

THE CONSEQUENCES OF HAVING A SON ON FAMILY WEALTH IN URBAN CHINA

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Due to the influence of traditional culture, housing is regarded as a status good and plays an important role in improving male competitiveness in the marriage market in China. Using data from a recent household survey, we find that urban families with a son are more likely to own a house, with a larger size, and at an earlier date. With the booming of the Chinese housing market since the late 1990s as background, having a son thus generates a substantial effect on family wealth through the channel of house ownership. Using the gender of the first-born child as an instrument, our estimation shows that families with a son have 188 thousand RMB *yuan* higher housing wealth on average.

JEL Codes: J16, R21, O18

Keywords: child gender, China, income inequality, real estate market, wealth accumulation

1. INTRODUCTION

Under the influence of traditional culture, housing is regarded as a “status good” and often a prerequisite for marriage in China (Wei and Zhang, 2011). An interesting observation is that the groom’s family is usually responsible for providing a house for the young couple, while the bride’s family does not have the same obligation (Brown *et al.*, 2011; Wei *et al.*, 2012).¹ This phenomenon is still persistent today, partly due to competition in the marriage market. As the male-female sex ratio kept rising since the 1980s, it has become harder and harder for a young man to find a bride. In a recent internet survey, 68.1 percent female respondents agree that “men should purchase a house before marriage.”² Thus, comparing with the parents of a girl, the parents of a boy are more likely to increase saving

Notes: The authors are grateful to the Editor and two anonymous referees for valuable comments. Lixing Li acknowledges financial support from the National Natural Science Foundation of China (#71203004) and the Key Project of Philosophy and Social Sciences Research, Ministry of Education, China (#13JZD008). Xiaoyu Wu acknowledges financial support from the National Natural Science Foundation of China (#71103211 and #71673314) and the Beijing Higher Education Young Elite Teacher Project.

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¹The literature on bride price and dowry offers explanations for such social norms (e.g. Zhang and Chan, 1999; Brown, 2009).

²The survey was conducted by www.baihe.com, a leading dating website in China, in 2012.

(Wei and Zhang, 2011) and to purchase (in the urban area) or build (in the rural area) a house in preparation for the marriage of their child.

This paper examines the difference in house purchase behavior that is due to child gender, and discusses its consequences on family wealth. With a long-term upward price trend since the late 1990s, housing assets have become the largest wealth component for most people living in urban China (Gustafsson *et al.*, 2006). Families with a son benefit from house value appreciation more than son-less families, because they are more aggressive in buying houses. The estimated wealth effect is quite substantial. Families with (at least) a son have 188 thousand *yuan* higher housing wealth, which roughly equals to 36 percent of the average household wealth in our sample.

In terms of empirical strategy, this paper explicitly deals with the potential endogeneity of child gender. Because child gender could be affected through sex-selection, it is endogenous to household characteristics (Angrist and Evans, 1998). In particular, China has a high and rising sex ratio since the 1980s under the influence of son preference, the One-Child Policy (Zeng *et al.*, 1993; Ebenstein, 2010), and the availability of sex-selection technologies (Chen *et al.*, 2013). Thus, whether or not a family has a son may be reversely affected by household wealth, as rich families could obtain greater access to sex-selection technologies. Despite this, the actual sex ratio of the first child is found to be close to the natural rate, and gender of the first child is usually treated as exogenous (Ebenstein, 2010; 2011; Li and Wu, 2011; Chen *et al.*, 2013). Following this literature, we rely on the gender of the first child as the source of identification. We first estimate the (reduced-form) effect of “having a first-born son” relative to “having a first-born daughter” using data from the 2010 China Family Panel Studies (CFPS). The findings not only include a higher probability of house ownership over the currently living house and a higher level of family wealth, but also contain a larger number of house unit owned by the family, a larger floor space, and an earlier date when buying the house. In contrast, we do not find significant differences in both labor supply and family income, suggesting that families with and without a first-born son are otherwise similar. Difference in their family wealth is due to a difference in their house purchase decisions. Finally, we use “having a first-born son” as an instrumental variable to quantify the economic effect of “having (at least) a son” on house purchase and wealth.

Existing studies that relate children to family wealth mainly focus on the impact of the number of children and family size. A larger family size usually leads to a lower labor force participation rate for the wife and a lower level of household wealth (Smith and Ward, 1980). Families with more children are more likely to have a longer period under credit constraint and thus a delayed asset accumulation (Scholz and Seshadri, 2007). With regard to the impact of child gender, having a son rather than a daughter is found to be correlated with an increased labor supply and wage for the husband in the U.S. (Lundberg and Rose, 2002). Using Chinese data, Wei and Zhang (2011) find an increased household saving rate and a higher probability of being an entrepreneur, Knight *et al.* (2010) find a higher family income, Li and Wu (2011) find an increased female bargaining power and an improvement of the nutrition status for all family members. Our paper enriches this literature and shows a significant difference in

family wealth. The finding that difference in family wealth is mainly driven by difference in housing wealth is consistent with common observations and echoes with Li (2014), who suggests that household wealth and its degree of inequality have been increasing much more quickly than those of household income since the late 1990s.

The remainder of this paper is organized as follows. Section 2 discusses channels through which child gender could have an impact on family wealth. Section 3 introduces the background of China's real estate market. Section 4 introduces our data and empirical strategy. Section 5 reports results. Section 6 briefly concludes.

2. HOW HAVING A SON AFFECTS FAMILY WEALTH?

China has a long history of parental preference for a son. Sons are expected to inherit the family name, carry the family line, and provide old-age support for elderly parents. Under the influence of a son preference, there are several possible channels through which child gender could affect family wealth.

First, having a son may increase the motive of the couple to earn more income and thus accumulate more wealth. Knight *et al.* (2010) argue that if parents value a son more than a daughter, they may want to obtain more income and transfer it to the son while he is growing up or at the time of marriage. Their estimation based on data from the 2002 China Household Income Project (CHIP) shows that having a son rather than a daughter raises household income by 13 percent in rural China. However, the empirical evidence is mixed. Li and Wu (2011) do not find significant impact of having a son on labor supply of the husband or the wife using data from the 1993–2006 China Health and Nutrition Survey (CHNS).

Second, having a son increases a wife's bargaining power against her husband in the family. Because women are more likely to spend family resources on nutrition, education and health-related commodities (Thomas, 1990), the increased bargaining power could result in an improvement of family members' human capital (Li and Wu, 2011). Thus, having a son may have a long-term effect on household wealth through human capital accumulation.

Third, having a son may raise the couple's status in the extended family. The couple may receive more gifts and transfers from clan members, which could potentially contribute to a higher family wealth. However, Li and Wu (2011) do not find significant effect of having a son on transfers received from the couple's parents.

This paper does not intend to rule out above channels. Instead, we plan to offer a new channel, that is, the effect due to differences in house purchase behavior. As we have already mentioned in the introduction, it is a persistent social norm in China that the groom's family is responsible for purchasing a house for the young couple. The high and rising sex ratio has intensified the marriage market competition. It is estimated that about 30 million males cannot find wives in China (Zhu *et al.*, 2009). Thus, people raise their saving rate in order to buy a house, so that their sons can be more attractive in the marriage market (Wei and Zhang, 2011; Wei *et al.*, 2012). In fact, according to a 2010 survey conducted in Beijing,

marriage has already become the most important reason for young people to buy a house.³ The ownership of a house would significantly improve a young man's chance of success in the marriage market.⁴ Thus, parents who have given birth to a boy are more aggressive in buying houses. Specifically, if they do not yet own a house, they may want to buy one as early as possible; if they already own a house, they may want to exchange for a larger one so that their daughter-in-law and grandchildren could live with them in the future;⁵ if they are rich enough, they may want to buy a separate house for their son even though the son is still very young.

While house ownership is playing an important role in getting married, the legal protection of ownership rights is becoming stronger and stronger in China. The *Marriage Law* of 2001 explicitly recognized the sole ownership of property that is purchased before marriage.⁶ The *Judicial Interpretation for Marriage Law* of 2011 further protects one's ownership rights over houses that were purchased with a mortgage before marriage.⁷ Thus, if a man bought a house before marriage, he will maintain the ownership after divorce. His family does not need to worry about the loss of housing property. If the house was purchased with a mortgage before marriage and his wife helped to pay the mortgage after marriage, he can still claim the ownership after compensating his wife's payment and corresponding value appreciation. Furthermore, even if a house is purchased after marriage, as long as the payment is made by the husband's parents and the house is registered under his name, the house will be treated as his sole property.⁸ Legal protection should strengthen the incentive of the groom's family to buy a house for their son's marriage.

Although we emphasize the role of a house in marriage, it could simply serve as a type of luxury consumption good that is purchased under the expectation of a higher future income. Because a son is traditionally considered to be more productive than a daughter (Lipatov *et al.*, 2008), having a son might induce the parents to choose a higher present consumption level in a life-cycle model. If this is the reason why the parents decide to buy a house, it is possible that they did not consider their children's future marriage at all. Even if this is the case, we can still interpret the effect on household wealth as a result of having a son, which is consistent with our key argument that child gender affects house purchase behavior.

³The survey was conducted by the China Ever-Bright Bank and Homelink Real Estate Corporation in 2010. 60 percent of young home owners in Beijing buy their homes in order to get married. In another question, 64 percent of all respondents agree that owning a home and enjoying a happy life have a direct correlation. See <http://www.chinadecoded.com/2010/09/11/homeownership-almost-a-prerequisite-for-marriage/>.

⁴For example, in a survey of Chinese mothers with young daughters by *Shanghai Daily* in 2010, 80 percent of the mothers indicate that they would object to their daughters marrying a man who does not own a home (Wei *et al.*, 2012).

⁵In China, it is not rare for a couple to live with the husband's parents. This is true even in the urban area. In contrast, very few couples live with the wife's parents.

⁶Article 18 of the amended *Marriage Law*, which was passed by the People's Congress on April 18, 2001.

⁷Article 10 of the *Judicial Interpretation for Marriage Law Issue 3*, which was published by the Supreme Court on July 4, 2011.

⁸Article 7 of the *Judicial Interpretation for Marriage Law Issue 3*.

3. REAL ESTATE MARKET AND WEALTH DISTRIBUTION IN CHINA

Before the market-oriented housing reform in the 1990s, houses in the urban area were publicly owned and allocated mainly through an employee's working unit. For people without a formal job, their living houses were allocated by the government. Residents pay very low rents. Urban housing reform was initiated in 1994 when employees in the state sector were allowed to purchase their currently living apartment at subsidized prices. In 1998, the traditional way of house allocation through a work unit was abandoned. Urban housing became privatized and commercialized (Lee, 2000). Rents for public housing were gradually increased to motivate people to purchase their own house. At the same time, in order to avoid economic recession after the 1997 Asian financial crisis, the government adopted various policies to stimulate domestic demand, including the development of the residential mortgage market. Commercial banks started to offer loans to home buyers in 1998. Since then, China's urban real estate market has experienced a long-term booming. Many factors have contributed to this booming, including the strengthened private property rights, increased income level, economic openness, monetary and fiscal stimuli, large-scale migration, and rapid urbanization process (Li and Wu, 2014).

The growth rate of housing price was quite substantial, especially in major cities such as Beijing, Shanghai, Shenzhen and Hangzhou. Taking Beijing as an example, according to the official statistics published by the National Statistical Bureau, the residential housing price increased from 4557 *yuan* per square meter in 2000 to 17151 *yuan* in 2010. Because the official statistics are not adjusted for housing quality (Wu *et al.*, 2011), the growth rate perceived by residents could be faster. For example, using household survey data, Li (2014) finds that the annual growth rate of housing prices is around 25 percent during 2002–2010. Under such an upward price trend, house owners experienced an unexpected but substantial wealth appreciation. Li (2014) compares the 2002 CHIP and 2010 CFPS data and finds that wealth outgrows income by a large margin. While the annual growth rate of household income was 8 percent during 2002–2010, the annual growth rate of household housing wealth was as high as 22 percent. At the same time, the inequality of wealth has been greatly widened, with the Gini coefficient of urban household wealth increasing from 0.45 to 0.66. The Gini coefficient of household wealth has exceeded that of income since the late 1990s. Because families with a son are more aggressive in buying houses, they accumulate a higher housing wealth than son-less families.

Owning a house might be more important for marriage in rural China. As son preference is more pervasive in the rural area, status competition through housing is also more popular. However, it should be noted that there is no formal real estate market in rural China. The construction cost of rural housing is relatively cheap and stable. Lack of transaction rights prevents rural residents from gaining house value appreciation (Li, 2012).⁹ Many houses in the rural area are even vacant due to large-scale out-migration. In spite of its importance in marriage, rural housing was not an attractive investment in terms of monetary return. Thus,

⁹The urban-rural difference in the wealth effect due to house value appreciation is a major reason for the widening wealth inequality along the urban-rural division.

TABLE 1
SUMMARY STATISTICS

Variable	Mean	Standard Deviation	Observations
Having a first-born son	0.598	0.490	5830
Having a son	0.692	0.461	5830
Own current house	0.823	0.382	5830
Number of houses owned	1.048	0.626	5830
First child age when purchase house	14.995	10.875	3377
Per capita floor space—current house	31.19	21.39	4371
Per capita floor space—all houses	36.15	69.89	4583
Wealth (10,000 <i>yuan</i>)	51.10	234.7	5830
Housing Wealth	45.98	230.7	5830
Saving	1.345	4.803	5830
Stock	0.530	4.027	5830
Fund	0.450	3.853	5830
Other wealth	2.667	33.95	5830
Family income (10,000 <i>yuan</i>)	2.648	3.078	5091
Ratio of housing wealth to income	51.66	324.82	5091
Married	0.879	0.326	5830
Average age	47.56	13.69	5830
Average years of education	7.873	4.631	5830
Male labor supply			
Have a job	0.617	0.486	4362
Months of work per year	10.86	2.65	2247
Days of work per month	25.09	4.65	2189
Hours of work per day	9.128	2.648	2183
Female labor supply			
Have a job	0.423	0.494	5058
Months of work per year	10.51	3.19	1604
Days of work per month	24.88	4.88	1537
Hours of work per day	8.698	2.275	1537

Notes: Data is from CFPS 2010.

the wealth effect of child gender due to difference in house investment behavior is trivial in the rural area. We will not examine it in this paper.

4. DATA AND EMPIRICAL STRATEGY

Our data comes from the 2010 China Family Panel Studies (CFPS), which was conducted by the Institute of Social Sciences Survey Center at Peking University, China, in collaboration with the Survey Research Center at University of Michigan. The study was designed in a style similar to the Panel Study of Income Dynamics (PSID) in the U.S. It is a nationally representative household survey that contains rich socioeconomic information of individual, family and community.¹⁰

To study the effect of child gender on wealth accumulation, we restrict our sample to families with at least one child and with non-missing data on family wealth. The total sample size is 5830. Table 1 reports the descriptive statistics.

¹⁰For detailed survey description and data download information, see <http://www.issf.edu.cn/>. In 2012, a follow-up survey was conducted and the data is also available. We do not use the 2012 data in this paper for two reasons: 1) there was change in the definition of wealth component across these two waves; 2) there was little change in family member composition.

About 59.8 percent of the sample families have a first-born son and 69.2 percent have at least a son. The percentage of families who have ownership over the house they currently live is 82.3 percent. The average number of house units owned by each family is slightly above one (1.048). It is evident from these statistics that house ownership ratio is quite high in urban China.¹¹ The per capita floor space of the house in which the family is currently living is 31.19 square meters, and the per capita floor space of all houses owned by the family (not necessarily including the current house) is 36.15 square meters. If we ignore the inequality in distribution, these figures demonstrate a decent living condition for urban residents. The average (self-reported) family wealth is around 511 thousand RMB *yuan*. Housing wealth (total value of all houses owned by the family) is the largest component, with an average value of 460 thousand *yuan*. Other components of wealth, including bank saving, stock, and fund, are much less compared with housing wealth. Among these 5830 sample families, 5091 report non-missing income information. Their average annual family income is 26.5 thousand *yuan*, and the average ratio of housing wealth to income is 51.66.

Table 1 also lists summary statistics of the labor supply variables for the couple. Among our sample, 61.7 percent male and 42.3 percent female currently have a job. Conditional on having a job and reporting non-missing data on working length, husbands work for near 11 months per year on average, which is slightly longer than wives.

Fertility choice is an important family decision, which is endogenous to family characteristics. In particular, whether a couple has a son or not is likely to be affected by the degree of son preference and affordability of sex-selection technologies, which may be unobserved and correlated with family wealth. Failing to deal with the endogeneity problem would generate biased estimation. In contrast to “having a son,” gender of the first-born child is more natural. Although the One-Child Policy restricts the number of children one couple could have, there was a relaxation for rural residents and for ethnic minorities. In the urban area, violation of the policy is not unusual, either.¹² Thus, sex selection usually takes place at the second or higher birth orders, and the observed sex ratio of the first child is close to the natural rate. Following the literature (Ebenstein, 2010, 2011; Li and Wu, 2011; Chen *et al.*, 2013), we treat the gender of the first child as exogenous and use “having a first-born son” instead of “having a son” to conduct a reduced-form estimation. This could largely alleviate the endogeneity problem. To quantify the effect of “having a son” on house purchase and wealth accumulation, we will also use “having a first-born son” as its instrument at the end.

5. RESULTS

Table 2 presents regression results of having a first-born son on house purchase. We explore various aspects of the house purchase behavior, including ownership of the current house, number of house units owned by the family, floor

¹¹The 2012 China Household Finance Survey (CHFS) shows a house ownership ratio of 89.68 percent in China, while the world average is around 60 percent.

¹²1508 out of the 5830 sample families have multiple children in our sample.

TABLE 2
HAVING A FIRST-BORN SON ON HOUSE PURCHASE

	(1) Own current house	(2) Own current house	(3) Number of houses	(4) First child age when purchase house	(5) Floor space— current house	(6) Floor space— all houses
Having a first-born son	0.031*** (0.010)	0.030** (0.013)	0.055*** (0.017)	-0.508* (0.268)	1.803*** (0.650)	5.999*** (2.177)
Married	0.054*** (0.017)	0.091*** (0.019)	0.102*** (0.027)	-1.586*** (0.399)	-2.422** (1.054)	-2.869 (3.570)
Age	0.002*** (0.000)	0.007*** (0.001)	0.003*** (0.001)	0.616*** (0.012)	-0.036 (0.028)	-0.007 (0.093)
Education	0.001 (0.001)	0.002 (0.001)	0.008*** (0.002)	-0.080*** (0.030)	0.182** (0.078)	0.138 (0.260)
R-squared	0.049	0.086	0.048	0.577	0.115	0.021
Observations	5830	4579	5830	3377	4371	4583

Notes: This table reports linear regression results on various house purchase outcomes. Column 2 excludes families who bought house before the birth of their first child. Data is from CFPS 2010.

*Significant at 10%; **significant at 5%; ***significant at 1%.

space of the current house, floor space of all houses owned by the family, and the time of house purchase. In all regressions, we apply a linear model and control for the marital status of the household head, average age and education of the couple (or the household head if single), and provincial dummies.

Column 1 reports regression results on ownership of the current house using a linear probability model. Compared with families who have a first-born daughter, those who have a first-born son have 3.1 percentage points higher probability of owning the house in which the family is currently living. If the house was bought before the birth of the first child, house purchase decision should have nothing to do with child gender. We exclude this sample and run the regression again. The results listed in Column 2 remain very similar. Column 3 examines the effect on the total number of house units owned by the family. The estimated coefficient is positive and significant. Having a first-born increases the number of house units by 0.055, which is about 5.2 percent of the average number owned by each family. In Column 4, we examine the timing of house purchase. A natural benchmark is the age of children. To make the measurement of timing comparable, we restrict our sample to those who own the current house and bought it after the birth of their first child. The dependent variable is the age of the first child when buying the house. The estimated coefficient is -0.51 , suggesting that families with a first-born son bought the house about half a year earlier than those with a first-born daughter. In Columns 5 and 6, we examine the per capita floor space of the house in which the family is currently living and the per capita floor space of all houses owned by the family. It is found that having a first-born son increases these two measures by 1.8 and 6.0 square meters, respectively. In sum, Table 2 shows that families with a first-born son have a higher probability of house ownership and a younger age of the first child at house purchase; they own a larger number of house units, with a larger size in per capita terms.

Next we study the impact of the gender of the first child on wealth accumulation using a similar empirical method. The dependent variables include total family wealth and its various components, namely housing wealth (value of all houses owned by the family), bank saving, stock, fund, and other wealth. We also examine family annual income and the ratio of housing wealth to family income. The findings listed in Table 3 are consistent with the house purchase behavior found in Table 2. While having a first-born son increases the family wealth by 151 thousand *yuan*, most of this increase comes from the channel of housing. The estimated impact on housing wealth is 142 thousand *yuan*, an amount that is very consistent with the estimated floor space difference of Table 2.¹³ In contrast to housing wealth, other wealth components are generally similar between families with a first-born son and those with a first-born daughter. The only exception is saving. The estimated effect is 2280 *yuan*. These findings are consistent with the common observation that the main wealth difference across households comes from housing—those who played more aggressively in house purchase accumulate more wealth.

¹³Multiplying the estimated per capita floor space difference of Table 2 (6 square meters) with the average family size (4.26) and the average housing price in 2010 (5032 *yuan*) would give a rough estimate of 130 thousand *yuan*, which is considerably close to the estimated housing wealth difference of 142 thousand *yuan*.

TABLE 3
HAVING A FIRST-BORN SON ON FAMILY WEALTH

	(1) Total wealth	(2) Housing wealth	(3) Saving	(4) Stock	(5) Fund	(6) Other wealth	(7) Family income	(8) Ratio of housing wealth to income
Having a first-born son	15.099** (6.436)	14.179** (6.338)	0.228* (0.130)	0.024 (0.105)	-0.041 (0.049)	0.692 (0.942)	-0.004 (0.081)	21.938** (9.425)
Married	10.725 (10.397)	8.409 (10.238)	0.407* (0.211)	0.079 (0.170)	-0.036 (0.079)	1.698 (1.522)	0.686*** (0.143)	-50.29*** (16.581)
Age	0.483* (0.275)	0.348 (0.271)	0.021*** (0.006)	0.019*** (0.004)	0.006*** (0.002)	0.092** (0.040)	-0.016*** (0.004)	1.965*** (0.424)
Education	1.210 (0.772)	0.653 (0.760)	0.128*** (0.016)	0.100*** (0.013)	0.040*** (0.006)	0.256** (0.113)	0.212*** (0.010)	-2.834** (1.152)
R-squared	0.027	0.024	0.046	0.036	0.016	0.004	0.203	0.034
Observations	5830	5830	5830	5830	5830	5830	5091	5091

Notes: Data is from CFPS 2010.

*Significant at 10%; **significant at 5%; ***significant at 1%.

We also estimate the impact of child gender on family income and labor supply of the couple. In contrast to Knight *et al.* (2010), we do not find a significant difference in family income between those with a first-born son and those with a first-born daughter in Column 7. Column 8 shows that the ratio of housing wealth to income is significantly affected by child gender. The coefficient, 21.94, equals 42 percent of the average ratio (51.66). In Table 4, we estimate the effects of having a first-born son on job participation and length of working (conditional on job participation) of the couple. For length of time working, we list results on the self-reported months of work per year, days of work per month, and hours of work per day. None of these labor supply variables are significantly affected by the gender of the first child. This is consistent with Li and Wu (2011)'s finding using data from the 1993–2006 CHNS. In sum, families with and without a first-born son have similar income and labor supply. These findings provide additional support to the exogeneity claim regarding the first birth.

The level and growth rate of housing price have large regional variations in urban China. Such regional variations should have played an important role in shaping the house purchase behavior and may interact with child gender as well. For example, in contrast to a couple who live in a city with a rising price trend, a couple who live in a city with a stable housing price may face weaker pressure to buy a house when their son is born. While the provincial dummies have controlled for the level effect, it would be nice to add a region-specific measure of “housing price pressure” and estimate its interaction effect with child gender. However, because people bought houses in different years, it is hard to construct a measure that could reflect the actual pressure faced by each family when making the purchase decision. Instead, we take a simple approach and examine the effect of child gender by region. We divide the sample provinces into two groups: the east region and the middle and west region.¹⁴ Because the east region has a higher level and a faster growth rate of housing price, we expect that people living in this region face a stronger pressure of house purchase, which may induce families with a first-born son to behave more aggressively. Table 5 shows the regression results on major house purchase and family wealth outcomes by region.¹⁵ The estimated coefficients of “having a first-born son” are generally larger and statistically more significant for families living in the east region. Their house purchase decision is more affected by the gender of the first child, and the corresponding wealth gain is also larger. In contrast, as housing is more affordable in the middle and west

¹⁴The east region includes Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong and Guangdong, the middle and west region includes Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, Hunan, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, and Gansu. According to the official statistics of National Bureau of Statistics, in the east region, the average housing price is 8017 RMB *yuan/m*² in 2010, the average growth rate of housing price from 2000 to 2010 is 212 percent, and the median ratio of housing price per square meter to annual income is 0.33. In the middle and west region, these numbers are 3308, 182 percent, and 0.21, respectively.

¹⁵Because the east region has a much higher ratio of migrants than the middle and west region (32.27 percent v.s. 23.75 percent in our sample), it is not meaningful to compare the ownership status over the house unit people currently live in. Thus we focus on the total number of house units owned by a family, the age of the first child at house purchase, the floor space, and wealth outcomes.

TABLE 4
HAVING A FIRST-BORN SON ON LABOR SUPPLY

	Male				Female			
	(1) Have a job	(2) Months of working per year	(3) Days of working per month	(4) Hours of working per day	(5) Have a job	(6) Months of working per year	(7) Days of working per month	(8) Hours of working per day
Having a first-born son	-0.021 (0.014)	0.014 (0.110)	0.231 (0.191)	0.051 (0.113)	0.001 (0.014)	0.048 (0.157)	-0.265 (0.233)	-0.061 (0.114)
Married	0.090*** (0.034)	0.987** (0.429)	1.448* (0.757)	-1.095** (0.449)	0.020 (0.024)	0.495 (0.402)	0.565 (0.600)	0.625** (0.293)
Age	-0.014*** (0.001)	0.020*** (0.006)	-0.037*** (0.011)	-0.025*** (0.007)	-0.010*** (0.001)	0.056*** (0.010)	-0.050*** (0.015)	-0.021*** (0.008)
Education	0.012*** (0.002)	0.130*** (0.015)	-0.240*** (0.026)	-0.116*** (0.016)	0.014*** (0.002)	0.146*** (0.022)	-0.384*** (0.033)	-0.121*** (0.016)
R-squared	0.206	0.073	0.118	0.042	0.156	0.071	0.168	0.074
Observations	4362	2247	2189	2183	5058	1604	1537	1537

Notes: Data is from CFPS 2010.

*Significant at 10%; **significant at 5%; ***significant at 1%.

TABLE 5
HAVING A FIRST-BORN SON ON HOUSE PURCHASE AND FAMILY WEALTH—BY REGION

	East					Middle and West				
	(1) Number of houses	(2) First child age when house purchased	(3) Floor space— all houses	(4) Total wealth	(5) Housing wealth	(6) Number of houses	(7) First child age when house purchased	(8) Floor space— all houses	(9) Total wealth	(10) Housing wealth
Having a first-born son	0.055** (0.021)	-0.895** (0.379)	5.200* (2.706)	23.307** (10.062)	22.313** (9.847)	0.055** (0.026)	-0.160 (0.378)	3.126 (3.387)	6.196 (7.946)	5.467 (7.910)
Married	0.057* (0.034)	-1.688*** (0.579)	-3.950 (4.155)	22.936 (16.635)	19.083 (16.280)	0.151*** (0.043)	-1.511*** (0.550)	-4.092 (4.893)	-0.868 (12.543)	-1.762 (12.485)
Age	0.002** (0.001)	0.649*** (0.018)	-0.123 (0.130)	0.924** (0.440)	0.620 (0.431)	0.005*** (0.001)	0.590*** (0.016)	-0.190 (0.149)	0.089 (0.332)	0.109 (0.331)
Education	0.007*** (0.002)	0.015 (0.044)	0.253 (0.322)	2.854** (1.248)	1.838 (1.221)	0.010*** (0.003)	-0.157*** (0.042)	-0.232 (0.378)	-0.274 (0.923)	-0.427 (0.918)
R-squared	0.064	0.584	0.049	0.030	0.026	0.030	0.572	0.019	0.006	0.006
Observations	2950	1636	1585	2950	2950	2880	1741	1660	2880	2880

Notes: Data is from CFPS 2010. The east region includes Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong and Guangdong, the middle and west region includes Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, Hunan, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, and Gansu.
*Significant at 10%; **significant at 5%; ***significant at 1%.

region, families face less pressure to buy houses when having a son. Thus the estimated coefficients of “having a first-born son” are generally smaller and statistically less significant, consistent with our expectation.

Estimations from previous tables could be viewed as “reduced-form” effects of “having a first-born son.” To quantify the effect of “having a son” on house purchase and wealth accumulation, we use “having a first-born son” as its instrument and conduct a two-stage least square estimation. Table 6 reports estimation results for major house purchase and family wealth outcomes using both OLS and IV strategies. The first stage result is listed as well. Comparing with the OLS estimates of Columns 1–5, the IV estimates of Columns 6–11 generally have a larger magnitude. According to the IV results, families with a son own 0.072 more house units and buy their current house 0.675 year earlier than families without a son. Having a son increases the per capita floor space by 7.9 square meters, total wealth by 200 thousand *yuan*, and housing wealth by 188 thousand *yuan*.¹⁶

6. CONCLUSION

In this paper, we examine the consequences of having a son on family house purchase behavior and wealth accumulation outcomes. Due to the influence of traditional culture, housing is regarded as a status good and plays an important role in improving a man’s competitiveness in the marriage market in China. We find that families with a son have a higher probability of house ownership, own more and larger houses, and buy their house earlier. With the booming of the Chinese housing market since the late 1990s as background, these families benefit from house value appreciation more than son-less families. Having a son thus generates an unintended consequence on family wealth accumulation. We find empirical evidence for all these hypotheses. In contrast, we do not find that families with and without a son have different income or labor supply. Regression by region shows that the higher level and faster growth rate of housing price in the east region places a stronger pressure on families living there. Their house purchase decisions are more affected by child gender, and the corresponding wealth gain is also larger.

Inequality has been the key concern for both the society and the government in China. Because housing wealth makes up the most important part of private wealth in urban China, such a large and unintended effect has an important implication on China’s wealth inequality. In addition, as household wealth affects human capital investment on children and the nutrition inputs of all family members, differences in wealth level may have a persistent effect. Specifically, this wealth effect due to the birth of a boy would increase resources available for his future education and tends to enlarge the gender gap in human capital accumulation. Our findings shed light on the gender perspective of intergenerational mobility.

¹⁶These IV estimates equal to the ratio of the reduced-form coefficient (as shown in Tables 2–3) to the first-stage estimate (0.756).

TABLE 6
HAVING A SON ON HOUSE PURCHASE AND FAMILY WEALTH—IV ESTIMATIONS

	OLS										
	IV—1 st stage					IV—2 nd stage					
	(1) Number of houses	(2) First child age when purchase house	(3) Floor space— all houses	(4) Total wealth	(5) Housing wealth	(6) Having a son	(7) Number of houses	(8) First child age when purchase house	(9) Floor space— all houses	(10) Total wealth	(11) Housing wealth
Having a son	0.054*** (0.018)	-0.167 (0.291)	5.104** (2.334)	13.937** (6.895)	12.967* (6.790)	0.756*** (0.007)	0.072*** (0.022)	-0.675* (0.356)	7.886*** (2.864)	19.968** (8.514)	18.751** (8.383)
Having a first-born son											
Married	0.100*** (0.027)	-1.594*** (0.399)	-3.038 (3.575)	10.216 (10.411)	7.942 (10.252)	0.051*** (0.012)	0.099*** (0.027)	-1.565*** (0.400)	-3.228 (3.577)	9.700 (10.421)	7.447 (10.261)
Age	0.003*** (0.001)	0.612*** (0.012)	0.013 (0.093)	0.529* (0.273)	0.392 (0.269)	-0.001*** (0.000)	0.003*** (0.001)	0.614*** (0.012)	-0.000 (0.093)	0.500* (0.274)	0.364 (0.270)
Education	0.009*** (0.002)	-0.077** (0.031)	0.159 (0.262)	1.285* (0.777)	0.722 (0.766)	-0.009*** (0.001)	0.009*** (0.002)	-0.085*** (0.031)	0.204 (0.263)	1.386* (0.782)	0.818 (0.770)
R-squared	0.047	0.577	0.020	0.027	0.024	0.686	0.047	0.576	0.020	0.026	0.023
Observations	5830	3377	4583	5830	5830	5830	5830	3377	4583	5830	5830

Notes: Data is from CFPS 2010. The F-statistic of the 1st stage regression is 749.19.
*Significant at 10%; **significant at 5%; ***significant at 1%.

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