

Property Division upon Divorce and Household Decisions*

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Abstract

Marriage laws that regulate the division of property upon divorce are crucial for household decisions within marriage. In recent decades, regulation of marital property division upon divorce in developed countries has generally shifted from a title-based regime to equitable distribution, with the goal of promoting spousal equity. In contrast, a 2011 Supreme Court decision in China effectively changed the law governing pre-marital housing property division upon divorce, from an equal-division regime to one based on title. To understand the influence of property division laws on family behavior, we examine the consequences of this legal change. We focus on several outcomes, which reflect changes in intrahousehold bargaining power and affect consumption and leisure allocations between spouses as well as investment in children. We analyze families in which the home is registered under the husband's name only. We exploit a difference-in-differences design based on the fact that only families in which the home was bought by the groom before marriage were affected by the new court ruling. We find that this change weakened wives' intra-household bargaining power in those families, leading to a) reductions in their leisure, b) increases in consumption of goods favored by their husbands (e.g., alcohol), and reduced investment in children.

Key words: Marital property law; Household behavior; Intrahousehold bargaining power; Intergenerational investment

JEL Codes: D10; D13; D15; K11

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1 Introduction

The property division laws that govern property rights upon divorce are crucial for spouses' relative bargaining positions and ultimately affect a household's decisions during marriage. A growing literature examines the impact of laws that regulate property division upon divorce in the U.S. Prominent examples include Gray (1998), Chiappori et al. (2002), Stevenson (2008), and Voena (2015). Most of the reforms of these laws in the U.S. during the 1960s and 1980s involved switching from a title-based regime to equitable division. Studies that leverage these legal changes find that reforms in the U.S. led to increases in female bargaining power and well-being. On the other hand, researchers have found that policies that change spouses' relative bargaining positions—and, in particular, strengthen the woman's position—could also have a positive impact on children (Duflo, 2003; Lundberg et al., 1997; Rubalcava et al., 2009; Thomas, 1990).

To further our understanding of the implications of marital property division laws, we examine the impact of a unique legal reform in China that moved property division laws for pre-marital assets in the opposite direction, going from an equal-division to a title-based regime. The literature on the impact of marriage property laws on family behavior has primarily focused on the variations that stem from changes from a title-based to an equitable-division regime. The 2011 decision, which stipulated that a home purchased prior to marriage will be deemed the personal property of the registered owner, rather than the joint property of the couple, offers a unique context for study of this phenomenon. Before this change in the law, housing property was divided equally upon divorce, regardless of whose name was on the title and regardless of the timing of purchase. In particular, before 2011 even *pre-marital* housing assets brought into marriage by one of the spouses (often the husband) used to be divided equally upon divorce. Coupled with the unilateral divorce regime present in China throughout the period we study, this judicial decision effectively generated a large shock to the relative bargaining positions of both spouses. Figure 1 presents a graphical depiction of how divorce regimes have changed due to the reform in China, compared with well-documented reforms in the U.S.

In China, it is now common to buy a home when a couple marries. About 90 percent

of the married couples in our data were homeowners before 2010— i.e., before the reform went into effect. Based on social norms and marriage customs, the burden of purchasing the home usually falls on the groom’s family.¹ As a result, it is not uncommon for the home in which the spouses end up living in to be purchased prior to marriage, and titled solely under the soon-to-be husband’s name. In a very small minority of cases, the home is registered solely in the wife’s name. This was not usually consequential before 2011, as the de facto equal-division regime guaranteed a 50-50 split upon divorce regardless of who purchased the home, whether the home was purchased before or after marriage, and whose name was on the title. This paper explores the effects of the 2011 reform and provides evidence on its implications for Chinese families, in terms of intrahousehold allocation outcomes, including, work, consumption and investment in children.

We examine the implications of the legal reform using data from three waves of the China Family Panel Studies (CFPS). The first wave of data collection was conducted in 2010, just before the reform. The second and third waves occurred after the reform, in 2012 and 2014. The CFPS offers uniquely rich data on home ownership and the time of purchase. Using information on home ownership in 2010 and the timing of purchase relative to the timing of marriage, we can exactly identify, for each married couple, which spouse stands to gain and which to lose from the 2011 reform. The CFPS also provides comprehensive longitudinal data on employment, consumption, and intergenerational investments, which enable us to explore changes in household behavior in different families before and after the reform. Moreover, the county of residence, as well as the mortgage debt balance on the property, enable us to analyze heterogeneous impacts based on the sex ratio, which also affects bargaining power and the degree of home equity the household has in the marital home, which determines the net value of the housing asset at stake.

Our empirical strategy compares the behavior of two groups of families before and after the reform, in a difference-in-differences design. We focus on couples who married and purchased their marital home (either before or after marriage) prior to the reform,

¹Wei and Zhang (2011) and Wei et al. (2017) document the increasing importance of housing assets for prospective-groom status and marriage formation in China and how the marriage market ultimately affects the housing market.

and remained married throughout the years of analysis. As can be seen in Figure 2, the reform did not have a discernible effect on divorce rates. Specifically, families with the husband's names on the title are categorized into two groups, depending on how the time of purchase compares with the time of marriage. We compare changes in behavior before and after the reform between two types of families that differ with regard to the timing of home purchase. Our estimates can be interpreted as treatment effects on the couples in which the husband acquired the home before marriage and are therefore affected by the legal reform. On one hand, we have families that purchased the home after marriage; these are families in which the couples are unaffected by the reform. On the other hand, we have families in which the home was purchased by the groom (or by his parents on his behalf) before marriage. It is only in these latter families, that the husband benefits from a strengthened bargaining position with the 2011 judicial ruling.

To interpret our findings, we test for common trends in outcomes between the two types of families in the periods leading up to the reform. To that end, we inspect household behavior in the two types of families over the pre-reform period using a CFPS pilot survey and a pilot follow-up survey in 2008 and 2009, respectively. We find that before the 2011 court decision, household behavior and decisions across both types of families follow the same time trend.

Our results show that there are statistically significant responses by affected households as a result of the transition to a title-based regime. We find effects on several outcomes, including consumption and leisure allocations and investment in children. First, the legal reform leads to an increase in employment probability of 5 percentage points for wives in families in which the property was purchased by the groom before marriage. Second, husbands increase alcohol consumption in those families. Third, the data suggest that the impact of the Supreme Court's decision is passed on to the next generation, because affected families invest less in children's education.

A burgeoning literature examines the impact of reforms in laws that regulate the grounds for divorce and property division upon divorce on household behavior. Most of these studies focus on the impact of reforms of laws that regulate the grounds for

divorce. Wolfers (2006) argues that unilateral divorce reforms that no longer require mutual consent for divorce produced a short-lived increase in divorce rates, but ultimately led to a slight decline in divorce rates in the long run, possibly by changing the composition of marriages.² Stevenson and Wolfers (2006) find that the same reform is linked to a decline in female suicide rates and fewer cases of domestic violence. Gruber (2004) finds that children exposed to unilateral divorce while growing up had worse outcomes later in life.

Closer to our contribution, a more limited but growing literature examines how property division laws affect the outside opportunities of each spouse, spousal bargaining positions, within-marriage allocation of resources, and child outcomes (Chiappori et al., 2002; Gray, 1998; Stevenson, 2008; Voena, 2015). By exploiting variations in the timing of reforms across states in the U.S. during the 1970s, Stevenson (2008) finds that unilateral divorce leads to an increase in married women’s labor supply regardless of the underlying property division regime. Voena (2015) finds that under the equitable division of marital property, a move from mutual consent to unilateral divorce is associated with lower labor market participation for married women.

Another strand of literature explores whether policy changes that affect spouses’ relative bargaining positions can have a substantial effect on children’s education investment (Duflo, 2003; Lundberg et al., 1997; Thomas, 1990, 1994). In particular, changes that strengthen a wife’s bargaining position or allow her to control a larger share of resources are often thought to have a positive effect on various measures of child health and well-being. An emerging literature that employs structural approaches explores the link between divorce law and child development. For example, Gayle et al. (2017) investigate divorce law within a dynastic model and report that a switch to an equitable distribution regime led to an increase in maternal time with children. Brown et al. (2015) study the role of family law—in particular, grounds for divorce—in a model of parental investment in children.

²See also Mechoulan (2006) for the effects of unilateral divorce on divorce in the US. Work outside the US include Gonzalez and Viitanen (2009), who exploit cross-country variation in European countries, and Aguirre (2019), who evaluates the effects of unilateral divorce in Mexico.

Finally, our results are consistent and closely aligned with work by Wang (2014), who exploits a reform in China that gave some public employees the opportunity to purchase the homes they had been renting. In that case, property rights were defined at the individual, instead of the household, level. In some cases, therefore, the right was given to the wife and in other cases to the husband, depending on who was the public employee. Similar to our findings, Wang (2014) shows that various intrahousehold decisions evolve in ways that favor the spouse who becomes the property owner, whose bargaining position is much strengthened by the reform.³

This paper makes three contributions. First, we broaden the literature to include a non-U.S. setting. Chinese couples have unique customs and abide by particular social norms, but the same economic insights are in play when analyzing the effects of legal reforms that affect property division upon divorce. Second, we explore a legal reform that transitions across regimes in the opposite direction, relative to the previous literature; specifically, the Chinese reform changes the division of pre-marital property upon divorce from an equal-division regime to a title-based regime (see Figure 1). This is important, because pre-reform marriage formation could be different under (a) an equal-division baseline regime for like the one in China or (b) a title-based like the one prevalent in the U.S. for division of pre-marital housing assets upon divorce. Third, and perhaps most importantly, we use information on the names listed on the property title and the timing of the property purchase to exactly identify the families in which the wife stands to lose from the reform because only their husband's name was on the title and the home was purchased before marriage. Most work based on U.S. reforms does not observe whose name is on the title, and as a result cannot directly infer which spouse stands to lose or gain from changes in rules regulating property division upon divorce. It is commonly assumed that most households' marital property was titled under the husband's name only. Under that assumption, it is generally implied that a transition from title-based to equitable regimes benefits wives. However, those results will inevitably also commingle the effects

³Similarly, recent work by Gousse and Leturcq (2019) uses province-level variation in Canada and finds that a cohabiting woman's labor supply is reduced when she becomes eligible for a more protective cohabiting legal regime.

for households in which the wife is the one on the title (and loses with a move to equitable division) and those in which both are on the title (and the wife is thus unaffected). Because we can observe who is on the title before the reform is announced, a key advantage of our research design is that we can more cleanly identify the households in which only the husband's name is on the title and focus our analysis on that large subsample. When the property was purchased after marriage, the spouses in these households should be unaffected by the reform, as equal division still applies despite only the husband's name being on the title. When the property was purchased before marriage, the husband gains and the wife loses with the reform, as now the name on the title is upheld upon divorce. These reforms have effects that have opposite signs or have no effect, depending on the details of home ownership at baseline. Observing these details thus allows us to focus on the families in which the effects will be more cleanly identified.

How could this legal reform regarding the division of property upon divorce affect household outcomes within marriage? Following Chiappori et al. (2002), we argue that the reform directly changes property rights regarding the family home in the event of a divorce. After the reform, in families with premarital housing property held solely in the husband's name (premarital-ownership families henceforth), women would receive lower post-reform divorce allocation relative to those in families with housing property purchased during the marriage (marital-ownership families henceforth), even when that might also be held in the husband's name. As a result of the less favorable outside option, intrahousehold bargaining power decreases for wives in the premarital-ownership families relative to those in the marital-ownership families.

Similarly, in addition to affecting spousal leisure allocations and thus labor supply, the legal reform influences the amount of spousal private consumption, such as alcohol, a traditionally male-favored good. After the court's decision in 2011, the husband in a premarital-ownership family enjoys a more favorable outside option in case of divorce. Therefore, family demand for certain consumption goods will thus shift to more fully reflect his preferences. The judicial ruling alters intrahousehold bargaining power within marriage, and the spouse with increased bargaining power steers consumption allocations

in their preferred direction. Hence, after the legal change, the typical husband in a premarital-ownership family would increase his consumption of alcohol.

Similarly, we expect this change to affect a family's investment in children. Lower bargaining power for the wife prevents her from steering allocations in her preferred direction (e.g., higher investment in children). Studies in this area document that reduced bargaining power for the mother often translates into lower investment in and well-being for children.

In summary, we expect this legal reform to trigger large changes in bargaining power that translate into large changes in labor supply, consumption, and investment in children within affected households.

The remainder of the paper is structured as follows. The next section reviews the relevant institutional background and the 2011 Supreme Court's decision that effectively redefined housing property division upon divorce in China. Section 3 describes the data and our sample construction. Section 4 presents the empirical strategy. We report the empirical results in Section 5, and Section 6 concludes.

2 Institutional Background

Housing property is considered the most important component of all family assets for Chinese families. This is especially true since the privatization of the housing market in 1998, after which home ownership became common in China.⁴ Since then, home prices have been rising rapidly. Wu et al. (2012) report more than doubled home prices across major Chinese cities during the period from 2000 to 2010. Given the trend of soaring home prices, owning a house or an apartment signals that a man is successful, committed to marriage, and able to weather challenging financial circumstances, which improves his position in the marriage queue.

⁴Prior to the 1990s, a private housing market did not exist in China. Nearly all urban residences were nationalized and controlled by the central government, which assigned housing units to workers. There was no market for workers who sought to sell their current home or buy a new one. In 1998, the State Council's 23rd Decree formally laid the legal foundation for a private housing market by requiring that housing be purchased on the open market at market prices, marking the establishment of real estate market system.

Accordingly, new social norms and marriage customs have emerged: A bride's family usually expects the groom or his family to provide a home prior to the wedding (Pierson, 2010, Lim et al., 2013). Given the high home prices, the burden of home-buying thus falls heavily on the groom's parents. According to a government report produced by the Department of Housing Provident Funds (2009), more than 50 percent of first-time home buyers in Shanghai were below 30 years old, and around 62 percent had received financial support from parents to make down payments and mortgage payments.⁵ Housing has become the most important component of marriage expenditure and the largest lifetime investment for most Chinese families; Gan et al. (2013) find that the value of the family home comprises around 50 percent of total family assets in China in 2012.

2.1 Divorce Laws in China

In China, marriage used to be universal and mostly permanent; in premodern China, women were not allowed to divorce their husbands. The 1981 Marriage Law allowed divorce under mutual consent.⁶ In 2001, the Marriage Law Amendment loosened the criteria for filing a divorce.⁷ Specifically, divorce would be granted if the spouses had lived separately due to lack of mutual affection for at least 2 years. As a result, starting in 2001, the grounds for divorce in China can be essentially described as a unilateral regime. Since then, divorce rates have steadily increased in China. According to China's National Bureau of Statistics, the divorce rate increased from 4.36 divorces per 1,000 marriages in 2004 to 8.57 in 2014, almost doubling in 10 years (Figure 2). Accordingly, divorce cases in courts have increased, and disputes regarding housing property rights are the most frequent.

To summarize, after the privatization of the Chinese housing market in the late 1990s,

⁵A similar finding is reported in CBRE (2016). In this survey, 80 percent of the Chinese young adults interviewed agreed that wages were not keeping up with home prices, and over two-thirds agreed that they could afford a property only with financial support from their parents and relatives.

⁶Article 24 in the Marriage Law of the People's Republic of China (1981): "Divorce shall be granted if husband and wife both desire it. Both parties shall apply to the marriage registration office for divorce."

⁷Article 32 in the Marriage Law of the People's Republic of China (2001 Amendment): "Where either the husband or wife applies to get divorced, the parties concerned may request mediation, or he or she may file a suit at the People's Court for divorce. The People's Court shall order mediation in the process of hearing a divorce suit; divorce shall be granted if mediation fails because mutual affection no longer exists."

housing became a necessary good for starting a marriage. By social norms and marriage customs, the burden of purchasing the house usually falls on the groom and his family. As a result, the home is usually registered solely in the husband's name. In a small number of cases, however, the property is registered in the wife's name only or under both spouses' names. Because housing has become the largest component of marital assets, the division of housing property in the event of a divorce is of great importance for Chinese couples. A growing literature in economics examines the role housing plays in marriage decisions in China (see, for example, Wei and Zhang (2011)).

2.2 The 2011 Reform in China

In 2011, the Supreme Court issued a judicial interpretation of the Marriage Law. It stipulated that in the event of a divorce, the *housing property* bought by one spouse prior to marriage remains the personal asset of that spouse, provided that only his (her) name appears on the title. Another item says that if the house was purchased by the parents of either the groom or the bride, it shall be deemed a gift to that spouse, and therefore would revert to him or her on divorce.⁸ Previously, the family home was considered marital property and would be allocated based on equitable division at divorce, even if purchased by the groom before marriage.⁹

In other words, the 2011 reform directly relates to the possession of a family house in the event of a divorce. This change in the law has attracted great attention and prompted massive discussion and complaints in social media, given the skyrocketing real estate prices

⁸Articles 7 and 10 in Interpretation (III) of the Supreme People's Court of Several Issues on the Application of the Marriage Law of the People's Republic of China (2011).

Article 7: "Where the title to real estate purchased by the parents of one party for the party after the party's marriage is registered under the party's name, such real estate shall be deemed a gift given by the parents to the party and be determined as the party's personal property."

Article 10: "Where a spouse signs a real estate purchase contract, makes a down payment with his/her personal property, and gets a loan from a bank before marriage, if the spouse repays the loan with community property after marriage and the real estate is registered under the name of the payer of the down payment, such real estate shall be handled at the time of divorce by both parties by agreement. If no agreement is reached according to the preceding paragraph, the People's Court may render a judgment to award such real estate to the party under whose name the real estate is registered, and the unpaid loan shall be the personal debt of the party under whose name the real estate is registered."

⁹It should be noted that the concept of pre-marital assets as personal property first appeared in the 2001 Amendment (Article 8). This was not effective, however, because it did not stipulate the conditions or clearly delineate personal property settlements at divorce. See Ogletree Jr and de Silva-de Alwis (2003) for details of Chinese Marriage Law from 1950 to 2001.

in recent decades. Baidu Trends data revealed a five-fold rise in the volume of queries on “marriage law” and “housing title” within the first 2 months of the reform. The *New York Times* portrayed the scene as married women in China waking up to discover their husband had become their landlord.¹⁰ Because of deeply held social norms and marriage customs, under which the groom and his family usually provide the marital home, the reform created an unexpected shock to intrahousehold allocations for millions of families.

The result has been chaotic. In October 2011, *China Daily* reported that lawyers had been overwhelmed by phone calls asking about the new interpretation of the marriage law. To avoid possible legal disputes after marriage, a growing number of couples have signed or prepared prenuptial property agreements; some couples have rushed to add the spouse’s name to the title.¹¹ Data from the CFPS survey, which is regarded as nationally representative of Chinese families, show that for the same families during the period from 2010 to 2014, the proportion of families whose title had multiple names increased from 3 percent in 2010 to 11 percent in 2012 and 15 percent in 2014; see Figure 3 for a graphical depiction.

3 Data

3.1 The Chinese Family Panel Studies

The data we use to test the socioeconomic consequences of the Chinese 2011 Supreme Court decision are drawn from three waves of the CFPS. This is a nationally representative social survey, with a large sample size, advanced sampling design, and low attrition rate. It is conducted biennially and aims to document the massive transformation of Chinese society, economy, education, and health by focusing on the economic and noneconomic well-being of Chinese nationals. The CFPS consists of four data sets with high-quality longitudinal information at the individual (both adult and youth), family, and community

¹⁰*New York Times*, “Chinese Law Could Make Married Women Homeless,” September 7, 2011. <https://www.nytimes.com/2011/09/08/world/asia/08iht-letter08.html>, accessed on September 19, 2018.

¹¹*China Daily*, “Marriages need Cash and Love,” October 18, 2011, http://www.chinadaily.com.cn/cndy/2011-10/18/content_13920654.htm, accessed on September 19, 2018.

levels. This large-scale study contains a total of 14,960 successfully interviewed households with 33,600 adults and 8,990 children living in 645 communities in 25 designated provinces, representing 95 percent of the entire population of contemporary China (Xie, 2012; Xie and Hu, 2014).¹² Moreover, the CFPS implements probability-proportional-to-size sampling (PPS) with implicit stratification by administrative units and socioeconomic status. This design ensures its national representativeness. We can thus generalize our empirical findings to the Chinese population.

The CFPS baseline national survey was officially launched in 2010 in 25 provinces. Two full-scale follow-up interviews were carried out in 2012 and 2014. Thus, the data used in our main analysis include one wave before and two waves after the marriage property law reform in 2011. The panel's longitudinal nature allows us to investigate how changes in housing property division upon divorce affects household behavior throughout the sample period, *for the same households*.

The CFPS offers uniquely comprehensive data on home ownership. The questionnaire collects detailed information on a family's housing property, including the name(s) on the title and year of purchase. Using the information on home ownership collected in 2010, we can exactly identify those spouses who stand to gain (and lose) from the 2011 Supreme Court's ruling. For instance, a wife in a family whose house was a) bought before her marriage and b) registered solely in her husband's name is considered a potential loser. This is because prior to the reform, the marital home was considered a joint asset and would be distributed equally upon divorce. After the reform, it is regarded as her husband's personal asset and would be awarded solely to him.

Moreover, the CFPS contains rich information on demographic and socioeconomic characteristics for each family member including age, gender, marital status, family size, and registered residency (*hukou*). It also provides data on the spouses' employment status and consumption. The survey assigns household identification numbers, which allow us to group individuals by living unit. Based on this, we can precisely identify parent-child relationships for each family, which allows us to extract information on parental investment

¹²The excluded regions are Hong Kong, Macao, Taiwan, Xinjiang, Tibet, Qinghai, Inner Mongolia, Ningxia, and Hainan.

in their children. Using the first wave of the CFPS, we observe household behavior and decisions prior to the 2011 legal reform. As we match individuals throughout the three waves, we observe the changes in their behavior and decisions after the reform.

For our purposes, we extract a sample that includes all families in which (i) the couple was married prior to 2010 and remained in the same marriage in 2012 and 2014, and both adults in the couple were followed up in 2012 and 2014; (ii) the family owned home in 2010 and it was titled in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014). By placing restrictions on marital status, home ownership, and the wife's age, we maximize comparability across families. In the analysis, families are categorized by the timing of home purchase—either before or after marriage. These restrictions reduce the size of the final analysis sample. We also drop a small number of families in which the housing property is registered in the wife's name only or under both spouses' names. Overall, the sample contains 4,541 families; 1,439 purchased the home prior to marriage and 3,102 during marriage.¹³

3.2 Main Outcome Variables

To analyze how the legal change affects household behavior, we examine three sets of outcome variables: (i) employment status for both spouses; (ii) alcohol consumption for both spouses; and (iii) investment in child's human capital.

Specifically, we examine employment status for both spouses, defined as a binary variable that equals one if the spouse works at the time of the survey. This employment status comes from a question in the CFPS family survey that asks whether the individual currently has a job. The measure on the second outcome variable is also drawn from the CFPS family survey, which asks the frequency of alcohol consumption for each spouse. We define this variable as equal to one if the spouse drinks at least three times a week. For investment in children's human capital, we turn to the CFPS child questionnaire. We focus on children aged 2 to 12 in 2010 and examine the family's annual expense on child's

¹³The before-marriage group is smaller, and of course the characteristics of households that purchase before marriage could differ from those in the after-marriage group. However, we will be using a family fixed effects design, and therefore any permanent differences across households will be accounted for.

additional education fees, such as for extracurricular activities and after-school tutoring.¹⁴ By doing so, we obtain a balanced panel that contains information on educational expenditure for 2010, 2012, and 2014.

3.3 Summary Statistics

Table 1 presents the summary statistics for the pooled sample of the 4,541 families we analyze. Panel A describes the summary statistics for outcome variables in three categories. On average, 77 percent of females and 91 percent of males are employed. Married men tend to drink more alcohol: 3 percent of wives in our sample drink at least three times a week, while 33 percent of husbands do so. In our main sample, an average family spends approximately 613 yuan on child's tutoring.

As stated previously, our analysis sample only includes families in which the family home is in the husband's name only. Panel B reports that of these, the proportion of families whose houses were purchased prior to marriage is 32 percent. This pattern is consistent with emerging social norms and marriage customs, under which couples often purchase their marital home before marriage.

Panel C reports descriptive statistics for family demographic characteristics and other explanatory variables in our empirical analyses below. In our main sample, an average couple has been married for 21.3 years. The average age for wives is 43.5 years and for husbands is 45.4. An average family has 1.8 children and is of size 4.5. *After Reform* is a dummy variable that indicates the timing of the observation. Since we follow the 4,541 families for three waves, with the first wave being prior to the 2011 reform and other two after, this timing indicator equals two-thirds.

4 Empirical Strategy

The change to division rules for housing property took place uniformly across married families in 2011. We follow the same families longitudinally, before and after the reform.

¹⁴If a family has more than one child in the child data, we keep the first.

The families we analyze were formed before the reform, and we only consider the impact on these already-formed households. We do not explore the impact of the reform on household formation as done, for example, by Chiappori et al. (2017). The empirical strategy identifies the effects from within-household changes in the various behaviors. Our empirical strategy is a standard difference-in-differences design. It compares the changes in family outcomes before and after 2011 across two groups of families that purchased the family homes either before marriage (treatment group) or during marriage (control group).

We use a standard regression-based implementation for our difference-in-differences (DID) estimator. We estimate the effect of the reform on families in which the groom purchased the future family home before marriage using the following model:

$$Y_{it} = \beta_0 + \beta_1(\text{PremaritalOwnership}_i \times \text{Reform}_t) + \mathbf{X}_{it}\gamma + f_i + \delta_t + \epsilon_{it}, \quad (1)$$

where Y_{it} is a measure of household outcome for family i in year t . We have three types of outcome variables: (i) employment status, (ii) alcohol consumption, and (iii) expenditure on child's education. A key explanatory variable, $\text{PremaritalOwnership}_i$, is a binary indicator that equals one if the family home was purchased before the couple got married. Reform_t is an indicator that equals one for post-reform periods, i.e., 2012 and 2014. A vector of additional control variables, \mathbf{X}_{it} , includes various spousal and household characteristics, such as spouses' ages, years since marriage, and family structure. All specifications include family and year fixed effects, f_i and δ_t , respectively. Therefore, both $\text{PremaritalOwnership}_i$ and Reform_t are excluded from the equation above. The error term, ϵ_{it} , captures time-varying independent unobserved heterogeneity and measurement error. Our statistical inference is based on heteroskedasticity-robust standard errors.¹⁵

Specifically, we are interested in the estimate of β_1 , which captures the effect of the Supreme Court's ruling on the families affected by the ruling.

¹⁵The Appendix presents similar results when we use either standard errors clustered at the county level or bootstrap standard errors.

5 Results

In this section we present empirical results for the effects of the 2011 legal reform that shifted the division of pre-marital property upon divorce from an equal-division regime to a title-based regime. We identify the effects for premarital-ownership families (the treatment group) relative to marital-ownership families (the control group). We begin by examining the effects on spouses' employment status, alcohol consumption, and intergenerational investment. We next investigate heterogeneous effects. Finally, we check the robustness of our estimates.

Table 2 reports our main estimation results. Dependent variables are female and male employment in Panel A, alcohol consumption in Panel B, and the family's annual expenditure on child's tutoring in Panel C.

5.1 Employment

To examine the changes in both spouses' labor supply in response to the shift from equal-division to title-based property division regimes, we estimate the linear probability model in Equation (1). In particular, the outcome variable Y_{it} equals one if the spouse in family i is employed in year t and zero otherwise. Panel A in Table 2 reports the estimation results. Column (1) is the baseline specification on wife's employment, which includes only survey year, family, and spouses' age fixed effects. Column (2) adds the number of children in each family, family size, and years since marriage. The dependent variables are female employment in the first two columns and male employment in the next two columns.

We find that the 2011 reform is associated with an *increase* in employment probability for married women in premarital-ownership families. For example, in column (1), the coefficient estimate is 0.048 (statistically significant at the 1 percent level). This estimate implies that the introduction of title-based property division is associated with an 4.8-percentage-point increase in employment probability for married women in premarital-ownership families. This effect is of moderate size, given that the baseline labor market

participation rate of married women is 76.6 percent in our sample. We obtain very similar results when we include additional controls in column (2). The employment probability for married men, on the other hand, decreases for men in premarital-ownership families. The effect is statistically significant at the 10 percent level (column(4)). These findings support our hypothesis, which suggests that title-based housing property division increases women's employment by shifting bargaining power toward their husbands. Therefore, after the legal reform, women in premarital-ownership families become more likely to work, relative to women in marital-ownership families. This finding is consistent with that of Voena (2015). Specifically, she studies the response of female labor supply to the introduction of unilateral divorce in across states with various property division rules upon divorce. Voena finds a decrease in married women's employment probability when their condition upon divorce is improved. Voena focuses on the average effect of changes in property division laws across all families under unilateral divorce. In some cases (i.e., when the title is held in the wife's name) the wife's might benefit from these legal changes. But the most common case, both in China and the United States, is that in which the title is in the husband's name. Voena also documents that the impact is concentrated amongst wives who had the lowest bargaining power. We complement Voena's results by examining the impacts on the subsample of households in which we know the title is in the husband's name based on the initial (pre-reform) ownership of the housing asset we observe. These are the households where wives stand to lose from the 2011 court's decision, when the house was bought before marriage by the groom or his family. Information on the timing of home purchase and initial ownership of the housing property is important for interpreting the implications of changes in property division laws for couples living in homes titled under the husband's name only. For these families, the wife would lose her entitlement to an equal share of the home upon divorce in the title-based division regime, if the home purchase was made prior to marriage. As a result, the legal change in 2011 negatively affects their intrahousehold bargaining power, relative to wives in families who made the home purchase during marriage.

The link between female employment and intrahousehold bargaining power, as affected

by property division law, has been studied in U.S.-based literature; examples include Gray (1998); Chiappori et al. (2002); and Stevenson (2008). In this study, we provide evidence that the 2011 change in property division laws was associated with a decrease in intra-household bargaining power for Chinese married women when the home was purchased *prior to* marriage and registered solely in the husband's name. This is reflected in the increase in their employment probability, relative to that of married women with homes purchased *during* marriage.

5.2 Alcohol Consumption

To obtain more evidence, we explore the effects of the 2011 ruling on spouses' private consumption.

Panel B of Table 2 reports estimates for the same specifications as in Panel A, but now the dependent variable is an indicator that equals one if the spouse consumes alcohol at least three times a week. The estimates show that the introduction of title-based division of pre-marital property upon divorce is associated with an *increase* in alcohol consumption for married men in premarital-ownership families, compared with those in marital-ownership families. In column (7), the coefficient estimate for the effect is 0.03 (statistically significant at the 5 percent level), which again is not minor, in light of the mean outcome of 0.33 in the sample. This finding is again robust to controlling for additional family characteristics and for the time elapsed since marriage. In line with our prediction, the results suggest that when the family home is registered in the husband's name only, married men devote more household resources to their own private consumption, on average, if the home was purchased prior to marriage, than those whose home was purchased after marriage. These results provide further evidence suggesting that title-based property division increased men's bargaining power in the household. Most women do not drink heavily, even if they could. Thus we expect the elasticity of women's alcohol consumption with respect to her bargaining power to be low. Indeed, the results on female's alcohol consumption suggest that the change in property division rules leads to a slight increase in women's consumption of alcohol in families that purchased the

home prior to marriage (columns (5) and (6)). However, the results are not statistically significant.

In addition to the results on labor supply documented in subsection 5.1, here we provide further evidence that the 2011 reform is associated with a decrease in bargaining power within the household for women in premarital-ownership families. Additionally, we find that the reform leads to an increase in men’s bargaining power as they decrease their employment and increase alcohol consumption. This confirms that the 2011 reform led to a decline (increase) in married women’s (men’s) intrahousehold bargaining power and reduced (enhanced) well-being in premarital-ownership families, relative to wives (husbands) in marital-ownership families.

5.3 Investment in children’s human capital

We now turn to the third set of results: investment in children. We restrict our sample to 1,427 children aged 2 to 12 in 2010.¹⁶ Table 2 presents the effects of title-based housing property division laws on investment in children for premarital-ownership families. Specifically, we are interested in the family’s annual tutoring expenses for each child.¹⁷

In Panel C, the estimated interaction-term coefficients, β_1 , are negative and statistically significant, which suggests a lower level of investment in children’s education in premarital-ownership families relative to marital-ownership families after the introduction of the title-based regime. For families that purchased the home prior to marriage, the reform has a negative effect on tutoring expenditures for each child, compared with that for marital-ownership families. These estimates are statistically significant at the 5 percent level (columns (9) and (10)).

These estimates suggest that after the reform, premarital-ownership families invest less in children’s education compared with marital-ownership families. This result is consistent with previous studies that investigate the effects of divorce laws and a family’s

¹⁶By the age of 12, most children in China have finished the sixth grade, which is the last year in elementary school. For details on sampling frame, attrition, and interviews, see Xie (2012) and Xie and Hu (2014).

¹⁷Annual tutoring expenditure consists of family’s spending on child’s extracurricular activities and after-school tutoring fees. This variable is measured at child level.

decision regarding human capital investment in children (Stevenson, 2007), as well as studies that analyze maternal involvement and children’s well-being (Bernal and Keane, 2011; Carneiro et al., 2013, 2015; Dustmann and Schönberg, 2012) and studies that link increased maternal bargaining power to investment in children and children well-being (Duflo, 2003; Lundberg et al., 1997; Rubalcava et al., 2009; Thomas, 1990). If the change in the law were to lead to divorce being more likely, the wife would be compelled to no longer sacrifice labor-market experience to invest her time in the child, thus leading to an increase in her labor supply. This possibility has been advanced and formalized by LaFortune and Low (2020)) in their model of collateralized marriage. In our context, the court’s decision in 2011 can be interpreted as taking away the collateral that women thought they would have when they agreed to marry and specialize in the raising of children.¹⁸

5.4 Heterogeneous Effects

This section studies the differential impacts of the 2011 Chinese legal reform on affected families for different subsamples. Specifically, we examine whether the effects vary with (i) the sex ratio in the county where the family lives, and (ii) whether the family has an outstanding mortgage at the time of the survey.

5.4.1 County-level Sex Ratio

We start by investigating the heterogeneous effects related to the sex ratio of the county where a family registers residency.¹⁹ To this end, we define an indicator, *HighRatio_i*, that equals one if family *i* lives in a county in which the ratio of males to females is higher than the sample median (i.e., there is a relative scarcity of women).²⁰ We augment the

¹⁸Before 2011, an entitlement to equal-division of the husband’s pre-marital housing property upon divorce served as insurance in the event of unilateral divorces initiated by husbands, after investment in children (mostly using the wife’s time) is completed.

¹⁹Information on registered residency comes from the CFPS community questionnaire.

²⁰The county-level sex ratio is computed for the group aged 20-54 using the 2010 census data.

specification in (1) and adopt the following:

$$Y_{it} = \beta_0 + \beta_1(\text{PremaritalOwnership}_i * \text{Reform}_t) \tag{2}$$

$$+ \beta_2(\text{PremaritalOwnership}_i * \text{Reform}_t * \text{HighRatio}_i) + \mathbf{X}_{it}\gamma + f_i + \delta_t + \epsilon_{it},$$

where Y_{it} is again a measure of household outcome for family i in year t . We include the same control variables in \mathbf{X}_{it} , as well as family and year fixed effects, f_i and δ_t . The key regressor of interest is the triple interaction term, which assesses the additional effects of the reform that are moderated by the sex composition in the county where the family lives.

Estimated results in Panel A of Table 3 suggest that imbalances in the sex ratio do indeed influence household bargaining and responses to the legal reform. Effects on spousal employment are mainly driven by families in counties with low sex ratios (i.e., females are relatively abundant). We can see the effects on wives' employment seem to be primarily driven by low sex-ratio counties. Also, the estimated coefficient of β_2 indicates that in premarital-ownership families, husbands enjoy a smaller decrease in employment if they live in counties with a high sex ratio, compared with their analogues living in low (i.e. below-median) counties. On the other hand, results on men's alcohol consumption paint a different picture. In column (4), after the reform in premarital-ownership families, husbands are more likely to drink at least three times a week if the household resides in a county with a high sex ratio, relative to households living in counties with a low sex ratio.

The employment results suggest that the heterogeneous effects of a title-based division regime by local sex ratio is relevant. This is presumably because the local sex ratio affects spouses' opportunities outside marriage, which in turn influences spouses' bargaining power and how this bargaining power changes in response to legal reforms. The sex ratio thus ultimately affects intrahousehold allocation decisions, even when the marriage does not actually dissolve. (Chiappori et al., 2002)

5.4.2 Mortgage Status

Next, we examine the differential impacts of the 2011 Chinese legal reform across two types of families based on whether they have an outstanding mortgage at the time of the surveys. To do so, we replace the “high sex ratio” dummy in Equation (2) with a binary indicator that equals one if the family holds a mortgage.

The estimation results are presented in Panel B of Table 3. We find that the impacts on employment probability detected in the main sample are driven by families without a mortgage. Specifically, in column (6), the estimated β_1 indicates a relative increase in employment probability by 6.71 percentage points for wives in premarital-ownership families. Indeed, having an outstanding mortgage decreases the treatment effect on women’s employment probability, as β_2 is estimated to be negative. However, it is not statistically significant. The estimates in column (7) suggest a decrease in husband’s employment probability by 2.31 percentage points in premarital-ownership families with homes fully paid for. Similar results are found for spouses’ alcohol consumption (columns (8) and (9)). Finally, the estimates suggest that the legal reform has a negative effect on the family’s expenditure on child’s education, but such effect is independent of whether the family has an outstanding mortgage (column (10)).

The findings generally support our prediction that housing property division rules influence household decisions via spouses’ bargaining power. In particular, note that two premarital-ownership families with houses of the same market value could face different divorce allocations, depending on whether they have an outstanding mortgage. When the family has not paid off its housing debts, the net asset value of the home at stake is reduced, resulting in smaller changes in spouses’ divorce allocation after the reform, and ultimately smaller changes in spouses’ within-marriage bargaining positions. Indeed, our results suggest that families with mortgages are less affected by the reform than those with homes fully paid for.

5.5 Robustness Checks

In this section, we document the robustness tests we conduct to verify our main results. We first verify that household behavior in premarital-ownership and marital-ownership families follows the same trend over the period prior to the reform. Next, we confirm that there is no differential attrition between the two family types. We also show that the estimated effects are robust to using an extended control group that includes other types of families that are unaffected by the reform. Finally, we check that our results are similar when using an alternative measure of employment.

5.5.1 Pre-reform Placebo Tests

We inspect household behavior in the two types of families over the pre-reform period. We use data from the CFPS pilot survey and the pilot follow-up survey, conducted in 2008 and 2009.²¹ Using the same restriction methods as in Section 3.1, we obtain a pilot sample of 368 families.

Using the pilot surveys, we show that our treatment and control families display common trends in the periods before the reform. Specifically, in this section, home ownership is defined from the 2008 pilot survey. We create an indicator for a “placebo law” in 2008. *After 2008* equals one for the post-“reform” period. As in our main analysis, we examine two outcome variables for each spouse: employment status and alcohol consumption. Since the CFPS pilot surveys contain limited information on the family’s investment in each child, we do not examine investment in children’s human capital in this section. All specifications include family and year fixed effects, spouses’ ages, family size, and years since marriage. Since the placebo law precedes the announcement of the actual judicial decision in 2011, the DID estimates should be zero.

Columns (1)-(4) in Table 4 present evidence for common pre-reform trends, as the DID estimate is indistinguishable from zero. Specifically, from 2008 to 2009, the evolution of labor-market participation and alcohol consumption for both spouses does not vary sig-

²¹The CFPS pilot studies were conducted in Beijing, Shanghai, and Guangdong prior to the national baseline survey launched in 2010. The pilot studies include a baseline survey in 2008 and a follow-up survey in 2009.

nificantly across the two family types. In other words, prior to the 2011 ruling, household behavior and decisions do not evolve differently between premarital-ownership families and marital-ownership families. Therefore, it is reasonable to assume that in the absence of the 2011 judicial ruling, the various outcomes for these two types of families would follow the same time trend. Note however, that the pilot surveys were much smaller, so they may have somewhat limited power to detect small pre-existing differential trends.²²

5.5.2 Attrition

Next, we examine the potential selectivity of attrition. Attrition in the main sample could be a potential threat if the families that drop out of the sample are systematically different from those who stay. In our context, since we restrict attention to couples who remain in the same marriage throughout the three waves, the attritors include couples who divorced after the first wave of the survey and those who did not respond to follow-up surveys in 2012 and 2014. If there is selective attrition, the main sample becomes less representative of the population of Chinese families, and hence the estimates become less reliable. To address this, we use data that include all families who appeared in the 2010 survey, regardless of whether they remained married or responded to follow-up surveys in the latter years. Using the same restrictions on the timing of home purchase and wife's age, we obtain a sample of 5,859 families.

We start with a parsimonious specification for the probability of attrition. The dependent variable is an indicator that equals one if attrition occurs between survey rounds. The estimated results are shown in Table 5. Specifically, the dependent variable in the first two columns equals one if the couple was recorded as divorced at the time of the 2012 (or 2014) wave. In the next two columns, the dependent variable is an indicator for non-response in 2012 (or 2014). Finally, we use an indicator that equals one in the last two columns if the couple dropped out of the main sample in 2012 (or 2014) for any reason.

²²Still, we feel reassured in that no statistically significant differences in trends can be documented with the available data and the point estimates for the differential trends are numerically very small and close to zero

Reassuringly, conditional on all predetermined family characteristics such as couples' age categories, number of children, size of family, and years married, the estimated coefficients on the treatment indicator are indistinguishable from zero. The results suggest that there is no significant association between sample attrition and the marital/pre-marital timing of home purchase in families where the home was registered solely in the husband's name.

5.5.3 Extended Control Group

In the main analysis, we focus on families whose homes were registered solely in the name of the husband. The treatment group includes families in which the home was purchased prior to marriage, while the control group consists of those who purchased the home during marriage. To check the robustness of our results, we expand our control group to include all families that purchased homes after marriage, regardless of whose name was put on the title. These families provide a valid control group, because property rights for marital homes purchased during marriage remained unchanged before and after the reform, regardless of who was or wasn't on the title.

We reestimate specification (1) and obtain similar findings in Table 6. Coefficient β_1 now captures the changes in family outcomes in husband-owned premarital-purchase families relative to changes in all marital-ownership families before and after the 2011 law reform. Panel A reports the impacts on spousal employment. Panel B focuses on alcohol consumption by spouses, and Panel C on investment in child's education. Reassuringly, we again find statistically significant positive relative effects on wife's employment and husband's alcohol consumption, and negative effects on husband's employment and investment in children's education.

5.5.4 Hours Worked

To expand on the results on extensive margin employment, we use an alternative variable that measures spouses' annual working hours. The results are reported in Table 7. The estimated coefficient for female is positive and significant at the 1 percent level, suggesting

that married women in premarital-ownership families indeed work more after the reform (column(1)). We obtain similar findings in column (3) when restricting our attention to nonzero working hours.

6 Conclusions

In this paper, we show that property division rules upon divorce play a significant role in shaping household behavior during marriage. Specifically, we use data from the CFPS to estimate household responses to a 2011 Supreme Court’s decision in China, which effectively changed the way in which a family’s home was to be divided between spouses in the event of a divorce. Our analysis highlights changes in behavior before and after the court’s ruling, across two types of families that differ with regard to the relative timing of home purchase and marriage. Our empirical strategy relies on a traditional difference-in-differences design, with those who purchased the home before marriage (the treatment group) compared with those that purchased it after marriage, and were thus unaffected by the court’s decision (the control group). The results suggest that the shift from equal-division to title-based division of pre-marital housing property titled in husbands’ name was associated with large changes in intrahousehold allocation. Specifically, the change led to an increase in wives’ participation in the labor market (a reduction in leisure) and more private consumption of husband-favored goods like alcohol. In addition, these families reduced their investment in children’s human capital.

The results hold up when subjected to various robustness checks. The employment effects are driven mostly by counties in which the male-to-female sex ratio is not too high (e.g., counties with relatively abundant females that already allow for higher husband bargaining power) and by households with fully paid homes (i.e. with higher home equity).

Our results raise two major policy concerns in China. The first directly relates to inequality within the household. According to social norms and marriage customs, the homes where the newlyweds will reside are often purchased by the groom or his family prior to marriage, with title held under his name only. Before 2011, the fact that the

title was under the husband name was of little significance, given equal division upon divorce of a pre-marital housing asset used as family home during marriage. In 2011 however, this took on much greater significance the shift from an equal-division as the Supreme Court revised the existing interpretation of marriage law and excluded pre-marital housing assets from the equal-division standard. The resulting title-based regime for pre-marital housing property put most Chinese wives who married before 2011 in a much more vulnerable position. The impact on their well-being will be felt for decades to come. Second, our findings suggest that the reform is associated with under-investment in children's education in families in which the husband's bargaining power is strengthened. As a result, the 2011 court's decision discouraged investment in children's human capital in the many families in which the home was purchased before marriage. The resulting under-investment in children's education may have serious socioeconomic consequences in the long run. (Heckman et al., 2013).

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7 Tables and Figures

TABLE 1 Summary Statistics

	Obs	Mean	SD
<i>Panel A: Outcome Variables</i>			
Female employment	13,623	0.766	0.423
Male employment	13,623	0.910	0.287
Female alcohol consumption, at least 3 times a week	11,877	0.031	0.173
Male alcohol consumption, at least 3 times a week	11,877	0.333	0.471
Annual expenditure on tutoring, thousand yuan	4,281	0.613	1.890
<i>Panel B: Timing of Home Purchase</i>			
Home Purchased prior to Marriage	13,623	0.317	0.465
<i>Panel C: Control Variables</i>			
Age, female	13,623	43.509	9.263
Age, male	13,623	45.398	9.646
Number of children	13,623	1.824	0.867
Family size	13,623	4.465	1.731
Years since marriage	13,623	21.267	9.600
After reform	13,623	0.667	0.471

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

For annual expenditure on tutoring in Panel A, the sample includes children aged 2-12 in 2010. If a family has more than one child in the child data, we keep the first.

TABLE 2 Intrahousehold Bargaining and Intergenerational Investment

Dependent Variable:	A. Employment			
	Female		Male	
	(1)	(2)	(3)	(4)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0475*** (0.0154)	0.0555*** (0.0155)	-0.0130 (0.0108)	-0.0183* (0.0108)
Observations	13,623	13,623	13,623	13,623
Number of families	4,541	4,541	4,541	4,541
Sample mean outcome	0.766	0.766	0.910	0.910
	B. Alcohol Consumption			
	Female		Male	
	(5)	(6)	(7)	(8)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0076 (0.0065)	0.0063 (0.0066)	0.0326** (0.0157)	0.0319** (0.0162)
Observations	11,877	11,877	11,877	11,877
Number of families	3,959	3,959	3,959	3,959
Sample mean outcome	0.031	0.031	0.333	0.333
	C. Expenses on Child's Education			
	(9)	(10)		
Home Purchased Prior to Marriage × After Reform (β_1)	-0.1830** (0.0863)	-0.2067** (0.0904)		
Observations	4,281	4,281		
Number of families	1,427	1,427		
Sample mean outcome	0.613	0.613		
Family fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES
Number of children	NO	YES	NO	YES
Size of family	NO	YES	NO	YES
Years since married	NO	YES	NO	YES

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

Dependent variables are listed in column titles. Panel A reports regression results using a dummy variable on female (male) employment status. Panel B uses a dummy variable on female (male) alcohol consumption, which takes value one if the individual consumes alcohol at least three times a week. In Panel C, the sample includes children aged 2-12 in 2010. The dependent variable measures annual expenditure on a child's additional fees such as for extracurricular activities and after-school tutoring, in thousands of yuan. Panel C additionally controls for child's age. In all regressions, the treatment group is the families in which the marital home was purchased prior to marriage and was in the husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 3 Heterogeneous Analysis

Dependent Variable:	A. Sex Ratio				
	Employment		Alcohol		Child's
	Female (1)	Male (2)	Female (3)	Male (4)	Edu (5)
Premarital Ownership \times After Reform (β_1)	0.0655*** (0.0224)	-0.0287* (0.0147)	-0.0048 (0.0097)	0.0001 (0.0237)	-0.1661 (0.1242)
Premarital Ownership \times After Reform \times High Sex Ratio (β_2)	-0.0317 (0.0304)	0.0177 (0.0210)	0.0184 (0.0125)	0.0565* (0.0308)	-0.0534 (0.1786)
<i>p</i> -value: $\beta_1 + \beta_2 = 0$	0.0856	0.4777	0.1129	0.0079	0.0689
Observations	13,461	13,461	11,715	11,715	4,242
Number of families	4,487	4,487	3,905	3,905	1,414
Sample mean outcome	0.769	0.910	0.031	0.331	0.582

Dependent Variable:	B. Mortgage				
	Employment		Alcohol		Child's
	Female (6)	Male (7)	Female (8)	Male (9)	Edu (10)
Premarital Ownership \times After Reform (β_1)	0.0671*** (0.0178)	-0.0231* (0.0123)	0.0033 (0.0074)	0.0454** (0.0182)	-0.1373 (0.1114)
Premarital Ownership \times After Reform \times Has a Mortgage (β_2)	-0.0450 (0.0350)	0.0248 (0.0254)	0.0128 (0.0146)	-0.0565 (0.0360)	-0.2391 (0.1875)
<i>p</i> -value: $\beta_1 + \beta_2 = 0$	0.4706	0.9412	0.2153	0.7284	0.0094
Observations	13,623	13,623	11,877	11,877	4,281
Number of families	4,541	4,541	3,959	3,959	1,427
Sample mean outcome	0.766	0.910	0.0307	0.333	0.613
Family fixed effects	YES	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES	YES
Number of children	YES	YES	YES	YES	YES
Size of family	YES	YES	YES	YES	YES
Years since married	YES	YES	YES	YES	YES

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

Dependent variables are listed in column titles. Panel A reports heterogeneous effects based on the sex ratio of the county where the couple reside. Panel B reports heterogeneous effects for families with and without a mortgage. In all regressions, the treatment group is families in which the marital home was purchased prior to marriage and was in the husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 4 Robustness: Pre-reform Placebo Regressions

Dependent Variable:	Employment		Alcohol Consumption	
	Female (1)	Male (2)	Female (3)	Male (4)
Home Purchased Prior to Marriage × After 2008 (β_1)	0.0022 (0.0456)	0.0060 (0.0346)	-0.0025 (0.0303)	0.0090 (0.0587)
Family fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES
Size of family	YES	YES	YES	YES
Years since married	YES	YES	YES	YES
Observations	736	736	736	736
Number of families	368	368	368	368
Sample mean outcome	0.698	0.846	0.037	0.416

Note: Data from the CFPS pilot survey (2008) and the pilot follow-up survey (2009). Sample restricted to couples who stayed married and owned a home in the pilot studies, and only the husband's name was on the title in 2008.

Dependent variables are listed in column titles. Column (1): a dummy variable on female employment status; (2) male employment status; (3) a dummy variable on female's alcohol consumption; (4) male's alcohol consumption. House ownership is defined from the 2008 pilot survey. In all regressions, the treatment group is families in which the marital home was purchased prior to marriage and was in the husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 5 Robustness: Attrition

Dependent Variable:	Divorce		Nonresponse		Attrition Combined	
	2012	2014	2012	2014	2012	2014
	(1)	(2)	(3)	(4)	(5)	(6)
Home Purchased Prior to Marriage	0.0012 (0.0010)	0.0014 (0.0024)	-0.0067 (0.0106)	-0.0061 (0.0111)	-0.0055 (0.0107)	-0.0027 (0.0117)
Couple's age categories	YES	YES	YES	YES	YES	YES
Number of children	YES	YES	YES	YES	YES	YES
Size of family	YES	YES	YES	YES	YES	YES
Years since married	YES	YES	YES	YES	YES	YES
Number of families	5,859	5,859	5,859	5,859	5,859	5,859
Sample mean outcome	0.002	0.005	0.106	0.118	0.108	0.123

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married in 2010; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014). The dependent variable is a dummy variable on attrition in a certain year. Column (1): a dummy that takes value one if an individual divorced in 2012; (2) a dummy variable on divorce in 2014. Column (3): a dummy that takes value one if the individual observation was missing in 2012; (4) a dummy on non-response in 2014. Columns (5) and (6) use attrition dummies that equal one if the individual divorced or was missing in 2012 and 2014, respectively. In all regressions, the treatment group is the families in which the marital home was purchased prior to marriage and was only in the husband's name. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 6 Robustness: Extended Control Group

Dependent Variable:	A. Employment			
	Female		Male	
	(1)	(2)	(3)	(4)
Home Purchased prior to Marriage × After Reform (β_1)	0.0479*** (0.0148)	0.0567*** (0.0149)	-0.0071 (0.0104)	-0.0122* (0.0103)
Observations	15,696	15,696	15,696	15,696
Number of families	5,232	5,232	5,232	5,232
Sample mean outcome	0.756	0.756	0.904	0.904

	B. Alcohol Consumption			
	Female		Male	
	(5)	(6)	(7)	(8)
Home Purchased prior to Marriage × After Reform (β_1)	0.0073 (0.0063)	0.0065 (0.0063)	0.0345** (0.0151)	0.0341** (0.0155)
Observations	13,800	13,800	13,800	13,800
Number of families	4,600	4,600	4,600	4,600
Sample mean outcome	0.031	0.031	0.334	0.334

	C. Child's Education	
	(9)	(10)
Home Purchased prior to Marriage × After Reform (β_1)	-0.2311*** (0.0786)	-0.2441*** (0.0795)
Observations	4,923	4,923
Number of families	1,641	1,641
Sample mean outcome	0.679	0.679
Family fixed effects	YES	YES
Year fixed effects	YES	YES
Couple's age categories	YES	YES
Number of children	NO	YES
Size of family	NO	YES
Years since married	NO	YES

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). This table reports regression results using an expanded sample, with now includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the couple ownw the marital home, regardless of the name(s) on the title; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

Dependent variables are listed in column titles. In all regressions, the treatment group is the families in which the marital home was purchased prior to marriage and was in the husband's name only. The omitted family type is a family in which the marital home was purchased after marriage, regardless of the name(s) on the title. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE 7 Robustness: Working Hours

Dependent Variable:	Annual Hours Worked		Restriction to Nonzero Hours	
	Female	Male	Female	Male
	(1)	(2)	(3)	(4)
Home Purchased Prior to Marriage × After Reform (β_1)	0.1984*** (0.0507)	-0.0144 (0.0517)	0.1093** (0.0537)	0.0322 (0.0480)
Family fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES
Number of children	YES	YES	YES	YES
Size of family	YES	YES	YES	YES
Years since married	YES	YES	YES	YES
Observations	10,119	10,098	5,580	8,103
Number of families	3,373	3,366	1,860	2,701
Sample mean outcome	1.391	2.074	1.933	2.310

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

The dependent variable is the annual hours worked (in thousand hours). Columns (1) and (2) report regression results using the annual working hours (in thousand hours) for females and males as dependent variable. Columns (3) and (4) use nonzero working hours as the dependent variable. In all regressions, the treatment group is the families in which the marital home was purchased prior to marriage and was in the husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Robust standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

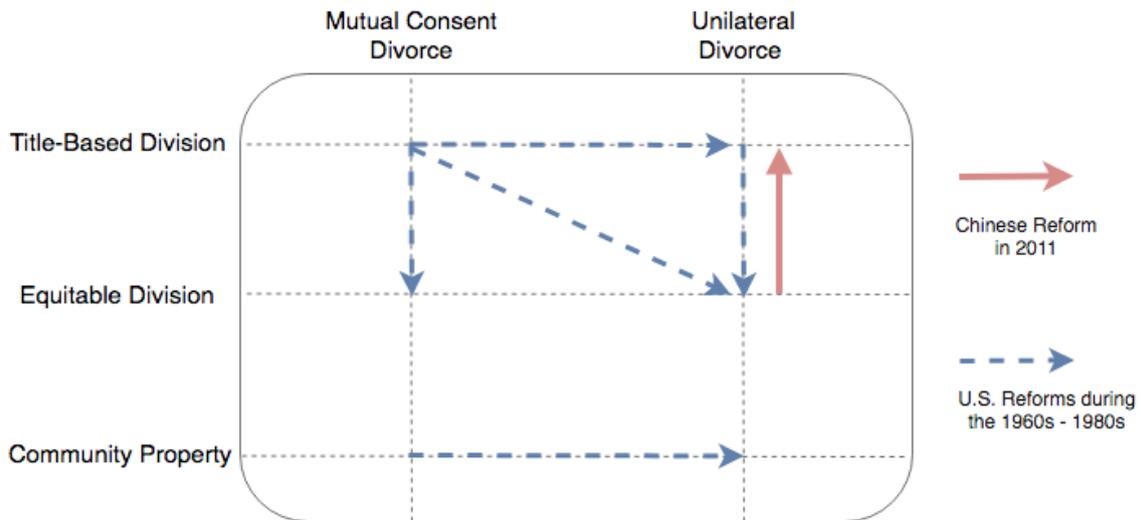


FIGURE 1
Marriage Law Reforms in China and the U.S.

Notes: Marriage laws governing divorce consider two dimensions: the grounds for divorce (columns) and the property division regimes (rows). The highlighted red arrow indicates the direction of the Chinese legal reform in 2011. This reform shifts the pre-marital housing property division regime from equal-division to title-based under unilateral divorce. The dashed blue arrows present the direction of U.S. marriage law reforms across states and over time during the 1960s to 1980s. These changes in the U.S. do not generally apply to any pre-marital assets. Many studies we review and compare in this paper exploit reforms in U.S. law in the directions indicated by the dashed blue arrows. See, for example, Stevenson and Wolfers (2006); Stevenson (2007); and Voena (2015).

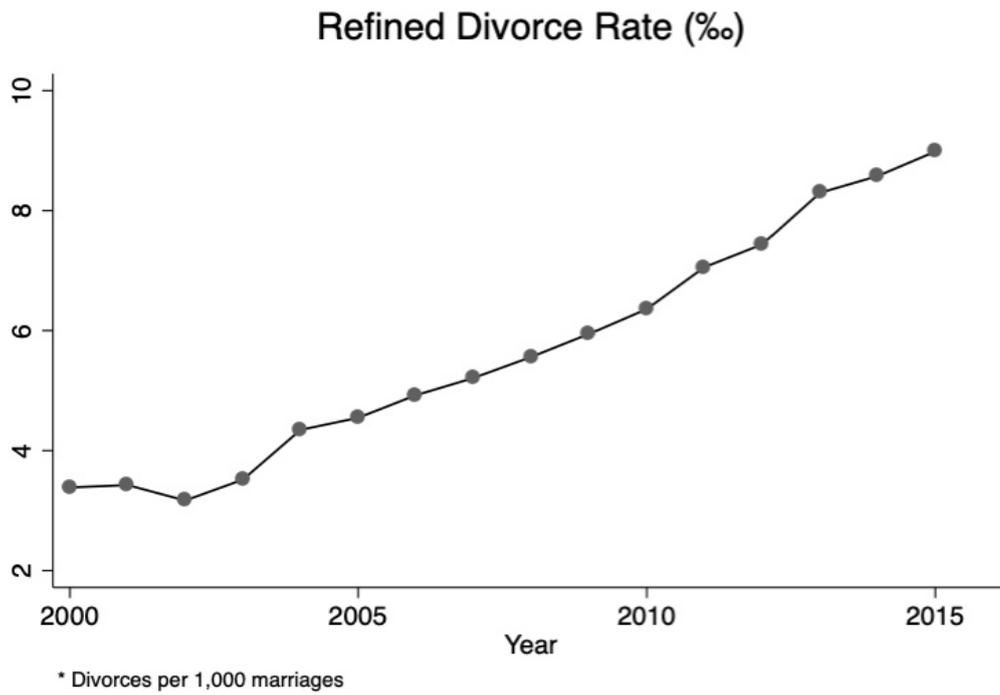


FIGURE 2
Refined Divorce Rate from 2000 to 2015

Notes: Data are from the National Bureau of Statistics of China. The refined divorce rate is defined by the number of divorces per 1,000 marriages. The figure shows a steep rise in refined divorce rates from 2000 to 2015.

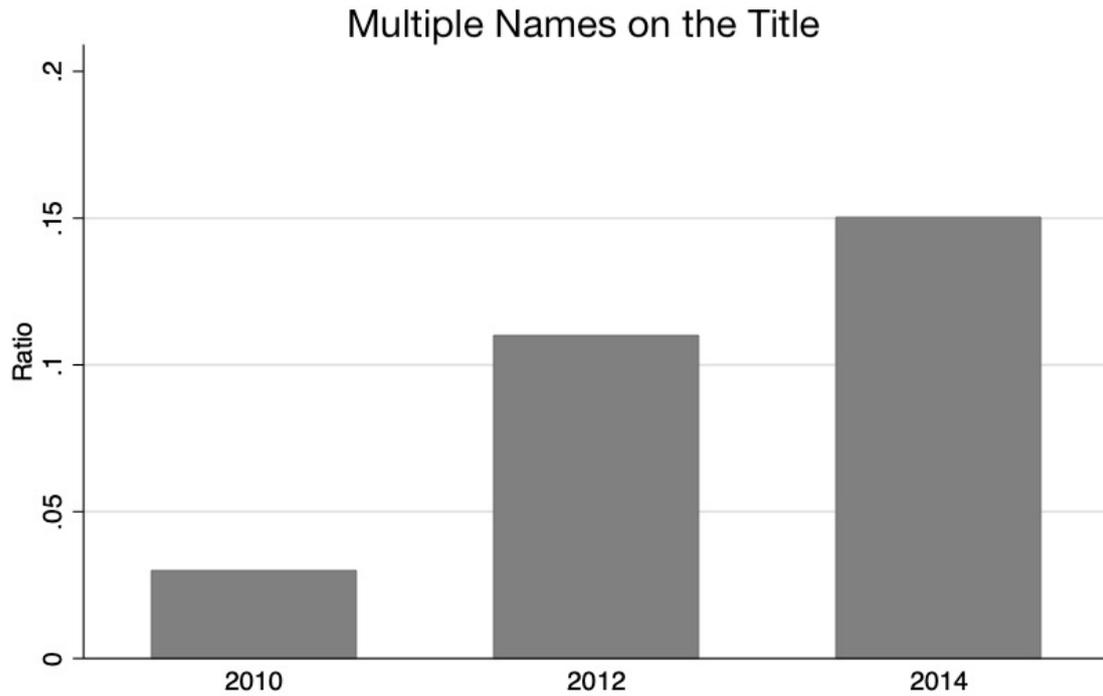


FIGURE 3
Share of Families with Multiple Names on the Title

Notes: Data are from three waves of the CFPS survey (2010, 2012, and 2014). Throughout the three waves, there are 6,957 families with non-missing information on house ownership. The figure shows the trend of adding names to the title for the same family after the legal reform in 2011, which changed the housing property division rule from equitable to title-based division.

Appendix

TABLE A.1 Robustness Checks: Bootstrapped Standard Errors

	A. Employment			
	Female		Male	
	(1)	(2)	(3)	(4)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0475*** (0.0173)	0.0555*** (0.0174)	-0.0130 (0.0118)	-0.0183 (0.0116)
Observations	13,623	13,623	13,623	13,623
Number of families	4,541	4,541	4,541	4,541
Sample mean outcome	0.766	0.766	0.910	0.910
	B. Alcohol Consumption			
	Female		Male	
	(5)	(6)	(7)	(8)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0076 (0.0078)	0.0063 (0.0080)	0.0326* (0.0181)	0.0319* (0.0186)
Observations	11,877	11,877	11,877	11,877
Number of families	3,959	3,959	3,959	3,959
Sample mean outcome	0.031	0.031	0.333	0.333
	C. Child's Education			
	(9)	(10)		
Home Purchased Prior to Marriage × After Reform (β_1)	-0.1830* (0.1110)	-0.2067* (0.1135)		
Observations	4,281	4,281		
Number of families	1,427	1,427		
Sample mean outcome	0.613	0.613		
Family fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES
Number of children	NO	YES	NO	YES
Size of family	NO	YES	NO	YES
Years since married	NO	YES	NO	YES

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

Dependent variables are listed in column titles. Panel A reports regression results using a dummy variable on female (male) employment status. Panel B uses a dummy variable on female (male) alcohol consumption, which takes value one if the individual consumes alcohol at least three times a week. In Panel C, the sample includes children aged 2-12 in 2010. The dependent variable measures annual expenditure on a child's additional fees such as for extracurricular activities and after-school tutoring, in thousands of yuan. Panel C additionally controls for child's age. In all regressions, the treatment group is families in which the marital home was purchased prior to marriage and was in husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Bootstrapped standard errors are in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

TABLE A.2 Robustness Checks: County-level Clustered Standard Errors

	A. Employment			
	Female		Male	
	(1)	(2)	(3)	(4)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0475*** (0.0166)	0.0555*** (0.0172)	-0.0130 (0.0119)	-0.0183 (0.0112)
Observations	13,623	13,623	13,623	13,623
Number of families	4,541	4,541	4,541	4,541
Sample mean outcome	0.766	0.766	0.910	0.910
	B. Alcohol Consumption			
	Female		Male	
	(5)	(6)	(7)	(8)
Home Purchased Prior to Marriage × After Reform (β_1)	0.0076 (0.0067)	0.0063 (0.0066)	0.0326** (0.0160)	0.0319* (0.0171)
Observations	11,877	11,877	11,877	11,877
Number of families	3,959	3,959	3,959	3,959
Sample mean outcome	0.031	0.031	0.333	0.333
	C. Child's Education			
	(9)	(10)		
Home Purchased Prior to Marriage × After Reform (β_1)	-0.1830** (0.0834)	-0.2067** (0.0911)		
Observations	4,281	4,281		
Number of families	1,427	1,427		
Sample mean outcome	0.613	0.613		
Family fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Couple's age categories	YES	YES	YES	YES
Number of children	NO	YES	NO	YES
Size of family	NO	YES	NO	YES
Years since married	NO	YES	NO	YES

Note: Data are from three waves of the CFPS survey (2010, 2012, and 2014). The main sample includes all households in the 2010 CFPS family data set in which: (i) the couple married prior to 2010 and remain in the same marriage in 2012 and 2014; (ii) the marital home is in the husband's name only; and (iii) the wife was born after 1954 (less than 60 years old in 2014).

Dependent variables are listed in column titles. Panel A reports regression results using a dummy variable on female (male) employment status. Panel B uses a dummy variable on female (male) alcohol consumption, which takes value one if the individual consumes alcohol at least three times a week. In Panel C, the sample includes children aged 2-12 in 2010. The dependent variable measures annual expenditure on a child's additional fees such as for extracurricular activities and after-school tutoring, in thousands of yuan. Panel C additionally controls for child's age. In all regressions, the treatment group is families in which the marital home was purchased prior to marriage and was in husband's name only. The omitted family type is a family in which the marital home was purchased after marriage and was in the husband's name only. Standard errors clustered at the county level in parentheses.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.