# Children and Divorce in China 

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#### Abstract

This study explores the association between children and divorce in China. In particular, we estimate how the number and sex composition of children are associated with the risk of divorce across time and space. We apply event-history analysis to longitudinal data from the China Family Panel Studies. Our observation covers the 1970-2012 period. We find that childless couples have a substantially higher divorce risk than parents do, especially during the two most recent decades. The more children a couple have, the less likely they are to divorce. The effect of the child's gender on divorce changes over time for rural and urban parents in different manners. For rural one-child parents, the child's gender had no effect on parental divorce up to the 1990s; its effect became notable in the 2000s, with parents who had a girl having a higher divorce risk than those with a boy. For urban one-child parents, however, the child's gender completely lost its importance for divorce over the turn of the new century. Findings of this study provide reflections on the empowerment of girls and the decline of son-preference culture in urban Chinese society.


Keywords: Number of children, Sex composition of children, Divorce, China

## 1 Introduction

The Chinese family system has been portrayed in the literature as patriarchal, patrilineal and patrilocal (Hershatter 2004). The family has long been the basic unit of society (Pimentel 2000). This kinship system values family ties traced through men in a continuous "descent line" that links a man with his ancestors and offspring (Pimentel 2000). Therefore, the traditional purpose of marriage was not the love and happiness of the husband and wife but to produce children, especially sons to carry on the family line (Handwerker 1998; Zeng 1995). A failure to produce children, especially sons, was considered a disgrace to one's ancestors (Handwerker 1998).

Earlier studies have explored the association between children and divorce in the context of China. Common findings include a negative association between the number of children and divorce and the protective effect of having a son on marriage stability, especially in rural areas (Xu et al. 2015; Zeng et al. 2002). However, we have little knowledge about how these associations may have varied across time for rural residents and urbanites.

Since the late 1970s, China has witnessed dramatic socioeconomic changes. The country has modernized and urbanized rapidly, and a small family size has gradually become the norm, especially in urban areas, largely due to population restriction policies from 1980 to 2015. Changes at the macro level often interact with family behaviour changes at the individual level (Ma and Rizzi 2017). The dramatic contextual changes in China raise questions about how the associations between children and divorce may have varied across time and space. In this study, we will examine these issues by applying event-history analysis to longitudinal data, the China Family Panel Studies.

## 2 Theoretical and research framework

Parenthood provides an important basis for the stability of marital unions. In the neo-classical New Household Economics tradition (Becker 1981), children are seen as investments in marital capital, and more marital-specific capital increases the attractiveness of the union and the costs of divorcing and living as single. The more marital-specific capital (i.e., children) a couple has, the lower their risk of divorce. From a sociological perspective, Durkheim (1984) suggests that children hold families together by increasing organic solidarity, a cohesion that arises from people's dependence on each other. The inability to produce children may increase marital dissatisfaction and, subsequently, the risk of divorce (Rosenblatt and

Hillabrant 1972).
The number of children matters for marriage stability. Empirical findings from a number of countries have consistently shown that couples with children are less likely to divorce compared to childless couples (see, for example, Andersson 1997; Erlangsen and Andersson 2001; Toulemon 1995; Waite and Lillard 1991). Results from Sweden show that compared to the divorce risk of women with one child, the divorce risk of childless women is more than double, whereas the risk for women with two children is approximately $50 \%$ lower. A third child does not affect the risk of divorce (Andersson 1997). Similar findings have been shown for France, where two-child couples are significantly less likely to divorce than those with one child (Toulemon 1995).

The sex composition of children also influences the stability of marriage. However, the empirical evidence is inconclusive and likely to be context specific. A protective effect of having at least one boy was found in India, a society entrenched in a son-preference culture (Agrawal et al. 2014; Bose and South 2003). Studies in the US context frequently show that a marriage is less likely to end in divorce if there is a boy present in the household (Katzev et al. 1994; Morgan et al. 1988; Mott 1994). Scholars argue that fathers in families with boys are more engaged in family life; they have a stronger sense of attachment and obligations and are more likely to be present at home, which increases their likelihood of staying in the marriage. In a follow-up study, Morgan and Pollard (2002) show that prior to the 1980s, couples with daughters experienced modestly higher rates of divorce than those with sons. Thereafter, the effect disappeared. The authors attribute this phenomenon to the increasing prevalence of gender-egalitarian values. In the context of Sweden, where the value of gender egalitarianism prevails, Andersson and Woldemicael (2001) find no effect of the child's gender on the divorce risk of one-child mothers but found an increased divorce risk for mothers with two children of the same sex compared to those with one child of each sex.

## 3 Children and divorce in the context of China

3.1 The one-child policy and the value of children

Traditionally, the welfare of a family in China depended on family members. Large numbers of children, especially sons, were desired for their labour contributions when the children were young as well as for the social security they provided as parents aged (Moore 1998). After marriage, sons stayed with their parents and, with their wives, shouldered the
responsibility of caring for their ageing parents, whereas daughters moved to their husbands' households, providing care for their parents-in-law (Murphy et al. 2011; Ye 1992). Hence, Chinese families have long favoured sons over daughters, not only because sons can carry on the family line but also because of their provision of old-age security (Arnold and Liu 1986; Croll 1985; Das Gupta et al. 2003; Li and Cooney 1993; Moore 1998; Murphy et al. 2011; Zeng 1995). Relative to daughters, sons received greater investment from parents. They received better educations and better occupational opportunities (Moore 1998).

The traditional value of children and of sons faced an enormous challenge with the introduction of the one-child policy (introduced in 1980 and abandoned in 2015), which advocated a small family size with the aim of curtailing population growth at the national level and facilitating economic growth (Wang et al. 2013). Despite its name, the one-child rule applies to a minority of China's population, mainly urban residents and government employees (Hesketh et al. 2005).

In rural areas, the fertility policy ignited strong resistance at the initial stage of implementation, which caused policymakers to re-evaluate their decision to implement the policy nationwide (Wang 2005). After 1984, the policy was re-adjusted. Rural residents were allowed to have a second child if they met certain criteria, most often if they lived in a poor area or had only a girl (see Gu et al. 2007 for the various categories of exceptions to the fertility policy). The one-child policy in rural areas actually underwent a stepwise transformation into a multi-policy regime (Wang 2005). The majority of rural couples had a second child, with some even having a third child (Feeney and Yuan 1994; Hesketh et al. 2005; Wang 2005).

In urban areas, however, the one-child policy was stringently enforced. A violation of the policy might lead to a dismissal from work and financial penalties (Hesketh et al. 2005). Nonetheless, the policy was relaxed in certain situations. For example, a second child was allowed if both spouses were only children (see Wang 2005 for exceptions for urban residents). In 2013, the policy was further relaxed by allowing urban couples to have a second child if one spouse was an only child (Wang et al. 2016). However, the desire for more children or for sons is less intense in urban areas than in rural areas (Arnold and Liu 1986; Zheng et al. 2009). The majority of couples are satisfied with having only one child, including many of those who meet the exception requirements (Feng 2010; Zheng et al. 2009). Economic considerations, the increasing cost of raising children, together with the pension coverage of most urbanites may have weakened urbanites' desire for more children,
particularly sons, for financial support in old age and therefore lowered their intention of having more than one child (Fong 2002; Goh 2006; Whyte 2005; Zheng et al. 2009).

Partially due to the one-child policy, girls living in one-child families are better off (Tsui and Rich 2002). As the singleton in the household, girls do not have to compete with boys for family resources. Their parents invest heavily in their upbringing, education and success (Fong 2002; Gallagher 2001). Tsui and Rich (2002) find equally high educational aspirations and similar mathematical performance for male and female only children in modern urban China. The scholars note that gender equality in education is an unintended consequence of the one-child policy. Fong (2002) argues that the one-child policy has actually increased the empowerment of urban girls and enhanced the value of gender equality in urban areas. Some recent studies on ageing show that parents living with daughters after retirement has become a trend in urban areas. Daughters are reported to have warmer relationships with parents than sons have and are as important as sons in providing elderly support (Xie and Zhu 2009; Whyte 2005).

### 3.2 Divorce: legislations and trends

Traditionally, divorce was uncommon in China, especially among the Han ethnic group (the majority ethnic group) (Zeng 1995). If a marriage did turn out to be unsuccessful, the man was the one who initiated a divorce, whereas the woman was the divorced party (Dong et al. 2002; Lang 1946). Hence, divorce was a tragic event for women. Upon divorce, women would most often lose economic resources and home. In addition, they were considered to bring disgrace to their parents' family (Dong et al. 2002).

The 1949 revolution and the post-Mao reforms contributed to major changes in marriage and family life in Chinese society (Hershatter 2004). The first Marriage Law, launched in 1950 (shortly after the establishment of the People's Republic of China), stipulated that everyone should enjoy the freedom of marriage and divorce (Croll 1981; Platte 1988). Along with the land reform, which guaranteed women's right to own their own land, women in unhappy marriages began initiating divorce from the early 1950s (Platte 1988).

The second Marriage Law came into effect in 1981. It allowed divorce by mutual consent. The previous requirement of "mediation" provided by the work unit, the residents' committee, family members and the court was abandoned, which simplified the divorce procedure (Dong et al. 2002; Platte 1988). In 2001, the amendment to the marriage law allowed unilateral divorce in circumstances of domestic violence and extramarital
relationships. The innocent party could seek damages from the guilty party (Sun and Zhao 2016).

Upon divorce, the custody of children ordinarily goes to the mother if a child is under two years old. For older children, custody is based on an agreement between the couple. If a child is ten years old or above, the wishes of the child are considered (Palmer 2007). Although the non-custodial parent generally has the right to visit the children and is obligated to pay monthly child support to the custodial parent based on an agreement, the negotiation process for visiting children is often frustrating, and delays or termination of payment often occurs (Palmer 2007). Hence, the sole custody system in China may somewhat restrict parents' desire for divorce.

Studies based on individual-level data show that the divorce trend in China increased substantially from the mid-1950s to the mid-1980s (Zeng et al. 2002). This trend accelerated during the 1990s. Towards the 2000s, however, the trend shifted to a plateau (Ma et al. 2018). Urbanites have been at the forefront of divorce over time. In the 2000s, when the divorce trend for urbanites shifted downward, rural residents became active practitioners of divorce. The divorce trend of the rural population continued to increase, and the gap between urbanites and the rural-born narrowed (Ma et al. 2018).

At present, we have little knowledge of whether the negative association between the number of children and divorce has changed over time for rural and urban residents. Furthermore, it is unclear whether the protective effect on marriage of having a boy persists over time for both rural and urban residents. Based on the existing theoretical framework, empirical research, and the specific context of China, we investigate the following research questions:

1. Do childless couples have a higher likelihood of divorce than parents do? How do the patterns vary over time and space?
2. Do parents with more children have a lower likelihood of divorce than parents with fewer children do? How do the patterns vary over time and space?
3. Do individuals with only girl(s) have a higher likelihood of divorce than those with at least a boy? How do the patterns vary over time and space for one-child and two-child parents?

## 4 Data and methods

The data used for the analyses come from the China Family Panel Studies (CFPS waves 2010 and 2012), launched by the Institute of Social Science Survey of Peking University. The CFPS is a nationwide, comprehensive, longitudinal social survey intended to serve research needs on a variety of subjects in contemporary China. It gathers a wealth of information, including individuals' life history with regard to educational attainment, civil status change and childbearing.

### 4.1 Methods

We apply event-history analysis (piece-wise constant hazard regression models) to explore the association of children and divorce. We begin observing our individual respondents from the month of their first marriage. The observation stops at the month of divorce. If there is no occurrence of divorce, the observation censors at the death of the spouse, 25 years after the marriage formation, or the last interview, whichever comes first. Our observation covers the period from 1970 to 2012. Altogether, 32,169 ever-married respondents ( 16,619 women and 15,550 men) were involved in the analysis. Within our observation time, 911 divorces occurred, accounting for $3 \%$ of total first marriages, confirming that divorce remains a marginal family behaviour in China.

### 4.2 Variables

Table 1 presents brief statistics on the variables used for analysis. Duration of marriage is the basic time factor of this study. A large share of divorces occurred from three to 15 years into married life.

Parity and the sex composition of children, both time varying, are the two important child variables in this study. Parity is specified as "No child", "1 child", " 2 children", and " $3+$ children". We constructed the sex composition of children based on parity. The periods in which our respondents had one child were specified as " 1 girl" or "1 boy", and the periods in which our respondents had two children were specified as " 2 girls", "1 girl \& 1 boy", and " 2 boys". Due to the small number of cases that had three or more children in our sample, we did not classify this category with the sex composition of children.

Calendar periods and hukou origin are our indicators for time and space. Calendar periods, which are time varying, help us capture how the divorce trends of different social actors vary over time. Three periods were included: the 1970s-1980s, the 1990s, and the 2000s. To ensure a sufficient number of cases within each calendar period for reliable
analysis, we grouped the 1970s and the 1980s together. Cases before 1970 were left truncated due to the small number of observations.

Based on the hukou (household registration) system, China's population is divided into agricultural (or rural) and non-agricultural (urban). Social welfare services such as education and health care are tightly bound to one's hukou status (Wu and Treiman 2004). Accordingly, notable rural-urban disparities exist in various aspects of social life. Given that our data do not provide our respondents' changes in hukou status prior to divorce, to avoid anticipatory analysis, we use our respondents' hukou status at age 12 as a proxy to indicate their ruralurban origin, namely, the place where they grew up.

Our analyses include a number of control variables. Age at marriage was categorized into four groups: 15-19 years, 20-24 years, 25-29 years, and 30 years or older. Respondents' own educational level at the time of first marriage was grouped into primary or below, secondary, and tertiary or above. We also controlled for "How couples met" (grouped into knowing each other independently, via introduction by friends and relatives, via arrangement by marriage agency or parents, and other), whether respondents cohabited with their first spouse prior to marriage, whether their first child was conceived prior to marriage, parents' education (grouped into primary or below, junior secondary or above, and missing), and ethnicity (with the categories of Han Chinese and other ethnic groups).

Table 1 Descriptive statistics for variables used for study

|  | Person-months | \% | Divorces | \% |
| :---: | :---: | :---: | :---: | :---: |
| Duration of marriage (t-v) |  |  |  |  |
| 0-1 year | 36,955 | 15\% | 41 | 5\% |
| 1-3 years | 42,132 | 17\% | 129 | 14\% |
| 3-6 years | 62,712 | 25\% | 171 | 19\% |
| 6-10 years | 34,655 | 14\% | 200 | 22\% |
| 10-15 years | 30,024 | 12\% | 211 | 23\% |
| 15-20 years | 24,862 | 10\% | 104 | 11\% |
| 20-25 years | 20,548 | 8\% | 55 | 6\% |

Child variables
Parity ( $t$-v)

| No child | 49,719 | $20 \%$ | 260 | $29 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| 1 child | 107,332 | $43 \%$ | 499 | $55 \%$ |
| 2 children | 63,066 | $25 \%$ | 122 | $13 \%$ |
| $3+$ children | 31,771 | $13 \%$ | 30 | $3 \%$ |
| Sex composition of children $(\boldsymbol{t} \boldsymbol{v} \boldsymbol{v})$ |  |  |  |  |
| No child | 49,719 | $20 \%$ | 260 | $29 \%$ |
| 1 girl | 47,378 | $19 \%$ | 232 | $25 \%$ |
| 1 boy | 59,882 | $24 \%$ | 267 | $29 \%$ |
| 2 girls | 14,015 | $6 \%$ | 40 | $4 \%$ |
| 1 girl \& 1 boy | 34,451 | $14 \%$ | 59 | $6 \%$ |
| 2 boys | 14,670 | $6 \%$ | 23 | $3 \%$ |
| $3+$ children | 31,771 | $13 \%$ | 30 | $3 \%$ |

## Time \& space variables

Calendar periods ( $t-v$ )

| 1970s-1980s | 91,945 | $37 \%$ | 104 | $11 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| 1990 s | 65,365 | $26 \%$ | 299 | $33 \%$ |
| 2000s | 94,578 | $38 \%$ | 508 | $56 \%$ |
| Hukou origin |  |  |  |  |
| Rural | 216,686 | $86 \%$ | 621 | $68 \%$ |
| Urban | 35,202 | $14 \%$ | 290 | $32 \%$ |

Table 1 Continued

|  | Person-months | \% | Divorces | \% |
| :---: | :---: | :---: | :---: | :---: |
| Control variables |  |  |  |  |
| Age at marriage |  |  |  |  |
| 15-19 | 32,373 | 13\% | 85 | 9\% |
| 20-24 | 146,788 | 58\% | 479 | 53\% |
| 25-29 | 61,705 | 24\% | 278 | 31\% |
| 30+ | 11,022 | 4\% | 69 | 8\% |
| Own education |  |  |  |  |
| Primary or below | 130,223 | 52\% | 330 | 36\% |
| Secondary | 115,523 | 46\% | 551 | 60\% |
| Tertiary or above | 6,142 | 2\% | 30 | 3\% |
| How couples met |  |  |  |  |
| Independently | 48,466 | 19\% | 223 | 24\% |
| Introduced | 187,069 | 74\% | 617 | 68\% |
| Arranged | 11,603 | 5\% | 40 | 4\% |
| Others | 4,750 | 2\% | 31 | 3\% |
| Cohabitation |  |  |  |  |
| No | 238,355 | 95\% | 806 | 88\% |
| Yes | 13,533 | 5\% | 105 | 12\% |
| Premarital pregnancy |  |  |  |  |
| No | 163,169 | 65\% | 638 | 70\% |
| Yes | 88,719 | 35\% | 273 | 30\% |
| Father's education |  |  |  |  |
| Illiterate or primary | 209,803 | 83\% | 661 | 73\% |
| Junior high or above | 42,085 | 17\% | 250 | 27\% |
| Mother's education |  |  |  |  |
| Illiterate or primary | 234,201 | 93\% | 767 | 84\% |
| Junior high or above | 17,687 | 7\% | 144 | 16\% |
| Ethnicity |  |  |  |  |
| Han ethnic group | 232,631 | 92\% | 828 | 91\% |
| Other ethnic groups | 19,257 | 8\% | 83 | 9\% |
| Total | 251,888 | 100\% | 911 | 100\% |

Source: Authors' own calculation based on the CFPS (waves 2010-2012)

## 5 Results

### 5.1 Number of children and divorce

Table 2 presents the relative risks of divorce estimated from our main effects model. The estimate for the basic time factor, duration of marriage, shows an inverted $U$-shaped pattern of divorce. Our respondents have a low risk of divorce within the first year of marriage. The risks of divorce increase steadily as the marriage duration lengthens. After reaching a peak approximately 10-15 years into marriage, the trend shifts to a decline.

The estimate for parity shows that childlessness is an important marker for divorce, whereas children are an effectual protective factor against divorce. All else being equal, the divorce risk for childless couples is four times that of couples with one child, whereas the divorce risks of two-child couples and couples with three or more children are approximately $60 \%$ and $80 \%$ lower, respectively. For parents, the more children they have, the less likely their marriage is to end in divorce.

Our estimate for our time variable, calendar periods, shows that during the 1970s and the 1980s, divorce was rather uncommon. The divorce trend increased substantially during the 1990s and then shifted towards a plateau in the 2000s. Our estimate for the space variable, hukou origin, shows that urbanites have a nearly $60 \%$ higher likelihood of ending a marriage than the rural born do.

Age at marriage does not matter for the divorce likelihood. The secondary educated are more likely to divorce than people at other educational levels. Marriages arranged by parents or marriage agencies have substantially higher risks of divorce than do marriages in which couples met each other independently or via the introduction of friends and relatives. Individuals who cohabited with their first spouse prior to marriage have a more than $90 \%$ higher likelihood of divorce than do those who did not. Premarital pregnancy slightly increases the divorce risk. Parents' education is positively associated with divorce risk. Minority ethnic groups have higher divorce rates than the Han ethnic group does.

Table 2 Relative risks of divorce, estimated from the main effects model, China (1970-2012)

|  | Haz. Ratio | $\mathrm{P}>\mathrm{z}$ |
| :---: | :---: | :---: |
| Duration of marriage <br> (Basic time factor) |  |  |
| 0-1 year | 0.35 | *** |
| 1-3 years | 1 |  |
| 3-6 years | 1.47 | *** |
| 6-10 years | 1.71 | *** |
| 10-15 years | 1.78 | *** |
| 15-20 years | 1.08 |  |
| 20-25 years | 0.71 | * |
| Child variables |  |  |
| Parity (t-v) |  |  |
| No child | 4.00 | *** |
| 1 child | 1 |  |
| 2 children | 0.38 | *** |
| $3+$ children | 0.21 | *** |
| Time \& space variables |  |  |
| Calendar periods (t-v) |  |  |
| 1970s-1980s | 1 |  |
| 1990s | 3.04 | *** |
| 2000s | 3.17 | *** |
| Hukou origin |  |  |
| Rural | 1 |  |
| Urban | 1.59 | *** |
| Control variables |  |  |
| Age |  |  |
| 15-19 | 1.13 |  |
| 20-24 | 1 |  |
| 25-29 | 1.12 |  |
| 30+ | 1.27 | * |
| Own education |  |  |
| Primary or below | 0.87 | * |
| Secondary | 1 |  |
| Tertiary or above | 0.60 | *** |

Table 2 Continued

|  | Haz. Ratio | $\mathrm{P}>\mathrm{z}$ |
| :--- | :--- | :--- |
|  |  |  |
| How couples met |  |  |
| Independently | 1 |  |
| Introduced | 0.98 |  |
| Arranged | 1.34 | $*$ |
| Others | 1.57 | $* *$ |
| Cohabitation prior to marriage |  |  |
| No | 1 |  |
| Yes | 1.94 | $* * *$ |
| Pregnancy prior to marriage | 1 |  |
| No | 1.15 |  |
| Yes | 1 | $* * *$ |
| Father's education | 1.28 |  |
| Illiterate or primary | 1 |  |
| Junior high or above | 1.37 |  |
| Mother's education |  |  |
| Illiterate or primary | 1 |  |
| Junior high or above | 1.37 |  |
| Ethnicity | 32169 |  |
| Han ethnic group | 911 |  |
| Other ethnic groups | 6744390 |  |
| No. of subjects | -4506.76 |  |
| No. of divorces | 0.00 |  |
| Time at risk |  |  |
| Log likelihood |  |  |
| Prob shi2 |  |  |

Notes: Statistical significance: $* * * p<.01$; $* * .01<p<.05$; and $* .05<p<.10$
Source: Authors' own calculation based on the CFPS (waves 2010-2012)

### 5.2 Sex composition of children and divorce

To explore the effect of children's gender on divorce, we replaced the variable of parity with the sex composition of children, and all other covariates were standardized. Figure 1 displays the estimated relative risks of divorce by sex composition of children from the main effects model. Among one-child parents, those who have a girl have a $17 \%$ higher risk of divorce than do those with a boy. Among two-child parents, those with two girls have a substantially higher risk of divorce than do those with at least one boy. The number of boys does not make a significant difference in divorce. These results are in line with earlier findings suggesting that in Chinese society, having a boy in the household protects marriage. The estimates for the other covariates are similar to those presented in Table 2 and thus are not shown.

Fig. 1 Relative risks of divorce by sex composition of children from the main effects model, China (1970-2012) (Reference category: 1 boy)


Notes: Estimates for "no child" and " $3+$ children" are not shown in the Figure
Statistical significance: ${ }^{* * * p<.01 ; ~ * * .01<p<.05 ; ~ a n d ~} * .05<p<.10$
Source: Authors' own calculation based on the CFPS (waves 2010-2012)

### 5.3 Number of children and divorce across time and space

To explore how the effect of the number of children on divorce varies across time, we estimated the interaction term of parity and calendar periods, while all other covariates were standardized. The results are presented in Figure 2. It is clear that childless couples had substantially higher divorce risks than parents did over the entire observation period. From the 1970s-1980s to the 1990s, an increase in divorce occurred among all couples, regardless of whether they had a child. This increase was obviously quicker for childless couples, followed by one-child parents. From the 1990s to the 2000s, a divorce plateau occurred for all parents, whereas the trend for childless couples continued to increase. By the end of our observation time, the divorce risk of childless couples was almost five times that of one-child parents.

An additional check for a three-way interaction term of parity, calendar periods and hukou origin shows that these patterns and trends hold for both the rural-born and urbanites (Figure not shown). Urban childless couples followed by rural childless couples were the major practitioners of divorce, especially in the two most recent decades. The negative association between the number of children and divorce likelihood also holds for both rural and urban parents across calendar periods.

Fig. 2 Interactive effect of parity and calendar periods on divorce, in the form of relative risks, China (1970-2012) (Reference category: 1 child, the 1990s)


Source: Authors' own calculation based on the CFPS (waves 2010-2012)
5.4 Sex composition of children and divorce across time and space

Given the rural-urban differentiation in the implementation of the one-child policy, the sex composition of children may affect parental divorce across time and space differently for different parities. Hence, we present our estimations for one-child parents and two-child parents separately.

### 5.4.1 One-child parents

Figure 3(a) presents the interactive effect of the child's gender and calendar periods on divorce among one-child parents in the form of relative risks. During the 1970s and the 1980s, when divorce was relatively uncommon compared to later periods, the child's gender did not make a difference for the divorce risk of one-child parents. In the 1990s, when divorce experienced a sharp rise, the role of the child's gender became visible. It seems that couples with a girl had a slightly higher risk of divorce than those with a boy. This gap enlarged significantly during the 2000s.

To explore how these trends differ for rural and urban parents, we estimated a three-way interaction term of child's gender, calendar periods, and hukou origin. Figure 3(b) conveys an important message: the effect of the child's gender on divorce changes over time for rural and urban parents in different ways.

Fig. 3(a) Interactive effect of child's gender and calendar periods on divorce of one-child parents, in the form of relative risks, China (1970-2012) (Reference category: 1 boy, 2000s)


Fig. 3(b) Three-way interactive effect of child's gender, calendar periods and hukou origin on divorce of one-child parents, in the form of relative risks, China (1970-2012) (Reference category: rural parents, 1 boy, 2000s)


[^0]For urban parents, a two-stage variation can be seen. During the 1970s-1980s and the 1990s, couples with a girl had a slightly higher likelihood of divorce than did those with a boy, though the difference was not statistically significant. During the 2000s, however, the previous positive association between having a girl and divorce disappeared; the divorce trend for couples with a boy even crossed over the trend for those with a girl. These results indicate that the child's gender completely lost its importance in parents' risk of divorce over the turn of the new century.

For rural parents, a two-stage variation can also be seen, but in an opposite manner. From the 1970s to the 1990s, the child's gender did not matter for parental divorce. During the 2000s, however, its effect became notable: the divorce trend for couples with a boy plateaued, whereas the trend for those with a girl increased significantly. The divorce risk for one-girl couples was $45 \%$ higher than that of one-boy couples, reaching the divorce level of their urban counterparts.

These results suggest that the widening gap of divorce by child's gender in the 2000s presented in Figure 3(a) was mainly contributed by the rural parents with a girl. When the likelihood of divorce among other parents either decreased or plateaued, the level of divorce among rural parents with a girl was maintained. Taken together, these results provide solid evidence that over the turn of the new century, the effect of the child's gender on parental divorce disappeared completely among urban one-child parents, whereas its role became important for rural one-child parents.

### 5.4.2 Two-child parents

Figure 4 presents the interactive effect of the sex composition of children and calendar periods on divorce among two-child parents. We can see that during the period of the 1970s1980s, the role of children's gender in parental divorce was not clear. Thereafter, substantial changes occurred. The divorce trend for parents with two girls increased significantly in the 1990s. Though the trend shifted to a decline towards the 2000s, the divorce risk for these parents during this calendar period remained significantly higher than that of the 1970s1980s. In comparison, the trends for parents with at least one boy increased at a much slower pace. The number of boys did not make a difference for divorce during our entire observation time.

Fig. 4 Interactive effect of children's gender and calendar periods on divorce of two-child parents, in the form of relative risks, China (1970-2012) (Reference category: 1 boy \& 1 girl, 1990s)


[^1]Due to the implementation of the one-child policy from the late 1970s, the number of families with two children in urban areas shrank over time. This shrinkage is mirrored in the distribution of our studied sample. When we attempted to investigate the effect of children's gender on divorce over time for rural and urban two-child parents separately, our data were unable to support a reliable analysis for urban parents. Our estimations for rural parents show similar results as those presented in Figure 4. Namely, the results presented in Figure 4 mainly represent the divorce patterns and trends of rural parents with two children. These results are consistent with the findings of earlier studies.

## 6 Discussion and conclusion

This study explored how the number of children and the sex composition of children are associated with divorce in contemporary China. We applied event-history analysis to individual-level longitudinal data from the CFPS. The distinguishing contribution of this study is that it reveals the increasingly higher divorce risks of childless couples relative to couples with children. Further, it demonstrates the changing effect of the child's gender on divorce among rural and urban one-child parents in opposite ways.

Our results showed that during our entire observation period from 1970 to 2012, childless couples were the major force in divorce. They had a substantially higher risk of divorce than parents did, especially during the two most recent decades (the 1990s and 2000s). In the 2000s, the divorce risk of childless couples was approximately five times that of one-child parents. All else being equal, the more children a couple had, the less likely they were to divorce. These patterns and trends hold for both rural and urban couples across our observation time.

The sex composition of children plays an important role in parental divorce. All else being equal, a boy in the household protects marriage. Nonetheless, our estimations from the interaction models reveal that the role of the child's gender varies across time for rural and urban one-child parents in different manners. For rural one-child parents, the child's gender did not have an effect on divorce prior to the 2000s. The effect became notable in the 2000s, when couples with a girl had a $45 \%$ higher divorce risk than those with a boy. For urbanites, however, the previous positive effect of having a girl on divorce disappeared in the 2000s. Namely, over the turn of the new century, the child's gender completely lost its importance for divorce among urban one-child parents.

Our estimations for two-child parents mainly represent the divorce patterns and trends of rural parents. The results are consistent with the findings of earlier studies. All else being equal, parents with two girls had a substantially higher risk of divorce than those with at least one boy. The number of boys did not make a difference. Estimations from the interaction models show that during the 1970s and the 1980s, the sex composition of children was not important for the divorce risk of parents. Great changes occurred thereafter: the divorce trend for parents with two girls rose dramatically in the 1990s and then declined somewhat in the 2000s. The trends for parents with at least one boy remained at a rather low level across the entire observation period. These findings demonstrate the protective effect over time of having at least one son on the marriage stability of rural couples.

The findings of this study have important implications. The contrasting divorce risks of childless couples and couples with children as well as the negative association between the number of children and divorce provide support for Durkheim's sociological theory and Becker's New Household Economics theory on the role of children in marriage stability. That is, children increase the attractiveness of the union, increase the bond between couples, and hold families together. The more children couples have, the happier they are likely to be with their marriage; therefore, the less likely they are to divorce. Without a bond to hold the family together, childless couples exit marriage more easily than parents do.

In addition to the children-parents bonding theory, the effects of specific Chinese contextual factors deserve note. The function of children to carry on the family line and the economic value of children to provide care to elderly parents may restrict parents' likelihood of divorce. In addition, the sole custody system plays a role. To avoid the possibility of losing custody of children because of divorce, couples in unhappy or dysfunctional marriages may choose to stay in the marriage rather than undertaking divorce. In contrast, childlessness, whether voluntary or involuntary, is positively associated with divorce. The strikingly higher divorce risks of childless couples in the 1990s and the 2000s may be mostly contributed by younger married cohorts. Relative to earlier marriage cohorts, younger married cohorts may be more likely to consider marriage a process of individual happiness rather than a means of producing children for the continuation of the family line or elderly care. They are also more likely to postpone childbearing to later ages. Longer exposure to marital childlessness may increase their likelihood of ending their marriage during the period of childlessness. Furthermore, a reverse causal effect may exist. Couples in unhappy relationships are less likely to have children, which indirectly increases our estimated divorce risks for childless
couples.
The changing effect of the child's gender on divorce among rural and urban one-child parents in opposite directions may be related to China's institutional and socioeconomic changes at the macro level. In urban areas, the implementation of the one-child policy from 1980 to 2015, the country's modernization process, and modern values that emphasize individualism and the realization of self-value have fostered the prevalence of small family size. When they have only one child, urban couples invest heavily in the child's education and success irrespective of the child's gender. Correspondingly, the child's gender completely lost its importance for the risk of divorce among urban one-child parents over the turn of the new century. The results reflect that girls' empowerment has substantially increased, whereas the cultural preference for sons has notably declined in urban China.

In rural areas, however, the one-child policy actually transformed into a multi-policy regime from the mid-1980s, with various categories of exceptions. Most couples have at least two children. Therefore, from the 1970s to the 1990s, when divorce was rather uncommon in rural areas, having a girl as the first child was not necessarily related to an increased divorce risk. In the 2000s, however, when the divorce intensity of urbanites decreased, rural residents became active practitioners of divorce. In this divorce diffusion process from urban to rural areas, rural couples with a girl took the lead in the new practice, whereas those with a boy lagged behind. This finding suggests that the protective effect of a boy on marriage stability persists among rural one-child parents. Our estimations for two-child parents, mainly representing the divorce patterns and trends of rural couples, also pinpoint the protective effect of boys on rural couples' marriages. These findings reflect that the function of a boy to carry on the family line and to provide care as parents age remains important in rural China.

This study has limitations. We do not have data concerning the quality of couples' relationships, which affects not only the number of children a couple may have but also the couple's divorce likelihood. Furthermore, China abandoned its one-child policy at the end of 2015, and the "universal two-child policy" came into effect in January 2016 (China Daily 2017; Wang et al. 2016). Accordingly, a considerable number of urban families are having or considering having a second child. In addition, the Chinese government is taking actions to alleviate poverty and to develop a sustainable social security system so that people living under the current poverty line in poor counties and regions will be out of poverty and all citizens, from both urban and rural areas, can have access to social security (CPC 2017). When these goals are achieved, the importance of raising sons for old age protection in rural
areas might weaken. This might alter the protective effect of having a boy on marriage stability of rural couples. It is unfortunate that the observation of this study ended in 2012. Follow-up studies are necessary in the future to continue this analysis to capture the new patterns and trends in the relationship between children and divorce.

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[^0]:    Source: Authors' own calculation based on the CFPS (waves 2010-2012)

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