1949”, 15.63% of the sample; those born 1950-1966 = 2, number 2726, defined as “socialist”, 39.77% of the sample; those born 1967-1966 = 1, number 2726, defined as “socialist”, 39.77% of the sample; and those born 1967-1966 = 1, number 2726, defined as “socialist”, 39.77% of the sample. 39.77%; born 1967-1977 = 3, n=1518, defined as “cultural revolution”, 22.15% of the sample; born 1978-present = 4, n=1539, defined as “Reform”, 22.15% of the sample.

For regional difference, using the categorical variable, according to the classification of the National Bureau of Statistics, Inner Mongolia Autonomous Region, Sichuan Province, Ningxia Hui Autonomous Region, Guangxi Zhuang Autonomous Region, Gansu Province, Chongqing Municipality, Shaanxi Province, Qinghai Province = 1, defined as “west”, number is 188, accounting for 22.15% of the sample. The number of “west” is 1884, accounting for 27.49% of the sample of married couples with children; the number of “east” is defined as 2,473, accounting for 36.08% of the sample; the number of “east” is defined as 2,473, accounting for 36.08% of the sample; the number of “west” is defined as “west” for the sample of “southwest”, accounting for 27.49% of the sample of married couples with children. Jiangxi, Henan, Hubei, Hunan = 3, number 2212, defined as “Middle”, accounting for 32.27% of the sample; Liaoning = 4, number 285, defined as “northeast”, accounting for 4.16% of the sample. 4.16%.

For income level, the question was: “What was your personal gross income for the whole of last year (2020)? ”. For this, the study constructed a continuous variable, valued uniformly at 10,000,000 for annual incomes above the millionth percentile, with a minimum value = 0, a maximum value of 10,000,000, mean = 48,136, SD = 333,999.5.

3.3. Control variables

Gender is a dichotomous variable, female = 0, number 3894, accounting for 56.81% of the sample of married couples with children; male = 1, number 2960, accounting for 43.19% of the sample. Ethnicity is a dichotomous variable, Han = 1, number 6349, representing 93.63% of the sample; minority = 0, number 505, representing 7.37% of the sample.

3.4. Method

This study utilizes the OLS regression approach to investigate the influence of both the quantity and gender composition of children on parents' attitudes towards gender roles. Initially, the regression model integrates the number of children, whether parents have male or female children, the gender distribution among the children, alongside other control factors. In the subsequent phase, the model expands to include the number of children, whether they are boys or girls, along with the interaction between the children's gender structure and being male (with females used as the reference group).

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These interaction terms also account for variations based on income level, regional difference and generational difference.

4. Results

Table 1: OLS regression of parental gender ideology on the number and gender of children.

	Coefficient
Number of children	0.0852***
	(0.0129)
Reference group (both son and daughter)	
only daughter	-0.141***
	(0.0295)
only son	-0.00784
	(0.0266)
Reference group (female)	
male	0.0546***
	(0.0190)
Reference group (minority)	
Han	-0.0158
	(0.0373)
Income level	-5.84e-08**
	(2.81e-08)
Reference (west)	
east	-0.0886***
	(0.0245)
middle	0.0573**
	(0.0249)
northeast	-0.146***
	(0.0486)
Reference (born before 1949)	
socialist	0.105***
	(0.0298)
cultural revolution	-0.0197
	(0.0339)
reform	-0.415***
	(0.0338)
Constant	2.605***
	(0.0645)
Observations	6,250
R-squared	0.115

*p < 0.05, **p < 0.01, ***p < 0.001

Table 1 shows the results of an ordinary least squares (OLS) regression analysis examining the relationship between parental gender ideology and the number and gender of children. The table includes various control variables such as gender, region, ethnicity, and generation.

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This study finds that number of children has a p-value of 0.000, which is less than 0.005, indicating that number of children has a significant effect on parental gender ideology. Its coefficient is 0.0852, indicating that the larger the number of children, the more traditional parental gender ideology is, controlling other variables constant. The results confirm H1.

For structure of children, the reference category is having both daughter and son. This study found that compared to having both son and daughter, only daughter has a coefficient of -0.1414 and p value of 0.000. It means that parents who only have daughters have significantly less traditional gender ideology. And compared to having sons and daughters, the p value of only son is 0.769, which indicates that there is no statistically significant difference between the gender ideology of parents who only have sons and those who have both sons and daughters. Next, this study will focus on the effect of number of children on parental gender ideology in different contexts.

For income level, the p-value of income level is 0.015, which is less than 0.05, indicating that the effect of income level on gender ideology is more significant. Its coefficient is -1.07e-07, indicating that the higher the income level, the lower the gender ideology. In other words, higher income is associated with less traditional gender views.

For region, west is the reference category. in terms of p-value, east's p-value is 0.005, which is less than 0.05, indicating that the gender ideology of east is significantly different from that of west; Middle's p-value is 0.942, which is greater than 0.05, indicating that the gender ideology of middle and west's gender ideology is not significantly different. northeast's p-value is 0.033, which is less than 0.05, indicating that east and west's gender ideology is significantly different. In terms of coefficient, the larger the coefficient, the more traditional and the smaller the more egalitarian. east's coefficient is -0.14212, which indicates that compared to west, the gender of people in east is more egalitarian; northeast's coefficient is -0.20984, meaning that the gender ideology of people in the east is more equal than that of the west, and that people in the northeast are more equal than that of the east.

For generational difference, the generation before 1949 is the reference category. p-value for socialist is 0.181, which is greater than 0.05 and not significant, indicating that there is no significant difference in gender ideology between the socialist generation and the before 1949 generation. The p-value for both the cultural revolution and reform generations is 0.000, which was less than 0.05 and statistically significant, indicating that there is a significant difference in gender ideology between the socialist generation and the before 1949 generation. Among them, the coefficient values of socialist, cultural revolution and reform generation are -0.08513, -0.3442 and -0.5903 respectively compared to before 1949 generation, they are all negative and getting smaller, which indicates that from before 1994, to socialist, to cultural revolution, and finally reform generations, people's thoughts are more and more equal.

Table 2: OLS regression results with interaction between income level and number of children on parental gender ideology.

	Coefficient
gender	0.0873***
	(0.0196)
number of children	0.150***
	(0.0118)
ethnicity	0.0133
	(0.0380)
income level	-1.07e-07**
	(4.40e-08)

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Table 2: (continued).

income level × number of children	5.04e-09
	(1.46e-08)
Constant	2.303***
	(0.0594)
Observations	6,250
R-squared	0.040

*p < 0.05, **p < 0.01, ***p < 0.001

Table 2 presents the results of an OLS regression analysis focusing on how income level interacts with the number of children to influence parental gender ideology. The table includes an interaction term between income and number of children, alongside controls for other demographic factors. It aims to explore whether income modifies the relationship between family size and parents' gender role attitudes.

Higher income levels are associated with less traditional gender views. The interaction term between income level and number of children has a p-value of 0.730, which is greater than 0.05, indicating that income level does not have a significant effect on how number of children is related to parental gender ideology. This suggests that while income affects gender ideology overall, it does not significantly alter the relationship between the number of children and parental gender ideology.

This result does not fully support H2. The coefficient on income level is negative and significant, suggesting that there is less traditional gender ideology in higher income households. This suggests that while income affects overall gender ideology, it does not significantly moderate the effect of number of children on gender ideolog, which weakens the hypothesis.

Table 3: OLS regression results with interaction between region and number of children on parental gender ideology.

	Coefficient
gender	0.0901***
	(0.0188)
number of children	0.123***
	(0.0170)
ethnicity	0.0198
	(0.0365)
Reference group (west)	
east	-0.142***
	(0.0510)
middle	0.00389
	(0.0534)
northeast	-0.210**
	(0.0982)
east × number of children	0.0218
	(0.0234)
middle × number of children	0.0146
	(0.0222)
northeast × number of children	0.0565

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Table 3: (continued).

	(0.0572)
Constant	2.381***
	(0.0636)
Observations	6,829
R-squared	0.044

*p < 0.05, **p < 0.01, ***p < 0.001

Table 3 shows an OLS regression analysis that investigates the interaction between region and the number of children in shaping parental gender ideology. Regional differences are explored by including east, middle, and northeast, compared to the reference region (west). The table helps to examine whether the effect of family size on gender attitudes varies across different parts of China, contributing to an understanding of geographic influences on gender ideology.

Parents in the east and northeast regions show significantly more egalitarian gender views compared to the west. Combining region and number of children, the greater the coefficient, the greater the effect of number of children on parental gender ideology. Compared to west, the coefficient of east is 0.0218, and the coefficient of northeast is 0.0565 That is to say, for the same number of children, compared to west, east and northeast parents are more equal in terms of gender, with northeast being more equal than east parents. This indicates that while regional differences in gender ideology exist, they do not significantly alter how the number of children affects these views.

For regional differences, the results do not support H3. The interaction effect between number of children and region is not significant, suggesting that the effect of number of children on parental gender awareness is similar across regions. Although there is a main effect showing that gender awareness is significantly higher in the east and northeast than in the west and central, there is no significant interaction effect that can show that the effect of number of children on gender awareness varies across regions. This contradicts the assumption that traditional gender awareness is more prevalent in the west and central regions.

Table 4: OLS regression of parental gender ideology on the number of children with interaction of cohort.

	Coefficient
gender	0.0523***
	(0.0182)
number of children	0.0578***
	(0.0177)
ethnicity	-0.0135
	(0.0348)
Reference group (before 1949)	
socialist	-0.0851
	(0.0637)
cultural revolution	-0.344***
	(0.0710)
reform	-0.590***
	(0.0731)
socialist × number of children	0.0763***
	(0.0227)

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Table 4: (continued).

cultural revolution × number of children	0.161***
	(0.0303)
after1978 × number of children	0.0638**
	(0.0319)
Constant	2.629***
	(0.0733)
Observations	6,829
R-squared	0.108

*p < 0.05, **p < 0.01, ***p < 0.001

Table 4 presents the results of an OLS regression analysis exploring how different generational cohorts interact with the number of children to influence parental gender ideology. The analysis includes interaction between generational cohorts (before 1949, socialist, cultural revolution, and reform) and the number of children, investigating whether the effect of family size on gender ideology differs across generations. The table includes controls for gender, ethnicity, and other relevant factors, aiming to identify generational shifts in gender ideology and the effect of family size.

Combining generational difference and number of children, the p-value for socialist, cultural revolution, and reform generations are 0.001, 0.000, and 0.045, respectively, which suggests that compared to the before 1949 generation, the last three generations of number of children has a significant effect on parental gender ideology. In terms of coefficient, the coefficient for socialist is 0.0763, which means that for the same number of children, the number of children of the socialist generation has a greater effect on parental gender ideology than that of the before 1949 generation. For the cultural revolution generation, the coefficient is 0.1611, which means that for the same number of children, the cultural revolution generation number of children has a greater influence on parental gender ideology than the before 1949 generation. For the reform generation, the coefficient is 0.0638, indicating that for the same number of children, number of children in the reform generation has a greater impact on parental gender ideology than before 1949. It is worth noting that for the same number of children, the effect of number of children on parental gender ideology is largest in the cultural revolution generation, and smaller in the reform generation than in the socialist but larger than in the before1949 generation.

The results largely confirm H4. The Reform generation is significantly less conscious of traditional gender than previous generations. The interaction term between generation and number of children also indicates that the Reform generation is less affected by the number of children than previous generations.

5. Conclusion

This study reveals how the number of children affects gender ideology among Chinese parents, with relationships across generations, regions and income levels. The finding that having more children is associated with more traditional gender ideology confirms previous research, but the subtle effects of regional and generational differences provide new insights.

Contrary to expectations, the relationship between the number of children and parental gender ideology did not differ significantly by income level or across geographic regions. Trends in traditional gender ideology and greater number of children were consistent across both the economically prosperous east and the less developed west. This study this suggests that income, which is often seen as a factor that can make gender ideology more equal, does not affect the link

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between the number of children to parental gender consciousness. Similarly, despite the large cultural and economic differences in China, regional differences appear to have a negligible effect on this relationship.

However, generational differences are particularly significant. For those born after 1949, the impact of having more children on traditional gender ideology is significantly stronger, with the greatest impact for those born during the Cultural Revolution. This suggests that historical and socio-political contexts have a lasting impact on gender norms. Dramatic social changes during and after the Cultural Revolution, including family planning policies and shifts in gender role expectations, appear to have influenced how different generations viewed gender roles in relation to family size. In contrast, previous generations, especially those born before 1949, may have experienced different sociocultural conditions. The influence of China's reform and opening-up period is important. For the "reform generation" - those born during the transition to a market economy - the link between the number of children and traditional gender ideology is less obvious than for older generations. The reforms brought more economic opportunities and more global norms, which may have influenced a shift toward a more egalitarian parental gender consciousness, although traditional gender perspectives still exist. This generation also experienced the one-child policy, which further changed family structures and gender dynamics by limiting family size and fostering different parental expectations of gender roles. In contrast, those born before 1949 and the "socialist generation" may have experienced different sociocultural conditions.

These findings emphasize the importance of considering historical and generational contexts when studying gender ideology, as well as the limitations of assuming that income or regional factors alone drive changes in gender ideology. Future research should delve deeper into the mechanisms behind these generational changes and explore how they interact with other social, cultural, or political factors to shape gender ideologies. This study highlights the complexity of gender ideology in modern China, suggesting that while fertility structures play a role, their impact is closely linked to the broader historical and cultural transformations experienced by each generation.

References

[1] *Sun, X., & Lai, K. (2017). Are mothers of sons more traditional? The influence of having son(s) and daughter(s) on parents' gender ideology. The Journal of Chinese Sociology, 4(1). https://doi.org/10.1186/s40711-016-0049-7*

[2] *Hu, Y., & Scott, J. (2016). Family and Gender Values in China. Journal of Family Issues, 37(9), 1267–1293. https://doi.org/10.1177/0192513x14528710*

[3] *de Bruin, A., & Liu, N. (2019). The urbanization-household gender inequality nexus: Evidence from time allocation in China. China Economic Review, 60, 101301. https://doi.org/10.1016/j.chieco.2019.05.001*

[4] *Pimentel, E. E. (2006). Gender Ideology, Household Behavior, and Backlash in Urban China. Journal of Family Issues, 27(3), 341–365. https://doi.org/10.1177/0192513x05283507*

[5] *Ji, Y., Wu, X., Sun, S., & He, G. (2017). Unequal Care, Unequal Work: Toward a more Comprehensive Understanding of Gender Inequality in Post-Reform Urban China. Sex Roles, 77(11-12), 765–778. https://doi.org/10.1007/s11199-017-0751-1*

[6] *Qing, S. (2020). Gender role attitudes and male-female income differences in China. The Journal of Chinese Sociology, 7(1). https://doi.org/10.1186/s40711-020-00123-w*