**Title:** Daughters and Divorce

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**Abstract:** What makes couples with daughters more likely to divorce than couples with sons? Using Dutch registry and U.S. survey data, we show that daughters are associated with higher divorce risks, but only when they are 13-18 years old. These age-specific results run counter to explanations involving overarching time-invariant son preferences and selection. We propose another explanation involving relationship dynamics in families with teenagers. In subsample analyses, child gender differences disappear for fathers who grew up with sisters and are larger for groups whose gender-role attitudes are likely to differ from their daughters'. We also find survey evidence of relationship strains.

**Introduction**

Research by sociologists (Spanier and Glick 1981; Morgan et al. 1988) and economists (Bedard and Deschenes 2005; Dahl and Moretti 2008; Mammen 2008; Ananat and Michaels July 1, 2008) has found that U.S. couples with daughters face modestly, but significantly higher divorce risks than couples with sons. Their findings seem to complement evidence from developing countries that preferences for sons alter family behavior (Ben-Porath and Welch 1976; Arnold 1997; Das Gupta et al. 2003). However, associations between children's genders and divorce do not appear in all U.S. data (Morgan and Pollard 2002; Diekmann and Schmidheiny 2004; Reichman et al. 2004), and associations have not been detected in any other developed countries (Andersson and Woldemicael 2001; Diekmann and Schmidheiny 2004; Leigh 2009; Flouri and Malmberg 2010). Thus, there is a genuine question whether the associations found among U.S. parents reflect some fundamental characteristic of the modern family or stem from country-specific idiosyncrasies which have limited relevance to the rest of the world.

If associations are present, the next logical question is why they exist. Lundberg (2005) differentiates between two general categories of explanations. One category involves parents' preferences, such as an overarching preference for sons or a preference among fathers to spend time with sons (Lundberg et al. 2007; Dahl and Moretti 2008; Mammen 2011). The other category involves the constraints parents face, such as higher time or money costs of raising girls, more stressful parenting interactions with girls, or worse developmental consequences of divorce for boys (VanderValk et al. 2007; Bertrand and Pan 2013; Durante et al. 2015; Baker and Milligan 2016). Sociologists have pointed to greater father involvement with sons, the reinforcement of gendered specialisation within households, and the effects of daughters on parents' gender-role attitudes (Morgan et al. 1988; Katzev et al. 1994; Raley and Bianchi 2006). Besides the causal mechanisms, sex-selection into live birth

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might also explain the associations (Hamoudi and Nobles 2014). Although the previous studies of children's gender and divorce have considered these explanations, they have not had the necessary data or statistical power to distinguish among them.

We examine how children's gender affects divorce risks in the Netherlands, using administrative data that cover every marriage and registered partnership that existed in that country from 1995 to 2015. The data include more than 2 million marriages, allowing us to estimate effects precisely and consider how effects vary with the children's ages, parities, and conditional on parents' backgrounds. The administrative data are highly accurate with the exact dates of weddings, births, and divorces. This contrasts with nearly all the previous studies which have relied on retrospective self-reports that are subject to recall errors and other misreporting (Mitchell 2010). It also contrasts with several studies which could identify parenting relationships or children's parities only approximately (e.g., Ananat and Michaels 2008; Bedard and Deschênes 2005; Dahl and Moretti 2008; Mammen 2008). Unlike most previous economic studies, we estimate event-history models that account for the duration of the marriage or registered partnership, changing divorce risks with children's ages, and right-censoring in spells.

We find that daughters are associated with higher risks of divorce among Dutch couples—the first robust finding of such an association from a European country. The analysis of age-specific differences leads to a more novel and intriguing result. The difference in divorce risks only appears when the daughters are 13 to 18 years old—there are no detectable gender differences at earlier or later ages. This effect is observed among both firstborn and higher-parity children. We find the same age pattern in analyses of the 1980, 1985, 1990 and 1995 U.S. Current Population Survey Marriage and Fertility Supplements (CPS-MFS). The age pattern runs counter to several causal mechanisms that have been proposed to explain the divorce disparity, including simple overarching time-invariant

preferences for sons, selection into live birth, and rational forward-looking behavior based on age-specific differences in preferences and costs. Instead, the results are more consistent with unexpected age-related changes in constraints or family processes. We conjecture that the changes may include relationship strains with teenage daughters.

Additional analyses of Dutch data buttress this explanation. The teenage gender disparity in divorce risks only appears for fathers who grew up without sisters, suggesting that the father's attitudes and understanding are critical. The gap is wider for couples from earlier birth cohorts and immigrant couples, who are more likely to disagree—either with their daughters or among themselves—about gender roles. We also analyse the Longitudinal Internet Studies for the Social Sciences (LISS) panel, a large survey of Dutch households, and uncover direct evidence of relationship strains between fathers and teenage daughters, more disagreements over parenting among couples with teenage daughters, and more favourable attitudes towards divorce among mothers of teenage daughters.

**Theory**

We use Weiss' (1997) rational-choice model of marriage and divorce to consider differences in how sons or daughters might affect marital stability (see also Becker et al. 1977). Weiss theorised that couples choose whether to marry and subsequently whether to remain married by comparing the expected value of being married to the value of being single or in another relationship. The benefits within marriage include the enjoyment of time that a couple can spend together; the extra consumer goods that they might be able to purchase or produce because of household efficiencies, economies of scale, and specialisation (Becker 1985); and special goods, such the number and quality of children, that their marriage might produce. The net benefits of marriage depend on characteristics of each spouse, the marriage-specific goods (e.g., children), and a match-specific quality. In each period, the couple knows the current values of these variables but does not know all the

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future values. Divorce occurs when one or more variables suffers a sufficiently negative unexpected realisation, such as a drop in match-specific quality, a loss of earning power, or a change in outside opportunities.

As mentioned, Lundberg (2005) proposed preference- and constraint-based explanations for the possible effects of children's gender on divorce. In the context of Weiss' model, children are a type of marriage-specific capital, and an overarching preference for boys over girls would raise the value of this capital more for sons. An overarching son preference might also lead parents to invest more in boys' development, which would increase the value of their marriage-specific capital further. Either effect would reduce the incentives to divorce. Similar effects occur if fathers more strongly prefer spending time with sons than daughters (Lundberg et al. 2007; Mammen 2011), as this would raise their valuations of marriage-specific capital and their incentives to invest in it. Such preferences may be either stable over the child's life, or they may be specific to certain ages. Lundberg (2005) and Raley and Bianchi (2006) summarise evidence that fathers' preferences for sharing activities with sons are stronger when the boys are school-aged. This would strengthen marriages at those ages. However, under the assumptions of rational and forward-looking behavior, it would also strengthen marriages with sons at earlier ages because the fathers would need to stay in the marriage to realise the expected benefits.

Lundberg (2005) also discussed explanations that involve differences in the costs and constraints of raising sons and daughters. Baker and Milligan (2016) found that parents spend more time in teaching activities for pre-school girls than boys. Durante et al. (2015) conducted experiments in which people allocated more resources to daughters, and Moffitt and Ribar (forthcoming) found that disadvantaged families were more protective of daughters' food needs. Other things held equal, higher costs of daughters would reduce the amount of marriage-specific capital that a couple could produce and weaken the incentives to

remain married. Another possibility is that parent-child interactions are more stressful with girls than boys. VanderValk et al. (2007) found that adolescent girls' emotional problems strained their parents' marriages but boys' problems did not. A different constraint involves the possibility that boys are more susceptible to developmental problems if parents divorce, which would lower the value of parents' alternatives to marriage (see the reviews by Lundberg 2005 and Raley and Bianchi 2006 and findings from Bertrand and Pan 2013). Alternatively, adolescent girls may perform more housework or require less supervision than same-age boys (Kalenkoski et al. January 1, 2011); this might directly reduce the costs of divorce or indirectly reduce the costs by allowing mothers to work more in the labor market and acquire more human capital.

As with the preference explanations, age-related differences in costs and constraints could lead to age-specific divorce patterns. Higher relative costs of very young girls or greater vulnerability among young boys could raise the divorce risks for families with girls at those ages. However, within the rational-choice framework, higher costs or vulnerabilities at later ages would affect divorce risks at those ages as well as earlier ages, provided that the costs or vulnerabilities were anticipated. An isolated age pattern of elevated divorce risks that is not preceded by a gradual build-up is more consistent with unexpected changes to the net valuation of marriage or myopic behavior.

Sociologists have offered other explanations that involve family processes. One possibility is that fathers' preferences for spending time with sons increase their overall household involvement, which might improve a couple's communication, increase a couple's shared time, and strengthen the solidarity of their marriage (Morgan et al. 1988; Katzev et al. 1994). These processes could lead to gender differences in divorce risks that vary with children's ages if fathers are more involved at some ages but not others. Another possibility is that the presence of sons or daughters changes parents' attitudes. The presence of boys may

reinforce traditional gender-role or family attitudes (Morgan et al. 1988; Katzev et al. 1994; Perales et al. 2018), which might directly strengthen marriages or increase gender specialisation and couples' interdependence.

While a child's gender might affect divorce, it is also possible that characteristics related to divorce affect child gender. Hamoudi and Nobles (2014) described how girls in utero have survival advantages under conditions of stress relative to boys. They found that mothers who reported high levels of relationship conflict prior to their children's births were more likely to give birth to girls. Thus, the association between children's gender and divorce could arise from selection.

**Institutional Background - Marriage and divorce in the Netherlands**

As with other Western countries, marriage and divorce in the Netherlands have been subject to several changes over the last 50 years. In 1971 the country introduced a no-fault divorce law, which replaced the law granting divorce only on grounds of adultery, cruelty or other pre-specified issues (Boele-Woelki et al. 2003). In 1998, registered partnerships were introduced as an alternative civil arrangement for couples who want to live together. Dutch marriages and registered partnerships offer similar legal benefits and protections. Couples who want to enter either arrangement must first register their intention by the municipality at least two weeks before the wedding or partnership occurs. The lone exception is that registered partners can convert their arrangement into a marriage. The notice requirements and effective waiting periods for marriages are more stringent than those of the U.S.

The marriage rate in the Netherlands has fallen over the last half century from 9.5 different-sex marriages per 1,000 inhabitants in 1970 to 3.8 per 1,000 inhabitants in 2015 (CBS 2017). New different-sex partnership registrations rose from fewer than 2,000 in 2001 to about 13,000 in 2015. The marriage patterns are similar to trends in the U.S. and other developed countries. Dutch attitudes on marriage and its alternatives have become less

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traditional over time (Treas et al. May 14, 2014), consistent with the "deinstitutionalisation" of marriage (Cherlin 2004) in the U.S. and Europe.

Divorce in the Netherlands requires a formal legal proceeding, but dissolution of a registered partnership does not. Between 2001 and 2009, couples could also take advantage of a "flash divorce" procedure under which they could convert marriages into registered partnerships and then quickly dissolve the partnerships. Divorces and partnership dissolutions in the Netherlands take effect once they have been recorded in the municipal register. Overall, the determinants of divorce in the Netherlands are similar to those in other countries (see de De Graaf and Kalmijn 2006). The number of divorces was relatively constant at around 35,000 per year, or about 10 per 1,000 married couples, over the period that we study.

**Dutch administrative data**

We construct our main analysis dataset primarily from Dutch municipal register data. The data are maintained by Statistics Netherlands and cover all Dutch residents between 1995 and 2015. They describe each person's date of birth, gender, immigration background, marital history, living arrangements, place of residence, and family relationships. Personal identifiers allow us to link records of people who are (or were) married or registered partners and create couple-specific measures. They also allow us to link parents and children.

The marriage records cover all the marriages and registered partnerships that existed in the Netherlands from 1995 to 2015. This includes 3,609,495 marriages that were on-going on 1 January 1995 and 1,839,504 marriages or registered partnerships that began on or after that date. For each marriage and registered partnership, we observe the wedding or registration date, and the type of union. We also observe whether spouses are marrying for the first time or remarrying. For marriages and registered partnerships that ended during the analysis period, we observe the termination dates and causes (divorce, death, or change of civil status).

The registers enable us to match children to their legal parents, starting with children born in 1966. Each child is assigned paternal and maternal identifiers, if the parental records are present in the data. Most children can be linked to both parents; only 7% cannot, usually because the father's identifier is missing. Parental records may be missing if the parent died before 1995, the parent lives in another country, or the child has no legal mother or father. Using the parent-child identifiers, we construct measures of the gender- and age-composition of each couple's children.

We drop marriages and registered partnerships of couples who have children with prior partners, couples who re-married, couples who adopted children, couples whose firstborn children were twins, and same-sex couples. We further restrict our analyses to marriages that began on or after 1 October 1971 (after the Netherlands adopted its no-fault divorce regime). Lastly, we drop marriages and partnerships if either spouse was born before 1935 or after 1985. The results are not sensitive to the choice of the cutoff years. These restrictions leave us with a dataset covering 2,722,871 marriages and partnerships.

We use these data to create spell observations. The spells begin on the wedding or registration date if the couple married in or after 1995 or are left-truncated in 1995 if they married earlier. For the left-truncated spells, we observe and condition on the elapsed duration of the marriage or partnership, the couple's childbearing history, and the age progression of their children through 1995. We omit the portions of the spells prior to 1995 because our data are incomplete before then. The spells continue until a divorce or partnership dissolution occurs, or a right-censoring event occurs. Spells are right-censored on 31 December 2015, when a spouse dies, when a spouse emigrates from the Netherlands, when the marriage reaches 40 years, or when the youngest child reaches age 27. Our results are robust to the choice of censoring cutoffs.

**Analysis**

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Before analysing divorce risks, we examined whether there were differences in average observable characteristics of married couples before their first child was born. This helps us to determine whether the associations between children's genders and divorce occur through selection or whether they are possibly causal. We restricted our comparison to 1.1 million married couples whose first child was born in or after 1995, because we lack comprehensive pre-birth information for parents of children born earlier. Higher-parity births are excluded from this comparison because their realizations may depend on the first child's gender. The observable characteristics included each parent's birth year, age at marrying, age at first childbirth, immigration background, education, employment status, and earnings in the year before the birth. We also observed the year of wedding, marriage or partnership duration, registered partnership status, and whether the child was born out of the wedlock (i.e., prior to marriage or partnership). Results are shown in Table 1. Pairwise t-tests failed to detect statistically significant differences in any of these characteristics. This finding was confirmed by a joint significance test in an OLS regression of the child's gender on the same set of characteristics. Thus, we find no evidence of sex-selection into live birth on the basis of observable characteristics.

The nearly identical shares of boys and girls born out of the wedlock indicate that the incidence of so-called shotgun weddings is not affected by the gender of the child. Similarly, the gender of the child does not influence the odds of legitimization following the birth. This is confirmed by an auxiliary test that revealed that there were no gender differences in legitimization rates among all first-born children who were born out of the wedlock in or after 1995. The two findings of no significant associations differ from the findings of Dahl and Moretti (2008) and imply that our results should not be affected by couples' selective entry into marriage.

Gender-specific differences do appear, however, in other outcomes that follow the

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births. First, gender of the firstborn influences subsequent fertility decisions. Parents of firstborn girls have slightly *fewer* children than parents of firstborn boys. This finding is inconsistent with an overarching preference for sons; it also conforms with recent evidence from the U.S. U.S. (Blau et al. 2017). Second, the divorce rate for parents of firstborn girls is 0.17 percentage points higher than the rate for parents of firstborn boys, 15.49% versus 15.33%, or a relative difference of 1%.

To explore the divorce association further, we estimate complementary log-log discrete-time hazard models of marriage durations, which allow us to jointly model several duration-dependent processes, including the duration of the marriage and the ages of the couple's children (effectively durations following the children's births). The models also allow us to control for other observed characteristics of the couples. The functional form of the cloglog model is

$$\Pr[y_{it} = 1 \mid \mathbf{x}_{it}] = 1 - \exp\left(-\exp\left(\mathbf{x}_{it}'\boldsymbol{\beta}\right)\right),$$

where the hazard probability of a divorce *y* for a couple *i* observed at time *t* is defined as a function of covariates **x** that are specific to the given couple and time. The influence of covariates on the hazard probability is captured by a vector of parameters $\boldsymbol{\beta}$, and the estimates of these parameters are obtained by maximum likelihood. Since the model operates in discrete time, we split the marital spells into a series of yearly records which contain the characteristics of the couple and their children on the day of the wedding anniversary and an indicator for the event of divorce or dissolution in the following 12 months.

For the following duration analyses, we expand the sample of marriages and registered partnerships to include couples with children born before 1995. This allows us to track divorce outcomes in families with adolescent and adult children. The sample of couples with children born in or after 1995 is analyzed separately in the robustness section, yielding the same results.

Unconditional results. As an initial analysis, we estimate a descriptive hazard model of marriage durations for the couples with children in which the age of the first-born child is the lone duration measure. We specify the duration pattern non-parametrically by including dummy variables for the child's age, and we allow for gender-specific effects by interacting the age dummies with an indicator for the child being a daughter. The reference group is couples whose child is less than one year old. The corresponding functional form is

$$\mathbf{x}_{it}'\boldsymbol{\beta} = \beta_0 + \sum_{k=1}^{26} \mathbf{1}(FB\,age_{it} = k) \cdot (\beta_{1k} + \beta_{2k} \cdot FB\,daughter_i).$$

For this initial analysis, we ignore the risks faced by the parents in the years preceding the birth, and the risks faced by childless couples.

Exponentiated estimates of the age-specific coefficients are graphed in Figure 1, and estimated coefficients and standard errors are listed in Supplemental Appendix Table A1. The estimates, which can be interpreted as approximate odds ratios, indicate that the unconditional hazard probabilities of divorce for couples with sons and daughters follow indistinguishable trajectories through the children's 12th year, rising rapidly until the children reach age 7 and falling thereafter. At age 13, however, the trajectories diverge, with significantly higher hazard probabilities for daughters. The dots indicate at which ages the excess divorce risks for families with daughters are statistically significant. The disparity peaks when the children are 15 years old and remains statistically significant until they reach age 19. At the peak of the disparity, families with firstborn daughters face 8.8% higher hazard risks of divorce. After age 19, the hazards are again indistinguishable. Overall, the descriptive results point to a gender difference in divorce risks but one that only appears during a child's teenage years—not early in the child's life nor after the child's 19th birthday.

Conditional results. Estimated duration dependence patterns can be sensitive to omitted variables. For that reason, we estimate a multivariate model that adds controls for marriage duration, parental immigration, parental education, parental age at marriage, being

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in a registered partnership, the first child being born pre-maritally, and cohort and year effects. This specification does not control for the gender and age of higher-parity children because of concerns regarding the endogeneity of the corresponding fertility decisions (though we examine such births later). We also expand the analysis data set to include yearly marriage spell records preceding the first birth, and records of childless couples. The inclusion of childless couples allows us to better approximate the duration dependence of divorce risks in early stages of marriage. To make the results comparable to the unconditional estimates for couples with children, we continue to use the first-born child's year of birth as the reference category and add a time-varying dummy indicator for the couple being childless. The corresponding functional form is

$$
\mathbf{x}_{\mathbf{it}}'\boldsymbol{\beta} = \beta_0 + \sum_{k=1}^{26} \left[ \mathbf{1}\left( FB\,age_{it} = k \right) \cdot \left( \beta_{1k} + \beta_{2k} \cdot FB\,daughter_i \right) \right] + \beta_3 \cdot Childless_{it}
$$
$$
+ \sum_{j=1}^{40} \beta_{4j} \cdot \mathbf{1}\left( Duration_{it} = j \right) + \beta_5 \cdot RegPar_{it} + \sum_{y=1996}^{2015} \beta_{6j} \cdot \mathbf{1}\left( Year_{it} = y \right) + \mathbf{z}_{\mathbf{i}}'\boldsymbol{\beta}_{\mathbf{7}},
$$

where the set of time-fixed characteristics is represented by $\mathbf{z}_{\mathbf{i}}'\boldsymbol{\beta}_{\mathbf{7}}$. The gender- and age-specific estimates of the divorce risks associated with first-born children from this model are graphed in Figure 2, and the full set of coefficient estimates are reported in Supplement Appendix Table A1 (column 2).

The magnitude and general shape of the age-dependent pattern change considerably in the multivariate specification. Accounting for the duration of marriage and other covariates leads to divorce risks that increase until the first-born reaches age 18 or 19 and that fall afterwards. This pattern is consistent with parents trying to delay divorce until the children are adults. It is also consistent with increasing marital stress during children's adolescence and diminished stress as young adult children leave the household and parents experience the 'empty nest' (Heaton 1990; Hiedemann et al. 1998).

Although the shape of the age pattern changes, the age-specific gender differences

remain. The conditional age-specific excess divorce risks for first-born daughters closely follow the pattern from the unconditional model. As with the unconditional results, divorce risks associated with daughters and sons are indistinguishable through age 12 and from age 19 onwards, but the risks associated with daughters are higher from ages 13 to 18. The differences retain both the original magnitudes and statistical significance.

To quantify the absolute magnitude of the effects of the firstborn's gender on divorce, we derive the gender-specific cumulative divorce rates by the time that the firstborn reaches ages 12, 18, and 26. In line with the coefficients in Figure 2, the cumulative divorce rate through the child's 12th year does not differ significantly by the child's gender. The rate for parents of 12-year-old girls is 15.63%, which is 0.08 percentage points higher than the rate for parents of boys. The disparity widens to 0.4 percentage points by the time the children are 18 years old, with cumulative divorce rates of 21.89% for parents of boys and 22.28% for parents of girls. By age 26, the cumulative divorce rates increase to 27.26% and 27.61%, respectively, with the gender disparity narrowing slightly to 0.35 percentage points.

The coefficient estimates for the other characteristics of couples in Supplemental Appendix Table A1 reveal that Dutch couples' divorce risks rise through the first four years of marriage and fall thereafter. Childless couples are estimated to have the same divorce risks as parents whose first-born children are 12 years old. For couples with children, divorce risks are higher if the first child was born pre-maritally. Registered partnerships are more likely to dissolve than formal marriages, which is consistent with the easier dissolution procedures for partnerships. The divorce risks rose in 2001-2007 when flash divorces were available. Couples in which both spouses immigrated to the Netherlands have lower divorce risks than couples in which both spouses are natives, while couples whose parents immigrated and couples with mixed immigration backgrounds (e.g., a first-generation immigrant married to a native) have higher divorce risks. Divorce is negatively associated with the spouses'

education levels.

Higher-parity children. We next estimate an extended model with controls for the gender and age-structure of higher-parity children (age-specific count variables interacted with gender). The extended specification helps us to see whether the firstborn's gender effects are mediated through subsequent fertility decisions, and whether the higher-parity children are subject to similar age- and gender-specific patterns of divorce risks as the firstborns. We use count variables instead of dummies to account for twins and closely-spaced siblings. The corresponding functional form is

$$
\mathbf{x}'_{it}\boldsymbol{\beta} = \beta_0 + \sum_{k=1}^{26}\Big[\mathbf{1}\big(FB\,age_{it}=k\big)\cdot\big(\beta_{1k}+\beta_{2k}\cdot FB\,daughter_i\big)\Big]+\beta_3\cdot Childless_{it}
$$
$$
+\sum_{j=1}^{40}\beta_{4j}\cdot\mathbf{1}\big(Duration_{it}=j\big)+\beta_5\cdot RegPar_{it}+\sum_{y=1996}^{2015}\beta_{6j}\cdot\mathbf{1}\big(Year_{it}=y\big)+\mathbf{z}'_{i}\boldsymbol{\beta_7}
$$
$$
+\sum_{k=0}^{26}\Bigg[\sum_{n=2}^{N}\Big[\mathbf{1}\big(HP\,age_{itn}=k\big)\cdot\big(\beta_{8k}+\beta_{9k}\cdot HP\,daughter_{in}\big)\Big]\Bigg]+
$$

where $n$ indexes the parity of children, and $N$ denotes the total number of children. We restrict the coefficients $\beta_{8k}$ and $\beta_{9k}$ to each have a single value at ages 24 and beyond because our right-censoring criteria for the firstborn's age (26) leads to very few observations of higher-parity children past age 24. The rest of the model specification is kept unchanged.

Figure 3a shows the gender-specific age profiles for firstborn children from this model, and Figure 3b shows the profiles for higher-parity children (full results are reported in Supplemental Appendix Table A1, column 3). The estimates continue to indicate that firstborn girls are associated with higher divorce risks at ages 13-18 but not at other ages, indicating that the gender effect is not mediated through subsequent fertility. Perhaps of more interest, the age profiles for higher-parity children exhibit strikingly similar gender effects, although the magnitude of the effects is slightly attenuated. Higher-parity girls are associated with significantly higher divorce risks from ages 14-18, but also at age 10.

The age-specific gender differences in divorce risks and their appearance for both

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firstborn and higher-parity children help to distinguish among causal mechanisms that have been proposed to explain gender effects. The absence of gender differences in infancy and early childhood goes against theories which assume the existence of overarching time-invariant preferences for sons. It is also inconsistent with the selection hypothesis, corroborating the evidence of no gender differences in pre-birth characteristics of parents of firstborn boys and girls. In addition, our findings run counter to hypotheses that involve forward-looking parents with age-specific preferences for time spent with children or with foreseeable age-specific costs or constraints.

We argue that these robust teenage effects are more likely to occur because of unexpected changes in the constraints or family processes faced by the parents of teenage boys and girls. The teenage years constitute a period of tremendous and sometimes tumultuous change, not only in terms of children's physical, emotional and behavioural development, but also in their relationships with parents, independence, and the consequences of their actions. Some of these changes might be more expected or more successfully navigated by parents than others. Teenage girls are likely to be subject to stricter regimes, less autonomy and more parental supervision than teenage boys, and these restrictions may generate conflict. Parents' beliefs about their daughter's behavior and choices may go unnoticed when the child is young and dependent, but in the teenage period they may translate into worse relationships with the child, and also with each other - particularly if the father's and mother's attitudes towards gender roles diverge. The lower enjoyment of the shared family time may reduce the utility from marriage and nudge the parents towards divorce.

**Subgroup analyses**

We investigate the conflict hypothesis further by estimating hazard models for subgroups of the Dutch population which are likely to differ in terms of the gender norms and

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experiences of fathers and mothers. To facilitate comparisons across the subgroups, we use a simplified version of the hazard model without controls for higher-parity children. We keep all the covariates from that specification, except for the 27 age-specific interactions of the first-daughter indicator, which are replaced with a simpler set of three age-group interactions corresponding to the first daughter being a child (aged 0-12), teenager (aged 13-18), or young adult (aged 19-26). Relative and absolute effects corresponding to the child and teenage differentials are listed in Table 2. We focus on these two effects because the adult coefficients in smaller subsamples are estimated imprecisely, and their inclusion does not qualitatively change our conclusions.

As a benchmark, we estimate the simplified model for the full sample of couples and report the results in the first row of Table 2 (complete results are in the Supplemental Appendix). In line with the results from Figure 2, the only statistically significant coefficient is the one for firstborn teenage daughters, who are associated with divorce hazard risks that are 5.2% higher than those associated with firstborn teenage sons. The restricted model yields the same absolute effect as our principal specification: by age 18, there is a 0.4 percentage-point gender difference in divorce risks.

We hypothesize that disagreements regarding gender roles and relationship strains with teenage daughters will be more pronounced among parents who were raised in different cultural contexts, parents with more traditional backgrounds, and parents with fewer mixed-gender experiences. These hypotheses are broadly confirmed. We find that immigrant Dutch parents experience larger relative teenage daughter effects than native parents, although the absolute effects for immigrant parents are not significantly different from natives due to immigrants' lower baseline divorce rates. Parents with mixed immigration backgrounds experience larger gender effects both in relative and absolute terms.

Gender-role attitudes tend to be more egalitarian among people with more schooling

(see Treas et al. 2014). More educated parents might also be better informed about parent-child relationships or more capable of navigating difficulties. Consistent with this and previous findings (Spanier and Glick 1981; Dahl and Moretti 2008), the relative teenage daughter effects decrease with parents' education levels. Gender-role attitudes have also become more egalitarian over time. Parents born in earlier cohorts are estimated to face stronger relative effects; however, since they are less likely to divorce, the ordering of the absolute effects is reversed.

Our final subgroup analyses investigate whether the teenage daughter effect varies with the gender composition of the parents' siblings. Parents' early exposure to mixed-gender relationships may influence their gender norms. Growing up with an opposite-sex sibling may also provide insights into mixed-gender family relationships. To form subgroups, we link records of native Dutch parents who were born after 1965 with the records of their near-age (born less than 10 years apart) maternal siblings, and estimate the model separately for parents who did and did not grow up with opposite-gender siblings. The gender composition of the father's siblings has a striking influence on the teenage effect. The teenage daughter hazard coefficient for fathers who grew up without sisters is significant and nearly twice the size of the estimate for the general cohort born after 1965, whereas the coefficient for fathers who grew up with one or more sisters is not only insignificant but effectively zero. Among the mothers, there are no significant differences in divorce risks between mothers who grew up with and without brothers. This suggests that the father's experiences and background are particularly important for explaining the gender gap in divorce.

**Survey evidence**

The subgroup results provide indirect evidence that the higher divorce risks stem from parent-child, and possibly father-daughter, relationship strains. For more direct evidence, we turn to the Longitudinal Internet Studies for the Social Sciences survey panel. The LISS

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followed a representative sample of Dutch households, totaling 11,500 individuals, for nine years and asked household members about the quality of their relationships, attitudes, time-use, and expenditures. We focus on married couples whose firstborn is younger than 19 years of age and is the biological child of both spouses. The full set of sample restrictions is described in the Appendix. The resulting sample has approximately 6,500 parent-year observations.

We estimate multivariate models of the outcomes reported by the mothers and fathers. For responses involving relationships and attitudes, we estimate ordered logit models, and for reports of expenditures and time-use, we estimate OLS regressions. Our principal explanatory variables are dummy variables for firstborns aged 0-12 and 13-19 and interactions with an indicator for a firstborn daughter. Table 3 reports the estimated coefficients for the interactions separately for mothers and fathers. The models also control for the parent's age, education and immigration background; the numbers of higher-parity boys and girls; and wave fixed effects.

Several results indicate that marital and parenting relationships are more strained in households with teenage daughters than in households with teenage sons or younger children. Fathers and mothers of teenage daughters report significantly more parenting disagreements with their partners than fathers and mothers of teenage sons; in contrast, the coefficients for fathers and mothers of younger girls are negative but they do not attain statistical significance. Mothers of teenage daughters report significantly more disagreements with their partners over money; mothers of younger daughters also report significantly more disagreements over money, though the coefficient is smaller. Fathers of teenage daughters also report significantly worse relationships with their families. Mothers of teenage daughters report significantly more favorable attitudes towards divorce and significantly lower life satisfaction than mothers of teenage sons.

Some other results are equivocal, providing neither support nor refutation of the relationship strains explanation. Parents of teenage daughters report the same satisfaction with their own relationships as parents of teenage sons. Parents of teenage daughters are somewhat but not significantly less likely to indicate that married people are generally happier than unmarried people.

The LISS provides no evidence of higher time or money costs of teenage daughters. Parents of teenage daughters are no more likely than parents of teenage sons to report children's care as a burden, though mothers of younger daughters report fewer burdens. Similarly, parents do not report differences in the time spent with teenage daughters, but mothers report less time spent with younger daughters. Parents also do not report differences in expenditures for children if they have teenage daughters (though the measure only describes expenditures for children under 15 years).

The LISS asked children who were age 16 or older about relationships with their parents. We estimate ordered logit models of the responses with a sample of firstborn children aged 16-18 and a larger sample of all children aged 16-18. The models include a dummy variable for daughters and controls for the other parent, household, and temporal characteristics from our previous specifications. Teenage daughters report worse relationships than sons with their fathers, but they do not report worse relationships with their mothers. These responses bolster the evidence of strains in the relationships between fathers and daughters. However, the absence of data from children under age 16 prevents us from examining whether these gender differentials change as children age.

**External validity and relation to previous findings**

We replicate the event-history analysis using U.S. survey data from the 1980, 1985, 1990, and 1995 CPS Marriage and Fertility Supplements extracted from IPUMS-CPS (Flood et al. 2015) and NBER CPS archives. The supplements in these years asked all women living

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in CPS households who were older than 15 years of age about the dates of wedding, separation, and divorce for their first three marriages and about the genders and the years of birth of the first four children and their most recent child. Supplements in other and subsequent years have only asked about the youngest child and current marital status.

We analyse durations of first marriages of women who were childless or whose first child was born within those marriages. We drop marriages of women who were born before 1935 and women who married before age 16 or after age 45. The results are not sensitive to the choice of cutoff ages. Each marital spell is assigned a failure time if the marriage ended in divorce prior to the year of the survey. Spells are right-censored in the year of the survey if the woman was still in her first marriage, or in the year when the husband died, the marriage reached 30 years, or the youngest child reached age 27.

We estimate a discrete-time cloglog hazard model that is similar to the specification used in the Dutch subsample analysis. The covariates include dummies for firstborn age groups; interactions of age groups with a daughter dummy; controls for marriage duration, non-parenthood, and maternal age at marriage; and cohort and wave fixed effects. The observations are weighted by the CPS-MFS weights. Estimates for the daughter/age-group interactions are reported in the last row of Table 2.

The age pattern from the U.S. closely resembles the pattern from the Netherlands. We find a small and statistically insignificant difference in divorce risks for firstborn daughters aged 0-12 years. The large standard errors however make it impossible to rule out the existence of effects of the magnitude found by previous U.S. studies. In contrast, we find a substantial and statistically significant difference for daughters aged 13-18 years. The relative teenage daughter effect is nearly three times as large as the effect for Dutch married couples. The CPS-MFS findings are robust to changes of the sample and model specification, including choice of the censoring thresholds, exclusion of marriages of childless mothers,

extension to second and third marriages, and inclusion of controls for higher-parity children (detailed results are available upon request).

The results from our event-history analysis are similar to the CPS-MFS results obtained by Dahl and Moretti (2008). Our estimates imply a 1.02 percentage point increase in divorce risks by the time the children reach age 18, which is nearly identical to the CPS-MFS estimate of Dahl and Moretti.

The same authors also produced much smaller estimates of the divorce disparity based on U.S. census data, using a restricted sample of families with children aged 0-12. The authors attributed the difference between the census and CPS estimates to the small sample size of the CPS. However, our analysis indicates that the difference between the coefficients is likely attributable to Dahl and Moretti restricting their census sample to mothers with children aged 0-12 but not placing a similar restriction on their CPS sample. Further evidence supporting this interpretation can be found in Bedard and Deschênes (2005) and Ananat and Michaels (2008), whose analyses of census data applied looser age restrictions and yielded larger divorce effect estimates, both in absolute and relative terms (in the Supplemental Appendix we summarize the divorce effects and age cutoffs from previous studies of child's gender and divorce risks).

Our finding that gender differences are absent until children reach age 13 provides an explanation for null results reported by some studies from the US and the studies from the rest of the world. Two of these studies imposed very strict age cutoffs: Flouri and Malmburg (2010) only considered parents of three-year-olds, and Reichman et al. (2004) considered parents of 1½-year-olds. Morgan and Pollard (2002) set an age cutoff of 14 years, and other studies imposed similar restrictions that would have excluded many families with teenage children (Andersson and Woldemicael 2001). Our analysis suggests that rather than being evidence of the absence of gender effects, the null findings from these studies may have been

an artifact of restrictive sample selection criteria.

**Robustness checks**

We subjected our baseline findings of excess divorce risks faced by Dutch families with teenage daughters to many robustness checks. These included specifications in which we: replaced the divorce date by the date of separation (extracted from the personal cohabitation records); dropped marriages of couples with children born before 1995; estimated logit specifications of the model; extended the sample to include families with children that are not shared by the same parents, and added employment and earnings controls among the set of covariates (available as of 1999). The results were qualitatively similar across all specifications.

We also investigated whether similar patterns exist among parents who were living together out of wedlock. The analysis indicated that cohabiting couples with firstborn daughters are also subject to excess separation risks in the teenage years. The coefficient estimate is twice as high as the one for married couples (for details see the Supplemental Appendix). Thus, our findings extend to all cohabiting couple relationships in the Netherlands and not just formal marriages and partnerships.

Another hypothesis is that mothers do foresee the gender-specific differences in marriage outcomes, but they cannot act on them immediately, as they have to first attain a level of human capital sufficient to support a single-earner household. The period of human capital accumulation would lead to a delayed onset of the gender-specific risks of divorce. This hypothesis would necessarily reflect in different levels of labor force participation and earnings among mothers with young boys and girls. However, we find no evidence of such strategic behavior. Both labor force participation and earnings of mothers with boys and girls are not significantly different throughout the first 11 years of the child's life. The labor force outcomes diverge afterwards with mothers of girls working more than mothers of boys,

however this divergence could be caused by the teenage effect, rather than the other way around.

A different work-related hypothesis asserts that the presence of adolescent girls reduces the costs of mothers working because adolescent girls perform more housework and require less supervision than boys (Kalenkoski et al. 2011). The easier access to the labor market might then render mothers more likely to divorce. To examine the confounding effects of work behavior under either of the two hypotheses, we estimate a specification in which we add both maternal and paternal employment and earnings into the divorce model (results are shown in the Supplemental Appendix). The employment data are available as of 1999, which renders the pool of analysed married spells smaller than in our principal specification. Nevertheless, the age-specific gender coefficients remain similarly sized and they retain statistical significance from ages 13 to 17. Thus, the work-related hypotheses do not explain the age pattern that we uncover.

**Conclusion**

Our analyses show that Dutch and U.S. parents with teenage daughters are more likely to divorce than parents with teenage sons. In the Netherlands, the effect peaks at age 15, when couples with firstborn daughters face an 8.8% higher hazard probability of divorce compared to couples with firstborn sons. The daughter-specific divorce risks remain elevated throughout the teenage years, so that by the age of 19, the cumulative divorce rate for couples with firstborn daughters is 0.40 percentage points higher than the rate for couples with firstborn sons. The teenage daughter divorce differential for U.S. couples appears to be even bigger. The age pattern of effects is also found for higher-parity children.

We find no evidence of gender-specific divorce risks among families with children aged 0-12, or children older than 18. This finding is important for narrowing the set of potential explanations for the association between children's gender and divorce. It runs

counter to explanations which assume the existence of time-invariant preferences for boys. Our findings of modestly higher fertility in families with firstborn boys, and of no gender differences in firstborns' legitimization rates are also inconsistent with an overarching preference for sons. The age patterns of divorce risks also rule out the mechanism involving selection into live birth. The lack of observable differences in the characteristics of parents prior to the birth of their first child corroborates this interpretation. The age patterns also fit poorly with explanations based on forward-looking rational behavior based on other foreseeable differences in the parental valuations of marriages with sons and daughters.

The isolation of the gender effect in the teenage years is more consistent with a dynamic mechanism which influences marital stability through unexpected changes in the constraints faced by the parents of teenage children. Although analysts have suggested expenditures, time requirements, and parental involvement as possible constraints, we see stressful parent-child relations as a more likely mechanism. Teenage daughters are likely to be subject to stricter regimes and more parental supervision than teenage sons, and this involvement may instil conflict between the parents and their child. The conflict can be further exacerbated if the parents' gender-role attitudes and expectations diverge from those of their daughters.

Our subsample analyses support this hypothesis. Families in which parents and children are more likely to hold conflicting beliefs about the gender roles are subject to larger teenage divorce differentials. This includes parents with immigrant backgrounds, parents from older birth cohorts, and parents with less education. More strikingly, the teenage divorce differential only appears for fathers who father grew up without sisters and disappears completely if the father's sibship includes sisters.

The conflict hypothesis is also supported by corroborating age patterns in our analysis of household survey data, which show that fathers of teenage daughters report worse family

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relationships, parents of teenage daughters report more disagreements over child rearing, and mothers of teenage daughters report more favourable attitudes towards divorce and lower life satisfaction. Teenage daughters also report worse relationships than teenage sons with their fathers. Other results from the survey data regarding relationship strains are inconclusive, but there are no significant results that refute the strains explanation. The responses of parents with teenage sons and daughters show no significant difference in levels of expenditures on children, levels of parental time investments, or perceptions of care burdens.

Although the evidence is consistent with relationship strains, we cannot rule out other age-related explanations. For example, traits could emerge in adolescence that indicate that a child is vulnerable to divorce. There could be unexpected age-specific changes in costs that we are not able to measure or control for. It is even possible that parents' preferences could evolve in unexpected ways. We also cannot rule out complex, age-varying interactions in explanations. For example, parents could have time-invariant preferences for sons but be constrained from acting on them until the children reach adolescence.

Finally, the age pattern that we uncover in the Dutch and U.S. data helps to reconcile differences in findings from previous studies. Although several studies have found that daughters are associated with higher divorce risks, others have failed to detect associations. Most studies that have found associations have considered children across a range of ages that includes their teenage years, when the gender effect is present. In contrast, studies with null findings focused predominantly on young children or had other age restrictions, which reduced their ability to find effects.

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**Table 1: Average characteristics of couples with firstborn sons and daughters**

|  | Sons | Daughters | Diff. | P-value |
|---|---|---|---|---|
| Father's birth year | 1971.59 | 1971.60 | -0.01 | 0.398 |
| Mother's birth year | 1974.11 | 1974.12 | -0.01 | 0.389 |
| Year of wedding | 2001.14 | 2001.15 | -0.01 | 0.635 |
| Father's age at wedding | 30.04 | 30.04 | 0.00 | 0.702 |
| Mother's age at wedding | 27.53 | 27.53 | 0.00 | 0.704 |
| Mother's age at birth of the firstborn | 31.91 | 31.91 | 0.00 | 0.859 |
| Father's age at birth of the firstborn | 29.39 | 29.39 | 0.00 | 0.871 |
| Marriage duration at birth of the first born (conditional on being married at birth) | 2.78 | 2.78 | 0.00 | 0.424 |
| *Father's immigration background* |  |  |  |  |
|    Native | 77.31% | 77.23% | 0.09% | 0.284 |
|    1st Generation Immigrant | 16.08% | 16.14% | -0.06% | 0.415 |
|    2nd Generation Immigrant | 6.61% | 6.64% | -0.03% | 0.547 |
| *Mother's immigration background* |  |  |  |  |
|    Native | 75.55% | 75.51% | 0.04% | 0.587 |
|    1st Generation Immigrant | 17.43% | 17.44% | -0.01% | 0.870 |
|    2nd Generation Immigrant | 7.01% | 7.05% | -0.03% | 0.518 |
| *Father's completed education* |  |  |  |  |
|    Less than High School | 3.17% | 3.20% | -0.03% | 0.397 |
|    High-school | 29.81% | 29.77% | 0.04% | 0.622 |
|    University | 23.66% | 23.65% | 0.01% | 0.880 |
|    Missing records | 48.35% | 48.38% | -0.05% | 0.776 |
| *Mother's completed education* |  |  |  |  |
|    Less than High School | 3.52% | 3.54% | -0.02% | 0.438 |
|    High-school | 31.40% | 31.49% | -0.09% | 0.315 |
|    University | 26.01% | 25.92% | 0.09% | 0.278 |
|    Missing records | 39.07% | 39.04% | 0.03% | 0.784 |
| *Labor supply 1yr prior to birth of the firstborn* |  |  |  |  |
|    Father employed | 85.25% | 85.20% | 0.05% | 0.587 |
|    Mother employed | 84.57% | 84.63% | -0.06% | 0.478 |
|    Father's annual earnings, in 1000€ | 30.38 | 30.35 | 0.03 | 0.644 |
|    Mother's annual earnings, in 1000€ | 22.19 | 22.21 | -0.02 | 0.531 |
| Share of firstborns who were born prior to marriage / registered partnership | 14.13% | 14.10% | 0.03% | 0.597 |
| Share of firstborns whose parents engaged in registered partnerships | 3.12% | 3.07% | 0.04% | 0.206 |
| Number of siblings | **1.07** | **1.06** | **0.007** | **0.000** |
| Birth spacing between the first two children | 2.80 | 2.79 | 0.004 | 0.213 |
| Share of firstborns whose parents divorced (marriage or registered partnership) | **15.33** | **15.49** | **-0.160** | **0.023** |

Note: Authors' estimates of average characteristics of 1,067,067 couples with firstborn sons and daughters born in 1995-2015. The sample excludes same-sex couples, and couples whose firstborn children are either adopted, twins, or step-children. The sex ratio is 1.052. Labor supply statistics are restricted to years 2000-2015 due to limited availability of the employment records. P-values correspond to means comparison t-tests with unequal variance.

### Table 2: Relative and absolute divorce effects of firstborn daughters

| Sample | Excess hazard risk, firstborn daughters (%) | | Cumulative divorce rate by age 19 (%) | | |
| --- | --- | --- | --- | --- | --- |
| | Age 0-12 | Age 13-18 | Sons | Daughters | Difference |
| Full sample | 0.50 | 5.24*** | 21.88 | 22.28 | 0.40***. |
| *(2,732,223 spells)* | (0.45) | (0.69) | (0.04) | (0.05) | (0.06) |
| *Immigration background* | | | | | |
| Both spouses native | 0.72 | 4.26*** | 21.56 | 21.92 | 0.37***. |
| *(2,180,235 spells)* | (0.51) | (0.75) | (0.05) | (0.06) | (0.09) |
| Both spouses immigrants | -0.61 | 7.74*** | 18.11 | 18.33 | 0.22 |
| *(315,582 spells)* | (1.40) | (2.38) | (0.16) | (0.16) | (0.22) |
| Mixed imm. background | -0.03 | 12.11*** | 30.96 | 31.98 | 1.02*** |
| *(226,406 spells)* | (1.07) | (2.43) | (0.22) | (0.20) | (0.30) |
| *Husband's education* | | | | | |
| Less than high school | 0.07 | 8.41*** | 29.25 | 30.17 | 0.92** |
| *(105,529 spells)* | (1.97) | (3.14) | (0.30) | (0.29) | (0.44) |
| High school | 0.46 | 5.10*** | 27.76 | 28.21 | 0.44*** |
| *(646,848 spells)* | (0.77) | (1.30) | (0.12) | (0.11) | (0.15) |
| University | 1.58 | 4.00** | 19.53 | 19.94 | 0.40** |
| *(482,387 spells)* | (1.12) | (1.81) | (0.10) | (0.12) | (0.16) |
| Missing records | 0.06 | 5.21*** | 19.59 | 19.91 | 0.32*** |
| *(1,487,459 spells)* | (0.67) | (0.94) | (0.06) | (0.07) | (0.09) |
| *Husband's birth cohort* | | | | | |
| 1955 and earlier | 0.16 | 7.47*** | 16.41 | 16.66 | 0.26 |
| *(643,058 spells)* | (2.46) | (1.71) | (0.26) | (0.25) | (0.28) |
| 1956-1965 | 0.34 | 5.11*** | 19.67 | 20.07 | 0.40*** |
| *(879,164 spells)* | (0.79) | (0.93) | (0.08) | (0.08) | (0.12) |
| 1966 and later | 0.58 | 4.29*** | 25.12 | 25.55 | 0.43*** |
| *(1,200,001 spells)* | (0.56) | (1.27) | (0.09) | (0.10) | (0.13) |
| *Sibship, native husbands born after 1965* | | | | | |
| No sisters | 1.13 | 7.93*** | 27.59 | 28.45 | 0.86*** |
| *(365,798 spells)* | (0.99) | (2.52) | (0.20) | (0.18) | (0.26) |
| At least one sister | 1.21 | 0.41 | 25.15 | 25.43 | 0.28 |
| *(520,846 spells)* | (0.86) | (1.96) | (0.14) | (0.14) | (0.20) |
| *Sibship, native wives born after 1965* | | | | | |
| No brothers | -0.31 | 3.96** | 27.64 | 27.94 | 0.30 |
| *(407,470 spells)* | (0.90) | (2.01) | (0.17) | (0.15) | (0.23) |
| At least one brother | 0.70 | 3.71** | 25.45 | 25.91 | 0.46*** |
| *(630,304 spells)* | (0.75) | (1.59) | (0.11) | (0.12) | (0.17) |
| *Other data* | | | | | |
| US married couples (CPS) | 2.05 | 14.96** | 22.08 | 23.10 | 1.02** |
| *(133,022 spells)* | (2.12) | (7.40) | (0.30) | (0.33) | (0.44) |

Note: Excess hazard risks are exponentiated coefficients of age-specific daughter dummies from cloglog hazard models of marriage durations. Cumulative divorce rates are predicted from age- and gender-specific hazard rates of divorce. Standard errors in parentheses.
*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.
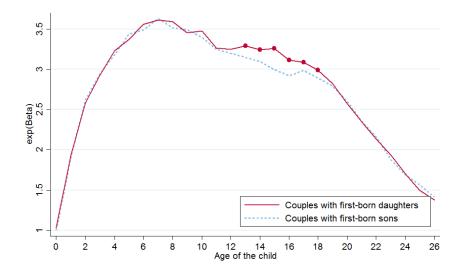
**Table 3: Multivariate analysis of parental responses in the LISS panel, excess coefficients for firstborn daughters aged 0-12 and 13-18**

| *Subjective questions* | Fathers with daughters | | Mothers with daughters | |
|---|---|---|---|---|
| | Age 0-12 | Age 13-18 | Age 0-12 | Age 13-18 |
| How satisfied are you with your current relationship? | 0.032 (0.088) | 0.030 (0.110) | -0.185** (0.078) | -0.071 (0.098) |
| [Did] you and your partner (have) any differences of opinion regarding money expenditure over the past year? | -0.113 (0.096) | 0.148 (0.125) | 0.189** (0.085) | 0.258** (0.111) |
| [Did] you and your partner (have) any differences of opinion regarding raising the children over the past year? | -0.152 (0.096) | 0.298** (0.122) | -0.108 (0.086) | 0.181* (0.109) |
| A woman is more suited to rearing young children than a man | -0.170* (0.094) | -0.371*** (0.119) | 0.014 (0.086) | -0.189* (0.105) |
| Divorce is generally best solution if a married couple cannot solve their marital problems | -0.102 (0.095) | 0.085 (0.121) | 0.052 (0.087) | 0.323*** (0.109) |
| Married people are generally happier than unmarried people | -0.100 (0.095) | -0.155 (0.120) | -0.079 (0.086) | -0.073 (0.105) |
| How would you generally describe the relationship with your family? | -0.216 (0.138) | -0.406** (0.165) | 0.032 (0.118) | -0.111 (0.144) |
| Caring for my child is not such a burden | 0.116 (0.138) | 0.100 (0.165) | 0.380*** (0.118) | 0.048 (0.144) |
| How satisfied are you with the life you lead at the moment? | 0.012 (0.097) | -0.060 (0.121) | -0.146 (0.086) | -0.212** (0.106) |
| *Expenditures and time-use* | | | | |
| How much time did you spend in the last seven days on activities with own child (in hours) | 0.320 (0.989) | 1.375 (1.186) | -2.013** (0.878) | -0.679 (1.057) |
| Log total expenditure per month for children living at home, children 0-15 | 0.235 (0.295) | -0.017 (0.353) | 0.038 (0.122) | 0.100 (0.159) |

Note: Authors' estimates of coefficients of the daughter-age interactions from ordered logit and regression models of responses from different-sex couples with a firstborn biological child younger than 19 at the time of the survey. LISS data 2008-2015. The models include controls for parent's age, education and immigration background, and number and gender of children of higher parities. For details, including the full set of controls and numbers of observations, see Appendix. Standard errors in parentheses.
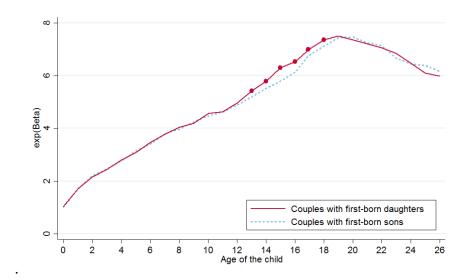*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.

**Figure 1: Unconditional hazard probabilities of divorce by age and gender of first-born children**



Note: Authors' estimates of exponentiated coefficients from cloglog hazard model of marriage durations which controls for marriage durations with no other controls. The dots indicate the ages at which the divorce risks for families with daughters are statistically significant ($p<0.05$) from divorce risks for families with sons. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage.

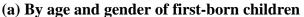**Figure 2: Conditional hazard probabilities of divorce by age and gender of first-born children**



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Note: Authors' estimates of exponentiated coefficients from cloglog hazard model of marriage durations which controls for marriage durations and parent's observable characteristics. The dots indicate the ages at which the divorce risks for families with daughters are statistically significant (p<0.05) from divorce risks for families with sons. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage.

**Figure 3: Conditional hazard probabilities of divorce**

**(a) By age and gender of first-born children**



**(b) By age and gender of higher-order children**



Note: Authors' estimates of exponentiated coefficients from cloglog hazard model of marriage durations which controls for marriage durations, parent's observable characteristics, and age and gender of both firstborn and higher-parity children. The dots indicate the ages at which the divorce risks for families with daughters are statistically significant ($p<0.05$) from divorce risks for families with sons. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage.
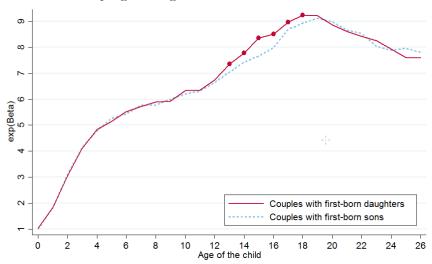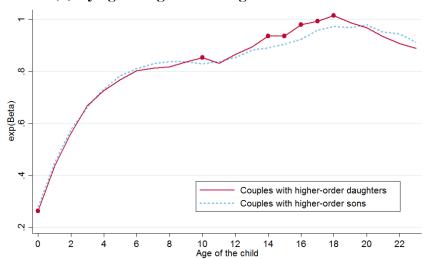
# Supplementary Appendix (for online publication only)

## Contents

## APPENDIX A

### 1. Calculation of absolute effects

Our event-history models yield child-gender coefficient estimates that can be interpreted as relative effects of the children's gender on divorce risks. To get a better sense of the absolute magnitude of these gender effects, we calculate cumulative probabilities that a marriage with children fails at different ages of firstborn children, distinguishing between the cumulative probabilities faced by the families with firstborn boys and firstborn girls. We use the following formula,

$$CP_k^s = \hat{\lambda}_0^s + \sum_{A=1}^{k} \left( \hat{\lambda}_A^s \cdot \prod_{a=0}^{A-1} (1 - \hat{\lambda}_k^s) \right),$$

where $\hat{\lambda}_k^s$ is an estimate of the age-specific hazard rate of divorce, and corresponds to the average of predicted hazard probabilities of divorce for families whose firstborn child is of gender $s = \{b,g\}$ and is $k$ years old:

$$\hat{\lambda}_k^b = \frac{1}{N_k^b} \sum_{i=1}^{N} \left( \hat{y}_{it} \cdot (FB\,age_{it} = k) \cdot (FB\,daughter_i = 0) \right)$$
$$\hat{\lambda}_k^g = \frac{1}{N_k^g} \sum_{i=1}^{N} \left( \hat{y}_{it} \cdot (FB\,age_{it} = k) \cdot (FB\,daughter_i = 1) \right)$$
.

Using the cumulative divorce probabilities, we can calculate absolute gender effects (defined as the difference between gender-specific cumulative probabilities at a given age), and relative gender effects (defined as the ratio of increments of gender-specific cumulative probabilities over a pre-specified period). Table A3 lists the absolute and relative effects for three focal age groups - childhood (age 0-12), teenage period (age 13-18) and early adulthood (age 19-26). The effects were calculated using the coefficient estimates from our principal model specification. Standard errors are bootstrapped using 100 draws from the multivariate distribution of coefficient estimates $\boldsymbol{\beta}_{BS} \sim N(\hat{\boldsymbol{\beta}}, \hat{\Sigma})$.

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## 2. Details of sub-group analyses

For our group analyses, we estimate models with a set of controls which corresponds to the principal specification in which we replaced the 26 age-specific age-gender interactions with a simpler set of three age-group interactions corresponding to the daughter being aged 0-12, 13-18, or 19-26. This simplified treatment of gender coefficients facilitates exposition of the results. Exponentiated coefficients for the three daughter-age group interactions quantify the relative effects of gender over the specified age intervals, and they are reported in Table A3 (complete results are provided in Appendix Table B1).

Our first group analysis differentiates couples by their immigration backgrounds. We split couples into three groups: spouses who were both born in the Netherlands, spouses who were both first-generation immigrants, and couples with dissimilar immigration background (blended couples). In the second group analysis we consider how the relationship between child gender and divorce differs with wives' and husbands' education levels. Education is reported in four categories, including a category for missing educational records.[1] The next three rows of Table A3 report estimates for models that consider families with fathers who were born in 1935-55, 1956-65, and 1966-85.

In the last set of models, we investigate whether the teenage effect varies with the gender composition of the parents' siblings. For these analyses, we link the spousal records to records for their mothers and quantify the number and genders of each spouse's maternal siblings. We drop spouses who were born before 1966 because maternal identifiers are incomplete before then. We also exclude first-generation immigrants because we do not have their maternal records unless the mothers also emigrated to the Netherlands. We split the husbands and wives into groups based on whether they have at least one opposite-gender

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[1] The administrative records of educational attainment come from municipal authorities. All municipalities provide records for people born after 1986, but municipal participation is incomplete for earlier cohorts, with the number of participating areas falling for successively earlier cohorts. The availability of education information does not appear to be associated with other personal characteristics except for birth cohort.

sibling born less than ten years apart from themselves. We apply this spacing restriction because near-aged siblings interact more. To dispel concerns about the endogeneity of parental sibship size and gender composition, we also estimate models for subsamples of spouses with twin siblings, conditioning on the gender of the twin. Even within this very restricted subsample, we find that fathers with twin brothers are subject to much larger teenage daughter effect than fathers with twin sisters. Results from these models are presented in the last rows of Table A3.

### 3. Robustness check - Baseline results

We subject our baseline finding of excess divorce risks faced by families with teenage daughters to a variety of robustness checks. These include model specifications in which we: estimate logit specification of the model; drop marriages of couples with children born before 1995; extend the sample to include families with children that are not biologically shared by the same parents; replace the divorce date by the date of separation (extracted from the personal cohabitation records); and add employment and earnings controls among the set of covariates (available as of 1999). Full sets of corresponding coefficient estimates are listed in Supplemental Appendix Table B4.

### 4. Robustness check - Results for cohabiting couples

We also investigate whether similar patterns exist among parents who are living out of wedlock. The analysis of cohabiting couples is complicated by the lack of precise information on the starting and ending dates of the relationships, however we are able to construct measures which approximate the relationship durations.

The date of separation can be approximated by the date when one of the parents is observed to move out of the shared residence (provided that he or she does not move back in afterwards). A similar strategy can be adopted to approximate the date of initiation; however,

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doing so is further complicated by left-censoring of the cohabitation data (residential histories were not collected prior to 1995). For this reason, we replicate the strategy used in the unconditional analysis of marriage durations and use the age of the firstborn child to approximate the duration of the relationship. The event of separation occurs when one of the parents leaves the shared household, and does not move back within the period of observation. Apart from the previously discussed censoring events, the cohabitation spell is treated as right-censored at the point when a couple is observed to get married. The specification of the hazard model for cohabiting couples includes dummies for the yearly ages of the firstborn, three gender-age group interaction terms, cubic polynomials of parental age at birth, and year and cohort fixed effects. The coefficient estimates are listed in the last column of Table B1c.

The results show that cohabiting couples with firstborn daughters are also subject to excess divorce risks in the teenage period. The estimated effect translates into a 9.1% increase of the divorce risks, which is a considerably higher effect than the one corresponding to the married couples. However, the smaller sample of cohabiting couples renders the estimate less precise.

### 5. Analysis of Current Population Survey

We conduct event-history analyses using U.S. data from 1980, 1985, 1990 and 1995 CPS Marriage and Fertility Supplements. We estimate three specifications of the discrete-time hazard model which are modelled on the specifications used in our main analysis. The set of covariates is simplified to account for the smaller sample size of CPS data, and fewer observable characteristics. Table A4 lists the estimated coefficients. The model in column 1 mimics the unconditional model of our principal analysis, restricting the sample to mothers with children and using the age of the firstborn to approximate marriage durations. The model in column 2 adds marriage duration controls and extends the sample to include also

mothers who are childless. The preferred specification in column 3 adds further observable characteristics.

## 6. Comparison of previous estimates of the gender effects

Previous studies of children's gender and divorce yielded estimated effects that ranged in size from small and insignificant to moderate and significant. We summarize these studies, including their estimates of the relative and absolute gender effects and imposed age cutoffs in Table A5a. In line with our findings, the studies focusing on parents with children younger than 12 years yield null or very small effects. The Swedish study of Andersson and Woldemicael (2001) did not impose an explicit child age cutoff, but the authors did restrict their analysis to the first 15 years of marriage, which makes the resulting sample of families also relatively young. The studies which imposed the child age cutoff within or after the teenage period find much larger effects, both in relative and absolute terms.

Table A5b lists studies that analyze related outcomes of interest (which are however distinct from divorce), and unpublished manuscripts analyzing divorce. This list includes several of the studies which challenge the US evidence of gender effects on marital stability. Also here, we see that the null findings are associated with low age cutoffs. The focus on different outcome variables (or lack of peer-review) however makes the respective effects difficult to compare to those listed in Table A5a.

## 7. LISS survey analysis - Dataset characteristics and sample selection

The Longitudinal Internet Studies for the Social Sciences dataset consists of 4500 households comprising 11,500 individuals who are followed over 8 years (2008-2015). Each household member older than 15 years of age is surveyed individually. Children up to the age 15 do not participate actively, their presence in the household (and a basic set of characteristics) is reported by the parents. Conditional on participating, the response rates of

household members are good, averaging 75-80%.

Our sample is restricted to couples with children who are married and whose firstborn is younger than 19 years of age, is alive, is neither adopted nor a step-child, and lives in the same household as the parents. This sample consists of 6,603 person-year records of participating parents, and 632 person-year records of participating firstborn teenagers (aged 16-18). The extended sample of all participating teenagers (regardless of birth parity) contains 1,178 person-year records. The loss of parental observations due to the sample restrictions is documented in Table A6.

The numbers of observations corresponding to individual regression models listed in Supplemental Appendix Table B3 may differ from the numbers of person-year records corresponding to the selected sample. This is partially due to individual non-response to specific questions, and partially due to changes to the structure of the LISS questionnaire across waves. Several questions have been asked only in a subset of waves (columns 7-22), which lowers the numbers of observations. Furthermore, the questions regarding first child's behaviour were asked to a random subset of families, and the questions regarding expenditures were asked only to the adult household member who is usually responsible for shopping.

The key coefficients of interest (the firstborn daughter/age-group interactions) from the models of fathers' and mothers' survey responses are reported in Table A7. Complete results are reported in Supplemental Appendix Table B3a-B3c. The estimates of the daughter coefficients from the models of teenagers' responses are reported in Table A8, complete results are reported in Supplemental Appendix Table B4.

**Table A1: Regression results, baseline specifications**

| VARIABLES | 1 exp(Beta) | St.e. | 2 exp(Beta) | St.e. | 3 exp(Beta) | St.e. |
|---|---|---|---|---|---|---|
| *Firstborn's age dummies* | | | | | | |
| age 1 | 1.915*** | 0.051 | 1.697*** | 0.045 | 1.828*** | 0.048 |
| age 2 | 2.620*** | 0.066 | 2.197*** | 0.055 | 3.104*** | 0.078 |
| age 3 | 2.942*** | 0.072 | 2.461*** | 0.061 | 4.152*** | 0.103 |
| age 4 | 3.185*** | 0.077 | 2.763*** | 0.068 | 4.776*** | 0.118 |
| age 5 | 3.444*** | 0.083 | 3.144*** | 0.077 | 5.262*** | 0.130 |
| age 6 | 3.491*** | 0.084 | 3.403*** | 0.083 | 5.433*** | 0.134 |
| age 7 | 3.630*** | 0.087 | 3.797*** | 0.092 | 5.771*** | 0.142 |
| age 8 | 3.518*** | 0.084 | 3.962*** | 0.097 | 5.777*** | 0.143 |
| age 9 | 3.495*** | 0.084 | 4.245*** | 0.104 | 6.003*** | 0.149 |
| age 10 | 3.403*** | 0.082 | 4.468*** | 0.110 | 6.196*** | 0.155 |
| age 11 | 3.252*** | 0.078 | 4.617*** | 0.115 | 6.316*** | 0.159 |
| age 12 | 3.202*** | 0.077 | 4.897*** | 0.122 | 6.655*** | 0.169 |
| age 13 | 3.151*** | 0.076 | 5.195*** | 0.130 | 7.042*** | 0.180 |
| age 14 | 3.098*** | 0.075 | 5.521*** | 0.139 | 7.424*** | 0.190 |
| age 15 | 2.997*** | 0.073 | 5.794*** | 0.147 | 7.672*** | 0.198 |
| age 16 | 2.923*** | 0.072 | 6.133*** | 0.157 | 7.981*** | 0.208 |
| age 17 | 2.987*** | 0.073 | 6.783*** | 0.174 | 8.688*** | 0.227 |
| age 18 | 2.894*** | 0.071 | 7.119*** | 0.184 | 8.939*** | 0.236 |
| age 19 | 2.798*** | 0.069 | 7.437*** | 0.194 | 9.131*** | 0.244 |
| age 20 | 2.608*** | 0.065 | 7.466*** | 0.197 | 8.996*** | 0.245 |
| age 21 | 2.360*** | 0.060 | 7.249*** | 0.195 | 8.664*** | 0.241 |
| age 22 | 2.167*** | 0.056 | 7.147*** | 0.196 | 8.539*** | 0.244 |
| age 23 | 1.884*** | 0.050 | 6.669*** | 0.189 | 8.045*** | 0.239 |
| age 24 | 1.692*** | 0.047 | 6.452*** | 0.190 | 7.906*** | 0.245 |
| age 25 | 1.568*** | 0.045 | 6.389*** | 0.194 | 7.974*** | 0.259 |
| age 26 | 1.411*** | 0.042 | 6.151*** | 0.195 | 7.799*** | 0.273 |
| *Firstborn's age * daughter dummies* | | | | | | |
| age 0 | 1.034 | 0.032 | 1.031 | 0.032 | 1.031 | 0.032 |
| age 1 | 1.014 | 0.022 | 1.011 | 0.022 | 1.011 | 0.022 |
| age 2 | 0.986 | 0.018 | 0.984 | 0.018 | 0.982 | 0.018 |
| age 3 | 0.994 | 0.017 | 0.994 | 0.017 | 0.991 | 0.016 |
| age 4 | 1.015 | 0.016 | 1.014 | 0.016 | 1.013 | 0.016 |
| age 5 | 0.981 | 0.015 | 0.980 | 0.015 | 0.978 | 0.015 |
| age 6 | 1.020 | 0.015 | 1.019 | 0.015 | 1.016 | 0.015 |
| age 7 | 0.995 | 0.014 | 0.995 | 0.014 | 0.992 | 0.014 |
| age 8 | 1.022 | 0.015 | 1.021 | 0.015 | 1.019 | 0.015 |
| age 9 | 0.989 | 0.015 | 0.989 | 0.015 | 0.987 | 0.015 |
| age 10 | 1.023 | 0.015 | 1.023 | 0.015 | 1.021 | 0.015 |
| age 11 | 1.005 | 0.015 | 1.005 | 0.015 | 1.004 | 0.015 |
| age 12 | 1.015 | 0.016 | 1.014 | 0.016 | 1.014 | 0.016 |

| | | | | | | |
|---|---|---|---|---|---|---|
| age 13 | 1.046*** | 0.016 | 1.045*** | 0.016 | 1.045*** | 0.016 |
| age 14 | 1.047*** | 0.016 | 1.047*** | 0.016 | 1.047*** | 0.016 |
| age 15 | 1.088*** | 0.017 | 1.088*** | 0.017 | 1.088*** | 0.017 |
| age 16 | 1.067*** | 0.017 | 1.066*** | 0.017 | 1.067*** | 0.017 |
| age 17 | 1.034** | 0.017 | 1.033** | 0.017 | 1.034** | 0.017 |
| age 18 | 1.034** | 0.017 | 1.033** | 0.017 | 1.034** | 0.017 |
| age 19 | 1.011 | 0.017 | 1.010 | 0.017 | 1.011 | 0.017 |
| age 20 | 0.987 | 0.018 | 0.986 | 0.018 | 0.986 | 0.018 |
| age 21 | 0.997 | 0.019 | 0.995 | 0.019 | 0.995 | 0.019 |
| age 22 | 0.989 | 0.020 | 0.987 | 0.020 | 0.987 | 0.020 |
| age 23 | 1.030 | 0.023 | 1.027 | 0.023 | 1.028 | 0.023 |
| age 24 | 1.008 | 0.025 | 1.006 | 0.025 | 1.006 | 0.025 |
| age 25 | 0.958 | 0.026 | 0.956* | 0.026 | 0.956* | 0.026 |
| age 26 | 0.977 | 0.029 | 0.974 | 0.028 | 0.974 | 0.028 |
| No Children dummy | | | 6.099*** | 0.134 | 6.216*** | 0.136 |
| *Marriage duration dummies* | | | | | | |
| 1 year | | | 3.882*** | 0.067 | 3.896*** | 0.068 |
| 2 years | | | 5.864*** | 0.107 | 5.927*** | 0.108 |
| 3 years | | | 7.157*** | 0.143 | 7.289*** | 0.145 |
| 4 years | | | 8.018*** | 0.179 | 8.233*** | 0.183 |
| 5 years | | | 7.741*** | 0.194 | 7.971*** | 0.200 |
| 6 years | | | 7.593*** | 0.213 | 7.819*** | 0.219 |
| 7 years | | | 7.109*** | 0.222 | 7.326*** | 0.228 |
| 8 years | | | 6.642*** | 0.229 | 6.842*** | 0.236 |
| 9 years | | | 6.235*** | 0.236 | 6.413*** | 0.243 |
| 10 years | | | 5.879*** | 0.243 | 6.027*** | 0.249 |
| 11 years | | | 5.517*** | 0.247 | 5.629*** | 0.252 |
| 12 years | | | 5.099*** | 0.246 | 5.171*** | 0.250 |
| 13 years | | | 4.822*** | 0.250 | 4.855*** | 0.252 |
| 14 years | | | 4.585*** | 0.254 | 4.582*** | 0.254 |
| 15 years | | | 4.378*** | 0.259 | 4.340*** | 0.256 |
| 16 years | | | 4.163*** | 0.261 | 4.093*** | 0.257 |
| 17 years | | | 3.880*** | 0.257 | 3.781*** | 0.251 |
| 18 years | | | 3.721*** | 0.261 | 3.595*** | 0.252 |
| 19 years | | | 3.513*** | 0.259 | 3.363*** | 0.248 |
| 20 years | | | 3.322*** | 0.257 | 3.149*** | 0.244 |
| 21 years | | | 3.112*** | 0.252 | 2.922*** | 0.237 |
| 22 years | | | 3.011*** | 0.255 | 2.803*** | 0.238 |
| 23 years | | | 2.861*** | 0.253 | 2.642*** | 0.234 |
| 24 years | | | 2.766*** | 0.255 | 2.539*** | 0.234 |
| 25 years | | | 2.525*** | 0.242 | 2.309*** | 0.222 |
| 26 years | | | 2.400*** | 0.239 | 2.190*** | 0.218 |
| 27 years | | | 2.262*** | 0.234 | 2.062*** | 0.214 |
| 28 years | | | 2.134*** | 0.229 | 1.943*** | 0.209 |
| 29 years | | | 2.099*** | 0.234 | 1.908*** | 0.213 |

| | | | | |
|---|---|---|---|---|
| 30 years | 1.901*** | 0.220 | 1.729*** | 0.200 |
| 31 years | 1.883*** | 0.226 | 1.717*** | 0.206 |
| 32 years | 1.868*** | 0.233 | 1.711*** | 0.214 |
| 33 years | 1.700*** | 0.222 | 1.567*** | 0.205 |
| 34 years | 1.554*** | 0.213 | 1.447*** | 0.198 |
| 35 years | 1.409** | 0.204 | 1.327* | 0.192 |
| 36 years | 1.097 | 0.172 | 1.046 | 0.164 |
| 37 years | 0.983 | 0.167 | 0.950 | 0.161 |
| 38 years | 0.827 | 0.155 | 0.809 | 0.151 |
| 39 years | 0.837 | 0.168 | 0.827 | 0.166 |
| 40 years | 0.953 | 0.201 | 0.950 | 0.201 |
| Registered Partnership | 1.479*** | 0.019 | 1.465*** | 0.019 |
| Child born prior to marriage | 1.455*** | 0.009 | 1.461*** | 0.009 |
| *Spousal immigration background* | | | | |
| Husband native, Wife 1st gen. | 1.368*** | 0.010 | 1.317*** | 0.009 |
| Husband native, Wife 2nd gen. | 1.389*** | 0.009 | 1.366*** | 0.009 |
| Husband 1st gen. Wife native | 1.921*** | 0.014 | 1.898*** | 0.014 |
| Husband 1st gen. Wife 1st gen. | 0.679*** | 0.004 | 0.689*** | 0.004 |
| Husband 1st gen. Wife 2nd gen. | 1.386*** | 0.016 | 1.344*** | 0.015 |
| Husband 2nd gen. Wife native | 1.376*** | 0.009 | 1.357*** | 0.009 |
| Husband 2nd gen. Wife 1st gen. | 1.216*** | 0.017 | 1.156*** | 0.016 |
| Husband 2nd gen. Wife 2nd gen. | 1.501*** | 0.022 | 1.464*** | 0.021 |
| *Age at wedding* | | | | |
| Husband, linear | 0.888*** | 0.010 | 0.892*** | 0.010 |
| Husband, quadratic | 1.003*** | 0.000 | 1.003*** | 0.000 |
| Husband, cubic | 1.000*** | 0.000 | 1.000*** | 0.000 |
| Wife, linear | 1.042*** | 0.011 | 1.029*** | 0.011 |
| Wife, quadratic | 0.998*** | 0.000 | 0.998*** | 0.000 |
| Wife, cubic | 1.000*** | 0.000 | 1.000*** | 0.000 |
| *Education levels* | | | | |
| Husband, High School | 0.877*** | 0.007 | 0.869*** | 0.007 |
| Husband, University | 0.626*** | 0.006 | 0.643*** | 0.006 |
| Husband, Missing | 0.836*** | 0.007 | 0.828*** | 0.007 |
| Wife, High School | 0.999 | 0.007 | 0.978*** | 0.007 |
| Wife, University | 0.744*** | 0.006 | 0.756*** | 0.006 |
| Wife, Missing | 0.601*** | 0.004 | 0.590*** | 0.004 |
| *Calendar year* | | | | |
| 1996 | 0.970*** | 0.010 | 0.969*** | 0.010 |
| 1997 | 0.952*** | 0.012 | 0.950*** | 0.012 |
| 1998 | 0.976* | 0.015 | 0.973* | 0.015 |
| 1999 | 1.022 | 0.018 | 1.020 | 0.018 |
| 2000 | 1.090*** | 0.023 | 1.088*** | 0.023 |
| 2001 | 1.141*** | 0.028 | 1.138*** | 0.028 |
| 2002 | 1.111*** | 0.031 | 1.107*** | 0.031 |
| 2003 | 1.072** | 0.034 | 1.067** | 0.034 |

| | | | | |
|---|---|---|---|---|
| 2004 | 1.081** | 0.038 | 1.074** | 0.038 |
| 2005 | 1.067* | 0.041 | 1.057 | 0.041 |
| 2006 | 1.023 | 0.043 | 1.011 | 0.043 |
| 2007 | 1.009 | 0.047 | 0.995 | 0.046 |
| 2008 | 0.933 | 0.046 | 0.920* | 0.046 |
| 2009 | 0.881** | 0.047 | 0.869*** | 0.047 |
| 2010 | 0.892** | 0.051 | 0.880** | 0.050 |
| 2011 | 0.873** | 0.053 | 0.860** | 0.052 |
| 2012 | 0.902 | 0.058 | 0.888* | 0.057 |
| 2013 | 0.929 | 0.064 | 0.912 | 0.062 |
| 2014 | 0.930 | 0.067 | 0.911 | 0.066 |
| 2015 | 0.907 | 0.069 | 0.886 | 0.067 |
| Number of higher-order children | | | 0.279*** | 0.005 |
| *Number of higher-order children by age (base group is age 0)* | | | | |
| age 1 | | | 1.601*** | 0.033 |
| age 2 | | | 2.060*** | 0.041 |
| age 3 | | | 2.367*** | 0.047 |
| age 4 | | | 2.623*** | 0.052 |
| age 5 | | | 2.802*** | 0.055 |
| age 6 | | | 2.900*** | 0.057 |
| age 7 | | | 2.966*** | 0.058 |
| age 8 | | | 2.997*** | 0.059 |
| age 9 | | | 2.993*** | 0.059 |
| age 10 | | | 2.966*** | 0.059 |
| age 11 | | | 2.998*** | 0.060 |
| age 12 | | | 3.050*** | 0.061 |
| age 13 | | | 3.154*** | 0.064 |
| age 14 | | | 3.185*** | 0.065 |
| age 15 | | | 3.233*** | 0.066 |
| age 16 | | | 3.301*** | 0.059 |
| age 17 | | | 3.424*** | 0.073 |
| age 18 | | | 3.481*** | 0.076 |
| age 19 | | | 3.462*** | 0.078 |
| age 20 | | | 3.450*** | 0.082 |
| age 21 | | | 3.398*** | 0.085 |
| age 22 | | | 3.370*** | 0.092 |
| age 23 | | | 3.265*** | 0.101 |
| age 24 and older | | | 3.300*** | 0.118 |
| *Number of higher-order daughters by age* | | | | |
| age 0 | | | 0.943** | 0.023 |
| age 1 | | | 0.970* | 0.017 |
| age 2 | | | 0.975* | 0.015 |
| age 3 | | | 1.009 | 0.014 |
| age 4 | | | 0.991 | 0.013 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| age 5 | | | | | 0.982 | 0.013 |
| age 6 | | | | | 0.989 | 0.013 |
| age 7 | | | | | 0.980 | 0.013 |
| age 8 | | | | | 0.976* | 0.013 |
| age 9 | | | | | 0.999 | 0.014 |
| age 10 | | | | | 1.029** | 0.014 |
| age 11 | | | | | 0.992 | 0.014 |
| age 12 | | | | | 1.015 | 0.015 |
| age 13 | | | | | 1.012 | 0.015 |
| age 14 | | | | | 1.050*** | 0.016 |
| age 15 | | | | | 1.035** | 0.016 |
| age 16 | | | | | 1.061*** | 0.017 |
| age 17 | | | | | 1.036** | 0.017 |
| age 18 | | | | | 1.041** | 0.018 |
| age 19 | | | | | 1.020 | 0.020 |
| age 20 | | | | | 0.989 | 0.021 |
| age 21 | | | | | 0.981 | 0.023 |
| age 22 | | | | | 0.959 | 0.026 |
| age 23 | | | | | 0.970 | 0.032 |
| age 24 and older | | | | | 0.935* | 0.037 |
| Constant | 0.004*** | 0.000 | 0.004*** | 0.001 | 0.005*** | 0.002 |
| Observations | 30,180,829 | | 36,541,693 | | 36,541,693 | |
| Marriage spells | 2,174,182 | | 2,722,223 | | 2,722,223 | |
| Cohort FE | NO | | YES | | YES | |
| ln likelihood | -1,964,835 | | -2,427,247 | | -2,412,257 | |

Note: Authors' estimates of exponentiated coefficients from cloglog hazard models of marriage durations. The models use linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage.
*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.

**Table A2: Relative and absolute divorce effects of firstborn daughters**

| Age period | Excess hazard risk of divorce, families with firstborn daughters | Cumulative divorce rate by the end of the covered age period | | Absolute effect (cumulative) |
| --- | --- | --- | --- | --- |
| | | Sons | Daughters | |
| Age 0-12 | 0.50 % | 15.55 % | 15.63 % | 0.08 p.p. |
| | (0.37) | (0.04) | (0.04) | (0.06) |
| Age 13-18 | 5.24 % | 21.89 % | 22.28 % | 0.40 p.p. |
| | (0.56) | (0.05) | (0.05) | (0.07) |
| Age 19-26 | -0.49 % | 27.26 % | 27.61 % | 0.35 p.p. |
| | (0.78) | (0.06) | (0.05) | (0.08) |

Note: Excess hazard risks and cumulative divorce rates are derived from age- and gender-specific hazard rates of divorce predicted using the principal specification of cloglog hazard model of marriage durations. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971 and did not have children with other partners prior to the marriage. Absolute effect corresponds to the difference between the predicted gender-specific cumulative divorce rates. Standard errors in parentheses.

**Table A3: Excess hazard probabilities of firstborn daughters in subsample analyses**

| Model specification | Age 0-12 | Age 13-18 | Age 19-26 | Spells |
|---|---|---|---|---|
| Baseline, full sample | 1.005 | 1.052*** | 0.995 | 2,732,223 |
| | (0.004) | (0.007) | (0.007) | |
| *Immigration background and homogeneity* | | | | |
| Both spouses native | 1.007 | 1.043*** | 0.985* | 2,180,235 |
| (incl. 2nd gen. immigrant) | (0.005) | (0.007) | (0.008) | |
| Both spouses immigrants | 0.994 | 1.077*** | 1.059** | 315,582 |
| | (0.014) | (0.024) | (0.025) | |
| Father native, mother | 1.014 | 1.115*** | 1.047 | 129,055 |
| immigrant | (0.019) | (0.036) | (0.041) | |
| Mother native, father | 0.987 | 1.125*** | 1.033 | 97,351 |
| immigrant | (0.018) | (0.036) | (0.039) | |
| *Education, husband* | | | | |
| Less than High School | 1.001 | 1.084*** | 1.053* | 105,529 |
| | (0.018) | (0.029) | (0.032) | |
| High School | 0.999 | 1.045*** | 0.987 | 646,848 |
| | (0.008) | (0.013) | (0.015) | |
| University | 1.016 | 1.040** | 1.014 | 482,387 |
| | (0.013) | (0.019) | (0.025) | |
| Missing records | 1.001 | 1.052*** | 0.989 | 1,487,459 |
| | (0.006) | (0.009) | (0.010) | |
| *Education, wife* | | | | |
| Less than High School | 1.025 | 1.064*** | 0.996 | 143,567 |
| | (0.017) | (0.024) | (0.024) | |
| High School | 1.004 | 1.040*** | 0.991 | 707,095 |
| | (0.007) | (0.011) | (0.013) | |
| University | 0.993 | 1.018 | 0.953 | 471,839 |
| | (0.012) | (0.021) | (0.028) | |
| Missing records | 1.012* | 1.064*** | 1.004 | 1,409,722 |
| | (0.007) | (0.010) | (0.011) | |
| *Birth cohort, husband* | | | | |
| Cohorts 1955 and earlier | 1.002 | 1.075*** | 0.992 | 643,058 |
| | (0.009) | (0.011) | (0.010) | |
| Cohorts 1956-1965 | 1.003 | 1.051*** | 0.993 | 879,164 |
| | (0.006) | (0.010) | (0.014) | |
| Cohorts 1966 and later | 1.006 | 1.043*** | 1.005 | 1,200,001 |
| | (0.007) | (0.010) | (0.039) | |
| *Sibship, husband* | | | | |
| No sisters | 1.011 | 1.079*** | 0.948 | 365,798 |
| | (0.010) | (0.025) | (0.057) | |
| At least one sister | 1.012 | 1.004 | 0.965 | 520,846 |
| | (0.007) | (0.020) | (0.047) | |
| *Sibship, wife* | | | | |
| No brothers | 0.996 | 1.040** | 0.974 | 407,470 |
| | (0.009) | (0.020) | (0.042) | |
| At least one brother | 1.008 | 1.037** | 0.953 | 630,304 |
| | (0.008) | (0.016) | (0.031) | |

| | | | | |
|---|---|---|---|---|
| *Sibship, husband - twin sample* | | | | |
| Twin brother | 1.007 | 1.134** | 1.067 | 27,318 |
| | (0.044) | (0.071) | (0.098) | |
| Twin sister | 1.019 | 1.030 | 1.043 | 13,977 |
| | (0.062) | (0.093) | (0.127) | |
| *Sibship, wife - twin sample* | | | | |
| Twin brother | 1.065 | 1.047 | 0.808 | 13,750 |
| | (0.064) | (0.090) | (0.108) | |
| Twin sister | 1.012 | 1.029 | 1.084 | 29,361 |
| | (0.043) | (0.065) | (0.094) | |

Note: Authors' estimates of exponentiated coefficients corresponding to firstborn daughters in the three age-groups from the simplified specification of cloglog model of marriage durations. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, did not have children with other partners prior to the marriage.

*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level .

**Appendix Table A4: Regression results, CPS-MFS sample**

| | 1 | | 2 | | 3 | |
|---|---|---|---|---|---|---|
| VARIABLES | exp(Beta) | St.e. | exp(Beta) | St.e. | exp(Beta) | St.e. |
| Firstborn daughter aged 0-12 | 1.026 | 0.022 | 1.028 | 0.022 | 1.021 | 0.022 |
| Firstborn daughter aged 13-18 | 1.147** | 0.073 | 1.149** | 0.073 | 1.150** | 0.073 |
| Firstborn daughter aged 19-26 | 0.937 | 0.091 | 0.938 | 0.091 | 0.941 | 0.091 |
| *Firstborn's age dummies* | | | | | | |
| 1 year | 1.250*** | 0.057 | 1.162*** | 0.053 | 1.133*** | 0.052 |
| 2 years | 1.282*** | 0.059 | 1.194*** | 0.057 | 1.143*** | 0.054 |
| 3 years | 1.264*** | 0.059 | 1.164*** | 0.057 | 1.086* | 0.053 |
| 4 years | 1.260*** | 0.060 | 1.248*** | 0.064 | 1.146*** | 0.059 |
| 5 years | 1.093* | 0.055 | 1.139** | 0.062 | 1.024 | 0.056 |
| 6 years | 1.078 | 0.056 | 1.242*** | 0.070 | 1.100* | 0.063 |
| 7 years | 0.957 | 0.052 | 1.194*** | 0.072 | 1.042 | 0.063 |
| 8 years | 0.998 | 0.055 | 1.348*** | 0.085 | 1.161** | 0.073 |
| 9 years | 0.872** | 0.052 | 1.297*** | 0.088 | 1.103 | 0.075 |
| 10 years | 0.815*** | 0.052 | 1.317*** | 0.096 | 1.108 | 0.081 |
| 11 years | 0.786*** | 0.052 | 1.404*** | 0.109 | 1.166** | 0.091 |
| 12 years | 0.750*** | 0.052 | 1.538*** | 0.128 | 1.275*** | 0.106 |
| 13 years | 0.588*** | 0.05 | 1.295*** | 0.127 | 1.067 | 0.105 |
| 14 years | 0.671*** | 0.057 | 1.520*** | 0.153 | 1.246** | 0.125 |
| 15 years | 0.478*** | 0.045 | 1.165 | 0.132 | 0.954 | 0.108 |
| 16 years | 0.621*** | 0.055 | 1.691*** | 0.188 | 1.395*** | 0.155 |
| 17 years | 0.522*** | 0.050 | 1.546*** | 0.187 | 1.281** | 0.154 |
| 18 years | 0.625*** | 0.063 | 1.975*** | 0.259 | 1.648*** | 0.215 |
| 19 years | 0.587*** | 0.065 | 1.890*** | 0.275 | 1.582*** | 0.227 |
| 20 years | 0.573*** | 0.076 | 1.895*** | 0.321 | 1.589*** | 0.266 |
| 21 years | 0.476*** | 0.064 | 1.578*** | 0.278 | 1.328 | 0.229 |
| 22 years | 0.436*** | 0.064 | 1.452* | 0.284 | 1.218 | 0.234 |
| 23 years | 0.424*** | 0.063 | 1.579** | 0.324 | 1.332 | 0.268 |
| 24 years | 0.350*** | 0.062 | 1.351 | 0.322 | 1.134 | 0.265 |
| 25 years | 0.371*** | 0.075 | 1.731* | 0.488 | 1.447 | 0.402 |
| 26 years | 0.295*** | 0.073 | 1.923* | 0.649 | 1.594 | 0.530 |
| No children dummy | | | 1.436*** | 0.053 | 1.627*** | 0.061 |
| *Marriage duration dummies* | | | | | | |
| 1 year | | | 1.631*** | 0.064 | 1.654*** | 0.065 |
| 2 years | | | 2.057*** | 0.08 | 2.098*** | 0.083 |
| 3 years | | | 1.951*** | 0.079 | 1.998*** | 0.084 |
| 4 years | | | 2.302*** | 0.093 | 2.370*** | 0.103 |
| 5 years | | | 2.033*** | 0.086 | 2.096*** | 0.097 |
| 6 years | | | 2.089*** | 0.091 | 2.162*** | 0.106 |
| 7 years | | | 1.831*** | 0.084 | 1.891*** | 0.099 |
| 8 years | | | 1.680*** | 0.081 | 1.731*** | 0.099 |
| 9 years | | | 1.589*** | 0.081 | 1.626*** | 0.099 |
| 10 years | | | 1.421*** | 0.077 | 1.444*** | 0.095 |
| 11 years | | | 1.310*** | 0.076 | 1.321*** | 0.094 |
| 12 years | | | 1.258*** | 0.078 | 1.257*** | 0.096 |
| 13 years | | | 1.014 | 0.071 | 1.001 | 0.085 |
| 14 years | | | 0.881* | 0.066 | 0.862 | 0.078 |

| | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
| 15 years | | | 0.903 | 0.069 | 0.872 | 0.082 |
| 16 years | | | 0.882 | 0.075 | 0.843* | 0.087 |
| 17 years | | | 0.761*** | 0.070 | 0.710*** | 0.079 |
| 18 years | | | 0.690*** | 0.068 | 0.634*** | 0.075 |
| 19 years | | | 0.604*** | 0.067 | 0.543*** | 0.071 |
| 20 years | | | 0.603*** | 0.071 | 0.534*** | 0.073 |
| 21 years | | | 0.579*** | 0.077 | 0.503*** | 0.077 |
| 22 years | | | 0.554*** | 0.077 | 0.470*** | 0.074 |
| 23 years | | | 0.644*** | 0.103 | 0.536*** | 0.095 |
| 24 years | | | 0.513*** | 0.091 | 0.417*** | 0.082 |
| 25 years | | | 0.567*** | 0.104 | 0.449*** | 0.090 |
| 26 years | | | 0.494*** | 0.113 | 0.382*** | 0.092 |
| 27 years | | | 0.405*** | 0.097 | 0.304*** | 0.077 |
| 28 years | | | 0.170*** | 0.066 | 0.126*** | 0.050 |
| 29 years | | | 0.169*** | 0.093 | 0.123*** | 0.068 |
| 30 years | | | 0.202*** | 0.112 | 0.135*** | 0.076 |
| Mother's age at wedding - linear term | | | | | 0.423*** | 0.042 |
| Mother's age at wedding - quad. term | | | | | 1.023*** | 0.004 |
| Mother's age at wedding - cubic term | | | | | 1.000*** | 0.000 |
| Birth cohort 1940-1944 | | | | | 1.085** | 0.036 |
| Birth cohort 1945-1949 | | | | | 1.079* | 0.049 |
| Birth cohort 1950-1954 | | | | | 1.111* | 0.068 |
| Birth cohort 1955-1959 | | | | | 1.075 | 0.084 |
| Birth cohort 1960-1964 | | | | | 1.001 | 0.098 |
| Birth cohort 1965-1969 | | | | | 0.876 | 0.106 |
| Birth cohort 1970+ | | | | | 0.806 | 0.135 |
| Calendar years 1955-1959 | | | | | 1.011 | 0.163 |
| Calendar years 1960-1964 | | | | | 1.087 | 0.173 |
| Calendar years 1965-1969 | | | | | 1.413** | 0.229 |
| Calendar years 1970-1974 | | | | | 1.865*** | 0.314 |
| Calendar years 1975-1979 | | | | | 1.807*** | 0.318 |
| Calendar years 1980-1984 | | | | | 1.883*** | 0.350 |
| Calendar years 1985-1989 | | | | | 2.049*** | 0.403 |
| Calendar years 1990+ | | | | | 3.379*** | 0.707 |
| Constant | 0.015*** | 0.001 | 0.008*** | 0.000 | 79.164*** | 63.618 |
| Observations | 962,065 | | 1,565,855 | | 1,565,855 | |
| Marriage spells | 82,167 | | 133,022 | | 133,022 | |
| ln likelihood | -109,143,653 | | -194,254,953 | | -182,229,045 | |

Note: Authors' estimates of exponentiated coefficients from cloglog hazard models of marriage durations. The model uses retrospective marital histories of American women aged 15-65, collected in CPS-MFS waves 1980, 1985, 1990 and 1995. The sample consists of first marital spells of women who were born in or after 1935, who married before the age of 16 and 45, and who did not give birth to any children prior to the date of the first marriage.
*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.

**Table A5a: Overview of gender effects on marital stability found by earlier studies – published papers analyzing divorce**

| Study | Land | Dataset | Age cutoff | Div. rate, parents w/ boys | Relative Effect | Absolute Effect | Statistically significant (p<0.05) | Notes |
|---|---|---|---|---|---|---|---|---|
| Dahl and Moretti (2008) | USA | Census '60-'00 | **12 yrs** | 12.5% | 1.3% | **0.16 p.p.** | ✓ | Firstborn girl effect, outcome is current divorce or separation, (retrieved from Table 1, col. 3). |
| Dahl and Moretti (2008) | USA | Census '60-80 | **12 yrs** | 20.6% | 2.2% | **0.45 p.p.** | ✓ | Firstborn girl effect, outcome is first marriage ended in divorce, (retrieved from Table 1, col. 5). |
| Andersson and Woldmicael (2001) | SWE | Admin. '71-'95 | **15 yrs of marriage** | 17.3%[†] | 1.0% | **0.17 p.p.**[†] | insig. | 1 boy vs 1 girl, outcome is first marriage ended in divorce, (retrieved from Table 1, col. 1, average divorce rate retrieved from Andersson, 1997). |
| Morgan et al. (1988) | USA | CPS '80 | **15 yrs** | 10.0%[†] | 6.3% | **0.63 p.p.**[†] | ✓ | 1 boy vs 1 girl, outcome is first marriage ended in divorce, (retrieved from Table A3, col. 4, average div. rate derived from Table A1). |
| Ananat and Michaels (2008) | USA | Census '80 | **16 yrs** | 17.2% | 3.7% | **0.63 p.p.** | ✓ | Firstborn girl effect effect, outcome is first marriage ended in divorce, (retrieved from Table 1, col. 1). |
| Bedard and Deschenes (2005) | USA | Census '80 | **17 yrs** | 20.0% | 4.0% | **0.80 p.p.** | ✓ | Firstborn girl effect, outcome is first marriage ended in divorce, (retrieved from Table 1, col. 1). |
| Dahl and Moretti 2008 | USA | CPS '80-'95 | **None** | 32.0% | 3.2% | **1.03 p.p.** | ✓ | Firstborn girl effect, outcome is first marriage ended in divorce, (retrieved from Table 1, col. 4). |
| Diekmann and Schmidheiny (2004) | INT'L | FFS '95 | **None** | 17.6%[†] | 6.0%[†] | **1.06 p.p.**[†] | partially insig. | 1 boy vs 1 girl, outcome is current divorce, unweighted average of country-specific effects (retrieved from Table 2). |

Note: The divorce rate in column 4 represents the share of divorced families within the analyzed subsample of families with boys. The study of Mammen (2008) is not listed due to the lack of comparable data.

[†]denotes own back-of-the-envelope calculations using the results and descriptive statistics provided in the manuscripts.

**Table A5b: Gender effects found by earlier studies – papers with different outcome variables, and unpublished papers analyzing divorce**

| Study | Land | Dataset | Age cutoff | Outcome rate, parents w/ boys | Relative Effect | Absolute Effect | Statistically significant | Notes |
|---|---|---|---|---|---|---|---|---|
| *Outcome variable is father's non-residence (compound effect of couple formation, divorce and separation)* | | | | | | | | |
| Reichman et al. (2004) | USA | FrFS '98-'00 | **1.5 yrs** | 37.0% | 2.0% | **0.74 p.p.**[†] | insig. | Firstborn girl effect, (Relative effect retrieved from Table 2, col. 4, baseline non-resid. rate retrieved from Table 1, col. 1). |
| Flouri and Malmberg (2010) | UK | MCS '03 | **3 yrs** | 7.50% | -8.0% | **-0.05 p.p.** | insig. | 1 boy vs 1 girl effect, (retrieved from Table 1, col. 2). |
| *Outcome variable is an indicator for not being married (compound effect of couple formation, legitimization and divorce)* | | | | | | | | |
| Depew and Price (2017) | USA | ACS '00-'14 | **12 yrs** | 20.2% | 1.63%[†] | **0.33 p.p.** | ✓ | Firstborn girl effect, (retrieved from Table 2, col.1, baseline not-in-marriage rate retrieved from Table 1, columns 1 and 5). |
| *Unpublished manuscripts, outcome variable is first marriage ended in divorce* | | | | | | | | |
| Morgan and Pollard (2002) | USA | CPS '80 & '85 | **14 yrs** | n/a | 6.0% | **n/a** | ✓ | Cummulative effect per girl, (retrieved from Table 2, col. 1). |
| Morgan and Pollard (2002) | USA | CPS '90 & '95 | **14 yrs** | n/a | 1.0% | **n/a** | insig. | Cummulative effect per girl, (retrieved from Table 2, col. 2). |

Note: [†]denotes own back-of-the-envelope calculations

**Table A6: Person-year records of coupled individuals who live with at least some of their children in the same household, LISS panel, years 2008-2015**

| Sample | Number of person-year records |
|---|---|
| Coupled adults in LISS households who live with their children | 24,467 |
| *Out of whom:* | |
| Adults who participate in the survey | 19,084 |
| Adults who filled out the family module (necessary to identify biological children) | 14,507 |
| *Out of whom:* | |
| Adults who share biological firstborn with their current partner | 12,886 |
| Adults whose biological firstborn is alive and at most 18 years old | 8,079 |
| Adults whose biological firstborn is at most 18 years old and lives in the same household | 8,029 |
| *Out of whom:* | |
| Adults who are married | 6,603 |
| Adults who are married and their firstborn is a teenager | 2,521 |

**Table A7: Regression analysis of parental responses in the LISS panel, excess coefficients for firstborn daughters aged 0-12 and 13-18**

| | Father | | Mother | |
| *Subjective questions* | Age 0-12 | Age 13-18 | Age 0-12 | Age 13-18 |
|---|---|---|---|---|
| How satisfied are you with your current relationship? | 0.032 | 0.030 | -0.185** | -0.071 |
| [Did] you and your partner (have) any differences of opinion regarding money expenditure over the past year? | -0.113 | 0.148 | 0.189** | 0.258** |
| [Did] you and your partner (have) any differences of opinion regarding raising the children over the past year? | -0.152 | 0.298** | -0.108 | 0.181* |
| A woman is more suited to rearing young children than a man | -0.170* | -0.371*** | 0.014 | -0.189* |
| Divorce is generally best solution if a married couple cannot solve their marital problems | -0.102 | 0.085 | 0.052 | 0.323*** |
| Married people are generally happier than unmarried people | -0.100 | -0.155 | -0.079 | -0.073 |
| How would you generally describe the relationship with your family? | -0.216 | -0.406** | 0.032 | -0.111 |
| Caring for my child is not such a burden | 0.116 | 0.100 | 0.380*** | 0.048 |
| How satisfied are you with the life you lead at the moment? | 0.012 | -0.060 | -0.146* | -0.212** |

*Behaviour of firstborn child over last three months*

| | | | | |
|---|---|---|---|---|
| Is too quarrelsome | -0.358** | -0.074 | -0.432*** | 0.420** |
| Has trouble concentrating cannot keep his/her attention focused on something for long | -0.797*** | -0.870*** | -1.023*** | -0.662*** |
| Has trouble relating to other children | -0.228 | -0.254 | -0.529*** | -0.118 |
| Is easily confused | -0.359** | -0.975*** | -0.353** | -0.650*** |
| Feels worthless or inferior | 0.154 | 0.017 | -0.267* | 0.521** |
| Is not liked by other children | -0.619*** | 0.072 | -0.316* | -0.154 |
| Is headstrong sullen or irritable | -0.417*** | 0.134 | -0.371*** | 0.232 |
| Is unhappy sad or depressed | -0.295 | 0.053 | -0.207 | 0.504** |
| Clings to adults | -0.070 | -0.518* | 0.142 | 0.026 |
| Is too dependent on others | -0.227 | -0.308 | -0.082 | 0.127 |
| Is disobedient in school | -1.244*** | -1.032*** | -1.093*** | -0.388 |
| Has trouble relating to teachers | -0.363 | -0.272 | -0.454 | -0.117 |

*Expenditures and time-use*

| | | | | |
|---|---|---|---|---|
| How much time did you spend in the last seven days on activities with own child | 0.320 | 1.375 | -2.013** | -0.679 |
| Log total expenditure per month for children living at home, children 0-15 | 0.235 | -0.017 | 0.038 | 0.100 |

Note: Authors' estimates of coefficients of the daughter-age interactions from ordered logit and regression models of responses from different-sex couples with a firstborn biological child younger than 19 at the time of the survey. LISS data 2008-2015. The models include controls for parent's age, education and immigration background, and number and gender of children of higher parities. Significance based on robust standard errors.
*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.

**Table A8: Regression analysis of children's responses in the LISS panel, excess coefficients for daughters aged 16-18**

| Question | Teenage daughters aged 16-18, firstborn only | Teenage daughters aged 16-18, all parities |
|---|---|---|
| How would you describe your overall relationship with your father | -0.277* | -0.265** |
| How would you describe your overall relationship with your mother | -0.034 | -0.043 |

Note: Authors' estimates of coefficients of the daughter-age interactions from ordered logit models using the responses of 16-18 year old children born to different-sex couples whose firstborn is a biological child. LISS data 2008-2015. The models include controls for parent's age, education and immigration background, and number and gender of children of higher parities. Models use ordered logit specification with robust standard errors.

**APPENDIX B – TABLES OF RESULTS CORRESPONDING TO SUPPLEMENTARY ANALYSES**
**Table B1a: Estimates corresponding to the subsample models**

| VARIABLES | Baseline | Immigration background | | | | Education, husband | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Native | Immigrants | Mixed, husband native | Mixed, husband immigrant | Primary school | High school | University | Missing |
| *Firstborn's age dummies* | | | | | | | | | |
| age 1 | 1.681*** | 1.717*** | 1.518*** | 1.845*** | 1.546*** | 1.443*** | 1.719*** | 1.773*** | 1.649*** |
| | (0.032) | (0.038) | (0.086) | (0.152) | (0.093) | (0.127) | (0.057) | (0.100) | (0.043) |
| age 2 | 2.148*** | 2.165*** | 2.089*** | 2.499*** | 2.036*** | 1.770*** | 2.155*** | 2.303*** | 2.119*** |
| | (0.039) | (0.045) | (0.111) | (0.196) | (0.116) | (0.148) | (0.068) | (0.124) | (0.053) |
| age 3 | 2.416*** | 2.479*** | 2.215*** | 2.953*** | 2.141*** | 1.845*** | 2.435*** | 2.644*** | 2.363*** |
| | (0.043) | (0.051) | (0.117) | (0.227) | (0.122) | (0.153) | (0.076) | (0.140) | (0.058) |
| age 4 | 2.741*** | 2.847*** | 2.397*** | 3.420*** | 2.271*** | 2.085*** | 2.640*** | 3.017*** | 2.729*** |
| | (0.048) | (0.058) | (0.127) | (0.261) | (0.131) | (0.171) | (0.083) | (0.159) | (0.066) |
| age 5 | 3.067*** | 3.210*** | 2.707*** | 3.762*** | 2.333*** | 2.140*** | 2.993*** | 3.525*** | 3.004*** |
| | (0.054) | (0.065) | (0.143) | (0.288) | (0.136) | (0.177) | (0.094) | (0.185) | (0.073) |
| age 6 | 3.384*** | 3.567*** | 2.861*** | 4.142*** | 2.498*** | 2.163*** | 3.200*** | 4.163*** | 3.321*** |
| | (0.059) | (0.073) | (0.152) | (0.318) | (0.148) | (0.180) | (0.101) | (0.218) | (0.080) |
| age 7 | 3.731*** | 3.948*** | 3.075*** | 4.273*** | 2.832*** | 2.279*** | 3.450*** | 4.586*** | 3.702*** |
| | (0.066) | (0.081) | (0.164) | (0.331) | (0.169) | (0.191) | (0.109) | (0.241) | (0.090) |
| age 8 | 3.943*** | 4.195*** | 3.116*** | 4.739*** | 2.803*** | 2.527*** | 3.691*** | 5.113*** | 3.817*** |
| | (0.070) | (0.086) | (0.169) | (0.369) | (0.171) | (0.212) | (0.118) | (0.270) | (0.093) |
| age 9 | 4.158*** | 4.466*** | 3.134*** | 4.644*** | 2.850*** | 2.431*** | 3.788*** | 5.428*** | 4.087*** |
| | (0.074) | (0.092) | (0.172) | (0.367) | (0.178) | (0.207) | (0.123) | (0.289) | (0.100) |
| age 10 | 4.450*** | 4.743*** | 3.494*** | 5.302*** | 2.952*** | 2.677*** | 4.015*** | 5.883*** | 4.364*** |
| | (0.080) | (0.098) | (0.192) | (0.420) | (0.188) | (0.229) | (0.131) | (0.316) | (0.107) |
| age 11 | 4.559*** | 4.821*** | 3.673*** | 5.629*** | 3.132*** | 2.694*** | 4.017*** | 6.037*** | 4.513*** |
| | (0.083) | (0.101) | (0.204) | (0.450) | (0.202) | (0.232) | (0.133) | (0.329) | (0.111) |
| age 12 | 4.858*** | 5.131*** | 3.808*** | 5.937*** | 3.539*** | 2.641*** | 4.430*** | 6.260*** | 4.779*** |
| | (0.089) | (0.108) | (0.213) | (0.480) | (0.230) | (0.231) | (0.148) | (0.345) | (0.119) |
| age 13 | 5.112*** | 5.465*** | 3.919*** | 5.875*** | 3.284*** | 2.980*** | 4.648*** | 6.556*** | 5.017*** |
| | (0.096) | (0.118) | (0.227) | (0.494) | (0.227) | (0.266) | (0.161) | (0.374) | (0.128) |
| age 14 | 5.439*** | 5.828*** | 4.008*** | 6.110*** | 3.640*** | 3.174*** | 4.843*** | 6.992*** | 5.375*** |
| | (0.103) | (0.127) | (0.235) | (0.520) | (0.253) | (0.286) | (0.170) | (0.404) | (0.137) |
| age 15 | 5.819*** | 6.217*** | 4.389*** | 6.986*** | 3.682*** | 3.190*** | 5.046*** | 7.836*** | 5.780*** |
| | (0.111) | (0.136) | (0.259) | (0.596) | (0.262) | (0.291) | (0.180) | (0.456) | (0.148) |
| age 16 | 6.096*** | 6.497*** | 4.501*** | 7.324*** | 4.273*** | 3.345*** | 5.458*** | 8.259*** | 5.976*** |
| | (0.117) | (0.143) | (0.270) | (0.632) | (0.305) | (0.307) | (0.196) | (0.488) | (0.155) |
| age 17 | 6.636*** | 7.047*** | 5.184*** | 8.181*** | 4.423*** | 3.337*** | 5.850*** | 9.073*** | 6.569*** |

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|---|---|---|---|---|---|---|---|---|
|  | (0.128) | (0.156) | (0.312) | (0.710) | (0.323) | (0.310) | (0.213) | (0.542) | (0.171) |
| age 18 | 6.967*** | 7.409*** | 5.441*** | 8.521*** | 4.575*** | 3.498*** | 6.203*** | 9.526*** | 6.873*** |
|  | (0.136) | (0.166) | (0.331) | (0.750) | (0.341) | (0.328) | (0.229) | (0.577) | (0.180) |
| age 19 | 7.398*** | 7.787*** | 6.110*** | 9.141*** | 5.125*** | 3.430*** | 6.607*** | 10.599*** | 7.283*** |
|  | (0.147) | (0.177) | (0.375) | (0.821) | (0.391) | (0.327) | (0.250) | (0.651) | (0.193) |
| age 20 | 7.338*** | 7.737*** | 6.230*** | 8.183*** | 4.972*** | 3.701*** | 6.563*** | 9.927*** | 7.254*** |
|  | (0.148) | (0.178) | (0.389) | (0.759) | (0.392) | (0.356) | (0.254) | (0.626) | (0.195) |
| age 21 | 7.157*** | 7.531*** | 5.879*** | 8.480*** | 5.076*** | 3.675*** | 6.237*** | 9.933*** | 7.113*** |
|  | (0.147) | (0.177) | (0.377) | (0.802) | (0.411) | (0.360) | (0.249) | (0.642) | (0.194) |
| age 22 | 7.030*** | 7.273*** | 6.781*** | 7.945*** | 4.698*** | 3.538*** | 6.265*** | 9.885*** | 6.941*** |
|  | (0.148) | (0.174) | (0.439) | (0.777) | (0.398) | (0.354) | (0.257) | (0.655) | (0.193) |
| age 23 | 6.689*** | 6.884*** | 6.332*** | 7.007*** | 5.187*** | 3.518*** | 6.157*** | 9.512*** | 6.506*** |
|  | (0.145) | (0.170) | (0.425) | (0.722) | (0.448) | (0.359) | (0.262) | (0.652) | (0.186) |
| age 24 | 6.404*** | 6.618*** | 5.892*** | 7.305*** | 4.233*** | 2.933*** | 5.587*** | 9.207*** | 6.387*** |
|  | (0.144) | (0.168) | (0.414) | (0.779) | (0.402) | (0.314) | (0.251) | (0.657) | (0.188) |
| age 25 | 6.187*** | 6.176*** | 6.797*** | 7.489*** | 4.657*** | 3.180*** | 5.550*** | 8.369*** | 6.127*** |
|  | (0.144) | (0.164) | (0.486) | (0.830) | (0.455) | (0.347) | (0.261) | (0.631) | (0.186) |
| age 26 | 6.011*** | 5.945*** | 6.376*** | 7.548*** | 5.481*** | 3.004*** | 5.347*** | 7.820*** | 6.012*** |
|  | (0.146) | (0.164) | (0.481) | (0.875) | (0.545) | (0.341) | (0.266) | (0.624) | (0.189) |
| No Children dummy | 6.023*** | 6.352*** | 5.035*** | 7.450*** | 4.451*** | 3.545*** | 5.413*** | 9.721*** | 5.896*** |
|  | (0.096) | (0.118) | (0.240) | (0.525) | (0.227) | (0.263) | (0.153) | (0.464) | (0.130) |
| Firstborn daughter aged 0-12 | 1.005 | 1.007 | 0.994 | 1.014 | 0.987 | 1.001 | 0.999 | 1.016 | 1.001 |
|  | (0.004) | (0.005) | (0.014) | (0.019) | (0.018) | (0.018) | (0.008) | (0.013) | (0.006) |
| Firstborn daughter aged 13-18 | 1.052*** | 1.043*** | 1.077*** | 1.115*** | 1.125*** | 1.084*** | 1.051*** | 1.040** | 1.052*** |
|  | (0.007) | (0.007) | (0.024) | (0.036) | (0.036) | (0.029) | (0.013) | (0.019) | (0.009) |
| Firstborn daughter aged 19-26 | 0.995 | 0.985* | 1.059** | 1.047 | 1.033 | 1.053* | 0.987 | 1.014 | 0.989 |
|  | (0.007) | (0.008) | (0.025) | (0.041) | (0.039) | (0.032) | (0.015) | (0.025) | (0.010) |
| *Marriage duration dummies* | | | | | | | | | |
| 1 year | 3.882*** | 3.889*** | 4.181*** | 4.329*** | 4.043*** | 3.778*** | 3.678*** | 3.885*** | 4.016*** |
|  | (0.067) | (0.074) | (0.292) | (0.335) | (0.282) | (0.393) | (0.113) | (0.170) | (0.100) |
| 2 years | 5.864*** | 5.782*** | 7.013*** | 7.919*** | 6.129*** | 5.041*** | 5.470*** | 6.439*** | 5.992*** |
|  | (0.107) | (0.117) | (0.494) | (0.628) | (0.446) | (0.539) | (0.178) | (0.302) | (0.154) |
| 3 years | 7.157*** | 6.714*** | 10.206*** | 10.947*** | 8.770*** | 6.478*** | 6.351*** | 8.479*** | 7.363*** |
|  | (0.143) | (0.150) | (0.756) | (0.940) | (0.697) | (0.738) | (0.232) | (0.449) | (0.204) |
| 4 years | 8.018*** | 7.108*** | 13.254*** | 14.205*** | 10.824*** | 7.580*** | 6.936*** | 9.783*** | 8.295*** |
|  | (0.179) | (0.178) | (1.056) | (1.348) | (0.963) | (0.941) | (0.287) | (0.593) | (0.254) |
| 5 years | 7.741*** | 7.021*** | 12.561*** | 13.272*** | 9.366*** | 6.777*** | 6.677*** | 9.852*** | 8.003*** |
|  | (0.194) | (0.198) | (1.095) | (1.410) | (0.943) | (0.932) | (0.315) | (0.684) | (0.272) |
| 6 years | 7.593*** | 7.041*** | 11.480*** | 13.509*** | 8.363*** | 6.699*** | 6.414*** | 10.286*** | 7.831*** |
|  | (0.213) | (0.223) | (1.096) | (1.599) | (0.947) | (1.016) | (0.342) | (0.808) | (0.296) |
| 7 years | 7.109*** | 6.803*** | 10.189*** | 12.089*** | 6.888*** | 5.212*** | 5.946*** | 10.159*** | 7.395*** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (0.222) | (0.240) | (1.065) | (1.590) | (0.872) | (0.874) | (0.355) | (0.897) | (0.309) |
| 8 years | 6.642*** | 6.600*** | 8.312*** | 11.028*** | 5.908*** | 4.858*** | 5.565*** | 9.908*** | 6.850*** |
| | (0.229) | (0.257) | (0.949) | (1.601) | (0.830) | (0.893) | (0.370) | (0.973) | (0.315) |
| 9 years | 6.235*** | 6.273*** | 7.792*** | 10.481*** | 5.086*** | 4.104*** | 5.197*** | 9.296*** | 6.511*** |
| | (0.236) | (0.268) | (0.965) | (1.667) | (0.786) | (0.824) | (0.380) | (1.008) | (0.327) |
| 10 years | 5.879*** | 6.100*** | 6.462*** | 9.666*** | 4.592*** | 3.529*** | 4.775*** | 9.077*** | 6.221*** |
| | (0.243) | (0.285) | (0.867) | (1.676) | (0.775) | (0.770) | (0.383) | (1.078) | (0.340) |
| 11 years | 5.517*** | 5.817*** | 6.036*** | 8.488*** | 4.089*** | 3.008*** | 4.503*** | 9.015*** | 5.803*** |
| | (0.247) | (0.295) | (0.872) | (1.596) | (0.749) | (0.710) | (0.392) | (1.165) | (0.343) |
| 12 years | 5.099*** | 5.443*** | 5.449*** | 8.332*** | 3.348*** | 2.788*** | 4.141*** | 8.165*** | 5.417*** |
| | (0.246) | (0.297) | (0.845) | (1.688) | (0.663) | (0.707) | (0.390) | (1.142) | (0.345) |
| 13 years | 4.822*** | 5.276*** | 4.684*** | 7.261*** | 3.117*** | 2.559*** | 3.841*** | 8.018*** | 5.154*** |
| | (0.250) | (0.310) | (0.777) | (1.580) | (0.663) | (0.695) | (0.389) | (1.207) | (0.352) |
| 14 years | 4.585*** | 5.090*** | 4.331*** | 6.952*** | 2.684*** | 2.282*** | 3.526*** | 7.966*** | 4.970*** |
| | (0.254) | (0.319) | (0.766) | (1.616) | (0.611) | (0.661) | (0.382) | (1.284) | (0.362) |
| 15 years | 4.379*** | 4.906*** | 3.925*** | 6.733*** | 2.616*** | 1.909** | 3.375*** | 7.721*** | 4.783*** |
| | (0.259) | (0.328) | (0.737) | (1.666) | (0.634) | (0.589) | (0.390) | (1.328) | (0.371) |
| 16 years | 4.163*** | 4.761*** | 3.559*** | 5.834*** | 2.297*** | 1.643 | 3.200*** | 7.478*** | 4.580*** |
| | (0.261) | (0.338) | (0.707) | (1.533) | (0.591) | (0.537) | (0.393) | (1.367) | (0.377) |
| 17 years | 3.881*** | 4.472*** | 3.190*** | 5.722*** | 2.082*** | 1.578 | 2.930*** | 6.967*** | 4.307*** |
| | (0.257) | (0.336) | (0.670) | (1.591) | (0.567) | (0.545) | (0.381) | (1.349) | (0.375) |
| 18 years | 3.722*** | 4.366*** | 2.864*** | 5.463*** | 1.788** | 1.410 | 2.753*** | 6.789*** | 4.185*** |
| | (0.261) | (0.346) | (0.633) | (1.602) | (0.514) | (0.513) | (0.378) | (1.388) | (0.384) |
| 19 years | 3.514*** | 4.195*** | 2.468*** | 4.855*** | 1.666* | 1.166 | 2.557*** | 6.444*** | 4.016*** |
| | (0.259) | (0.350) | (0.574) | (1.499) | (0.504) | (0.447) | (0.370) | (1.388) | (0.387) |
| 20 years | 3.322*** | 4.008*** | 2.283*** | 4.677*** | 1.432 | 1.184 | 2.508*** | 6.116*** | 3.742*** |
| | (0.257) | (0.351) | (0.556) | (1.515) | (0.455) | (0.475) | (0.381) | (1.384) | (0.379) |
| 21 years | 3.112*** | 3.766*** | 2.126*** | 4.683*** | 1.321 | 1.025 | 2.215*** | 6.429*** | 3.550*** |
| | (0.252) | (0.346) | (0.542) | (1.588) | (0.440) | (0.431) | (0.353) | (1.524) | (0.376) |
| 22 years | 3.011*** | 3.728*** | 1.972** | 4.155*** | 1.052 | 0.919 | 2.161*** | 5.936*** | 3.475*** |
| | (0.255) | (0.358) | (0.525) | (1.474) | (0.367) | (0.404) | (0.360) | (1.473) | (0.385) |
| 23 years | 2.861*** | 3.568*** | 1.797** | 3.967*** | 1.079 | 0.784 | 2.021*** | 5.857*** | 3.333*** |
| | (0.253) | (0.357) | (0.499) | (1.469) | (0.392) | (0.360) | (0.351) | (1.517) | (0.385) |
| 24 years | 2.766*** | 3.484*** | 1.687* | 4.089*** | 0.954 | 0.731 | 1.908*** | 5.850*** | 3.249*** |
| | (0.255) | (0.364) | (0.488) | (1.577) | (0.361) | (0.349) | (0.346) | (1.580) | (0.391) |
| 25 years | 2.525*** | 3.212*** | 1.535 | 3.660*** | 0.846 | 0.717 | 1.716*** | 5.400*** | 2.971*** |
| | (0.242) | (0.349) | (0.462) | (1.471) | (0.334) | (0.356) | (0.324) | (1.519) | (0.372) |
| 26 years | 2.401*** | 3.114*** | 1.321 | 3.322*** | 0.776 | 0.629 | 1.637** | 5.211*** | 2.835*** |
| | (0.239) | (0.352) | (0.414) | (1.389) | (0.319) | (0.325) | (0.321) | (1.524) | (0.369) |
| 27 years | 2.262*** | 2.971*** | 1.294 | 3.122*** | 0.598 | 0.575 | 1.516** | 4.498*** | 2.728*** |
| | (0.234) | (0.348) | (0.420) | (1.356) | (0.256) | (0.308) | (0.309) | (1.367) | (0.369) |

25

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| 28 years | 2.134*** | 2.863*** | 1.100 | 2.721** | 0.630 | 0.573 | 1.308 | 5.248*** | 2.565*** |
| | (0.229) | (0.348) | (0.372) | (1.230) | (0.279) | (0.319) | (0.277) | (1.654) | (0.360) |
| 29 years | 2.099*** | 2.900*** | 0.950 | 2.529** | 0.500 | 0.440 | 1.421 | 4.598*** | 2.526*** |
| | (0.234) | (0.366) | (0.335) | (1.189) | (0.231) | (0.254) | (0.312) | (1.506) | (0.367) |
| 30 years | 1.901*** | 2.652*** | 0.931 | 2.175 | 0.431* | 0.409 | 1.243 | 4.011*** | 2.325*** |
| | (0.220) | (0.347) | (0.343) | (1.068) | (0.208) | (0.245) | (0.284) | (1.367) | (0.351) |
| 31 years | 1.883*** | 2.695*** | 0.702 | 2.189 | 0.369** | 0.391 | 1.154 | 4.184*** | 2.342*** |
| | (0.226) | (0.366) | (0.274) | (1.120) | (0.186) | (0.243) | (0.275) | (1.481) | (0.366) |
| 32 years | 1.868*** | 2.612*** | 0.947 | 2.085 | 0.543 | 0.306* | 1.115 | 4.265*** | 2.366*** |
| | (0.233) | (0.369) | (0.379) | (1.116) | (0.280) | (0.199) | (0.277) | (1.573) | (0.384) |
| 33 years | 1.700*** | 2.479*** | 0.713 | 1.975 | 0.249** | 0.329* | 0.980 | 4.386*** | 2.127*** |
| | (0.222) | (0.365) | (0.304) | (1.109) | (0.141) | (0.222) | (0.256) | (1.687) | (0.361) |
| 34 years | 1.554*** | 2.299*** | 0.555 | 2.171 | 0.178*** | 0.328 | 0.934 | 3.145*** | 1.981*** |
| | (0.213) | (0.355) | (0.253) | (1.268) | (0.110) | (0.230) | (0.258) | (1.300) | (0.352) |
| 35 years | 1.410** | 2.053*** | 0.563 | 0.901 | 0.397 | 0.136** | 0.914 | 4.477*** | 1.727*** |
| | (0.204) | (0.335) | (0.270) | (0.618) | (0.235) | (0.106) | (0.267) | (1.899) | (0.324) |
| 36 years | 1.098 | 1.616*** | 0.446 | 0.984 | 0.226** | 0.119** | 0.747 | 2.829** | 1.375 |
| | (0.172) | (0.285) | (0.232) | (0.711) | (0.149) | (0.099) | (0.238) | (1.344) | (0.278) |
| 37 years | 0.984 | 1.501** | 0.302** | 0.508 | 0.208** | 0.176** | 0.591 | 2.095 | 1.275 |
| | (0.167) | (0.283) | (0.181) | (0.466) | (0.146) | (0.146) | (0.212) | (1.134) | (0.275) |
| 38 years | 0.827 | 1.258 | | 2.537 | 0.085*** | 0.212* | 0.591 | 3.614** | 0.876 |
| | (0.155) | (0.261) | | (1.764) | (0.078) | (0.179) | (0.230) | (1.903) | (0.215) |
| 39 years | 0.837 | 1.112 | 0.379 | 1.640 | 0.268* | 0.043** | 0.571 | 2.436 | 1.091 |
| | (0.168) | (0.256) | (0.243) | (1.299) | (0.201) | (0.053) | (0.245) | (1.514) | (0.275) |
| 40 years | 0.953 | 1.462 | 0.396 | 0.536 | 0.139** | 0.157* | 0.799 | 2.695 | 1.111 |
| | (0.201) | (0.343) | (0.272) | (0.634) | (0.131) | (0.152) | (0.347) | (1.800) | (0.301) |
| Registered Partnership | 1.479*** | 1.402*** | 3.330*** | 2.156*** | 1.391*** | 1.262** | 1.434*** | 1.694*** | 1.437*** |
| | (0.019) | (0.019) | (0.224) | (0.108) | (0.089) | (0.142) | (0.031) | (0.046) | (0.029) |
| Child born prior to marriage | 1.455*** | 1.461*** | 1.437*** | 1.387*** | 1.232*** | 1.339*** | 1.464*** | 1.422*** | 1.458*** |
| | (0.009) | (0.010) | (0.028) | (0.032) | (0.028) | (0.038) | (0.017) | (0.026) | (0.012) |
| *Spousal immigration background* | | | | | | | | | |
| Husband native, Wife 1st gen. | 1.368*** | | | 1.079*** | | 1.607*** | 1.464*** | 1.255*** | 1.328*** |
| | (0.010) | | | (0.019) | | (0.071) | (0.020) | (0.023) | (0.013) |
| Husband native, Wife 2nd gen. | 1.389*** | 1.392*** | | | | 1.363*** | 1.385*** | 1.311*** | 1.398*** |
| | (0.009) | (0.010) | | | | (0.058) | (0.019) | (0.024) | (0.013) |
| Husband 1st gen. Wife native | 1.921*** | | | | 1.253*** | 1.997*** | 1.767*** | 1.799*** | 1.938*** |
| | (0.014) | | | | (0.020) | (0.070) | (0.028) | (0.043) | (0.018) |
| Husband 1st gen. Wife 1st gen. | 0.679*** | | | | | 0.633*** | 0.771*** | 0.990 | 0.667*** |
| | (0.004) | | | | | (0.013) | (0.009) | (0.020) | (0.005) |
| Husband 1st gen. Wife 2nd gen. | 1.386*** | | | | | 0.926* | 1.171*** | 1.440*** | 1.518*** |
| | (0.016) | | | | | (0.039) | (0.027) | (0.062) | (0.023) |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| Husband 2nd gen. Wife native | 1.376*** | 1.380*** | | | | 1.149*** | 1.390*** | 1.269*** | 1.386*** |
| | (0.009) | (0.010) | | | | (0.053) | (0.018) | (0.024) | (0.013) |
| Husband 2nd gen. Wife 1st gen. | 1.216*** | | | | | 1.191*** | 1.077*** | 1.288*** | 1.231*** |
| | (0.017) | | | | | (0.076) | (0.027) | (0.052) | (0.024) |
| Husband 2nd gen. Wife 2nd gen. | 1.501*** | 1.462*** | | | | 1.404*** | 1.484*** | 1.528*** | 1.488*** |
| | (0.022) | (0.021) | | | | (0.120) | (0.036) | (0.059) | (0.031) |
| *Age at wedding* | | | | | | | | | |
| Husband, linear | 0.887*** | 0.929*** | 0.729*** | 1.008 | 0.956 | 0.814*** | 0.902*** | 0.985 | 0.914*** |
| | (0.010) | (0.016) | (0.017) | (0.036) | (0.030) | (0.031) | (0.021) | (0.043) | (0.013) |
| Husband, quadratic | 1.004*** | 1.003*** | 1.008*** | 0.999 | 1.000 | 1.005*** | 1.003*** | 1.001 | 1.003*** |
| | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) |
| Husband, cubic | 1.000*** | 1.000*** | 1.000*** | 1.000 | 1.000 | 1.000*** | 1.000*** | 1.000 | 1.000*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | 1.043*** | 0.848*** | 1.043** | 0.960 | 1.180*** | 1.085*** | 1.069*** | 1.118*** | 1.020 |
| | (0.011) | (0.015) | (0.021) | (0.030) | (0.036) | (0.034) | (0.021) | (0.045) | (0.015) |
| Wife, quadratic | 0.998*** | 1.005*** | 0.997*** | 1.000 | 0.994*** | 0.9962** | 0.997*** | 0.997 | 0.999*** |
| | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) |
| Wife, cubic | 1.000*** | 1.000*** | 1.000*** | 1.000 | 1.0002** | 1.000*** | 1.000*** | 1.000 | 1.000** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *Education levels* | | | | | | | | | |
| Husband, High School | 0.877*** | 0.831*** | 1.021 | 0.787*** | 0.822*** | | | | |
| | (0.007) | (0.009) | (0.017) | (0.029) | (0.023) | | | | |
| Husband, University | 0.626*** | 0.596*** | 0.792*** | 0.532*** | 0.613*** | | | | |
| | (0.006) | (0.007) | (0.019) | (0.021) | (0.020) | | | | |
| Husband, Missing | 0.836*** | 0.804*** | 0.884*** | 0.625*** | 0.922*** | | | | |
| | (0.007) | (0.009) | (0.014) | (0.022) | (0.024) | | | | |
| Wife, High School | 0.999 | 0.861*** | 1.540*** | 0.988 | 0.920*** | 1.488*** | 0.884*** | 0.896*** | 1.018* |
| | (0.007) | (0.008) | (0.023) | (0.028) | (0.027) | (0.036) | (0.012) | (0.036) | (0.009) |
| Wife, University | 0.744*** | 0.625*** | 1.476*** | 0.848*** | 0.716*** | 1.379*** | 0.751*** | 0.720*** | 0.754*** |
| | (0.006) | (0.006) | (0.032) | (0.027) | (0.023) | (0.061) | (0.012) | (0.029) | (0.008) |
| Wife, Missing | 0.601*** | 0.536*** | 0.639*** | 0.714*** | 0.561*** | 1.300*** | 0.927*** | 0.962 | 0.434*** |
| | (0.004) | (0.005) | (0.009) | (0.019) | (0.016) | (0.030) | (0.013) | (0.038) | (0.004) |
| *Calendar year* | | | | | | | | | |
| 1996 | 0.970*** | 0.955*** | 1.005 | 1.001 | 1.044 | 1.027 | 0.988 | 0.969 | 0.962*** |
| | (0.010) | (0.012) | (0.030) | (0.044) | (0.041) | (0.051) | (0.022) | (0.037) | (0.013) |
| 1997 | 0.952*** | 0.945*** | 0.985 | 0.919 | 0.982 | 1.066 | 0.989 | 0.929* | 0.938*** |
| | (0.012) | (0.013) | (0.036) | (0.048) | (0.047) | (0.064) | (0.026) | (0.040) | (0.015) |
| 1998 | 0.976* | 0.981 | 0.955 | 0.895* | 0.995 | 1.061 | 1.042 | 0.957 | 0.956** |
| | (0.015) | (0.017) | (0.043) | (0.056) | (0.059) | (0.079) | (0.032) | (0.047) | (0.018) |
| 1999 | 1.022 | 1.037* | 0.958 | 0.872* | 1.039 | 1.160* | 1.108*** | 1.034 | 0.990 |
| | (0.018) | (0.021) | (0.052) | (0.066) | (0.075) | (0.105) | (0.040) | (0.058) | (0.023) |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2000 | 1.090*** | 1.109*** | 0.971 | 0.915 | 1.126 | 1.323*** | 1.251*** | 1.042 | 1.039 |
| | (0.023) | (0.027) | (0.063) | (0.081) | (0.096) | (0.141) | (0.053) | (0.068) | (0.028) |
| 2001 | 1.141*** | 1.155*** | 1.027 | 0.952 | 1.208* | 1.400*** | 1.315*** | 1.082 | 1.088*** |
| | (0.028) | (0.032) | (0.077) | (0.097) | (0.120) | (0.175) | (0.064) | (0.080) | (0.034) |
| 2002 | 1.111*** | 1.106*** | 1.114 | 0.917 | 1.190 | 1.462*** | 1.310*** | 1.037 | 1.050 |
| | (0.031) | (0.035) | (0.096) | (0.107) | (0.136) | (0.209) | (0.073) | (0.087) | (0.038) |
| 2003 | 1.072** | 1.055 | 1.107 | 0.895 | 1.194 | 1.542*** | 1.262*** | 1.014 | 1.007 |
| | (0.034) | (0.038) | (0.108) | (0.118) | (0.154) | (0.249) | (0.079) | (0.096) | (0.041) |
| 2004 | 1.081** | 1.059 | 1.139 | 0.874 | 1.200 | 1.729*** | 1.294*** | 1.010 | 1.005 |
| | (0.038) | (0.042) | (0.123) | (0.128) | (0.172) | (0.312) | (0.090) | (0.106) | (0.046) |
| 2005 | 1.067* | 1.031 | 1.135 | 0.868 | 1.304* | 1.786*** | 1.305*** | 0.993 | 0.983 |
| | (0.041) | (0.045) | (0.136) | (0.140) | (0.206) | (0.356) | (0.100) | (0.114) | (0.050) |
| 2006 | 1.023 | 0.977 | 1.113 | 0.886 | 1.249 | 1.753** | 1.287*** | 0.938 | 0.934 |
| | (0.043) | (0.047) | (0.146) | (0.157) | (0.217) | (0.383) | (0.108) | (0.118) | (0.052) |
| 2007 | 1.009 | 0.953 | 1.128 | 0.845 | 1.340 | 1.793** | 1.301*** | 0.949 | 0.905* |
| | (0.047) | (0.050) | (0.161) | (0.162) | (0.253) | (0.426) | (0.118) | (0.129) | (0.054) |
| 2008 | 0.933 | 0.863*** | 1.109 | 0.792 | 1.392 | 1.852** | 1.194* | 0.836 | 0.844*** |
| | (0.046) | (0.049) | (0.171) | (0.164) | (0.284) | (0.475) | (0.117) | (0.123) | (0.055) |
| 2009 | 0.881** | 0.804*** | 1.095 | 0.779 | 1.346 | 2.024** | 1.158 | 0.807 | 0.776*** |
| | (0.047) | (0.049) | (0.181) | (0.174) | (0.295) | (0.558) | (0.122) | (0.127) | (0.054) |
| 2010 | 0.892** | 0.809*** | 1.151 | 0.757 | 1.368 | 2.114** | 1.164 | 0.844 | 0.781*** |
| | (0.051) | (0.053) | (0.204) | (0.180) | (0.321) | (0.623) | (0.131) | (0.142) | (0.058) |
| 2011 | 0.872** | 0.777*** | 1.196 | 0.766 | 1.423 | 2.328*** | 1.166 | 0.786 | 0.759*** |
| | (0.053) | (0.054) | (0.226) | (0.194) | (0.355) | (0.731) | (0.140) | (0.141) | (0.060) |
| 2012 | 0.902 | 0.802*** | 1.220 | 0.737 | 1.570* | 2.496*** | 1.248* | 0.823 | 0.766*** |
| | (0.058) | (0.059) | (0.244) | (0.198) | (0.416) | (0.832) | (0.159) | (0.156) | (0.065) |
| 2013 | 0.929 | 0.818*** | 1.346 | 0.764 | 1.549 | 2.665*** | 1.305** | 0.828 | 0.786*** |
| | (0.064) | (0.063) | (0.285) | (0.218) | (0.434) | (0.939) | (0.176) | (0.167) | (0.070) |
| 2014 | 0.930 | 0.807*** | 1.333 | 0.794 | 1.742* | 2.603** | 1.297* | 0.840 | 0.787** |
| | (0.067) | (0.066) | (0.298) | (0.239) | (0.515) | (0.968) | (0.184) | (0.178) | (0.074) |
| 2015 | 0.907 | 0.778*** | 1.373 | 0.748 | 1.755* | 2.718** | 1.242 | 0.837 | 0.765*** |
| | (0.069) | (0.067) | (0.322) | (0.236) | (0.546) | (1.064) | (0.186) | (0.186) | (0.076) |
| Constant | 0.004*** | 0.007*** | 0.103** | 0.001*** | 0.059** | 0.045*** | 0.005*** | 0.000*** | 0.005*** |
| | (0.001) | (0.003) | (0.100) | (0.001) | (0.076) | (0.054) | (0.006) | (0.000) | (0.002) |
| Observations | 36,541,693 | 29,372,847 | 4,448,168 | 1,154,105 | 1,563,324 | 1,459,147 | 9,114,809 | 5,029,058 | 20,937,108 |
| Spells | 2,722,223 | 2,180,235 | 315,582 | 129,055 | 97,351 | 105,529 | 646,848 | 482,387 | 1,487,459 |
| ln likelihood | -2,427,260 | -1,912,881 | -254,265 | -124,760 | -129,329 | -125,931 | -726,879 | -289,524 | -1,271,334 |

## Table B1b: Estimates corresponding to the subsample models

| VARIABLES | Education, wife | | | | Cohorts, husband | | |
|---|---|---|---|---|---|---|---|
| | Primary school | High school | University | Missing | 1935-1955 | 1956-1965 | 1966-1985 |
| *Firstborn's age dummies* | | | | | | | |
| age 1 | 1.608*** | 1.695*** | 1.747*** | 1.644*** | 0.532 | 1.694*** | 1.720*** |
| | (0.146) | (0.050) | (0.084) | (0.049) | (0.253) | (0.190) | (0.053) |
| age 2 | 2.113*** | 2.157*** | 2.189*** | 2.110*** | 1.350 | 2.164*** | 2.212*** |
| | (0.181) | (0.062) | (0.101) | (0.060) | (0.497) | (0.228) | (0.065) |
| age 3 | 2.097*** | 2.431*** | 2.618*** | 2.338*** | 1.514 | 2.521*** | 2.551*** |
| | (0.179) | (0.068) | (0.118) | (0.065) | (0.533) | (0.258) | (0.074) |
| age 4 | 2.276*** | 2.759*** | 2.914*** | 2.671*** | 1.233 | 2.897*** | 2.949*** |
| | (0.193) | (0.077) | (0.131) | (0.073) | (0.435) | (0.292) | (0.084) |
| age 5 | 2.493*** | 3.031*** | 3.451*** | 2.971*** | 1.701 | 3.456*** | 3.357*** |
| | (0.210) | (0.085) | (0.155) | (0.081) | (0.580) | (0.344) | (0.096) |
| age 6 | 2.597*** | 3.324*** | 3.863*** | 3.289*** | 1.460 | 3.796*** | 3.730*** |
| | (0.219) | (0.094) | (0.175) | (0.090) | (0.500) | (0.375) | (0.106) |
| age 7 | 2.739*** | 3.608*** | 4.429*** | 3.637*** | 1.805* | 4.098*** | 4.199*** |
| | (0.232) | (0.102) | (0.201) | (0.099) | (0.606) | (0.403) | (0.119) |
| age 8 | 2.911*** | 3.777*** | 4.952*** | 3.793*** | 1.634 | 4.489*** | 4.509*** |
| | (0.247) | (0.108) | (0.227) | (0.104) | (0.548) | (0.440) | (0.128) |
| age 9 | 3.236*** | 4.060*** | 5.070*** | 3.948*** | 1.839* | 4.651*** | 4.839*** |
| | (0.274) | (0.117) | (0.236) | (0.109) | (0.611) | (0.455) | (0.138) |
| age 10 | 3.223*** | 4.244*** | 5.647*** | 4.285*** | 1.945** | 5.014*** | 5.117*** |
| | (0.275) | (0.124) | (0.265) | (0.118) | (0.642) | (0.489) | (0.147) |
| age 11 | 3.355*** | 4.318*** | 5.757*** | 4.407*** | 2.099** | 5.236*** | 5.303*** |
| | (0.287) | (0.128) | (0.276) | (0.123) | (0.689) | (0.511) | (0.154) |
| age 12 | 3.466*** | 4.587*** | 6.279*** | 4.688*** | 2.206** | 5.390*** | 5.701*** |
| | (0.298) | (0.137) | (0.305) | (0.131) | (0.721) | (0.525) | (0.166) |
| age 13 | 3.340*** | 4.876*** | 6.723*** | 4.928*** | 1.912** | 5.912*** | 5.964*** |
| | (0.294) | (0.150) | (0.340) | (0.141) | (0.627) | (0.577) | (0.178) |
| age 14 | 3.506*** | 5.351*** | 7.153*** | 5.142*** | 2.207** | 6.253*** | 6.278*** |
| | (0.310) | (0.166) | (0.368) | (0.148) | (0.721) | (0.610) | (0.189) |
| age 15 | 3.690*** | 5.667*** | 7.827*** | 5.528*** | 2.241** | 6.824*** | 6.626*** |
| | (0.328) | (0.178) | (0.409) | (0.159) | (0.730) | (0.666) | (0.202) |
| age 16 | 3.851*** | 5.983*** | 8.195*** | 5.772*** | 2.335*** | 6.996*** | 7.042*** |
| | (0.344) | (0.191) | (0.437) | (0.168) | (0.760) | (0.683) | (0.217) |
| age 17 | 4.044*** | 6.575*** | 8.718*** | 6.304*** | 2.537*** | 7.829*** | 7.457*** |
| | (0.363) | (0.211) | (0.474) | (0.184) | (0.824) | (0.764) | (0.233) |
| age 18 | 4.430*** | 6.864*** | 9.895*** | 6.528*** | 2.742*** | 8.094*** | 7.857*** |

|  | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | (0.399) | (0.224) | (0.545) | (0.192) | (0.890) | (0.790) | (0.249) |
| age 19 | 5.086*** | 7.189*** | 10.479*** | 6.952*** | 2.706*** | 8.674*** | 8.282*** |
|  | (0.459) | (0.240) | (0.596) | (0.206) | (0.877) | (0.847) | (0.271) |
| age 20 | 4.459*** | 7.266*** | 10.210*** | 6.966*** | 2.740*** | 8.480*** | 8.274*** |
|  | (0.411) | (0.247) | (0.602) | (0.209) | (0.888) | (0.829) | (0.278) |
| age 21 | 5.043*** | 6.745*** | 10.614*** | 6.815*** | 2.771*** | 8.208*** | 8.101*** |
|  | (0.466) | (0.237) | (0.641) | (0.207) | (0.898) | (0.803) | (0.282) |
| age 22 | 4.738*** | 6.711*** | 10.031*** | 6.741*** | 2.657*** | 7.865*** | 8.344*** |
|  | (0.445) | (0.242) | (0.635) | (0.208) | (0.861) | (0.771) | (0.301) |
| age 23 | 4.769*** | 6.379*** | 9.687*** | 6.359*** | 2.498*** | 7.490*** | 7.951*** |
|  | (0.454) | (0.239) | (0.643) | (0.202) | (0.810) | (0.736) | (0.304) |
| age 24 | 4.392*** | 6.123*** | 9.666*** | 6.089*** | 2.379*** | 7.352*** | 7.145*** |
|  | (0.429) | (0.240) | (0.676) | (0.199) | (0.772) | (0.724) | (0.297) |
| age 25 | 4.381*** | 5.952*** | 9.078*** | 5.873*** | 2.162** | 7.013*** | 7.464*** |
|  | (0.438) | (0.245) | (0.683) | (0.197) | (0.702) | (0.692) | (0.333) |
| age 26 | 4.074*** | 6.093*** | 9.339*** | 5.576*** | 2.144** | 6.804*** | 7.219*** |
|  | (0.421) | (0.262) | (0.744) | (0.194) | (0.697) | (0.674) | (0.358) |
| No Children dummy | 4.225*** | 5.019*** | 8.301*** | 6.261*** | 2.037** | 6.797*** | 7.073*** |
|  | (0.328) | (0.127) | (0.337) | (0.156) | (0.656) | (0.655) | (0.187) |
| Firstborn daughter aged 0-12 | 1.025 | 1.004 | 0.993 | 1.012 | 1.002 | 1.003 | 1.006 |
|  | (0.017) | (0.007) | (0.012) | (0.007) | (0.015) | (0.009) | (0.006) |
| Firstborn daughter aged 13-18 | 1.064*** | 1.040*** | 1.018 | 1.064*** | 1.075*** | 1.051*** | 1.043*** |
|  | (0.024) | (0.011) | (0.023) | (0.010) | (0.011) | (0.010) | (0.010) |
| Firstborn daughter aged 19-26 | 0.996 | 0.991 | 0.953 | 1.004 | 0.992 | 0.993 | 1.005 |
|  | (0.024) | (0.013) | (0.028) | (0.011) | (0.010) | (0.014) | (0.029) |
| *Marriage duration dummies* | | | | | | | |
| 1 year | 4.254*** | 3.935*** | 3.776*** | 3.860*** | 1.316 | 2.612*** | 4.113*** |
|  | (0.450) | (0.114) | (0.144) | (0.106) | (0.404) | (0.263) | (0.137) |
| 2 years | 5.781*** | 5.689*** | 6.063*** | 5.905*** | 2.227*** | 4.169*** | 6.163*** |
|  | (0.621) | (0.173) | (0.252) | (0.167) | (0.617) | (0.398) | (0.205) |
| 3 years | 7.743*** | 6.765*** | 7.991*** | 7.064*** | 2.635*** | 4.890*** | 7.641*** |
|  | (0.867) | (0.227) | (0.380) | (0.217) | (0.710) | (0.461) | (0.261) |
| 4 years | 9.019*** | 7.397*** | 9.137*** | 7.989*** | 3.614*** | 5.826*** | 8.421*** |
|  | (1.079) | (0.279) | (0.503) | (0.270) | (0.950) | (0.547) | (0.303) |
| 5 years | 8.477*** | 6.904*** | 9.596*** | 7.717*** | 3.770*** | 5.452*** | 7.889*** |
|  | (1.100) | (0.294) | (0.609) | (0.290) | (0.998) | (0.520) | (0.303) |
| 6 years | 7.738*** | 6.842*** | 9.812*** | 7.475*** | 3.394*** | 4.921*** | 7.586*** |
|  | (1.093) | (0.327) | (0.711) | (0.312) | (0.915) | (0.478) | (0.311) |
| 7 years | 6.960*** | 6.440*** | 9.536*** | 6.937*** | 2.123*** | 4.328*** | 7.008*** |
|  | (1.069) | (0.343) | (0.780) | (0.320) | (0.596) | (0.430) | (0.309) |
| 8 years | 5.980*** | 6.055*** | 8.953*** | 6.521*** | 2.439*** | 4.049*** | 6.365*** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | (0.998) | (0.357) | (0.819) | (0.331) | (0.692) | (0.412) | (0.301) |
| 9 years | 5.458*** | 5.683*** | 8.610*** | 6.117*** | 1.888** | 3.699*** | 5.894*** |
| | (0.986) | (0.369) | (0.871) | (0.339) | (0.552) | (0.387) | (0.299) |
| 10 years | 4.885*** | 5.332*** | 8.452*** | 5.778*** | 1.504 | 3.411*** | 5.429*** |
| | (0.952) | (0.378) | (0.939) | (0.349) | (0.454) | (0.367) | (0.294) |
| 11 years | 4.312*** | 5.000*** | 8.341*** | 5.404*** | 1.492 | 3.216*** | 4.990*** |
| | (0.903) | (0.384) | (1.009) | (0.353) | (0.461) | (0.357) | (0.289) |
| 12 years | 3.927*** | 4.621*** | 7.899*** | 4.998*** | 1.353 | 2.739*** | 4.560*** |
| | (0.881) | (0.384) | (1.036) | (0.352) | (0.430) | (0.314) | (0.281) |
| 13 years | 3.507*** | 4.380*** | 7.424*** | 4.787*** | 1.136 | 2.649*** | 4.227*** |
| | (0.840) | (0.391) | (1.049) | (0.361) | (0.372) | (0.314) | (0.277) |
| 14 years | 3.385*** | 4.109*** | 7.379*** | 4.563*** | 1.071 | 2.334*** | 4.003*** |
| | (0.862) | (0.392) | (1.117) | (0.367) | (0.361) | (0.286) | (0.278) |
| 15 years | 3.251*** | 3.973*** | 6.713*** | 4.392*** | 1.020 | 2.214*** | 3.770*** |
| | (0.877) | (0.404) | (1.086) | (0.376) | (0.355) | (0.280) | (0.277) |
| 16 years | 2.811*** | 3.757*** | 6.907*** | 4.183*** | 0.777 | 2.055*** | 3.597*** |
| | (0.803) | (0.405) | (1.187) | (0.380) | (0.279) | (0.269) | (0.279) |
| 17 years | 2.547*** | 3.450*** | 6.408*** | 3.974*** | 0.844 | 1.873*** | 3.277*** |
| | (0.767) | (0.394) | (1.168) | (0.382) | (0.312) | (0.254) | (0.268) |
| 18 years | 2.478*** | 3.279*** | 6.175*** | 3.842*** | 0.684 | 1.806*** | 3.105*** |
| | (0.785) | (0.395) | (1.189) | (0.389) | (0.261) | (0.253) | (0.267) |
| 19 years | 2.277** | 3.099*** | 5.776*** | 3.653*** | 0.632 | 1.677*** | 2.888*** |
| | (0.758) | (0.393) | (1.172) | (0.389) | (0.249) | (0.243) | (0.260) |
| 20 years | 2.125** | 2.888*** | 5.976*** | 3.447*** | 0.555 | 1.542*** | 2.709*** |
| | (0.741) | (0.385) | (1.274) | (0.385) | (0.225) | (0.231) | (0.256) |
| 21 years | 1.804 | 2.777*** | 5.156*** | 3.273*** | 0.534 | 1.420** | 2.475*** |
| | (0.658) | (0.388) | (1.154) | (0.383) | (0.223) | (0.220) | (0.244) |
| 22 years | 1.660 | 2.665*** | 5.450*** | 3.167*** | 0.479* | 1.356* | 2.375*** |
| | (0.632) | (0.389) | (1.275) | (0.388) | (0.206) | (0.217) | (0.245) |
| 23 years | 1.546 | 2.555*** | 5.148*** | 3.014*** | 0.425* | 1.277 | 2.213*** |
| | (0.614) | (0.389) | (1.258) | (0.385) | (0.189) | (0.210) | (0.238) |
| 24 years | 1.451 | 2.433*** | 5.205*** | 2.936*** | 0.403** | 1.235 | 2.047*** |
| | (0.600) | (0.386) | (1.327) | (0.391) | (0.184) | (0.210) | (0.229) |
| 25 years | 1.334 | 2.189*** | 4.869*** | 2.695*** | 0.337** | 1.107 | 1.882*** |
| | (0.573) | (0.362) | (1.293) | (0.373) | (0.158) | (0.194) | (0.219) |
| 26 years | 1.239 | 2.102*** | 4.517*** | 2.569*** | 0.321** | 1.024 | 1.776*** |
| | (0.553) | (0.361) | (1.248) | (0.370) | (0.155) | (0.185) | (0.215) |
| 27 years | 1.117 | 1.905*** | 3.969*** | 2.511*** | 0.289** | 0.964 | 1.606*** |
| | (0.517) | (0.340) | (1.140) | (0.375) | (0.144) | (0.179) | (0.203) |
| 28 years | 0.880 | 1.820*** | 4.203*** | 2.367*** | 0.270** | 0.878 | 1.568*** |
| | (0.423) | (0.337) | (1.254) | (0.367) | (0.138) | (0.168) | (0.207) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 29 years | 0.975 | 1.652*** | 3.630*** | 2.431*** | 0.264** | 0.850 | 1.466*** |
| | (0.485) | (0.318) | (1.127) | (0.390) | (0.139) | (0.168) | (0.203) |
| 30 years | 0.847 | 1.570** | 3.100*** | 2.173*** | 0.227*** | 0.758 | 1.284* |
| | (0.437) | (0.314) | (1.005) | (0.362) | (0.123) | (0.154) | (0.191) |
| 31 years | 0.621 | 1.554** | 3.096*** | 2.202*** | 0.186*** | 0.763 | 1.213 |
| | (0.334) | (0.323) | (1.046) | (0.380) | (0.104) | (0.159) | (0.198) |
| 32 years | 0.858 | 1.497* | 2.840*** | 2.166*** | 0.201*** | 0.721 | 1.216 |
| | (0.476) | (0.325) | (1.008) | (0.388) | (0.115) | (0.155) | (0.230) |
| 33 years | 0.653 | 1.365 | 3.072*** | 1.958*** | 0.158*** | 0.666* | 1.031 |
| | (0.378) | (0.311) | (1.140) | (0.366) | (0.093) | (0.148) | (0.264) |
| 34 years | 0.638 | 1.061 | 2.590** | 1.895*** | 0.126*** | 0.617** | 1.086 |
| | (0.385) | (0.260) | (1.032) | (0.369) | (0.077) | (0.142) | (0.419) |
| 35 years | 0.536 | 1.240 | 2.443** | 1.571** | 0.119*** | 0.553** | 0.895 |
| | (0.340) | (0.318) | (1.048) | (0.323) | (0.074) | (0.132) | (0.648) |
| 36 years | 0.576 | 0.990 | 1.426 | 1.191 | 0.098*** | 0.422*** | |
| | (0.378) | (0.280) | (0.736) | (0.263) | (0.063) | (0.106) | |
| 37 years | 0.498 | 0.804 | 0.771 | 1.140 | 0.075*** | 0.393*** | |
| | (0.345) | (0.256) | (0.536) | (0.266) | (0.050) | (0.104) | |
| 38 years | 0.332 | 0.964 | 2.528* | 0.755 | 0.073*** | 0.317*** | |
| | (0.252) | (0.321) | (1.385) | (0.200) | (0.050) | (0.091) | |
| 39 years | 0.344 | 0.943 | 1.546 | 0.839 | 0.090*** | 0.278*** | |
| | (0.273) | (0.348) | (1.092) | (0.232) | (0.063) | (0.087) | |
| 40 years | 0.263 | 0.665 | 1.470 | 1.170 | 0.072*** | 0.421*** | |
| | (0.233) | (0.305) | (1.207) | (0.325) | (0.053) | (0.134) | |
| Registered Partnership | 1.219* | 1.345*** | 1.656*** | 1.624*** | 1.576** | 1.442*** | 1.419*** |
| | (0.143) | (0.029) | (0.039) | (0.036) | (0.283) | (0.090) | (0.041) |
| Child born prior to marriage | 1.438*** | 1.411*** | 1.304*** | 1.480*** | 1.552*** | 1.437*** | 1.423*** |
| | (0.034) | (0.014) | (0.023) | (0.013) | (0.065) | (0.022) | (0.013) |
| *Spousal immigration background* | | | | | | | |
| Husband native, Wife 1st gen. | 1.225*** | 1.307*** | 1.370*** | 1.352*** | 1.551*** | 1.458*** | 1.360*** |
| | (0.041) | (0.018) | (0.025) | (0.013) | (0.053) | (0.021) | (0.014) |
| Husband native, Wife 2nd gen. | 1.386*** | 1.344*** | 1.306*** | 1.442*** | 1.402*** | 1.364*** | 1.377*** |
| | (0.051) | (0.016) | (0.023) | (0.014) | (0.052) | (0.019) | (0.014) |
| Husband 1st gen. Wife native | 2.039*** | 1.897*** | 1.878*** | 1.894*** | 1.962*** | 1.802*** | 1.970*** |
| | (0.073) | (0.024) | (0.034) | (0.021) | (0.061) | (0.027) | (0.022) |
| Husband 1st gen. Wife 1st gen. | 0.559*** | 0.868*** | 1.169*** | 0.613*** | 1.117*** | 0.807*** | 0.656*** |
| | (0.010) | (0.009) | (0.021) | (0.005) | (0.031) | (0.010) | (0.005) |
| Husband 1st gen. Wife 2nd gen. | 1.152*** | 1.197*** | 1.549*** | 1.499*** | 1.620*** | 1.919*** | 1.612*** |
| | (0.054) | (0.021) | (0.050) | (0.028) | (0.145) | (0.074) | (0.035) |
| Husband 2nd gen. Wife native | 1.414*** | 1.364*** | 1.312*** | 1.389*** | 1.343*** | 1.346*** | 1.378*** |
| | (0.052) | (0.016) | (0.023) | (0.014) | (0.048) | (0.019) | (0.014) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Husband 2nd gen. Wife 1st gen. | 0.792*** | 1.062** | 1.447*** | 1.295*** | 1.544*** | 1.495*** | 1.379*** |
| | (0.038) | (0.028) | (0.060) | (0.026) | (0.146) | (0.059) | (0.038) |
| Husband 2nd gen. Wife 2nd gen. | 1.397*** | 1.401*** | 1.504*** | 1.620*** | 1.637*** | 1.368*** | 1.459*** |
| | (0.111) | (0.032) | (0.053) | (0.037) | (0.171) | (0.052) | (0.039) |
| *Age at wedding* | | | | | | | |
| Husband, linear | 0.882*** | 0.870*** | 0.948 | 0.893*** | 0.975 | 0.735*** | 0.796 |
| | (0.026) | (0.018) | (0.036) | (0.016) | (0.043) | (0.018) | (0.020) |
| Husband, quadratic | 1.003*** | 1.004*** | 1.001 | 1.0042** | 1.000 | 1.011*** | 1.008*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Husband, cubic | 1.000*** | 1.000*** | 1.000 | 1.000*** | 1.000 | 1.000*** | 1.000*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | 1.009 | 1.037* | 0.90*** | 1.001 | 1.121*** | 0.972 | 1.019 |
| | (0.031) | (0.022) | (0.041) | (0.015) | (0.034) | (0.019) | (0.016) |
| Wife, quadratic | 0.999 | 0.998** | 1.004*** | 0.999 | 0.994*** | 0.999 | 0.997*** |
| | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) | (0.001) | (0.001) |
| Wife, cubic | 1.000 | 1.000 | 1.000*** | 1.000* | 1.000*** | 1.000** | 1.000*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *Education levels* | | | | | | | |
| Husband, High School | 1.229*** | 0.762*** | 0.763*** | 0.882*** | 0.855*** | 0.905*** | 0.852*** |
| | (0.029) | (0.010) | (0.030) | (0.011) | (0.038) | (0.016) | (0.011) |
| Husband, University | 0.964 | 0.568*** | 0.505*** | 0.686*** | 0.992 | 0.829*** | 0.630*** |
| | (0.042) | (0.009) | (0.020) | (0.009) | (0.048) | (0.016) | (0.009) |
| Husband, Missing | 1.581*** | 1.117*** | 0.880*** | 0.531*** | 1.130*** | 0.952*** | 0.799*** |
| | (0.033) | (0.015) | (0.035) | (0.006) | (0.045) | (0.016) | (0.010) |
| Wife, High School | | | | | 1.144*** | 0.953*** | 0.981* |
| | | | | | (0.041) | (0.013) | (0.011) |
| Wife, University | | | | | 1.216*** | 0.899*** | 0.739*** |
| | | | | | (0.051) | (0.015) | (0.009) |
| Wife, Missing | | | | | 0.661*** | 0.589*** | 0.589*** |
| | | | | | (0.022) | (0.008) | (0.006) |
| *Calendar year* | | | | | | | |
| 1996 | 1.000 | 0.977 | 1.004 | 0.960*** | 0.976 | 0.977 | 1.004 |
| | (0.042) | (0.019) | (0.037) | (0.014) | (0.035) | (0.017) | (0.015) |
| 1997 | 1.039 | 0.968 | 0.984 | 0.931*** | 1.027 | 0.978 | 0.989 |
| | (0.053) | (0.022) | (0.040) | (0.016) | (0.047) | (0.020) | (0.017) |
| 1998 | 1.050 | 1.009 | 0.966 | 0.955** | 1.090 | 1.038 | 1.026 |
| | (0.066) | (0.027) | (0.045) | (0.020) | (0.064) | (0.025) | (0.020) |
| 1999 | 1.084 | 1.111*** | 0.989 | 0.977 | 1.191** | 1.074** | 1.104*** |
| | (0.084) | (0.035) | (0.053) | (0.025) | (0.087) | (0.031) | (0.025) |
| 2000 | 1.212** | 1.207*** | 0.993 | 1.036 | 1.271*** | 1.176*** | 1.195*** |
| | (0.111) | (0.044) | (0.061) | (0.031) | (0.111) | (0.040) | (0.031) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2001 | 1.310** | 1.309*** | 1.027 | 1.059 | 1.310*** | 1.272*** | 1.261*** |
| | (0.140) | (0.055) | (0.072) | (0.037) | (0.135) | (0.050) | (0.038) |
| 2002 | 1.382*** | 1.300*** | 0.969 | 1.016 | 1.394*** | 1.279*** | 1.235*** |
| | (0.170) | (0.063) | (0.077) | (0.041) | (0.165) | (0.058) | (0.042) |
| 2003 | 1.514*** | 1.271*** | 0.944 | 0.954 | 1.431*** | 1.235*** | 1.209*** |
| | (0.210) | (0.069) | (0.084) | (0.043) | (0.192) | (0.063) | (0.046) |
| 2004 | 1.470** | 1.306*** | 0.926 | 0.958 | 1.513*** | 1.283*** | 1.249*** |
| | (0.228) | (0.079) | (0.091) | (0.048) | (0.228) | (0.073) | (0.053) |
| 2005 | 1.556*** | 1.268*** | 0.905 | 0.953 | 1.634*** | 1.337*** | 1.232*** |
| | (0.266) | (0.085) | (0.098) | (0.053) | (0.273) | (0.084) | (0.057) |
| 2006 | 1.593** | 1.202** | 0.847 | 0.922 | 1.648*** | 1.274*** | 1.200*** |
| | (0.299) | (0.088) | (0.100) | (0.056) | (0.303) | (0.088) | (0.061) |
| 2007 | 1.538** | 1.193** | 0.860 | 0.899 | 1.452* | 1.349*** | 1.193*** |
| | (0.314) | (0.095) | (0.111) | (0.060) | (0.293) | (0.101) | (0.065) |
| 2008 | 1.600** | 1.094 | 0.785* | 0.829*** | 1.539** | 1.209** | 1.139** |
| | (0.353) | (0.094) | (0.109) | (0.060) | (0.336) | (0.098) | (0.067) |
| 2009 | 1.646** | 1.046 | 0.707** | 0.780*** | 1.526* | 1.210** | 1.089 |
| | (0.390) | (0.097) | (0.105) | (0.060) | (0.361) | (0.106) | (0.069) |
| 2010 | 1.803** | 1.051 | 0.722** | 0.785*** | 1.519 | 1.238** | 1.153** |
| | (0.457) | (0.104) | (0.115) | (0.065) | (0.386) | (0.116) | (0.078) |
| 2011 | 1.906** | 1.055 | 0.694** | 0.748*** | 1.511 | 1.215* | 1.140* |
| | (0.514) | (0.111) | (0.117) | (0.066) | (0.412) | (0.121) | (0.082) |
| 2012 | 1.959** | 1.070 | 0.712* | 0.786*** | 1.363 | 1.288** | 1.188** |
| | (0.561) | (0.119) | (0.128) | (0.073) | (0.399) | (0.136) | (0.091) |
| 2013 | 1.966** | 1.109 | 0.723* | 0.809** | 1.758* | 1.285** | 1.260*** |
| | (0.596) | (0.131) | (0.137) | (0.080) | (0.541) | (0.144) | (0.102) |
| 2014 | 1.864* | 1.040 | 0.744 | 0.841* | 1.583 | 1.335** | 1.305*** |
| | (0.597) | (0.129) | (0.149) | (0.087) | (0.522) | (0.158) | (0.111) |
| 2015 | 1.871* | 0.972 | 0.713 | 0.845 | 1.712 | 1.371** | 1.280*** |
| | (0.630) | (0.127) | (0.150) | (0.092) | (0.597) | (0.171) | (0.115) |
| Constant | 0.047** | 0.010*** | 0.002*** | 0.005*** | 0.009*** | 0.056*** | 0.013*** |
| | (0.070) | (0.005) | (0.002) | (0.002) | (0.010) | (0.021) | (0.004) |
| Observations | 1,339,041 | 8,429,751 | 4,904,870 | 21,816,248 | 7,595,264 | 11,516,765 | 14,600,538 |
| Spells | 143,567 | 707,095 | 471,839 | 1,409,722 | 643,058 | 879,164 | 1,200,001 |
| Log-likelihood | -115,582 | -761,893 | -319,345 | -1,216,143 | -96,775 | -625,857 | -1,082,133 |

**Table B1c: Estimates corresponding to the subsample models**

| VARIABLES | Sibship, husband | | Sibship, wife | | Twins, husband | | Twins, wife | | Cohabiting couples |
|---|---|---|---|---|---|---|---|---|---|
| | No sisters | At least one sister | No brothers | At least one brother | Twin brother | Twin sister | Twin brother | Twin sister | |
| *Firstborn's age dummies* | | | | | | | | | |
| age 1 | 1.709*** | 1.747*** | 1.708*** | 1.732*** | 2.144*** | 2.194*** | 1.309 | 1.396** | 1.381*** |
| | (0.060) | (0.054) | (0.057) | (0.048) | (0.411) | (0.663) | (0.357) | (0.235) | (0.023) |
| age 2 | 2.163*** | 2.217*** | 2.225*** | 2.153*** | 2190*** | 3.254*** | 2.560*** | 1.894*** | 1.471*** |
| | (0.073) | (0.066) | (0.071) | (0.058) | (0.416) | (0.934) | (0.628) | (0.302) | (0.034) |
| age 3 | 2.480*** | 2.509*** | 2.605*** | 2.395*** | 2.947*** | 3.528*** | 2.439*** | 2.375*** | 1.534*** |
| | (0.083) | (0.074) | (0.083) | (0.064) | (0.542) | (1.006) | (0.606) | (0.368) | (0.047) |
| age 4 | 2.849*** | 2.907*** | 2.951*** | 2.792*** | 3.666*** | 4.063*** | 2.664*** | 2.341*** | 1.467*** |
| | (0.095) | (0.086) | (0.094) | (0.074) | (0.667) | (1.151) | (0.659) | (0.367) | (0.058) |
| age 5 | 3.267*** | 3.150*** | 3.251*** | 3.136*** | 4.113*** | 5.114*** | 3.233*** | 2.676*** | 1.516*** |
| | (0.110) | (0.094) | (0.104) | (0.084) | (0.746) | (1.433) | (0.793) | (0.418) | (0.073) |
| age 6 | 3.629*** | 3.574*** | 3.666*** | 3.501*** | 4.430*** | 4.107*** | 4.041*** | 2.409*** | 1.470*** |
| | (0.124) | (0.108) | (0.118) | (0.094) | (0.805) | (1.176) | (0.984) | (0.383) | (0.084) |
| age 7 | 3.853*** | 3.939*** | 4.078*** | 3.838*** | 4.453*** | 5.061*** | 4.582*** | 3.345*** | 1.437*** |
| | (0.134) | (0.120) | (0.133) | (0.105) | (0.818) | (1.442) | (1.116) | (0.519) | (0.095) |
| age 8 | 4.207*** | 3.994*** | 4.257*** | 4.026*** | 4.537*** | 5.976*** | 4.930*** | 3.050*** | 1.426*** |
| | (0.149) | (0.125) | (0.141) | (0.112) | (0.839) | (1.699) | (1.203) | (0.484) | (0.107) |
| age 9 | 4.357*** | 4.186*** | 4.558*** | 4.162*** | 5.578*** | 6.783*** | 4.701*** | 3.481*** | 1.307*** |
| | (0.158) | (0.134) | (0.154) | (0.118) | (1.025) | (1.934) | (1.160) | (0.551) | (0.111) |
| age 10 | 4.622*** | 4.498*** | 4.621*** | 4.539*** | 5.145*** | 6.672*** | 5.257*** | 3 419*** | 1.311*** |
| | (0.172) | (0.147) | (0.160) | (0.131) | (0.960) | (1.923) | (1.301) | (0.550) | (0.123) |
| age 11 | 4.535*** | 4.387*** | 4.723*** | 4.436*** | 4.740*** | 6.906*** | 5.796*** | 4121*** | 1.274** |
| | (0.175) | (0.149) | (0.169) | (0.132) | (0.899) | (2.002) | (1.440) | (0.660) | (0.131) |
| age 12 | 4.877*** | 4.783*** | 5.203*** | 4.741*** | 5.277*** | 5.833*** | 4.697*** | 4.203*** | 1.171 |
| | (0.194) | (0.167) | (0.190) | (0.144) | (1.005) | (1.723) | (1.196) | (0.681) | (0.132) |
| age 13 | 4.736*** | 4.969*** | 5.415*** | 4.886*** | 5.959*** | 7.839*** | 4.819*** | 3.893*** | 1.141 |
| | (0.206) | (0.187) | (0.212) | (0.158) | (1.157) | (2.317) | (1.263) | (0.662) | (0.140) |
| age 14 | 5.270*** | 5.179*** | 5.695*** | 5.314*** | 6.784*** | 8.168*** | 5.780*** | 4.439*** | 1.144 |
| | (0.237) | (0.202) | (0.230) | (0.177) | (1.319) | (2.431) | (1.505) | (0.760) | (0.151) |
| age 15 | 5.492*** | 5.317*** | 5.983*** | 5.517*** | 7.689*** | 7.392*** | 6.921*** | 4.837*** | 1.109 |
| | (0.260) | (0.218) | (0.251) | (0.190) | (1.501) | (2.231) | (1.804) | (0.832) | (0.156) |
| age 16 | 5.849*** | 5.588*** | 6.420*** | 5.767*** | 6.843*** | 8.105*** | 5.606*** | 4.742*** | 1.057 |
| | (0.292) | (0.241) | (0.281) | (0.207) | (1.365) | (2.451) | (1.505) | (0.832) | (0.159) |
| age 17 | 5.771*** | 5.908*** | 6.779*** | 5.897*** | 6.892*** | 7.467*** | 7.346*** | 5.192*** | 0.991 |
| | (0.313) | (0.271) | (0.313) | (0.223) | (1.395) | (2.296) | (1.958) | (0.916) | (0.159) |
| age 18 | 6.261*** | 6.275*** | 6.765*** | 6.217*** | 8.295*** | 7 997*** | 7.898*** | 5.797*** | 0.969 |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| | (0.365) | (0.309) | (0.335) | (0.247) | (1.678) | (2.479) | (2.117) | (1.030) | (0.165) |
| age 19 | 6.378*** | 6.200*** | 7.239*** | 6.325*** | 8.952*** | 11.175*** | 7.708*** | 6.064*** | 0.994 |
| | (0.450) | (0.364) | (0.409) | (0.285) | (1.861) | (3.467) | (2.151) | (1.109) | (0.179) |
| age 20 | 6.463*** | 5.714*** | 6.577*** | 6.301*** | 8.617*** | 11.160*** | 8.619*** | 5.438*** | 0.966 |
| | (0.511) | (0.376) | (0.413) | (0.308) | (1.839) | (3.541) | (2.425) | (1.030) | (0.183) |
| age 21 | 7.104*** | 5.441*** | 7.571*** | 6.260*** | 9.137*** | 10.896*** | 7.281*** | 5 941*** | 0.802 |
| | (0.625) | (0.411) | (0.513) | (0.336) | (1.986) | (3.529) | (2.128) | (1.144) | (0.161) |
| age 22 | 5.931*** | 5.580*** | 6.566*** | 5.935*** | 7.612*** | 7.815*** | 6.114*** | 4.642*** | 0.820 |
| | (0.649) | (0.482) | (0.526) | (0.361) | (1.736) | (2.701) | (1.885) | (0.956) | (0.172) |
| age 23 | 5.250*** | 4.196*** | 6.874*** | 5.311*** | 5.682*** | 10 917*** | | 5.433*** | 0.710 |
| | (0.734) | (0.473) | (0.634) | (0.383) | (1.405) | (3.779) | | (1.148) | (0.157) |
| age 24 | | | | | | | | | 0.755 |
| | | | | | | | | | (0.174) |
| age 25 | | | | | | | | | 0.581** |
| | | | | | | | | | (0.142) |
| age 26 | | | | | | | | | 0.635* |
| | | | | | | | | | (0.161) |
| No Children dummy | 5.716*** | 6.078*** | 5.925*** | 5.922*** | 6.924*** | 8.250*** | 6.246*** | 4.805*** | |
| | (0.170) | (0.160) | (0.168) | (0.141) | (1.161) | (2.186) | (1.385) | (0.667) | |
| Firstborn daughter aged 0-12 | 1.011 | 1.012 | 0.996 | 1.008 | 1.007 | 1.019 | 1.065 | 1.012 | 1.004 |
| | (0.010) | (0.009) | (0.009) | (0.008) | (0.044) | (0.062) | (0.064) | (0.043) | (0.007) |
| Firstborn daughter aged 13-18 | 1.079*** | 1.005 | 1.039** | 1.038** | 1.134** | 1.030 | 1.047 | 1.029 | 1.091*** |
| | (0.025) | (0.020) | (0.020) | (0.016) | (0.071) | (0.093) | (0.090) | (0.065) | (0.024) |
| Firstborn daughter aged 19-26 | 0.948 | 0.965 | 0.974 | 0.953 | 1.067 | 1.043 | 0.808 | 1.084 | 1.046 |
| | (0.057) | (0.047) | (0.042) | (0.031) | (0.098) | (0.127) | (0.108) | (0.094) | (0.038) |
| *Marriage duration dummies* | | | | | | | | | |
| 1 year | 3.861*** | 3.982*** | 3.940*** | 3.950*** | 3.808*** | 4.076*** | 3.447*** | 4.379*** | |
| | (0.118) | (0.109) | (0.118) | (0.100) | (0.605) | (1.062) | (0.755) | (0.712) | |
| 2 years | 5.683*** | 5.961*** | 6.000*** | 5.720*** | 5.523*** | 6.898*** | 5.210*** | 6.813*** | |
| | (0.196) | (0.183) | (0.198) | (0.161) | (0.860) | (1.735) | (1.115) | (1.082) | |
| 3 years | 6.457*** | 7.049*** | 6.871*** | 6.886*** | 5.886*** | 7.989*** | 6.145*** | 6.092*** | |
| | (0.263) | (0.254) | (0.264) | (0.223) | (0.920) | (1.998) | (1.305) | (0.987) | |
| 4 years | 7.050*** | 7.387*** | 7.308*** | 7.470*** | 6.546*** | 8.832*** | 5.456*** | 7.288*** | |
| | (0.340) | (0.314) | (0.329) | (0.283) | (1.019) | (2.203) | (1.180) | (1.168) | |
| 5 years | 6.755*** | 7.255*** | 7.043*** | 7.275*** | 6.005*** | 7.177*** | 5.805*** | 6.714*** | |
| | (0.382) | (0.360) | (0.369) | (0.319) | (0.943) | (1.819) | (1.251) | (1.086) | |
| 6 years | 6.590*** | 7.464*** | 6.956*** | 7.170*** | 4.836*** | 8.391*** | 5.543*** | 5.809*** | |
| | (0.430) | (0.425) | (0.418) | (0.360) | (0.774) | (2.101) | (1.200) | (0.952) | |
| 7 years | 6.387*** | 7.097*** | 6.557*** | 6.999*** | 5.947*** | 7.766*** | 4.937*** | 5.509*** | |
| | (0.473) | (0.460) | (0.446) | (0.398) | (0.933) | (1.957) | (1.077) | (0.909) | |
| 8 years | 6.068*** | 6.933*** | 6.364*** | 6.649*** | 4.657*** | 6.764*** | 3.886*** | 6.300*** | |

|  | | | | | | | | |
|---|---|---|---|---|---|---|---|
|  | (0.505) | (0.504) | (0.485) | (0.423) | (0.747) | (1.721) | (0.863) | (1.027) |
| 9 years | 5.823*** | 6.608*** | 6.056*** | 6.360*** | 4.337*** | 6.662*** | 3.556*** | 5.165*** |
|  | (0.539) | (0.533) | (0.512) | (0.449) | (0.700) | (1.694) | (0.794) | (0.857) |
| 10 years | 5.702*** | 6.505*** | 5.755*** | 6.207*** | 4.302*** | 6.043*** | 4.173*** | 5.612*** |
|  | (0.581) | (0.578) | (0.535) | (0.481) | (0.695) | (1.542) | (0.916) | (0.923) |
| 11 years | 5.311*** | 6.195*** | 5.620*** | 5.894*** | 3.753*** | 4.467*** | 3.548*** | 4.602*** |
|  | (0.592) | (0.601) | (0.570) | (0.499) | (0.614) | (1.165) | (0.789) | (0.770) |
| 12 years | 5.163*** | 6.017*** | 5.142*** | 5.688*** | 3.871*** | 4.517*** | 2.769*** | 4.487*** |
|  | (0.624) | (0.634) | (0.566) | (0.522) | (0.633) | (1.176) | (0.629) | (0.752) |
| 13 years | 4.904*** | 5.679*** | 4.924*** | 5.485*** | 3.629*** | 3.122*** | 2.816*** | 4.263*** |
|  | (0.640) | (0.646) | (0.585) | (0.543) | (0.598) | (0.840) | (0.640) | (0.718) |
| 14 years | 4.793*** | 5.705*** | 4.836*** | 5.550*** | 3.017*** | 4.253*** | 2.428*** | 4.391*** |
|  | (0.672) | (0.696) | (0.616) | (0.589) | (0.507) | (1.113) | (0.561) | (0.739) |
| 15 years | 4.600*** | 5.567*** | 4.637*** | 5.297*** | 3.038*** | 3.636*** | 3.021*** | 3.026*** |
|  | (0.690) | (0.726) | (0.631) | (0.600) | (0.509) | (0.962) | (0.683) | (0.527) |
| 16 years | 4.599*** | 5.477*** | 4.549*** | 5.205*** | 2.608*** | 3.247*** | 2.369*** | 3.463*** |
|  | (0.735) | (0.761) | (0.659) | (0.628) | (0.444) | (0.868) | (0.548) | (0.596) |
| 17 years | 4.171*** | 5.307*** | 4.165*** | 4.908*** | 2.652*** | 3.385*** | 2.372*** | 2.657*** |
|  | (0.708) | (0.783) | (0.641) | (0.629) | (0.451) | (0.903) | (0.550) | (0.470) |
| 18 years | 4.137*** | 5.063*** | 4.170*** | 4.754*** | 2.109*** | 3.280*** | 1.743** | 2.567*** |
|  | (0.744) | (0.791) | (0.679) | (0.644) | (0.368) | (0.879) | (0.417) | (0.456) |
| 19 years | 3.986*** | 5.015*** | 3.865*** | 4.730*** | 2.222*** | 3.083*** | 2.092*** | 2.615*** |
|  | (0.757) | (0.827) | (0.664) | (0.676) | (0.386) | (0.833) | (0.491) | (0.464) |
| 20 years | 3.977*** | 4.592*** | 3.659*** | 4.623*** | 2.168*** | 3.472*** | 1.725** | 2.331*** |
|  | (0.796) | (0.799) | (0.662) | (0.695) | (0.379) | (0.930) | (0.414) | (0.418) |
| 21 years | 3.617*** | 4.831*** | 3.729*** | 4.196*** | 1.761*** | 2.127*** | 1.464 | 2.109*** |
|  | (0.764) | (0.884) | (0.709) | (0.664) | (0.315) | (0.593) | (0.359) | (0.383) |
| 22 years | 3.381*** | 4.541*** | 3.325*** | 4.245*** | 1.433* | 2.094*** | 1.429 | 1.896*** |
|  | (0.753) | (0.876) | (0.664) | (0.704) | (0.264) | (0.586) | (0.353) | (0.350) |
| 23 years | 3.526*** | 4.756*** | 3.281*** | 4.152*** | 1.243 | 1.781** | 1.457 | 1.709*** |
|  | (0.826) | (0.965) | (0.688) | (0.722) | (0.234) | (0.509) | (0.363) | (0.321) |
| 24 years | 3.264*** | 4.833*** | 3.006*** | 3.998*** | 1.134 | 1.703* | 1.270 | 1.666*** |
|  | (0.815) | (1.038) | (0.663) | (0.730) | (0.220) | (0.494) | (0.331) | (0.318) |
| 25 years | 2.807*** | 4.533*** | 3.086*** | 3.761*** | 1.208 | 1.412 | 1.024 | 1.427* |
|  | (0.770) | (1.058) | (0.718) | (0.725) | (0.240) | (0.430) | (0.288) | (0.286) |
| 26 years | 3.128*** | 6.137*** | 2.818*** | 4.035*** | 1.419* | 1.586 | 0.781 | 1.204 |
|  | (0.978) | (1.581) | (0.706) | (0.829) | (0.288) | (0.494) | (0.250) | (0.260) |
| 27 years | 3.601*** | 5.335*** | 2.188*** | 4.280*** | 0.999 | 0.473* | 0.789 | 1.087 |
|  | (1.412) | (1.814) | (0.630) | (0.963) | (0.231) | (0.208) | (0.274) | (0.256) |
| Registered Partnership | 1.425*** | 1.562*** | 1.351*** | 1.529*** | 1.237* | 1.368* | 0.909 | 1.336** |
|  | (0.031) | (0.030) | (0.029) | (0.029) | (0.150) | (0.253) | (0.176) | (0.154) |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Child born prior to marriage | 1.425*** | 1.500*** | 1.351*** | 1.513*** | 1.480*** | 1.560*** | 1.303*** | 1.358*** | |
| | (0.020) | (0.019) | (0.018) | (0.017) | (0.088) | (0.131) | (0.114) | (0.081) | |
| *Spousal immigration background* | | | | | | | | | |
| Husband native, Wife 1st gen. | 1.193*** | 1.305*** | | | 1.411*** | 1.178* | | | 1.522*** |
| | (0.020) | (0.019) | | | (0.093) | (0.115) | | | (0.023) |
| Husband native, Wife 2nd gen. | 1.328*** | 1.450*** | 1.348*** | 1.458*** | 1.283*** | 1.215** | 1.801*** | 1.448*** | 1.325*** |
| | (0.021) | (0.020) | (0.019) | (0.018) | (0.084) | (0.112) | (0.153) | (0.091) | (0.018) |
| Husband 1st gen. Wife native | | | 1.727*** | 1.881*** | | | 1 927*** | 1.834*** | 1.865*** |
| | | | (0.027) | (0.025) | | | (0.185) | (0.125) | (0.025) |
| Husband 1st gen. Wife 1st gen. | | | | | | | | | 1.333*** |
| | | | | | | | | | (0.014) |
| Husband 1st gen. Wife 2nd gen. | | | 1.147*** | 1.232*** | | | 1.388** | 1.157 | 1.813*** |
| | | | (0.029) | (0.019) | | | (0.207) | (0.130) | (0.039) |
| Husband 2nd gen. Wife native | 1.311*** | 1.439*** | 1.338*** | 1.418*** | 1.236*** | 1.302*** | 1.237** | 1.330*** | 1.364*** |
| | (0.021) | (0.020) | (0.019) | (0.017) | (0.083) | (0.122) | (0.112) | (0.085) | (0.018) |
| Husband 2nd gen. Wife 1st gen. | 0.894*** | 1.111*** | | | 1.015 | 1.600*** | | | 1.694*** |
| | (0.026) | (0.025) | | | (0.134) | (0.263) | | | (0.047) |
| Husband 2nd gen. Wife 2nd gen. | 1.295*** | 1.657*** | 1.333*** | 1.599*** | 1.675*** | 1.502** | 1.638*** | 1.574*** | 1.656*** |
| | (0.039) | (0.037) | (0.040) | (0.033) | (0.220) | (0.293) | (0.299) | (0.206) | (0.038) |
| *Age at wedding* | | | | | | | | | |
| Husband, linear | 0.805*** | 0.741*** | 0.985 | 0.965 | 1.012 | 1.017 | 0.856 | 0.894 | 1.164*** |
| | (0.053) | (0.040) | (0.036) | (0.030) | (0.121) | (0.178) | (0.130) | (0.114) | (0.024) |
| Husband, quadratic | 1.008*** | 1.011*** | 1.000 | 1.002** | 1.000 | 1.000 | 1.005 | 1.005 | 0.994*** |
| | (0.002) | (0.002) | (0.001) | (0.001) | (0.004) | (0.005) | (0.005) | (0.004) | (0.001) |
| Husband, cubic | 1.000*** | 1.000*** | 1.000 | 1.000*** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | 0.853*** | 0.901*** | 0.684*** | 0.750*** | 0.963 | 0.783 | 1.025 | 0.662*** | 1.541*** |
| | (0.040) | (0.035) | (0.035) | (0.031) | (0.098) | (0.145) | (0.151) | (0.090) | (0.054) |
| Wife, quadratic | 1.005*** | 1.004*** | 1.013*** | 1.010*** | 0.999 | 1.007 | 0.998 | 1.012*** | 0.982*** |
| | (0.002) | (0.001) | (0.002) | (0.002) | (0.003) | (0.006) | (0.005) | (0.005) | (0.001) |
| Wife, cubic | 1.000*** | 1.000*** | 1.000*** | 1.000*** | 1.000 | 1.000 | 1.000 | 1.000*** | 1.000*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *Education levels* | | | | | | | | | |
| Husband, High School | 0.770*** | 0.762*** | 0.823*** | 0.818*** | 0.765*** | 0.913 | 0.959 | 0.911 | 0.953*** |
| | (0.020) | (0.016) | (0.018) | (0.014) | (0.069) | (0.117) | (0.123) | (0.088) | (0.015) |
| Husband, University | 0.472*** | 0.468*** | 0.547*** | 0.509*** | 0.535*** | 0.559*** | 0.690*** | 0.652*** | 0.582*** |
| | (0.013) | (0.011) | (0.013) | (0.010) | (0.052) | (0.079) | (0.096) | (0.067) | (0.011) |
| Husband, Missing | 0.691*** | 0.682*** | 0.762*** | 0.756*** | 0.728*** | 0.867 | 0.935 | 0.917 | 0.950*** |
| | (0.018) | (0.015) | (0.017) | (0.013) | (0.064) | (0.108) | (0.117) | (0.086) | (0.015) |
| Wife, High School | 0.866*** | 0.835*** | 0.803*** | 0 799*** | 0.947 | 0.710*** | 0.851 | 0.762*** | 1.118*** |
| | (0.020) | (0.016) | (0.017) | (0.013) | (0.078) | (0.072) | (0.090) | (0.058) | (0.017) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Wife, University | 0.590*** | 0.550*** | 0.547*** | 0.537*** | 0.669*** | 0.509*** | 0.594*** | 0.544*** | 0.748*** |
| | (0.014) | (0.011) | (0.012) | (0.010) | (0.061) | (0.059) | (0.071) | (0.047) | (0.013) |
| Wife, Missing | 0.570*** | 0.525*** | 0.520*** | 0.499*** | 0.579*** | 0.419*** | 0.529*** | 0.501*** | 0.840*** |
| | (0.013) | (0.010) | (0.011) | (0.008) | (0.047) | (0.042) | (0.055) | (0.038) | (0.013) |
| *Calendar year* | | | | | | | | | |
| 1996 | 0.981 | 0.980 | 1.006 | 0.931*** | 1.021 | 1.067 | 1.105 | 1.073 | 0.961 |
| | (0.043) | (0.036) | (0.033) | (0.025) | (0.106) | (0.141) | (0.150) | (0.108) | (0.029) |
| 1997 | 0.955 | 0.956 | 0.983 | 0.918*** | 0.933 | 0.977 | 1.231 | 1.178* | 1.030 |
| | (0.044) | (0.037) | (0.035) | (0.027) | (0.099) | (0.132) | (0.163) | (0.117) | (0.034) |
| 1998 | 1.043 | 0.937 | 1.006 | 0.932** | 1.136 | 0.996 | 1.049 | 1.161 | 1.071* |
| | (0.051) | (0.039) | (0.040) | (0.031) | (0.115) | (0.135) | (0.146) | (0.116) | (0.041) |
| 1999 | 1.160*** | 1.053 | 1.061 | 1.022 | 1.243** | 1.073 | 1.210 | 1.319*** | 1.133*** |
| | (0.063) | (0.049) | (0.048) | (0.039) | (0.124) | (0.144) | (0.164) | (0.129) | (0.051) |
| 2000 | 1.246*** | 1.138** | 1.147*** | 1.082* | 1.484*** | 0.991 | 1.528*** | 1.441*** | 1.205*** |
| | (0.076) | (0.060) | (0.060) | (0.047) | (0.143) | (0.137) | (0.198) | (0.139) | (0.064) |
| 2001 | 1.258*** | 1.147** | 1.189*** | 1.098* | 1.474*** | 1.414*** | 1.268* | 1.516*** | 1 190*** |
| | (0.086) | (0.068) | (0.071) | (0.054) | (0.143) | (0.180) | (0.173) | (0.145) | (0.073) |
| 2002 | 1.165** | 1.069 | 1.095 | 1.031 | 1.480*** | 1.278* | 1.379** | 1.580*** | 1.239*** |
| | (0.090) | (0.071) | (0.074) | (0.058) | (0.145) | (0.168) | (0.186) | (0.151) | (0.086) |
| 2003 | 1.107 | 1.006 | 1.024 | 0.992 | 1.633*** | 1.363** | 1.740*** | 1.529*** | 1.239*** |
| | (0.095) | (0.074) | (0.077) | (0.062) | (0.157) | (0.178) | (0.225) | (0.148) | (0.097) |
| 2004 | 1.082 | 1.019 | 1.033 | 0.962 | 1.604*** | 1.371** | 1.610*** | 1.787*** | 1.240** |
| | (0.102) | (0.083) | (0.086) | (0.067) | (0.156) | (0.180) | (0.214) | (0.169) | (0.108) |
| 2005 | 1.070 | 0.942 | 0.988 | 0.915 | 1.420*** | 1.441*** | 1.750*** | 1.734*** | 1.255** |
| | (0.110) | (0.084) | (0.091) | (0.070) | (0.143) | (0.189) | (0.230) | (0.166) | (0.120) |
| 2006 | 1.027 | 0.927 | 0.960 | 0.884 | 1.691*** | 1.554*** | 1.670*** | 1.600*** | 1.233** |
| | (0.115) | (0.090) | (0.096) | (0.074) | (0.165) | (0.202) | (0.224) | (0.157) | (0.129) |
| 2007 | 0.988 | 0.886 | 0.918 | 0.864 | 1.613*** | I.434*** | 1.760*** | 1.663*** | 1.222* |
| | (0.120) | (0.093) | (0.100) | (0.078) | (0.160) | (0.191) | (0.236) | (0.163) | (0.139) |
| 2008 | 0.914 | 0.817* | 0.833 | 0.795** | 1.414*** | 1.284* | 1.724*** | 1.458*** | 1.238* |
| | (0.119) | (0.093) | (0.098) | (0.078) | (0.145) | (0.177) | (0.235) | (0.148) | (0.152) |
| 2009 | 0.842 | 0.743** | 0.779** | 0.717*** | 1.614*** | 1.280* | 1.277* | 1.465*** | 1.238 |
| | (0.118) | (0.090) | (0.098) | (0.075) | (0.162) | (0.179) | (0.189) | (0.149) | (0.163) |
| 2010 | 0.843 | 0.745** | 0.770* | 0.732*** | 1.421*** | 1.368** | 1.351** | 1.692*** | 1.251 |
| | (0.126) | (0.097) | (0.104) | (0.082) | (0.148) | (0.190) | (0.199) | (0.168) | (0.176) |
| 2011 | 0.820 | 0.737** | 0.746** | 0 719*** | 1.305** | 1.450*** | 1.901*** | 1.392*** | 1.332* |
| | (0.130) | (0.102) | (0.107) | (0.086) | (0.140) | (0.201) | (0.260) | (0.146) | (0.199) |
| 2012 | 0.854 | 0.775* | 0.779 | 0.748** | 1.527*** | 1.398** | 1.431** | 1.675*** | 1.442** |
| | (0.144) | (0.113) | (0.118) | (0.094) | (0.160) | (0.198) | (0.213) | (0.169) | (0.229) |
| 2013 | 0.887 | 0.779 | 0.806 | 0.757** | 1.603*** | 1.508*** | 1.670*** | 1.758*** | 1.495** |
| | (0.158) | (0.120) | (0.129) | (0.101) | (0.168) | (0.213) | (0.242) | (0.178) | (0.251) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2014 | 0.849 | 0.774 | 0.801 | 0.741** | 1.855*** | 1.588*** | 2.226*** | 1.768*** | |
| | (0.159) | (0.126) | (0.135) | (0.104) | (0.190) | (0.225) | (0.307) | (0.181) | |
| 2015 | 0.851 | 0.734* | 0.776 | 0.715** | 1.856*** | 1.507*** | 1.853*** | 1.611*** | |
| | (0.167) | (0.125) | (0.138) | (0.106) | (0.193) | (0.221) | (0.271) | (0.170) | |
| Constant | 0.121** | 0.152*** | 0.117*** | 0.030*** | 0.003*** | 0.011** | 0.009*** | 0.306 | 0.001*** |
| | (0.123) | (0.107) | (0.071) | (0.015) | (0.004) | (0.022) | (0.015) | (0.441) | (0.000) |
| Observations | 4,130,492 | 6,276,168 | 4,800,351 | 7,962,415 | 354,532 | 182,025 | 186,043 | 376,208 | 3,419,388 |
| Spells | 356,601 | 520,586 | 391,792 | 623,085 | 28,557 | 14,711 | 15,247 | 30,774 | 461,997 |
| ln likelihood | -345,732 | -481,976 | -410,395 | -622,390 | -25,228 | -12,999 | -13,517 | -26,726 | -423,644 |

Note: Authors' estimates of exponentiated coefficients corresponding to firstborn daughters in the three age-groups from the simplified specification of cloglog model of marriage durations. The model uses linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage.

*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.

**Table B2: Regression results, robustness checks**

| VARIABLES | Logit exp(Beta) | St.e. | Birth past 1995 exp(Beta) | St.e. | Incl. blended f. exp(Beta) | St.e. | Separation exp(Beta) | St.e. | Incl. income ctrl. exp(Beta) | St.e. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Firstborn's age dummies* | | | | | | | | | | |
| age 1 | 1.699*** | 0.045 | 1.688*** | 0.046 | 1.660*** | 0.037 | 1.379*** | 0.031 | 1.720*** | 0.055 |
| age 2 | 2.201*** | 0.056 | 2.183*** | 0.057 | 2.095*** | 0.045 | 1.627*** | 0.035 | 2.259*** | 0.069 |
| age 3 | 2.468*** | 0.061 | 2.463*** | 0.063 | 2.390*** | 0.050 | 1.819*** | 0.038 | 2.542*** | 0.076 |
| age 4 | 2.775*** | 0.068 | 2.812*** | 0.072 | 2.659*** | 0.055 | 2.015*** | 0.042 | 2.931*** | 0.087 |
| age 5 | 3.162*** | 0.077 | 3.200*** | 0.082 | 3.011*** | 0.062 | 2.283*** | 0.047 | 3.311*** | 0.097 |
| age 6 | 3.426*** | 0.084 | 3.517*** | 0.091 | 3.264*** | 0.068 | 2.474*** | 0.051 | 3.621*** | 0.106 |
| age 7 | 3.829*** | 0.094 | 3.913*** | 0.102 | 3.585*** | 0.074 | 2.686*** | 0.056 | 4.016*** | 0.118 |
| age 8 | 3.997*** | 0.098 | 4.130*** | 0.109 | 3.736*** | 0.078 | 2.820*** | 0.059 | 4.204*** | 0.124 |
| age 9 | 4.286*** | 0.106 | 4.369*** | 0.118 | 4.021*** | 0.084 | 3.032*** | 0.064 | 4.500*** | 0.133 |
| age 10 | 4.515*** | 0.112 | 4577*** | 0.126 | 4.216*** | 0.089 | 3.146*** | 0.067 | 4.711*** | 0.140 |
| age 11 | 4.668*** | 0.116 | 4.739*** | 0.134 | 4.352*** | 0.092 | 3.256*** | 0.070 | 4.907*** | 0.146 |
| age 12 | 4.953*** | 0.124 | 5.083*** | 0.147 | 4.570*** | 0.098 | 3.424*** | 0.074 | 5.256*** | 0.157 |
| age 13 | 5.259*** | 0.132 | 5.343*** | 0.159 | 4.848*** | 0.104 | 3.585*** | 0.078 | 5.557*** | 0.167 |
| age 14 | 5.594*** | 0.142 | 5.914*** | 0.181 | 5.125*** | 0.111 | 3.899*** | 0.085 | 5.898*** | 0.178 |
| age 15 | 5.872*** | 0.150 | 6.135*** | 0.197 | 5.382*** | 0.117 | 4.082*** | 0.090 | 6.191*** | 0.188 |
| age 16 | 6.220*** | 0.160 | 6.344*** | 0.216 | 5.739*** | 0.126 | 4.288*** | 0.096 | 6.557*** | 0.200 |
| age 17 | 6.889*** | 0.177 | 7.058*** | 0.256 | 6.261*** | 0.138 | 4.722*** | 0.106 | 7.203*** | 0.220 |
| age 18 | 7.228*** | 0.188 | 7.530*** | 0.305 | 6.578*** | 0.146 | 5.005*** | 0.113 | 7.682*** | 0.236 |
| age 19 | 7.550*** | 0.198 | 8.037*** | 0.390 | 6.842*** | 0.154 | 4.983*** | 0.115 | 7.993*** | 0.248 |
| age 20 | 7.583*** | 0.201 | 8.330*** | 0.621 | 6.848*** | 0.157 | 5.047*** | 0.118 | 8.151*** | 0.255 |
| age 21 | 7.362*** | 0.199 | | | 6.664*** | 0.156 | 4.832*** | 0.116 | 7.870*** | 0.250 |
| age 22 | 7.257*** | 0.200 | | | 6.471*** | 0.155 | 4.734*** | 0.117 | 7.765*** | 0.251 |
| age 23 | 6.766*** | 0.193 | | | 6.089*** | 0.151 | 4.366*** | 0.113 | 7.239*** | 0.239 |
| age 24 | 6.549*** | 0.193 | | | 5.930*** | 0.153 | 4.325*** | 0.116 | 6.968*** | 0.236 |
| age 25 | 6.487*** | 0.197 | | | 5.806*** | 0.156 | 4.246*** | 0.119 | 6.859*** | 0.238 |
| age 26 | 6.256*** | 0.198 | | | 5.631*** | 0.158 | 3.927*** | 0.117 | 6.589*** | 0.235 |
| *Firstborn's age * daughter dummies* | | | | | | | | | | |
| age 0 | 1.031 | 0.032 | 1.026 | 0.032 | 1.000 | 0.026 | 1.020 | 0.025 | 0.996 | 0.038 |
| age 1 | 1.011 | 0.022 | 1.026 | 0.023 | 0.999 | 0.018 | 1.022 | 0.020 | 1.019 | 0.026 |
| age 2 | 0.984 | 0.018 | 0.991 | 0.019 | 1.009 | 0.016 | 1.001 | 0.017 | 0.977 | 0.021 |
| age 3 | 0.993 | 0.017 | 0.997 | 0.018 | 0.983 | 0.014 | 0.981 | 0.016 | 1.003 | 0.020 |
| age 4 | 1.014 | 0.016 | 1.010 | 0.018 | 1.003 | 0.014 | 1.002 | 0.016 | 1.002 | 0.018 |
| age 5 | 0.980 | 0.015 | 0.980 | 0.017 | 0.973** | 0.013 | 0.985 | 0.015 | 0.985 | 0.017 |
| age 6 | 1.019 | 0.015 | 1.020 | 0.018 | 1.006 | 0.013 | 1.016 | 0.015 | 1.022 | 0.017 |
| age 7 | 0.995 | 0.015 | 1.007 | 0.018 | 0.988 | 0.013 | 1.004 | 0.015 | 1.003 | 0.016 |
| age 8 | 1.021 | 0.015 | 0.996 | 0.019 | 1.019 | 0.013 | 1.014 | 0.015 | 1.015 | 0.017 |
| age 9 | 0.988 | 0.015 | 0.983 | 0.020 | 0.980 | 0.013 | 0.992 | 0.015 | 0.981 | 0.016 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| age 10 | 1.023 | 0.015 | 1.049** | 0.022 | 1.011 | 0.014 | 1.022 | 0.015 | 1.033** | 0.017 |
| age 11 | 1.005 | 0.015 | 1.004 | 0.023 | 1.003 | 0.014 | 1.008 | 0.016 | 1.005 | 0.017 |
| age 12 | 1.015 | 0.016 | 1.019 | 0.024 | 1.010 | 0.014 | 1.036** | 0.016 | 1.009 | 0.017 |
| age 13 | 1.045*** | 0.016 | 1.032 | 0.026 | 1.046*** | 0.015 | 1.053*** | 0.017 | 1.039** | 0.018 |
| age 14 | 1.047*** | 0.017 | 1.024 | 0.028 | 1.044*** | 0.015 | 1.058*** | 0.017 | 1.051*** | 0.018 |
| age 15 | 1.089*** | 0.017 | 1.068** | 0.032 | 1.084*** | 0.016 | 1.074*** | 0.017 | 1.083*** | 0.019 |
| age 16 | 1.067*** | 0.017 | 1.072** | 0.036 | 1.065*** | 0.016 | 1.072*** | 0.018 | 1.074*** | 0.019 |
| age 17 | 1.032* | 0.017 | 1.051 | 0.040 | 1.041*** | 0.016 | 1.041** | 0.017 | 1.040** | 0.019 |
| age 18 | 1.034** | 0.017 | 0.983 | 0.045 | 1.026* | 0.016 | 1.007 | 0.017 | 1.022 | 0.019 |
| age 19 | 1.011 | 0.018 | 1.032 | 0.060 | 1.014 | 0.016 | 0.998 | 0.018 | 1.019 | 0.019 |
| age 20 | 0.987 | 0.018 | 1.098 | 0.107 | 0.981 | 0.017 | 0.996 | 0.018 | 0.980 | 0.019 |
| age 21 | 0.995 | 0.019 | | | 0.992 | 0.018 | 1.008 | 0.020 | 0.990 | 0.021 |
| age 22 | 0.987 | 0.020 | | | 1.003 | 0.019 | 1.000 | 0.021 | 0.981 | 0.022 |
| age 23 | 1.027 | 0.023 | | | 1.026 | 0.022 | 1.037 | 0.024 | 1.021 | 0.025 |
| age 24 | 1.005 | 0.025 | | | 1.001 | 0.023 | 0.986 | 0.025 | 0.999 | 0.026 |
| age 25 | 0.954* | 0.026 | | | 0.963 | 0.024 | 0.924*** | 0.026 | 0.947* | 0.026 |
| age 26 | 0.971 | 0.028 | | | 0.985 | 0.027 | 0.975 | 0.030 | 0.972 | 0.029 |
| No Children dummy | 6.185*** | 0.136 | 6.111*** | 0.137 | 5.683*** | 0.105 | 3.939*** | 0.070 | 6.040*** | 0.162 |
| *Marriage duration dummies* | | | | | | | | | | |
| 1 year | 3.914*** | 0.068 | 3.942*** | 0.071 | 3.733*** | 0.050 | 2.392*** | 0.033 | 3.644*** | 0.074 |
| 2 years | 5.945*** | 0.109 | 5.975*** | 0.118 | 5.472*** | 0.078 | 3.135*** | 0.047 | 5.616*** | 0.119 |
| 3 years | 7.273*** | 0.146 | 7.359*** | 0.167 | 6.639*** | 0.105 | 3.693*** | 0.063 | 6.701*** | 0.155 |
| 4 years | 8.155*** | 0.183 | 8.318*** | 0.219 | 7.403*** | 0.133 | 3.914*** | 0.078 | 7.435*** | 0.192 |
| 5 years | 7.868*** | 0.199 | 8.084*** | 0.247 | 6.866*** | 0.141 | 3.747*** | 0.086 | 7.204*** | 0.208 |
| 6 years | 7.714*** | 0.218 | 7.981*** | 0.279 | 6.469*** | 0.150 | 3.616*** | 0.095 | 7.098*** | 0.229 |
| 7 years | 7.217*** | 0.227 | 7.610*** | 0.301 | 5.870*** | 0.152 | 3.318*** | 0.098 | 6.781*** | 0.242 |
| 8 years | 6.734*** | 0.234 | 7.194*** | 0.318 | 5.372*** | 0.155 | 3.155*** | 0.105 | 6.397*** | 0.252 |
| 9 years | 6.318*** | 0.241 | 6.809*** | 0.334 | 4.958*** | 0.158 | 2.952*** | 0.108 | 6.042*** | 0.261 |
| 10 years | 5.953*** | 0.248 | 6.529*** | 0.352 | 4.615*** | 0.161 | 2.782*** | 0.112 | 5.748*** | 0.271 |
| 11 years | 5.582*** | 0.252 | 6.154*** | 0.362 | 4.232*** | 0.160 | 2.565*** | 0.113 | 5.400*** | 0.276 |
| 12 years | 5.155*** | 0.251 | 5.788*** | 0.369 | 3900*** | 0.160 | 2.409*** | 0.115 | 5.037*** | 0.277 |
| 13 years | 4.872*** | 0.255 | 5.417*** | 0.372 | 3.616*** | 0.159 | 2.259*** | 0.116 | 4.737*** | 0.280 |
| 14 years | 4.630*** | 0.259 | 5.296*** | 0.390 | 3.398*** | 0.160 | 2.147*** | 0.118 | 4.544*** | 0.287 |
| 15 years | 4.419*** | 0.263 | 5.066*** | 0.399 | 3.183*** | 0.160 | 2.029*** | 0.119 | 4.335*** | 0.292 |
| 16 years | 4.200*** | 0.266 | 4.798*** | 0.402 | 2.981*** | 0.159 | 1.930*** | 0.120 | 4.129*** | 0.295 |
| 17 years | 3.911*** | 0.262 | 4.542*** | 0.404 | 2.759*** | 0.156 | 1.816*** | 0.120 | 3.827*** | 0.289 |
| 18 years | 3.750*** | 0.265 | 4.416*** | 0.415 | 2.609*** | 0.156 | 1.716*** | 0.120 | 3.660*** | 0.292 |
| 19 years | 3.538*** | 0.263 | 4.002*** | 0.397 | 2.423*** | 0.152 | 1.608*** | 0.118 | 3.455*** | 0.290 |
| 20 years | 3.343*** | 0.261 | 3.901*** | 0.407 | 2.265*** | 0.149 | 1.533*** | 0.118 | 3.238*** | 0.285 |
| 21 years | 3.130*** | 0.256 | 3.720*** | 0.408 | 2.099*** | 0.145 | 1.442*** | 0.117 | 3.020*** | 0.278 |
| 22 years | 3.028*** | 0.259 | 3.520*** | 0.405 | 1.993*** | 0.144 | 1.393*** | 0.118 | 2.897*** | 0.279 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 23 years | 2.876*** | 0.257 | 3.368*** | 0.406 | 1.867*** | 0.141 | 1.300*** | 0.115 | 2.752*** | 0.277 |
| 24 years | 2.779*** | 0.258 | 3.204*** | 0.404 | 1.794*** | 0.141 | 1.260** | 0.116 | 2.659*** | 0.279 |
| 25 years | 2.534*** | 0.245 | 2.815*** | 0.372 | 1.618*** | 0.133 | 1.141 | 0.109 | 2.439*** | 0.266 |
| 26 years | 2.412*** | 0.243 | 2.652*** | 0.366 | 1.531*** | 0.130 | 1.090 | 0.109 | 2.318*** | 0.263 |
| 27 years | 2.272*** | 0.237 | 2.495*** | 0.360 | 1.427*** | 0.126 | 1.051 | 0.109 | 2.183*** | 0.257 |
| 28 years | 2.138*** | 0.232 | 2.320*** | 0.349 | 1.328*** | 0.122 | 0.971 | 0.105 | 2.061*** | 0.251 |
| 29 years | 2.107*** | 0.237 | 2.047*** | 0.322 | 1.283*** | 0.122 | 0.939 | 0.105 | 2.029*** | 0.256 |
| 30 years | 1.911*** | 0.223 | 2.038*** | 0.333 | 1.161 | 0.115 | 0.847 | 0.098 | 1.839*** | 0.241 |
| 31 years | 1.885*** | 0.229 | 1.715*** | 0.294 | 1.126 | 0.116 | 0.833 | 0.100 | 1.824*** | 0.248 |
| 32 years | 1.876*** | 0.236 | 1.764*** | 0.313 | 1.103 | 0.119 | 0.782* | 0.098 | 1.808*** | 0.255 |
| 33 years | 1.705*** | 0.225 | 1.386* | 0.260 | 0.994 | 0.112 | 0.744** | 0.098 | 1.644*** | 0.242 |
| 34 years | 1.556*** | 0.215 | 1.347 | 0.263 | 0.883 | 0.105 | 0.618*** | 0.086 | 1.500*** | 0.231 |
| 35 years | 1.414** | 0.207 | 1.329 | 0.270 | 0.791* | 0.100 | 0.559*** | 0.083 | 1.358* | 0.220 |
| 36 years | 1.105 | 0.175 | 0.955 | 0.211 | 0.599*** | 0.083 | 0.481*** | 0.077 | 1.054 | 0.183 |
| 37 years | 0.987 | 0.168 | | | 0.529*** | 0.080 | 0.379*** | 0.067 | 0.941 | 0.175 |
| 38 years | 0.833 | 0.156 | | | 0.442*** | 0.074 | 0.319*** | 0.063 | 0.787 | 0.159 |
| 39 years | 0.844 | 0.170 | | | 0.424*** | 0.077 | 0.306*** | 0.067 | 0.790 | 0.171 |
| 40 years | 0.941 | 0.200 | | | 0.492*** | 0.094 | 0.352*** | 0.081 | 0.891 | 0.202 |
| Registered Partnership | 1.489*** | 0.019 | 1.536*** | 0.020 | 1.250*** | 0.012 | 1.471*** | 0.019 | 1.495*** | 0.019 |
| Child born prior to marriage | 1.463*** | 0.009 | 1.419*** | 0.011 | 1.289*** | 0.006 | 1.483*** | 0.009 | 1.372*** | 0.009 |
| *Spousal immigration background* | | | | | | | | | | |
| Husband native, Wife 1st gen. | 1.373*** | 0.010 | 1.297*** | 0.012 | 1.363*** | 0.007 | 1.377*** | 0.010 | 1.279*** | 0.010 |
| Husband native, Wife 2nd gen. | 1.393*** | 0.010 | 1.376*** | 0.013 | 1.337*** | 0.008 | 1.391*** | 0.010 | 1.359*** | 0.011 |
| Husband 1st gen. Wife native | 1.937*** | 0.015 | 1.925*** | 0.019 | 2.011*** | 0.012 | 1.928*** | 0.014 | 1.631*** | 0.014 |
| Husband 1st gen. Wife 1st gen. | 0.677*** | 0.004 | 0.625*** | 0.005 | 0.857*** | 0.004 | 0.685*** | 0.004 | 0.565*** | 0.004 |
| Husband 1st gen. Wife 2nd gen. | 1.395*** | 0.016 | 1.284*** | 0.017 | 1.540*** | 0.015 | 1.391*** | 0.016 | 1.175*** | 0.015 |
| Husband 2nd gen. Wife native | 1.381*** | 0.010 | 1.367*** | 0.013 | 1.322*** | 0.008 | 1.374*** | 0.010 | 1.346*** | 0.011 |
| Husband 2nd gen. Wife 1st gen. | 1.221*** | 0.017 | 1.122*** | 0.018 | 1.286*** | 0.015 | 1.219*** | 0.017 | 1.125*** | 0.017 |
| Husband 2nd gen. Wife 2nd gen. | 1.511*** | 0.022 | 1.502*** | 0.025 | 1.484*** | 0.019 | 1.501*** | 0.022 | 1.411*** | 0.022 |
| *Age at wedding* | | | | | | | | | | |
| Husband, linear | 0.887*** | 0.010 | 0.918*** | 0.014 | 0.950*** | 0.006 | 0.879*** | 0.010 | 0.921*** | 0.012 |
| Husband, quadratic | 1.004*** | 0.000 | 1.002*** | 0.000 | 1.001*** | 0.000 | 1.004*** | 0.000 | 1.002*** | 0.000 |
| Husband, cubic | 1.000*** | 0.000 | 1.000*** | 0.000 | 1.000*** | 0.000 | 1.000*** | 0.000 | 1.000*** | 0.000 |
| Wife, linear | 1.043*** | 0.011 | 1.090*** | 0.015 | 0.994 | 0.005 | 1.033*** | 0.011 | 1.061*** | 0.013 |
| Wife, quadratic | 0.998*** | 0.000 | 0.997*** | 0.000 | 1.000 | 0.000 | 0.998*** | 0.000 | 0.998*** | 0.000 |
| Wife, cubic | 1.000*** | 0.000 | 1.000*** | 0.000 | 1.000 | 0.000 | 1.000*** | 0.000 | 1.000*** | 0.000 |
| *Education levels* | | | | | | | | | | |
| Husband, High School | 0.876*** | 0.007 | 0.838*** | 0.010 | 0.830*** | 0.005 | 0.878*** | 0.007 | 0.919*** | 0.009 |
| Husband, University | 0.623*** | 0.006 | 0.554*** | 0.007 | 0.570*** | 0.004 | 0.625*** | 0.006 | 0.690*** | 0.007 |
| Husband, Missing | 0.834*** | 0.007 | 0.747*** | 0.009 | 0.791*** | 0.005 | 0.838*** | 0.007 | 0.855*** | 0.008 |
| Wife, High School | 0.999 | 0.007 | 0.971*** | 0.011 | 0.925*** | 0.005 | 0.995 | 0.007 | 0.988 | 0.008 |

| | (1) | | (2) | | (3) | | (4) | | (5) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Wife, University | 0.742*** | 0.006 | 0.688*** | 0.008 | 0.635*** | 0.004 | 0.739*** | 0.006 | 0.702*** | |
| Wife, Missing | 0.598*** | 0.004 | 0.611*** | 0.007 | 0.555*** | 0.003 | 0.598*** | 0.004 | 0.579*** | 0.005 |
| *Calendar year* | | | | | | | | | | |
| 1996 | 0.970*** | 0.010 | 0.993 | 0.018 | 0.975*** | 0.009 | 0.917*** | 0.009 | | |
| 1997 | 0.952*** | 0.012 | 0.983 | 0.019 | 0.952*** | 0.010 | 0.907*** | 0.011 | | |
| 1998 | 0.976 | 0.015 | 0.987 | 0.022 | 0.959*** | 0.012 | 0.918*** | 0.014 | | |
| 1999 | 1.022 | 0.018 | 1.039 | 0.027 | 1.002 | 0.015 | 0.961** | 0.017 | | |
| 2000 | 1.091*** | 0.023 | 1.090*** | 0.033 | 1.058*** | 0.019 | 1.013 | 0.021 | | |
| 2001 | 1.143*** | 0.028 | 1.112*** | 0.038 | 1.118*** | 0.023 | 1.046* | 0.026 | 1.049*** | 0.010 |
| 2002 | 1.112*** | 0.031 | 1.032 | 0.040 | 1.093*** | 0.026 | 1.033 | 0.029 | 1.025** | 0.013 |
| 2003 | 1.073** | 0.034 | 1.000 | 0.043 | 1.072** | 0.029 | 1.017 | 0.032 | 0.990 | 0.015 |
| 2004 | 1.081** | 0.038 | 0.980 | 0.047 | 1.087*** | 0.033 | 1.015 | 0.036 | 0.997 | 0.019 |
| 2005 | 1.067* | 0.042 | 0.957 | 0.051 | 1.084** | 0.036 | 1.001 | 0.039 | 0.982 | 0.023 |
| 2006 | 1.023 | 0.044 | 0.920 | 0.053 | 1.049 | 0.038 | 0.976 | 0.042 | 0.941** | 0.026 |
| 2007 | 1.009 | 0.047 | 0.895* | 0.056 | 1.043 | 0.041 | 0.947 | 0.044 | 0.932** | 0.029 |
| 2008 | 0.933 | 0.047 | 0.832*** | 0.056 | 0.988 | 0.042 | 0.911* | 0.046 | 0.864*** | 0.031 |
| 2009 | 0.880** | 0.048 | 0.771*** | 0.056 | 0.939 | 0.043 | 0.862*** | 0.046 | 0.817*** | 0.032 |
| 2010 | 0.891** | 0.051 | 0.764*** | 0.059 | 0.957 | 0.047 | 0.838*** | 0.048 | 0.827*** | 0.036 |
| 2011 | 0.871** | 0.054 | 0.751*** | 0.062 | 0.943 | 0.049 | 0.828*** | 0.051 | 0.805*** | 0.039 |
| 2012 | 0.901 | 0.059 | 0.773*** | 0.068 | 0.976 | 0.054 | 0.856** | 0.056 | 0.833*** | 0.043 |
| 2013 | 0.929 | 0.064 | 0.793** | 0.073 | 1.008 | 0.059 | 0.821*** | 0.056 | 0.857*** | 0.048 |
| 2014 | 0.930 | 0.068 | 0.779** | 0.076 | 1.024 | 0.063 | 0.711*** | 0.052 | 0.849*** | 0.051 |
| 2015 | 0.906 | 0.069 | 0.756*** | 0.078 | 1.006 | 0.065 | 0.670*** | 0.051 | 0.826*** | 0.054 |
| Employed in previous year, husband | | | | | | | | | 1.021** | 0.008 |
| Employed in previous year, wife | | | | | | | | | 1.069*** | 0.006 |
| Log earnings, husband | | | | | | | | | 0.790*** | 0.004 |
| Log earnings, wife | | | | | | | | | 1.045*** | 0.005 |
| Constant | 0.004*** | 0.001 | 0.001*** | 0.001 | 0.004*** | 0.001 | 0.016*** | 0.006 | 0.001*** | 0.001 |
| Observations | 36,543,428 | | 17,991,797 | | 44,096,301 | | 35,762,080 | | 27,263,480 | |
| Spells | 2,722,223 | | 1,406,662 | | 3,420,124 | | 2,722,223 | | 2,567,217 | |
| Log-likelihood | -2,427,259 | | -1,307,774 | | -3,219,995 | | -2,405,832 | | -1,940,947 | |

Note: Authors' estimates of exponentiated coefficients corresponding to the main cloglog models of marriage durations. The models use linked marriage, divorce, and other registry data for different-sex couples who married after year 1971, and did not have children with other partners prior to the marriage. The second specification does not use data for couples whose children were born before year 1995. The third specification combines the baseline sample with the sample of re-marrying couples, and the sample of couples who have children with prior partners. The fourth specification uses an alternative definition of marriage spells which are terminated at the date of residential separation, rather than the date of divorce. The last specification does not use records preceding the year 2000 due to the limited availability of employment records

**Table B3: List of dependent variables from LISS panel**

| Col. No. | Full description of the variable |
|---|---|
| 1 | How satisfied are you with your current relationship? |
| 2 | Can you indicate whether you and your partner had any differences of opinion regarding money expenditure over the past year? |
| 3 | Can you indicate whether you and your partner had any differences of opinion regarding raising the children over the past year? |
| 4 | Do you agree with the following statement: A woman is more suited to rearing young children than a man. |
| 5 | Do you agree with the following statement: A divorce is generally the best solution if a married couple cannot solve their marital problems |
| 6 | Do you agree with the following statement: Married people are generally happier than unmarried people. |
| 7 | How would you generally describe the relationship with your family? |
| 8 | Do you agree with the following statement: All in all... caring for my child is not such a burden. |
| 9 | How satisfied are you with the life you lead at the moment? |
| 10 | Logarithm of total expenditure per month for children living at home, children 0-15 |
| 11 | How much time did you spend in the last seven days on: activities with own child |

**Table B3a: Regression analysis of parental responses in the LISS panel**

| VARIABLES | (1) father | (1) mother | (2) father | (2) mother | (3) father | (3) mother | (4) father | (4) mother | (5) father | (5) mother | (6) father | (6) mother |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FB daughter | 0.032 | -0.185** | -0.113 | 0.189** | -0.152 | -0.108 | -0.170* | 0.014 | -0.102 | 0.052 | -0.100 | -0.079 |
| aged 0-12 | (0.088) | (0.078) | (0.096) | (0.085) | (0.096) | (0.086) | (0.094) | (0.086) | (0.095) | (0.087) | (0.095) | (0.086) |
| FB child | 0.236** | 0.218** | -0.399*** | -0.167 | -0.288** | -0.438*** | 0.322** | 0.068 | -0.104 | -0.037 | 0.239* | 0.311*** |
| aged 13-18 | (0.119) | (0.105) | (0.133) | (0.119) | (0.132) | (0.117) | (0.129) | (0.113) | (0.131) | (0.116) | (0.129) | (0.115) |
| FB daughter | 0.030 | -0.071 | 0.148 | 0.258** | 0.298** | 0.181* | -0.371*** | -0.189* | 0.085 | 0.323*** | -0.155 | -0.073 |
| aged 13-18 | (0.110) | (0.098) | (0.125) | (0.111) | (0.122) | (0.109) | (0.119) | (0.105) | (0.121) | (0.109) | (0.120) | (0.105) |
| Number of | -0.060 | 0.151*** | 0.032 | 0.096* | 0.328*** | 0.208*** | 0.068 | 0.297*** | -0.219*** | -0.171*** | 0.154** | 0.054 |
| siblings | (0.058) | (0.050) | (0.064) | (0.056) | (0.065) | (0.056) | (0.063) | (0.055) | (0.063) | (0.055) | (0.063) | (0.056) |
| Number of | -0.018 | -0.123** | -0.128* | -0.143** | -0.300*** | -0.161** | 0.214*** | -0.037 | 0.017 | 0.003 | 0.083 | 0.079 |
| sisters | (0.065) | (0.058) | (0.073) | (0.065) | (0.072) | (0.064) | (0.071) | (0.064) | (0.071) | (0.065) | (0.072) | (0.065) |
| *Age at the time of survey collection* | | | | | | | | | | | | |
| Husband, | -0.028 | 0.111* | -0.070 | -0.025 | 0.216 | 0.064 | 0.097 | -0.068 | -0.083 | -0.045 | -0.302** | -0.110 |
| linear | (0.132) | (0.064) | (0.138) | (0.081) | (0.148) | (0.074) | (0.125) | (0.068) | (0.130) | (0.069) | (0.126) | (0.069) |
| Husband, | -0.001 | -0.004** | 0.002 | 0.000 | -0.005 | -0.001 | -0.002 | 0.002 | 0.003 | 0.002 | 0.007*** | 0.003* |
| quadratic | (0.003) | (0.002) | (0.003) | (0.002) | (0.003) | (0.002) | (0.003) | (0.002) | (0.003) | (0.002) | (0.003) | (0.002) |
| Husband, | 0.000 | 0.000** | -0.000 | 0.000 | 0.000* | 0.000 | 0.000 | -0.000 | -0.000 | -0.000 | -0.000*** | -0.000 |
| cubic | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | -0.060 | -0.135 | -0.289 | -0.221 | 0.179 | -0.566 | 0.139 | -0.441 | 0.868** | 0.887*** | -0.282 | -0.375 |
|  | (0.363) | (0.340) | (0.388) | (0.344) | (0.421) | (0.345) | (0.409) | (0.353) | (0.347) | (0.340) | (0.362) | (0.338) |
| Wife, | 0.002 | 0.003 | 0.006 | 0.006 | -0.003 | 0.016* | -0.005 | 0.009 | -0.023** | -0.021** | 0.006 | 0.007 |
| quadratic | (0.009) | (0.009) | (0.010) | (0.009) | (0.011) | (0.009) | (0.010) | (0.009) | (0.009) | (0.009) | (0.009) | (0.009) |
| Wife, cubic | -0.000 | -0.000 | -0.000 | -0.000 | 0.000 | -0.000* | 0.000 | -0.000 | 0.000** | 0.000** | -0.000 | -0.000 |
| cubic | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| *Education levels* | | | | | | | | | | | | |
| Husband, | -0.029 | 0.134 | 0.107 | -0.090 | -0.245** | -0.295*** | -0.342*** | -0.266*** | -0.001 | -0.044 | 0.275** | 0.160* |
| high school | (0.103) | (0.084) | (0.112) | (0.093) | (0.111) | (0.094) | (0.107) | (0.089) | (0.110) | (0.093) | (0.108) | (0.090) |
| Husband, | -0.186* | 0.341*** | -0.110 | -0.083 | -0.556*** | -0.588*** | -0.168 | -0.045 | 0.057 | -0.139 | 0.624*** | 0.631*** |
| university | (0.108) | (0.089) | (0.117) | (0.098) | (0.117) | (0.099) | (0.114) | (0.096) | (0.116) | (0.098) | (0.114) | (0.096) |
| Wife, | 0.183* | -0.235** | -0.284*** | -0.315*** | -0.009 | 0.044 | 0.183* | 0.004 | -0.221** | -0.195* | -0.009 | 0.100 |
| high school | (0.099) | (0.092) | (0.109) | (0.100) | (0.109) | (0.102) | (0.106) | (0.096) | (0.108) | (0.101) | (0.107) | (0.097) |
| Wife, | 0.190* | -0.289*** | -0.471*** | -0.552*** | -0.164 | -0.134 | -0.264** | -0.347*** | -0.282** | -0.286*** | 0.276** | 0.209** |
| university | (0.109) | (0.100) | (0.121) | (0.110) | (0.121) | (0.110) | (0.118) | (0.106) | (0.120) | (0.111) | (0.120) | (0.106) |

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*Immigration background*

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Husband native, wife 1st gen. | -0.498*** | -0.530*** | 0.537*** | 1.056*** | 0.880*** | 1.240*** | 0.338* | 0.624*** | -0.126 | 0.041 | 0.401** | 0.498*** |
| | (0.175) | (0.171) | (0.196) | (0.181) | (0.202) | (0.194) | (0.187) | (0.182) | (0.191) | (0.182) | (0.190) | (0.178) |
| Husband native, wife 2nd gen. | -0.544*** | -0.689*** | -0.121 | 0.450*** | -0.066 | 0.971*** | -0.460** | -0.330** | -0.242 | 0.245 | -0.187 | 0.031 |
| | (0.171) | (0.169) | (0.187) | (0.170) | (0.184) | (0.175) | (0.179) | (0.166) | (0.177) | (0.177) | (0.183) | (0.169) |
| Husband 1st gen., wife native | 0.167 | -0.255 | 0.582*** | 0.862*** | 1.211*** | 1.580*** | 0.166 | 0.518** | 0.543** | 0.518** | 0.498** | 0.520** |
| | (0.210) | (0.203) | (0.221) | (0.238) | (0.230) | (0.245) | (0.212) | (0.230) | (0.225) | (0.237) | (0.211) | (0.235) |
| Husband 1st gen., wife 1st gen. | 0.390* | -0.063 | 0.968*** | 1.102*** | 0.424* | 0.914*** | 1.126*** | 1.504*** | 0.421** | 0.553*** | 1.218*** | 1.345*** |
| | (0.210) | (0.203) | (0.230) | (0.211) | (0.226) | (0.218) | (0.222) | (0.220) | (0.209) | (0.213) | (0.223) | (0.211) |
| Husband 1st gen., wife 2nd gen. | 0.621 | -0.093 | -0.168 | -0.106 | 0.253 | 0.784** | 0.468 | 1.142*** | 0.043 | -0.405 | 0.400 | 1.190*** |
| | (0.389) | (0.381) | (0.420) | (0.394) | (0.418) | (0.395) | (0.396) | (0.395) | (0.400) | (0.379) | (0.399) | (0.409) |
| Husband 2nd gen., wife native | 0.315* | -0.065 | 0.291 | 0.378** | 0.422** | 0.442** | -0.493** | -0.403** | 0.169 | 0.319 | 0.056 | -0.451** |
| | (0.179) | (0.175) | (0.204) | (0.188) | (0.209) | (0.195) | (0.215) | (0.192) | (0.219) | (0.204) | (0.207) | (0.196) |
| Husband 2nd gen., wife 1st gen. | -0.769 | 0.969 | 1.015 | 0.952 | 0.462 | -0.641 | 0.755 | -0.615 | -0.999 | 0.738 | 0.768 | 0.959 |
| | (0.642) | (0.633) | (0.818) | (0.788) | (0.776) | (0.758) | (0.724) | (0.986) | (0.804) | (0.855) | (0.836) | (0.836) |
| Husband 2nd gen., wife 2nd gen. | -1.865*** | -1.552** | 0.611 | 0.870 | 1.631** | 1.722** | -0.293 | -0.999 | -0.416 | 0.085 | -0.262 | 0.328 |
| | (0.484) | (0.690) | (0.655) | (0.706) | (0.667) | (0.780) | (0.566) | (0.875) | (0.544) | (0.817) | (0.530) | (0.755) |
| Information missing | -0.109 | -0.170** | 0.643*** | 0.104 | 0.435*** | 0.330*** | 0.256** | 0.159** | -0.194* | 0.174** | 0.289** | 0.117 |
| | (0.105) | (0.073) | (0.116) | (0.081) | (0.117) | (0.080) | (0.119) | (0.080) | (0.117) | (0.082) | (0.119) | (0.081) |

*Calendar year*

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 | -0.392*** | -0.200* | -0.079 | 0.039 | -0.023 | 0.055 | 0.085 | 0.210* | -0.044 | 0.201* | -0.040 | 0.003 |
| | (0.119) | (0.105) | (0.131) | (0.115) | (0.129) | (0.115) | (0.125) | (0.108) | (0.125) | (0.112) | (0.124) | (0.109) |
| 2010 | -0.535*** | -0.340*** | 0.136 | -0.005 | -0.106 | 0.037 | -0.097 | 0.311*** | -0.123 | -0.171 | 0.126 | 0.318*** |
| | (0.122) | (0.109) | (0.136) | (0.119) | (0.134) | (0.119) | (0.131) | (0.114) | (0.132) | (0.118) | (0.130) | (0.116) |
| 2011 | -0.487*** | -0.353*** | -0.112 | 0.005 | -0.177 | -0.104 | 0.088 | 0.333*** | -0.192 | -0.005 | 0.052 | 0.124 |
| | (0.130) | (0.115) | (0.146) | (0.128) | (0.143) | (0.128) | (0.140) | (0.126) | (0.142) | (0.128) | (0.141) | (0.126) |
| 2012 | -0.303** | -0.219* | 0.029 | -0.219* | -0.277** | -0.095 | -0.089 | 0.115 | -0.093 | 0.085 | 0.115 | 0.238* |
| | (0.127) | (0.113) | (0.140) | (0.125) | (0.140) | (0.124) | (0.137) | (0.123) | (0.136) | (0.125) | (0.135) | (0.122) |
| 2013 | -0.493*** | -0.270** | 0.166 | -0.021 | -0.178 | -0.157 | -0.080 | 0.204 | -0.043 | -0.010 | 0.016 | 0.101 |
| | (0.131) | (0.116) | (0.142) | (0.127) | (0.142) | (0.127) | (0.137) | (0.124) | (0.141) | (0.127) | (0.139) | (0.125) |
| 2014 | -0.494*** | -0.323*** | 0.228* | -0.108 | -0.216 | -0.012 | 0.065 | 0.277** | 0.015 | -0.016 | -0.204 | -0.167 |
| | (0.125) | (0.111) | (0.137) | (0.122) | (0.137) | (0.122) | (0.140) | (0.130) | (0.143) | (0.133) | (0.142) | (0.132) |
| 2015 | -0.529*** | -0.262** | -0.095 | -0.347** | -0.356** | -0.181 | -0.297** | 0.048 | -0.134 | -0.117 | -0.143 | -0.136 |
| | (0.137) | (0.120) | (0.150) | (0.137) | (0.148) | (0.132) | (0.142) | (0.127) | (0.144) | (0.131) | (0.146) | (0.129) |
| Observations | 2,851 | 3,586 | 2,830 | 3,569 | 2,832 | 3,582 | 2,522 | 3,097 | 2,522 | 3,099 | 2,522 | 3,099 |
| ln likelihood | -4,626 | -5,788 | -2,375 | -3,011 | -2,474 | -3,149 | -3,558 | -4,319 | -3,412 | -3,983 | -3,381 | -4,117 |

## Table B3b: Regression analysis of parental responses in the LISS panel

| VARIABLES | (7) father | (7) mother | (8) father | (8) mother | (9) father | (9) mother | (10) father | (10) mother | (11) father | (11) mother |
|---|---|---|---|---|---|---|---|---|---|---|
| FB daughter | -0.216 | 0.032 | 0.116 | 0.380*** | 0.012 | -0.146* | 0.235 | 0.038 | 0.320 | -2.013** |
| aged 0-12 | (0.138) | (0.118) | (0.149) | (0.134) | (0.097) | (0.086) | (0.325) | (0.120) | (0.794) | (0.995) |
| FB child | 0.133 | 0.176 | -0.145 | 0.313* | 0.228* | 0.083 | 0.014 | -0.193 | -3.689*** | -9.522*** |
| aged 13-18 | (0.185) | (0.157) | (0.209) | (0.184) | (0.131) | (0.116) | (0.396) | (0.169) | (1.046) | (1.315) |
| FB daughter | -0.406** | -0.111 | 0.100 | 0.048 | -0.060 | -0.212** | -0.017 | 0.100 | 1.375 | -0.679 |
| aged 13-18 | (0.165) | (0.144) | (0.193) | (0.168) | (0.121) | (0.106) | (0.388) | (0.156) | (0.951) | (1.198) |
| Number of | -0.130 | 0.208*** | -0.328*** | -0.231*** | -0.134** | 0.140** | 0.516** | 0.137* | 0.872* | 2.390*** |
| siblings | (0.091) | (0.074) | (0.102) | (0.088) | (0.064) | (0.056) | (0.234) | (0.078) | (0.518) | (0.636) |
| Number of | 0.098 | -0.333*** | -0.033 | 0.085 | 0.037 | -0.073 | -0.293 | 0.107 | -1.290** | 0.347 |
| sisters | (0.100) | (0.088) | (0.113) | (0.102) | (0.071) | (0.066) | (0.257) | (0.090) | (0.586) | (0.742) |
| *Age at the time of survey collection* | | | | | | | | | | |
| Husband, | 0.260 | 0.187 | -0.462** | -0.190 | -0.070 | 0.126* | 2.583** | 0.663** | -0.739 | 0.207 |
| linear | (0.537) | (0.180) | (0.231) | (0.128) | (0.172) | (0.074) | (1.222) | (0.286) | (1.049) | (0.904) |
| Husband, | -0.007 | -0.005 | 0.010** | 0.003 | -0.001 | -0.005** | -0.055** | -0.012** | 0.012 | -0.010 |
| quadratic | (0.012) | (0.005) | (0.005) | (0.003) | (0.004) | (0.002) | (0.027) | (0.006) | (0.022) | (0.021) |
| Husband, | 0.000 | 0.000 | -0.000** | -0.000 | 0.000 | 0.000** | 0.000* | 0.000* | -0.000 | 0.000 |
| cubic | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | -0.100 | 0.208 | -0.218 | 0.732 | -0.271 | 0.247 | -0.655 | -0.173 | -1.889 | -1.516 |
| | (0.705) | (0.528) | (0.497) | (0.454) | (0.388) | (0.381) | (0.814) | (0.625) | (2.666) | (3.499) |
| Wife, | -0.000 | -0.005 | 0.009 | -0.017 | 0.011 | -0.003 | 0.019 | 0.003 | 0.026 | 0.008 |
| quadratic | (0.017) | (0.014) | (0.013) | (0.012) | (0.010) | (0.010) | (0.023) | (0.016) | (0.069) | (0.091) |
| Wife, cubic | 0.000 | 0.000 | -0.000 | 0.000 | -0.000 | 0.000 | -0.000 | -0.000 | -0.000 | 0.000 |
| cubic | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) |
| *Education levels* | | | | | | | | | | |
| Husband, | -0.075 | 0.253* | 0.091 | 0.305** | -0.040 | 0.221** | -0.292 | -0.018 | -0.579 | -0.067 |
| high school | (0.162) | (0.132) | (0.172) | (0.146) | (0.113) | (0.093) | (0.459) | (0.130) | (0.904) | (1.065) |
| Husband, | -0.077 | 0.301** | 0.137 | 0.156 | 0.011 | 0.358*** | -0.222 | -0.090 | 0.032 | 1.739 |
| university | (0.169) | (0.139) | (0.180) | (0.153) | (0.117) | (0.098) | (0.443) | (0.135) | (0.927) | (1.116) |
| Wife, | 0.242 | 0.316** | -0.022 | -0.109 | 0.268** | -0.063 | 0.941** | -0.048 | 1.269 | -0.694 |
| high school | (0.160) | (0.148) | (0.170) | (0.156) | (0.108) | (0.099) | (0.409) | (0.138) | (0.870) | (1.129) |
| Wife, | 0.509*** | 0.115 | 0.002 | -0.169 | 0.304** | -0.045 | 0.573 | 0.086 | 2.909*** | 2.609** |
| university | (0.175) | (0.158) | (0.193) | (0.170) | (0.120) | (0.109) | (0.412) | (0.153) | (0.965) | (1.236) |

*Immigration background*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Husband native, wife 1st gen. | -0.211 | -0.421* | -1.160*** | -0.127 | -0.574*** | -0.592*** | 0.234 | -0.177 | 1.499 | 2.829 |
| | (0.258) | (0.244) | (0.313) | (0.289) | (0.193) | (0.186) | (0.476) | (0.309) | (1.517) | (2.128) |
| Husband native, wife 2nd gen. | 0.238 | -0.358 | -0.020 | -0.639*** | -0.447** | -0.599*** | 0.404 | 0.380 | -0.550 | 0.236 |
| | (0.296) | (0.235) | (0.269) | (0.248) | (0.185) | (0.174) | (0.892) | (0.242) | (1.514) | (1.900) |
| Husband 1st gen., wife native | 0.321 | 0.029 | -0.660* | -1.152*** | -0.312 | -0.382* | 0.412 | -0.009 | 1.319 | 9.553*** |
| | (0.328) | (0.307) | (0.369) | (0.351) | (0.219) | (0.225) | (0.610) | (0.437) | (1.819) | (2.950) |
| Husband 1st gen., wife 1st gen. | 1.089*** | 0.893*** | 0.883** | 0.882*** | -0.243 | -0.540** | 0.624 | 0.300 | 1.116 | -4.217* |
| | (0.313) | (0.277) | (0.356) | (0.335) | (0.229) | (0.219) | (0.576) | (0.346) | (1.685) | (2.261) |
| Husband 1st gen., wife 2nd gen. | 0.133 | -0.613 | 0.475 | 1.249* | -0.799 | -1.208*** | 1.037 | -1.107* | -4.320 | 5.039 |
| | (0.580) | (0.533) | (0.695) | (0.748) | (0.543) | (0.449) | (1.034) | (0.623) | (3.342) | (4.259) |
| Husband 2nd gen., wife native | 0.158 | 0.482* | 0.237 | 0.377 | 0.025 | 0.178 | -1.669 | 0.091 | 2.105 | 2.798 |
| | (0.281) | (0.249) | (0.333) | (0.294) | (0.207) | (0.191) | (1.029) | (0.253) | (1.692) | (2.078) |
| Husband 2nd gen., wife 1st gen. | 0.268 | | | | -2.641*** | -1.605** | | 0.408 | | -10.987 |
| | (0.955) | | | | (0.794) | (0.754) | | (1.068) | | (9.872) |
| Husband 2nd gen., wife 2nd gen. | -0.459 | 0.823 | 2.016 | -2.140** | -1.003 | -1.576 | | -1.058 | 3.159 | -12.993 |
| | (0.754) | (0.971) | (1.330) | (1.070) | (0.653) | (0.960) | | (1.067) | (4.961) | (9.876) |
| Information missing | 0.238 | 0.010 | 0.334* | -0.242* | -0.222* | -0.037 | -0.091 | 0.037 | 2.425** | -0.348 |
| | (0.163) | (0.112) | (0.195) | (0.130) | (0.123) | (0.082) | (0.376) | (0.113) | (0.984) | (0.942) |
| *Calendar year* | | | | | | | | | | |
| 2009 | | | | | -0.049 | -0.283** | | | | |
| | | | | | (0.129) | (0.113) | | | | |
| 2010 | | | | | -0.235* | -0.254** | -0.336 | -0.623*** | 1.673** | 1.433 |
| | | | | | (0.136) | (0.118) | (0.351) | (0.129) | (0.818) | (1.034) |
| 2011 | | | -0.163 | -0.185 | -0.421*** | -0.407*** | | | | |
| | | | (0.141) | (0.125) | (0.141) | (0.127) | | | | |
| 2012 | 0.239 | 0.137 | | | -0.222 | -0.500*** | -0.233 | -0.723*** | 0.657 | 4.248*** |
| | (0.162) | (0.141) | | | (0.139) | (0.123) | (0.351) | (0.131) | (0.841) | (1.040) |
| 2013 | 0.114 | -0.115 | 0.095 | -0.078 | -0.300** | -0.426*** | | | | |
| | (0.167) | (0.144) | (0.143) | (0.126) | (0.147) | (0.133) | | | | |
| 2014 | 0.250 | 0.185 | | | -0.483*** | -0.681*** | | | | |
| | (0.161) | (0.140) | | | (0.139) | (0.124) | | | | |
| 2015 | 0.060 | 0.021 | | | -0.297** | -0.473*** | -0.343 | -0.757*** | 6.755*** | 11.804*** |
| | (0.172) | (0.149) | | | (0.145) | (0.130) | (0.343) | (0.138) | (0.865) | (1.085) |
| Constant | | | | | | | -28.932 | -4.354 | 64.489* | 64.794 |
| | | | | | | | (20.119) | (7.096) | (34.430) | (43.852) |
| Observations | 1,547 | 1,929 | 994 | 1,257 | 2,454 | 3,087 | 209 | 1,021 | 1,079 | 1,351 |
| ln likelihood | -1,517 | -1,905 | -1,436 | -1,796 | -3,574 | -4,576 | -390 | -1,842 | -3,980 | -5,453 |

**Table B4: Regression analysis of responses of teenage children in the LISS panel**

| VARIABLES | Relationship with mother | | Relationship with father | |
|---|---|---|---|---|
| | firstborn | all children | firstborn | all children |
| Daughter | -0.034 | -0.043 | -0.277* | -0.265** |
| | (0.173) | (0.122) | (0.167) | (0.118) |
| Number of siblings | 0.028 | 0.070 | -0.223* | -0.107 |
| | (0.133) | (0.087) | (0.127) | (0.084) |
| Number of sisters | 0.097 | -0.126 | 0.298* | 0.008 |
| | (0.160) | (0.110) | (0.152) | (0.105) |
| *Age at the time of survey collection* | | | | |
| Husband, linear | 0.426 | 0.030 | 0.149 | -0.331 |
| | (0.912) | (0.632) | (0.895) | (0.633) |
| Husband, quadratic | -0.004 | 0.001 | 0.000 | 0.007 |
| | (0.016) | (0.011) | (0.015) | (0.011) |
| Husband, cubic | 0.000 | -0.000 | -0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Wife, linear | 7.902* | -2.049** | 12.460*** | -1.899** |
| | (4.234) | (0.967) | (4.234) | (0.744) |
| Wife, quadratic | -0.164* | 0.054** | -0.261*** | 0.050*** |
| | (0.091) | (0.022) | (0.091) | (0.018) |
| Wife, cubic | 0.001* | -0.000*** | 0.002*** | -0.000*** |
| | (0.001) | (0.000) | (0.001) | (0.000) |
| *Education levels* | | | | |
| Husband, high school | -0.195 | -0.196 | 0.156 | -0.018 |
| | (0.229) | (0.166) | (0.221) | (0.159) |
| Husband, university | -0.247 | -0.325* | 0.078 | -0.197 |
| | (0.238) | (0.169) | (0.227) | (0.162) |
| Wife, high school | 0.018 | -0.170 | -0.398* | -0.235 |
| | (0.220) | (0.158) | (0.215) | (0.153) |
| Wife, university | 0.342 | 0.405** | -0.087 | 0.327* |
| | (0.266) | (0.190) | (0.258) | (0.184) |
| *Immigration background* | | | | |
| Husband native, wife 1st gen. | -0.501 | 0.046 | 0.633 | 0.695 |
| | (0.593) | (0.441) | (0.644) | (0.449) |
| Husband native, wife 2nd gen. | 0.102 | -0.104 | 0.078 | 0.046 |
| | (0.526) | (0.339) | (0.504) | (0.343) |
| Husband 1st gen., wife native | 0.297 | 0.033 | -0.109 | -0.041 |
| | (0.627) | (0.464) | (0.567) | (0.438) |
| Husband 1st gen., wife 1st gen. | 1.138** | 0.464 | 0.027 | -0.491 |
| | (0.469) | (0.349) | (0.400) | (0.331) |
| Husband 1st gen., wife 2nd gen. | | | | |
| | | | | |
| Husband 2nd gen., wife native | 0.013 | -0.109 | -0.278 | -0.323 |
| | (0.435) | (0.375) | (0.434) | (0.372) |
| Husband 2nd gen., wife 1st gen. | | | | |
| | | | | |
| Husband 2nd gen., wife 2nd gen. | | | | |
| | | | | |
| Immigration information missing | 0.555 | -0.007 | 0.496 | -0.247 |
| | (0.387) | (0.252) | (0.357) | (0.238) |
| *Calendar year* | | | | |
| 2009 | 0.235 | -0.065 | 0.299 | 0.002 |
| | (0.302) | (0.244) | (0.290) | (0.235) |
| 2010 | 0.115 | 0.038 | -0.014 | -0.006 |
| | (0.316) | (0.242) | (0.297) | (0.232) |
| 2011 | -0.225 | -0.328 | -0.374 | -0.338 |
| | (0.334) | (0.236) | (0.326) | (0.229) |

| | | | | |
|---|---|---|---|---|
| 2012 | -0.469 | 0.059 | -0.472 | -0.002 |
| | (0.317) | (0.249) | (0.308) | (0.239) |
| 2013 | -0.134 | -0.039 | 0.142 | 0.026 |
| | (0.336) | (0.254) | (0.324) | (0.244) |
| 2014 | -0.348 | -0.248 | -0.157 | -0.258 |
| | (0.302) | (0.246) | (0.293) | (0.240) |
| 2015 | -0.347 | 0.025 | -0.095 | 0.053 |
| | (0.318) | (0.253) | (0.308) | (0.243) |
| Observations | 620 | 1,141 | 616 | 1,130 |
| ln likelihood | -517 | -1,002 | -578 | -1,115 |

Note: Authors' estimates of coefficients from ordered logit models of responses of teenage children from different-sex couples with a firstborn biological child younger than 19 at the time of the survey. LISS data 2008-2015. Significance based on robust standard errors.
*** = 0.01 significance level, ** = 0.05 significance level, * = 0.1 significance level.