Fertility Decline and Educational Gender Inequality in China[1]

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Key words: Fertility Decline, Gender Educational Inequality, China

(Approximate word count in text: 5, 517)

[1] The authors would like to thank Bingdao ZHENG for her suggestions. The authors assume all responsibility for any remaining errors. Direct all correspondence to Hua YE, Division of Social Science, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong (email: yehua@ust.hk).

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ABSTRACT

This study examines the relationship between sibling configuration and educational attainment, and whether fertility decline has resulted in educational gender equality in China. Based on the data from a national representative survey conducted in 2006, we show that females are more disadvantaged in educational attainment within families with more siblings, especially when they have younger siblings or brothers. Educational gender inequality is less severe for younger cohorts than in older cohorts due to fertility decline in China. Females of agricultural hukou origin are more severely affected by larger sibship size. These findings suggest that educational gender inequality is not only affected by policies designed to promote equality or economic development, but also influenced by policies designed to reduce fertility rates.

INTRODUCTION

Education plays an increasingly important role in modern societies along with the industrialization process in most countries (Treiman 1970). Educational gender inequality as a significant aspect of gender stratification has drawn continuing attention from students of social stratification (Buchmann, DiPrete, and McDaniel 2008). Comparative research on educational stratification has shown a substantial reduction in the mean differences of educational attainment between men and women. Women in particular have benefited from the educational expansion (Shavit and Blossfeld 1993). Trends in educational stratification favor women (Hout and DiPrete 2006).

Previous studies have documented how educational gender inequality was affected by government policies designed to promote equality or economic development in China (Hannum and Xie 1994; Lu and Treiman 2008), but what about the effects of policies that induce fertility decline? The total fertility rate in China has declined from about 6 children per woman in the early 1970s to lower than replacement level in the early 1990s, which has important implications for family investment on education and educational gender inequality. The logic is simple: If parents have fewer children, the resource constraint on sponsoring children's education will be less severe, and the possibility of exercising any son preference behavior will also be lower, which will promote educational gender equality. However, few researches directly examine the effect of fertility decline on educational gender inequality.

This study seeks to examine the relationship between sibling configuration and educational gender inequality in China. China provides an unusual case for us to assess the effect of the state-imposed one-child policy on educational attainment, to examine how the different implementations of birth control policies and resource constraints of rural and urban Chinese families affect children's educational outcomes. The study attempts to answer the following two questions: Does fertility decline play a role in human capital investment, and thus affect educational gender inequality in China? How do aspects of sibling configuration, other than sibship size, influence educational gender inequality?

FERTILITY DECLINE IN CHINA

China completed its demographic transition in less than 30 years, a process which took European countries more than 100 years. As is shown in Figure 1, in the early to mid-1950s, the birth rate was about 35 per thousand, and the death rate dropped from 20 per thousand to about 10 per thousand due to the improvement of medical care and the recovery from the long time warfare with Japanese and the civil war between the Communist Party and the Kuomintang Regime. In late 1950s to early 1960s, the birth rate dropped and the death rate increased dramatically due the Great Leap Famine (Kung and Lin 2003). After the rebound from the famine, the birth rate started to decline in a dramatic fashion from about 40 per thousand in mid-1960s to about 12 per thousand in 2008.

[FIGURE 1 ABOUT HERE]

The pace of demographic transition of China would not have been completed in such a quick fashion without state-imposed birth control policies (Bongaarts and Greenhalgh 1985; Lavely and Freedman 1990). When the Communist Party came into power, it initially adopted a pro-natalist policy, as evident in Mao Zedong's speech on the eve of the founding of the new state about China's capacity to deal with population growth (Scharping 2003). Although Ma Yinchu warned in 1957 that high fertility would eat up the achievement from economic development, his alarm was ignored by the new government (Tien 1981). Later, China had two short-lived birth control campaigns in the 1950s and 1960s that were driven by the fear that population growth would hinder economic development (Banister 1987). However, they only affected urban areas, while most of China's population in rural areas was untouched (Lavely and Freedman 1990). The first national birth control campaign began in 1971 with the slogan of "later-longer-fewer" (*Wan Xi Shao*), promoting later marriage, longer spacing, and fewer children (Presser et al. 2006). As is shown in Figure 2, Fertility went down rapidly through the expansion of family planning programs to rural areas (Banister 1987). In 1979, a stringent one-child policy was launched which set the goal of limiting population to 1.2 billion by 2000. The post-Mao leadership established new legal and administrative structures to limit population growth. The Constitution of 1978 declared state advocacy of birth planning, while the Marriage Law of 1980 required every couple to practice birth control (Bongaarts and Greenhalgh 1985). As a result, the total fertility rate dropped from 5.8 children per woman in 1970 to 2.7 in 1979, fluctuated around the replacement level in the 1980s, remained below the replacement level from 1992, and reached 1.5 in 1998.

[FIGURE 2 ABOUT HERE]

The common assumption that China uniformly follows a one-child policy is simply not true for rural families, who account for 80 percent (???) of the total population (Lee and Feng 1999). As is shown in Figure 2, rural areas have higher total fertility rates than urban areas in any historical period, although the gap narrowed in recent years. In the absence of social security in rural areas, couples rely on grown-up sons for old-age support rather than daughters who usually leave their natal families after marriage. The need for old-age support, reinforced by the deep-rooted son preference, makes the goal of "one child for each couple" untenable (Bongaarts and Greenhalgh 1985; Presser et al. 2006). As a result, in 1984, the state modified the policy by allowing rural couples whose first child is a girl to have a second child (White 1994). The *de facto* two-child (1 and 1/2???) policy stipulates at least four years' duration between the first and the second children in the cities and three years in the countryside (Bongaarts and Greenhalgh 1985). This stands in sharp contrast to urban China, where more than 90 percent of all couples during the past two decades have had only one child. Such uniform and rapid urban compliance was at least initially a consequence largely of urban dependence on the state for employment, housing, education, and other benefits. In rural China, where there is no such dependence, there is also no such compliance (Lee and Feng 1999).

The above scenarios have significant implications for investment on education and educational gender inequality in China. For urban households, couples tend to obey birth control policies because of their reliance on the state for employment and welfare benefits. Since they have fewer children, their financial constraint on supporting children's education is less severe, and the possibility of exercising any son preference behavior is also lower. However, rural couples need sons for old-age support, and therefore they tend to invest more on sons than on daughters, given that they have children of both sexes. Moreover, it is more likely that girls rather boys give up schooling and to work in order to support their families in the Chinese context (Chu, Xie, and Yu 2007; Hannum 2005).

SIBLING CONFIGURATION AND EDUCATIONAL ATTAINMENT

The birth control policies in China have caused fundamental changes in Chinese population, and have stimulated scholarly research on their consequences (Banister 1987; Peng 2000; Poston et al. 2006; Scharping 2003; White 2006). However, few researches consider how the birth control policies cause variations of educational investment at the family level.

Education is the main engine of social mobility, and at the same time the main vehicle of social reproduction (Blau and Duncan 1967). Family, as the most important social unit where one grows up, naturally assumes a central place in the social stratification literature. For this reason, sociologists have made great efforts to identify factors within families that affect intergenerational transfer of resources, and in turn contribute to one's educational advancement.

One of the features of family structure that affect one's educational outcomes, namely sibling configuration, has generated a continuing interest among researchers (Cicirelli 1978; Heer 1985; Steelman et al. 2002). Sibling configuration, also known as sibling constellation, encompasses such features as the size of the sibling group, ordinal position (i.e., the child's position in the age hierarchy of siblings in the family), child spacing (i.e., the time intervals separating the births of siblings), and sex composition (i.e., the relative numbers of boys and girls in the sibling group) (Steelman et al. 2002). The most robust finding that emerges from the literature about sibling configuration is that sibship size has been consistently found to be negatively associated with educational attainment (Kuo and Hauser 1997; Steelman et al. 2002). Two well-known explanations are offered in the literature to account for this phenomenon. The confluence theory (Zajonc and Markus 1975) posits that the development of a child is molded by the intellectual atmosphere to which he/she is exposed in the family setting, and the intellectual climate is calculated by averaging the intellectual level of all members of the family. Since parents are assumed to be intellectually superior, the intellectual environment in a family will continue to decline with each additional child, unless children are very widely spaced in age. Following this logic, firstborn children have advantages over their siblings because they enjoy at least some uninterrupted time with their parents before their siblings are born. The degree of this advantage, however, is contingent on spacing.

Despite the apparent elegance of the confluence theory, it faces serious challenges from empirical studies (Hauser and Sewell 1985; Page and Grandon 1979; Steelman 1985). The finding that sibship size negatively affects educational attainment (e.g., years of schooling or the probability of transition to subsequent levels of education) net of intellectual development (typically operationalized by performance on standardized scores) is not consistent with the theory (Alwin and Arland 1984; Powell and Steelman 1993). The resource dilution hypothesis (Blake 1981) is offered as an alternative explanation to the empirical findings. It argues that the amount of resources that can be allocated to any given child depends on both the amount of resources in the family and the number of children. The larger the sibship size, the closer the child spacing, the greater the dilution of resources, and in turn the lower the educational progress of the child. This model is more appealing in the sense that it differentiates resources so that it can account for two kinds of effects of sibship size: some familial resources (e.g., parental interaction with children) influence intellectual development (and educational attainment indirectly), while other diluted resources (e.g., financial resources to pay school fees or reduce the need to leave school to contribute to family income) affect educational attainment directly. More detailed consideration of the relationship between sibship size and types of resources can be found in Downey's (1995) analysis.

Recently, Chu, Xie, and Yu (2007) offered a third explanation that potentially fits Asian societies well. Based on analyses of data from Taiwan, the authors found that if resources from all family members were pooled together, families may sacrifice the educational opportunities of older (female) siblings and transfer their resources to improve the educational outcomes of younger, especially male, siblings. They showed that negative effects of sibship size were the strongest for girls who had younger brothers and sisters who were spaced apart. This explanation can be seen as an extension of the resource dilution hypothesis, but is different from the latter in two aspects: First, the resource dilution hypothesis assumes that resources are transferred intergenerationally from parents to children, while Chu, Xie, and Yu (2007) pointed out the possibility of resource transfers among siblings. Second, the resource dilution hypothesis predicts that closer spacing affects all the related children, while Chu, Xie, and Yu (2007) demonstrated that only when children were spaced apart would girls be more disadvantaged.

China represents an interesting case in the research on the relationship between sibling configuration and educational attainment. First, although scholars have identified the effects of fertility on economic growth (Li and Zhang 2007), and although birth control policies in China have been in force for more than three decades, little research has considered the effect of these policies on educational investment at the family level. Second, as is well known, birth control policies have been implemented more strictly in urban areas than in rural areas. At the same time, families in rural areas may face more serious resource constraints than their counterparts in urban China, and thus the effects of sibship configuration may have a stronger effect on children's educational advancement. Although there are recurrent news reports that some rural youngsters give up their chances to go to college and instead go to work in cities to support their younger brothers' education, we do not have any statistical evidence at the population level. This study attempts to fill these gaps.

DATA, VARIABLE, AND METHOD

Data

The data used in these analyses are from the "2006 Chinese General Social Survey" (CGSS 2006). The survey followed a multi-stage stratified sampling strategy, and covered both rural and urban China. It collected extensive information on the respondent's educational attainment and family background, as well as his / her sibling composition.

Variables

The dependent variable of the following analyses is the respondent's years of schooling. Accordingly, OLS regressions are used to find out the determinants of one's educational attainment.

The independent variables include the respondent's sex, birth cohort, ethnicity, *hukou* origin, father's and mother's years of schooling, father's ISEI, and most importantly, his or her sibship configuration.

Sex: A dummy variable (male as the reference category) is used to examine educational gender inequality.

Sibling configuration: The survey collected information on the number of elder brothers, elder sisters, younger brothers, and younger sisters when the respondent was age 10. Thus, we can examine more closely on how sibling configuration affects one's educational attainment than was possible in earlier studies (Hannum and Xie 1994; Lu and Treiman 2008).

Birth cohort: In order to understand the effect of fertility decline on educational gender inequality, we make a distinction between two birth cohorts using China's first national campaign to control fertility in 1971 [2] promoting later marriage, longer spacing, and fewer children as the watershed (Presser et al. 2006): those who were born before 1971 and those who were born in or after 1971. It is expected that the latter cohort will enjoy higher degree of educational gender equality because of lower fertility rates.

Ethnicity: Previous studies have shown that minorities in China were less educated than *Han* Chinese (Hannum 2002). Accordingly, a dummy variable (*Han* Chinese as the reference category) is included to detect ethnic differences in educational attainment.

Hukou origin: The questionnaire asked when the respondent changed his or her agricultural *hukou* status to non-agricultural *hukou* status, so it can be used to identify the respondent's *hukou* origin, which is an important factor contributing to educational attainment in China (Wu and Treiman 2004). We categorize one's *hukou* origin according to *hukou* status at age 7, the modal entry age for primary school.

Father's and mother's years of schooling: As is established in the stratification literature, parental schooling is an important predictor of one's own educational attainment (Blau and Duncan 1967; Ganzeboom and Treiman 1993; Shavit and Blossfeld 1993; Treiman and Yip 1989). They are included as control variables in the models.

Father's ISEI: Father's ISEI when the respondent was 18 years old is an indicator of family background, which captures the financial ability of a family to support investment on children's education.

Both parental schooling and father's ISEI are powerful predictors of the number of children they want. After controlling these variables, the cohort differences should reflect more precisely the effect of birth control policies, rather than the effects of education and socioeconomic status on fertility decision at the family level.

[2] If the distinction is made on whether the respondent was born before or after 1979, when the one-child policy began to implemented, the results are essentially the same. However, since the one-child-policy cohort is relatively small in the sample (318 eligible observations), it cannot be used for further comparisons of changes of educational gender inequality between respondents with agricultural and non-agricultural *hukou* origins.

EMPIRICAL RESULTS

The descriptive statistics are shown in Table 1. From the comparison of the older cohort born between 1949 and 1970 and the younger cohort born between 1971 and 1988, we can see that the younger cohort was better-educated. The sibship size, as well as the number of brothers and sisters, has declined across cohorts. we go on to examine whether lower fertility induces educational gender equality.

[TABLE 1 ABOUT HERE]

Table 2 shows the general pattern of the relationship between sibling configuration and educational attainment. Model 1 is an additive model, and Model 2, 3, and 4 are interaction models.

Across different models, the effects of minority (non-*Han*), birth cohort, father's and mother's schooling, father's ISEI, and agricultural *hukou* origin on the respondent's years of schooling are consistent: minorities are about one year less educated than *Han* Chinese; the younger cohort are about 1.3 years more educated than the older one; people who are from agricultural *hukou* origin are almost 2 years less educated than their non-agricultural counterparts; a one year increase in father's years of schooling results in about 0.16 year increase in the respondent's years of schooling, and one year increase in mother's years of schooling results in about 0.14 year increase in the respondent's years of schooling; if father's ISEI increases by 10 points, the respondent's years of schooling will increase by about 0.4 year.

If we assume that sibling configuration affect males and females in the same way (Model 1), we find that people who have one more sibling will result in a 0.14 year decrease in their years of schooling, and females are about 1.7 years less educated than males. However, this assumption is not true, as it is contradicted by results shown in the interaction models. From Model 2 we can see that sibship size does not significantly affect males' educational attainment, while females' years of education will be 0.28 year less if they have one more sibling. We further differentiate the effects of the number of brothers and the number of sisters on one's educational attainment (Model 3). It is clear that both the number of brothers and the number of sisters only affect females: females who have one more brother decreases their schooling about 0.4 year, while having one more sister decreases their schooling by about 0.2 year. This is indirect evidence of son preference in China, since the effect of the number of brothers on female's schooling is larger than than the number of sisters. If we further break down the information on sibling configuration (Model 4), we can see that being girls with siblings suffer a lot, because their years of schooling are affected by the number of elder and younger brothers, as well as the number of younger sisters. Synthesizing the findings from Chu, Xie, and Yu (2007), it is reasonable to infer that females drop out of school and go to work in order to support other siblings, especially younger siblings.

[TABLE 2 ABOUT HERE]

To explicitly examine the effect of fertility decline on educational gender inequality in China, we break down the sample into two birth cohorts: the order cohort was born between 1949 and 1970 and lived in a period in which fertility was relatively high, while the younger cohort was born between 1971 and 1988 and lived in a period in which fertility was relatively low (Table 1).

As is shown in Table 3, females are less educated in the older cohort, while their disadvantage disappears in the younger cohort. Females in the older cohort are about one year less educated than males (Model 1, 2, and 3). In Model 1 we can see that for females, one more sibling results in a decrease of about 0.23 year of schooling. The effects of the number of brothers and the number of sisters on women's educational attainment are different (Model 2): females' years of schooling decrease by about 0.34 year if they have one more brother, while the effect of the number of sisters is not significant. If we further break down the composition of brothers and sisters (Model 3), we find that females suffer if they have younger siblings: either an increase of one younger brother or one younger sister result in about half a year decrease of years of schooling. However, the educational attainment of females in the younger cohort is not significant from that of males. More importantly, sibling configuration no longer has any significantly negative effect on years of schooling of females (Model 4, 5, and 6).

[TABLE 3 ABOUT HERE]

As mentioned above, birth control policies have been implemented differently in rural and urban China. They are more strictly followed by the urban population, while rural families are allowed to have one more child if the first child is a girl even under the one-child policy.

Table 4 shows results separated for people who are of agricultural *hukou* origin and of non-agricultural *hukou* origin. We can see that for both the older and the younger cohorts of non-agricultural *hukou* origin, being female is not disadvantageous compared to males in terms of educational attainment. More importantly, sibship size does not affect females' years of schooling if they are from non-agricultural *hukou* origin. For the older cohort of agricultural *hukou* origin, however, females have about 1.4 years less education. Moreover, females' years of schooling decrease by 0.22 years if they have one more sibling. For the younger cohort of agricultural *hukou* origin, females are not less educated than males, although they have about 0.3 year less education if they have one more sibling. These results show that fertility decline does affect educational gender inequality, as females' educational attainment is improved for the younger cohort.

[TABLE 4 ABOUT HERE]

CONCLUSION AND DISCUSSION

The study attempts to examine the relationship between sibling configuration and educational attainment, and whether fertility decline has resulted in educational gender equality in China. The results show that in terms of educational attainment, females are more disadvantaged in families with more siblings, especially when they have younger siblings or brothers. Educational gender inequality is less severe for younger cohorts than in older cohorts due to fertility decline in China. Females of agricultural *hukou* origin are more severely affected by larger sibship size.

This study contributes to the existing literature by showing that educational gender inequality is not only affected by policies designed to promote equality or economic development (Hannum and Xie 1994; Lu and Treiman 2008), but also influenced by policies designed to reduce fertility rates. Moreover, fertility decline not only promotes economic development (Li and Zhang 2007), but also reduces educational gender inequality. The findings have important implications for the improvement of educational gender equality in the developing countries. Reducing fertility rates not only promotes economic development in China, but also further reduces gender stratification in educational attainment.

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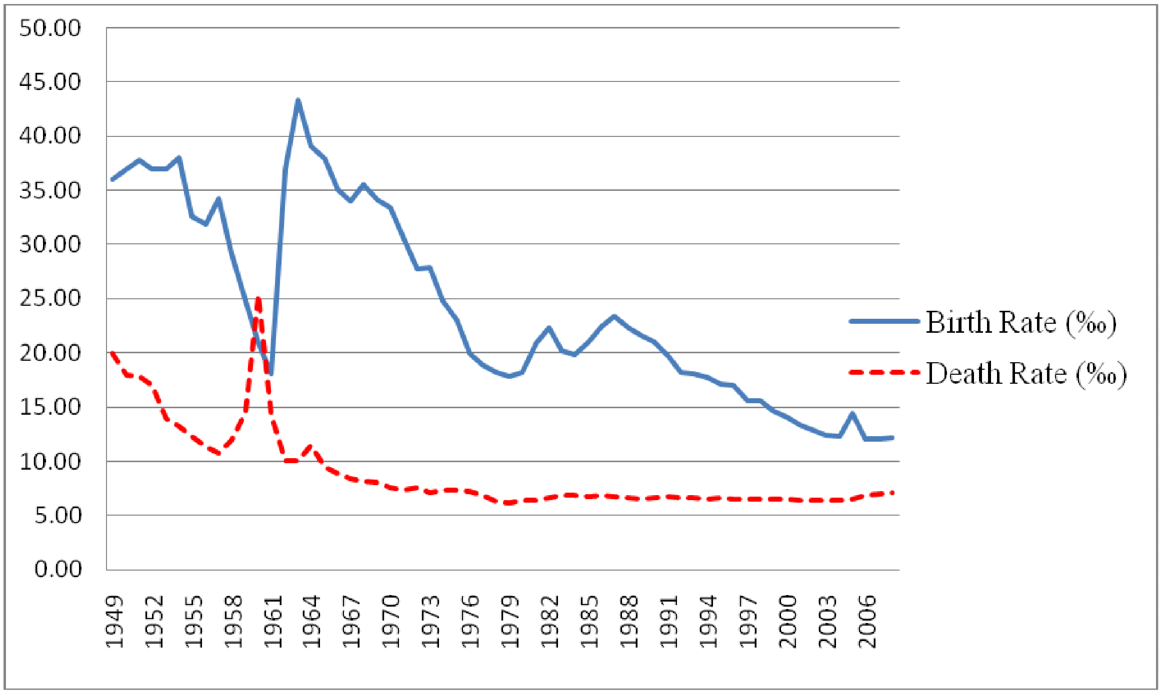
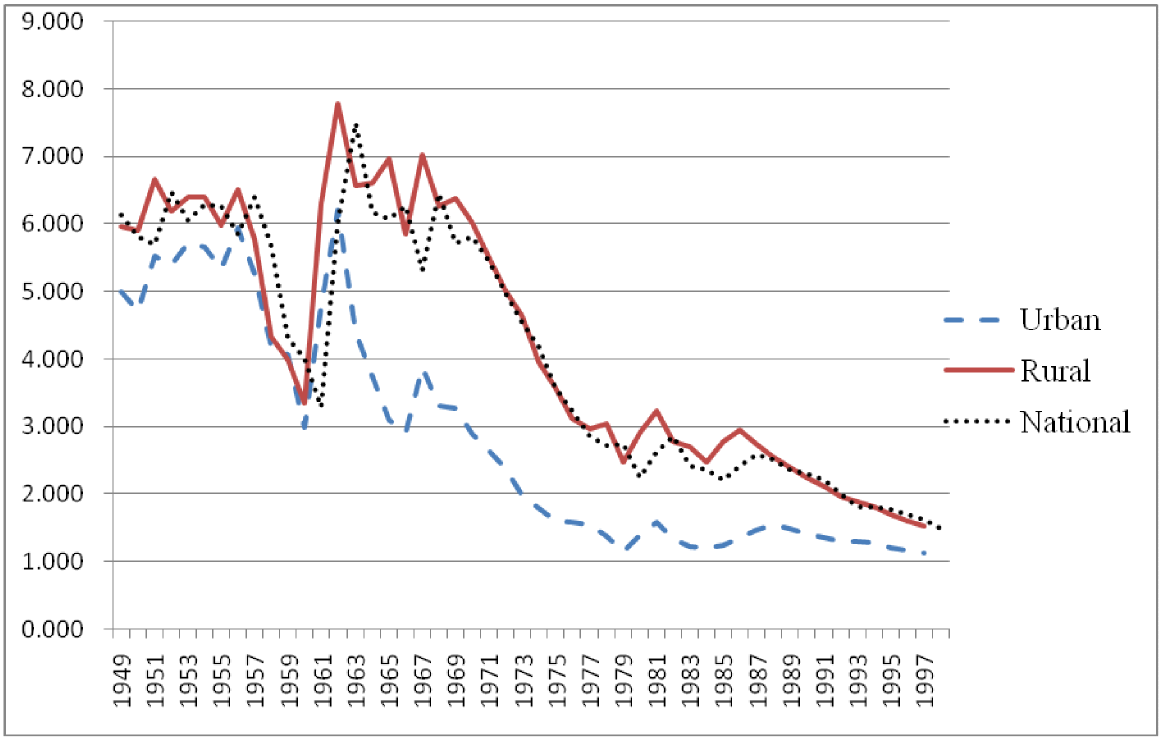
Figure 1: China's Birth and Death Rates, 1949-2008



Source: China Compedium of Statistics 1949-2004 (National Bureau of Statistics 2005); China Statistical Yearbook 2009 (National Bureau of Statistics 2009).

Figure 2: China's Total Fertility Rate, 1949-1998



Source: Table 1.1 in page 12 in Poston et al. (2006).

Table 1: Descriptive Statistics

VARIABLES	Full Sample	Birth Cohort	
		1949-1970	1971-1988
Years of schooling	7.829	7.404	9.135
	(4.085)	(4.035)	(3.961)
Female	0.618	0.591	0.700
	(0.486)	(0.492)	(0.459)
Sibling configuration			
Sibship size	3.150	3.439	2.262
	(1.840)	(1.807)	(1.645)
Number of brothers	1.632	1.790	1.145
	(1.223)	(1.238)	(1.034)
Number of sisters	1.519	1.649	1.118
	(1.288)	(1.296)	(1.176)
Number of elder brothers	0.840	0.886	0.699
	(1.018)	(1.033)	(0.955)
Number of younger brothers	0.792	0.904	0.446
	(0.946)	(0.997)	(0.657)
Number of elder sisters	0.827	0.859	0.730
	(1.047)	(1.045)	(1.047)
Number of younger sisters	0.691	0.790	0.388
	(0.921)	(0.973)	(0.650)
Non-Han	0.063	0.060	0.074
	(0.243)	(0.237)	(0.262)
Father's schooling	4.761	4.243	6.354
	(4.275)	(4.233)	(4.002)
Mother's schooling	3.067	2.618	4.448
	(3.842)	(3.647)	(4.092)
Father's ISEI	31.019	31.199	30.465
	(14.051)	(14.238)	(13.452)
Agricultural *hukou* origin	0.685	0.675	0.715
	(0.465)	(0.468)	(0.452)
N	5125	3867	1258

Note: Standard deviations are in parentheses.

Table 2: Sibling Configuration and Educational Attainment

VARIABLES	Model 1	Model 2	Model 3	Model 4
Female	-1.681***	-0.761**	-0.700**	-0.621**
	(0.118)	(0.241)	(0.240)	(0.239)
Sibling Configuration				
Sibship size	-0.135***	0.035		
	(0.035)	(0.054)		
Number of brothers			0.012	
			(0.074)	
Number of sisters			0.053	
			(0.072)	
Number of elder brothers				0.005
				(0.102)
Number of younger brothers				0.003
				(0.098)
Number of elder sisters				-0.031
				(0.083)
Number of younger sisters				0.170
				(0.111)
Non-Han	-0.991***	-1.016***	-1.041***	-1.009***
	(0.274)	(0.271)	(0.272)	(0.272)
Birth Cohort (Cohort 1949-1970 as the reference)				
Cohort 1971-1988	1.388***	1.344***	1.325***	1.230***
	(0.146)	(0.146)	(0.146)	(0.147)
Father's schooling	0.161***	0.161***	0.161***	0.166***
	(0.020)	(0.020)	(0.020)	(0.020)
Mother's schooling	0.142***	0.142***	0.140***	0.141***
	(0.020)	(0.020)	(0.020)	(0.020)
Father's ISEI	0.037***	0.037***	0.037***	0.037***
	(0.005)	(0.005)	(0.005)	(0.005)
Agricultural *hukou* origin	-1.930***	-1.941***	-1.935***	-1.896***
	(0.161)	(0.163)	(0.163)	(0.162)
Interactions				
Female * Sibship size		-0.278***		
		(0.067)		
Female * Number of brothers			-0.387***	
			(0.094)	
Female * Number of sisters			-0.196*	
			(0.093)	
Female* Number of elder brothers				-0.285*
				(0.125)
Female* Number of younger brothers				-0.539***
				(0.127)
Female* Number of elder sisters				0.062
				(0.114)
Female* Number of younger sisters				-0.519***
				(0.136)

Intercept	7.740***	7.194***	7.217***	7.183***
	(0.297)	(0.311)	(0.310)	(0.307)
N	5125	5125	5125	5125
R^2	0.300	0.304	0.305	0.312

Note: Robust standard errors are in parentheses. *** p<0.001, ** p<0.01, * p<0.05.

Table 3: Sibship Configuration and Educational Attainment by Cohort

VARIABLES	Birth Cohort 1949-1970 Model 1	Model 2	Model 3	Birth Cohort 1971-1988 Model 4	Model 5	Model 6
Female	-1.061***	-1.002***	-0.930**	-0.408	-0.337	-0.347
	(0.300)	(0.300)	(0.298)	(0.403)	(0.403)	(0.404)
Sibling Configuration						
Sibship size	0.027			-0.071		
	(0.062)			(0.106)		
Number of brothers		0.005			-0.157	
		(0.082)			(0.185)	
Number of sisters		0.047			-0.001	
		(0.080)			(0.150)	
Number of elder brothers			0.042			-0.257
			(0.120)			(0.194)
Number of younger brothers			-0.043			0.089
			(0.104)			(0.329)
Number of elder sisters			-0.086			0.125
			(0.095)			(0.154)
Number of younger sisters			0.213			-0.513
			(0.119)			(0.309)
Non-Han	-0.655	-0.668*	-0.633	-1.941***	-2.003***	-1.896***
	(0.337)	(0.338)	(0.337)	(0.418)	(0.412)	(0.414)
Father's schooling	0.139***	0.139***	0.145***	0.221***	0.219***	0.218***
	(0.023)	(0.023)	(0.023)	(0.041)	(0.041)	(0.041)
Mother's schooling	0.170***	0.168***	0.166***	0.082*	0.078*	0.085*
	(0.024)	(0.024)	(0.024)	(0.035)	(0.035)	(0.035)
Father's ISEI	0.035***	0.035***	0.034***	0.048***	0.048***	0.048***
	(0.006)	(0.006)	(0.006)	(0.011)	(0.011)	(0.011)
Agricultural *hukou* origin	-2.090***	-2.082***	-2.034***	-1.454***	-1.452***	-1.424***
	(0.174)	(0.173)	(0.173)	(0.408)	(0.406)	(0.405)
Interactions						
Female * Sibship size	-0.231**			-0.209		
	(0.079)			(0.133)		
Female * Number of brothers		-0.335**			-0.283	
		(0.108)			(0.223)	
Female * Number of sisters		-0.150			-0.180	
		(0.106)			(0.189)	
Female* Number of elder brothers			-0.254			-0.182
			(0.146)			(0.244)
Female* Number of younger brothers			-0.460**			-0.608
			(0.140)			(0.387)
Female* Number of elder sisters			0.175			-0.196
			(0.135)			(0.200)
Female* Number of younger sisters			-0.504***			0.058
			(0.148)			(0.377)
Intercept	7.484***	7.495***	7.448***	7.669***	7.724***	7.749***
	(0.353)	(0.352)	(0.349)	(0.733)	(0.730)	(0.726)

N	3867	3867	3867	1258	1258	1258
R^2	0.275	0.277	0.285	0.303	0.305	0.311

Note: Robust standard errors are in parentheses. *** p<0.001, ** p<0.01, * p<0.05.

Table 4: Sibship Size and Educational Attainment by Cohort and *Hukou* Origin

	Birth Cohort 1949-1970	Birth Cohort 1971-1988

VARIABLES	Agricultural	Non-Agricultural	Agricultural	Non-Agricultural
Female	-1.432***	-0.202	-0.353	-0.971
	(0.366)	(0.473)	(0.481)	(0.658)
Sibship size	0.049	-0.171	-0.017	-0.574
	(0.067)	(0.141)	(0.119)	(0.295)
Non-Han	-0.618	-0.781	-2.165***	-0.146
	(0.375)	(0.682)	(0.464)	(0.720)
Father's schooling	0.129***	0.141***	0.197***	0.329*
	(0.028)	(0.036)	(0.041)	(0.154)
Mother's schooling	0.205***	0.100**	0.097*	0.008
	(0.032)	(0.033)	(0.041)	(0.057)
Father's ISEI	0.041***	0.023***	0.054***	0.033*
	(0.009)	(0.006)	(0.014)	(0.014)
Interaction				
Female * Sibship size	-0.220*	-0.086	-0.294*	0.495
	(0.089)	(0.158)	(0.147)	(0.275)
Intercept	5.317***	8.100***	6.129***	8.119***
	(0.363)	(0.503)	(0.580)	(1.847)
N	2611	1256	899	359
R^2	0.185	0.154	0.214	0.221

Note: Robust standard errors are in parentheses. *** p<0.001, ** p<0.01, * p<0.05.