

Does the Combination of Spouses' Birth Orders Influence Their Divorce Risk?

Evidence from a register-based study of Norwegian first marriages

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Extended Abstract

Unions of individuals with different birth orders have been suggested to be more stable than those of individuals with the same birth order. One reason why spouses' birth orders may influence marital stability is that sibship position affects personality, and certain personality combinations are more compatible than others. First-borns may have more dominant personalities and unions of two first-born individuals, where both are dominant, may be more likely to break up. Likewise, marriages of two youngest siblings are said to be relatively unstable relationships (Leman 1998, Toman 1976).

Other authors reject the notion that the birth order has any universal effects on divorce, and argue that if any such effects exist, they only represent a modest influence in limited domains or in specific societies. Observed associations are suggested to be caused by omitted variables, small samples, biased datasets and incorrect model specifications (Freese et al. 1999, Rodgers et al. 2000).

For example, a Greek study concluded that there was support for the hypothesis that a low birth order increases the divorce risk, and argued that this effect was particularly strong for single children (Skalkidou 2000). However, the sample was miniscule: only 38 divorces were observed in the study period.

One of the reasons why mere correlations between birth order and divorce risk can be misleading are the potentially important influences of confounding factors, such as income and sibship size. In a large study of the effect of the birth order on educational attainment, Black et al. (2005) show that taking sibship size into account removes the effect of birth order on attained education level. The sibship size factor could also affect divorce risk as it may also influence an individual's level of understanding and tolerance for the other partner.

The reasons why personality can affect divorce rates is that certain personality types, such as a low level of risk aversion, could affect marriage dissolution rates. Personality can be affected by birth order since parents interact with children differently depending on their birth order (Ernst and Angst 1983). Different birth orders can cause parents to apply different methods of socialization to their children. Eisenman (1992) finds that first-borns are more anxious, better achievers and more creative, hence their lives may be very different simply because they were the first-born child in the family. The reason may be that parents are often overly anxious about their first child, and may be more restrictive with him/her than with later children. This could increase divorce risk among first-borns as constraint is positively related to divorce risk (Jockin et al. 1996)

According to Moore et al. (1997), who studied 39 mothers and their first- and second-born children at the age of 2 months, mothers tend to give more positive influence to second-borns than to first-borns, which leads the latter to be more positive than the former. This could affect divorce risk, as positive and negative emotionality are positively related to divorce risk (Jockin et al. 1996).

Beer and Horn (2000) use a sample of adopted children, and therefore reduce the “noise” provided by genetic similarities in the personality of siblings. They find that first-reared children have a higher level of conscientiousness, but that other personality traits do not differ significantly.

Personality patterns that are shaped in childhood by the influence of the family and siblings could affect union stability in adult life. First-borns and single children may be more likely to develop certain personality traits, such as anxiety and ambition. Hence, a first-born may have a more stable relationship with someone less dominant (who could be more likely to be a later-born) than another first-born. If both the husband and the wife are first-borns, this could mean that there would be a higher conflict level, as both are used to having their way and may be less willing to compromise. If, for example, the wife is a first-born and the husband is a later-born, the relationship may be more stable as their union may be of a “leader-follower” type, where one person is more and the other person is less dominant.

In case both spouses are later-borns, both may be uneasy to take the lead, and may be less satisfied with their union than if both of them were first-borns. This relationship may possibly be more stable than one of two first-borns, but less stable than a relationship of a first-born with a later-born individual, as the conflict level could be somewhere in between these two forms of relationships.

Our study will identify whether or not the combination of spouses’ birth orders affects the divorce risk in Norway. As we shall use unique data taken from population-wide administrative registers, we shall not run into problems associated with limited datasets, omitted variable bias, and non-random missing information that hampered studies from other countries. We shall also take into account the role of such important confounding factors as wealth and parental divorce.

Focusing on Norway allows us to study divorce in a society where divorce is relatively common and its social stigma is low (with relatively few cultural, financial, or legal barriers). Moreover, due to extensive social support systems and a compressed wage distribution, the financial implications of divorce are relatively weak as compared to other countries. Hence, any independent effect of birth order on divorce risk is likely to be observed in the Norwegian setting.

Data

We rely on data extracted from Norwegian administrative registers. A system of personal ID numbers facilitates linking individuals who are couples, and linking data from various registers to these individuals.

In addition to basic demographic information on the spouses and their marriage, the data include a number of other characteristics. For each spouse, we have access to his or her individual fertility history, a set of family background characteristics (including birth order and sibship size), and annual time series of educational attainment, school enrolment, annual income, and place of residence.

The final data set covers the complete Norwegian first-marriage cohorts from 1980 to 2000. The marriages are followed until divorce or censoring occurs, at the latest at the end of 2003. A number of control variables, such as spouses’ annual incomes and educational attainments, are included as time-varying covariates.

Statistical Approach

In our analysis, we employ discrete-time hazard regression models. This approach is both practical and sufficiently precise for our purposes. The temporal unit is the calendar year. After rearranging the data to discrete-time form, the data set contains more than 3 million observations of marriage years.

We group birth orders from 5 and upward together as there are very few individuals at such high birth orders. To separate the effects of being a single child from being first-born, we consider single children as a separate category.

We start by estimating a simple model with no control variables. This gives us estimates of time-constant odds ratios of divorce by spouses' birth orders. The result is a matrix of relative odds for divorce for each combination of husband's and wife's birth orders. In a second estimation round, we add a set of covariates to remove confounding factors. In addition to estimating unbiased relative divorce risks, we can then also assess what importance control variables have for the results.

Preliminary Results

Table 1 below shows the odds ratios for divorce for the various combinations of divorce risk obtained from our second model with control variables (duration, both spouses' ages at marriage, educational attainment, enrolment, age homogeneity, and others). Numbers in bold are significant at the 0.01-level.

Table 1: Relative annual odds of divorce by spouses' birth orders

		Husband's birth order					Missing
		Only child	1	2	3	4+	
Wife's birth order	Only child	0.82	0.90	0.92	0.92	0.99	0.53
	1	0.90	1.00	0.96	0.97	0.98	0.69
	2	0.92	0.99	0.94	0.93	0.95	0.67
	3	0.89	1.00	0.91	0.93	0.95	0.71
	4+	0.98	0.97	0.92	0.89	0.91	0.78
Missing	0.60	0.58	0.59	0.54	0.58	0.44	

Our results indicate that there is an effect of birth order on divorce risk. It is evident from our estimations that single children run a lower risk of dissolving their marriages. Marriages between two first-borns are the most unstable relationships, whereas marriages between two only children are the most stable.

We observe less systematic effects of birth order on divorce for combinations of higher birth orders. All but one of the odds ratios in table 1 are lower than 1 (the reference group's risk). The differences between these any two odds ratios are relatively small, given the volume data

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