Social Origins and Divorce

Why do couples with highly educated parents have higher divorce rates?

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Abstract

Some studies have found that having highly educated parents or having a middle- or upper class background increases the risk of divorce, but the literature offers little theoretical reasoning on the nature of this effect. This paper extends earlier research on this relationship by considering several competing explanations of the elevated divorce risk for couples from high social backgrounds. Continuous-time hazard models are estimated on register-based data on 20 complete marriage cohorts. Results show that the elevated dissolution risk for couples with highly educated parents cannot be attributed to the parents' marital history or to their economic resources, nor can an effect of urban environment explain the excess divorce risk. We speculate that some sociocultural factor contributes to raise these couples' risk of marital dissolution. (125 words)

Introduction

Few studies have systematically considered gradients in divorce risk across social origin despite the fact that the socioeconomic status of an individual's family of origin has been shown to be of importance for many related processes, including family formation (Hoem 1995; Blom 1994; Axinn and Thornton 1992), mate selection (Blackwell 1998), and fertility (Barber 2000; Lappegård and Rønsen *forthcoming*).

The studies that have included social origin in their models of marital disruption have reached no complete consensus on how this variable affects divorce risk, and provided little theoretical reasoning for why the social status of the spouses' families of origin should affect their probability of divorce. Using Swedish survey data, Hoem and Hoem (1992) found a slightly higher risk of marital disruption for daughters of middle- and higher-level employees. Non-conclusive results have been reported for other countries: In a study from the United States, Bumpass et al (1991) initially found a negative effect of having a college-educated mother on divorce risk, but it appeared to be insignificant once socioeconomic characteristics of the spouse were taken into account. Bracher et al (1993) found neither the parents' educational attainments nor the occupational class of the woman's father to be of any significance for Australian marital disruption patterns. However, these studies are based on small samples of individuals and not couples, and the relatively small amount of data at hand impose restrictions on the number of influences on divorce that may be examined.

There are three Norwegian studies that consider the impact of social origin on divorce risk. The most recent corroborated the findings of the Swedish results: Net of husband's and wife's own education levels and a number of other important divorce correlates, couples with highly educated parents seem more prone to divorce than others (Lyngstad 2004). The second study examined effects of endogamy in social class origin, which was measured by the occupational class of the spouses' fathers, and the reported results indicated class-endogamous

couples enjoy a slightly lower risk of divorce (Hansen 1995). Finally, the third and oldest study also found positive effects of the education of the wife's parents on the divorce rate for the marriage cohorts of 1968 to 1970 (Kravdal 1994),

A person's social origin is often measured as the occupational class of the person's parents, but his or her parents' educational attainments may also be used for this purpose. Both occupational class and parental education assess the position of an individual's family of origin in the societal hierarchy. Although they are not identical, we assume that the two measures are sufficiently similar to warrant comparisons of results.

Thus, the available evidence suggests that there is, at least in Scandinavian countries, an elevated risk of marital dissolution for couples from the upper social strata. This observation is the point of departure for the present analysis. We briefly review the arguments for why social origin should matter for divorce risk, and provide a new empirical analysis that improves on earlier research by including several new control variables.

Potential Explanations

Sociocultural factor makes divorce more acceptable in higher social strata

Among the few contributions on the relationship between social origin and divorce risk, we count the analysis of Hoem and Hoem (1992) as the only authors that attempts to explain the higher risk. They suggested that the higher risk of divorce for couples whose parents' came from middle- or upper class backgrounds could be attributed to the "bourgeois culture". Some sociocultural factor found in the bourgeoisie makes divorce more acceptable in upper social strata when spouses find their current marriage unsatisfactory. They provide no further reasoning to what this sociocultural factor actually represents, and hence an in-depth specification or consideration of the sociocultural factor is lacking. In the present study we will not speculate much beyond what our data allow, but by testing competing interpretations

of the higher divorce risk for couples with highly educated parents we might be able to rule out one ore more of them and make a stronger case for those that remain. We let the idea of a sociocultural factor play the role of a "default" explanation of the positive effect of parents' education on divorce risk. The following sections suggest several explanations of both substantive and non-substantive character of the earlier finding of higher divorce rates for couples with highly educated parents.

An artefact of an urban living environment

Couples living in an urban environment are known to have higher divorce rates than couples living in rural areas. The mechanism behind this difference might be explained by several factors including, but not limited to, the lower search costs for finding an alternative partner in densely populated urban areas and a more traditional mind-set related to family life in rural areas.

Persons with long educations tend to live in cities. For the parental generation, for which access to longer educations were more limited, the highly educated will be even more concentrated in urban areas. Hence, whatever mechanism produces the higher divorce rates in urban populations, it is neccesary to control for what kind of environment the couple live in to remove the suspicion that the higher divorce risk for couples with highly educated parents is an artefact of an urban living environment rather than an effect of the "bourgeois culture".

A by-product of the second demographic transition

The second demographic transition is a name for the dramatic changes in family attitudes and behaviours that have taken place in the industrialized world since the 1960s (Lesthaeghe 1995). The rapid increase in divorce rates from a low level to a stable high level is one of the major components of these changes. Other components include a lower fertility rate, a rising

popularity of cohabitation, increasingly frequent out-of-wedlock childbearing, and a broad acceptance of non-standard family forms.

The earlier observed effect of parents' education on divorce risk may also be a by-product of the second demographic transition. This turns on two points, of which the first regards possible changes in the educational gradient in divorce risk from one generation to the next.

Some authors have argued that the effect of spouses' own education on divorce risk might change from being positive to being negative (or at least positive but of a smaller magnitude) when a society develops from a low-divorce situation, as in the early phase of the second demographic trantition, to a situation with higher divorce rates, as in the later phases of the second demographic transition. This type of reasoning was initially offered by Goode (1962), but more recently also by Blossfeld et al (1995) and Hoem (1997), and is based on the idea that a divorce is a stronger breach of social norms in a low-divorce context, than it is in a high-divorce context. In the terminology of rational choice, this means that the "social costs of divorce" will be higher in a society where it is a relatively infrequent phenomenon and lower in a society where it is a more common phenomenon. Thus, as the society proceeds through the second demographic transition, the normative climate changes towards a stronger acceptance of divorce and a weaker stigma attached to divorcees. As the stigma decreases, and acceptance of divorce increases, personal capital, such as longer educations, will be less important for the spouse in his or her decision to dissolve the marriage (Hoem 1997, p. 19). Hence, a change in the frequency and acceptance of divorce is closely followed by a change in the educational gradient in divorce risk.

Norway should be at the end of this transition as there is widespread social acceptance of divorce and other traits of modern family behaviour (Blom et al 1993), and the educational gradients in divorce risk in Norway are negative (Lyngstad 2004; Kravdal and Noack 1989).

Italy is an example of the opposite context, with a predominantly Catholic population, higher religious activity, and a low divorce rate. Hence, Italy should be at an earlier stage of the second demographic transition, and a positive relationship between wives' education and divorce risk is found (de Rose 1992).

The second point is related to the effect on divorce rates of parental divorce, i.e. whether the person's family of origin remains intact or not. Parental divorce is demonstrated to be a strong determinant of individuals' divorce risk (White 1990; Kiernan and Cherlin 1999; Diekmann and Engelhardt 1999). If parental divorce is correlated with parental education, this effect may explain the positive effect of parental education on divorce risk.

That would, however, require the educational gradient in divorce risk have changed from being positive to being negative from one generation to the next, as suggested above. Most of couples included in the most recent Norwegian study of divorce risks married well after the transition was underway. Their parents, however, married before or during the early stages of the transition. The couples from the parental generation who divorced did so at a time when the prevalence was relatively low and the ability to cope would be more important, possibly generating a positive education gradient in divorce risk.

There seems to be little evidence for this hypothesis in Norway. The educational gradient is consistently shown to be negative in the Norwegian studies conducted during the last 15 years. Kravdal and Noack (1989) used data on the 1968 marriage cohort, which married well before the first marriage cohort included in the present analysis, and found negative effects of educational attainment on divorce risk. Although their data do not cover a period long enough as would be required in order to refute the proposition by Blossfeld et al (1995) and Hoem (1997), we can at least conclude that the educational gradient in divorce risk was negative for the marriages entered between 1968 and the late 1990's. Nevertheless, we must include parental divorce in our models to rule out this suspicion.

An indirect effect through parents' economic assistance to offspring

Another perspective on how parents' education influences a couple's risk of marital dissolution is based on economic arguments. In the literature, economic resources as income and wealth are found to affect divorce risk. The economic consequences of divorce are substantial (Poortman 2000; McManus and DiPrete 2001) as at least one of the spouses must find new housing and they lose the economy of scale enjoyed by a larger household. Economic considerations are therefore likely to play an important role in the process leading to a divorce.

Parents' with more economic resources may be better able to support their children financially after a divorce. Because a higher educational attainment yields higher returns in the labour market, it is likely that better-educated parents on average also hold larger economic resources than less-educated parents. If parents choose to support their child financially when the child is considering ending his or her marriage, we would expect that couples with well-educated parents have higher divorce rates because of the greater economic resources available to their parents.

However, the impact of the parents' economic resources is not neccesarily as determinate as outlined in the above paragraph. Financially well-off parents may just as well help the couple through periods of economic problems, for instance through spells of unemployment. We also know that economic hardship is linked to marital quality and stability (Conger et al., 1990). Such assistance may thus reduce marital strain, and in turn lower the divorce risk. In that case, the expected correlation between parents' economic resources and the divorce rate would be negative.

Data and methods

Data

Our data is extracted from Norwegian administrative registers and the censuses of 1970 and 1980. The data set covers *complete cohorts of first marriages* entered from 1975 to 1999. It includes a large number of variables. Apart from basic demographic variables on the spouses and the marriage, the data set contains time series of education level, educational activity, and annual income, complete fertility histories, histories of municipality of residence, and a set of family background characteristics. All this information is available for both spouses.

The marriages are followed until divorce, censoring, out-migration or any spousal death occurs. At the latest, censoring takes place at the end of the observation period, which is the end of the year 2003.

Although the time of separation could be a more appropriate measure for the break-up, the time of dissolution is measured as the time of the formal divorce. The rationale for this is that divorce is an irreversible event and a substantial number of separated couples reconcile without reporting to the Central Population Register when they move back together.

We only include marriages where both spouses are Norwegian-born in the analysis. This is due to the clearly different demographic behaviour patterns of immigrant couples. After the selection criteria are applied, the data set covers 291052 marriage. Of these, 21,4 per cent have ended in divorce during the observation period. The remainder of the couples experienced no divorce, and their spells were censored.

Statistical method

Continuous-time hazard models with time-varying covariates are estimated. The duration pattern is approximated by a piece-wise linear spline. Because the hazard is close to zero at the beginning of the spell, an intercept is also included. Period effects are also captured by a piece-wise linear spline. The two splines that capture duration dependencies are added

together in order to arrive at the instantaneous baseline risk for any marital duration. All other regressors are categorical. The models are estimated using the statistical software package aML version 2 (Lillard and Panis 2002).

All the time-varying covariates are lagged two calendar years. This is done because the Norwegian authorities, to grant a no-fault divorce, require the couple to be separated for at least one year prior to the formal divorce. Moreover, several explanatory variables are measured at an accuracy of one year. This requires a lag of at least one year to avoid using anticipatory regressors.

All individual variables are measured for both spouses. For several such variables, we combine the characteristics of husband and wife in order to create new combination variables of their values. Each one of these combinations is represented by a dummy variable in the regression models. For example, a spouse's educational attainment is measured on a three-level scale. We combine the educational attainment of husband and wife into combinations, creating 9 dummy variables. The dummy variable for the baseline group is left out of the model.

Parental family characteristics

Parents' economic resources are measured for each spouse. For both husband and wife, a variable is created which is the parents' pooled average income over a period of ten eyars. The start of the period is the year the father is 50 years old. If the father is born so late that the period would extend beyond the end of the income time series, the start is moved back until the period end before or at the same time as the income time series. Each annual income contributing to the average is adjusted for inflation with 1980 as a baseline year. The observations are then divided into five categories. If the parents for some reason have no

income in this period, for example because they both are dead, the observation is counted under a special category.

Parental divorce is measured by three dummy variables. One variable is set to one if the husband's family of origin has dissolved, but the wife's family of origin is intact. Another is set to one if the wife's family of origin has dissolved, but the husband's family of origin is intact. As homogamy in parental divorce has been shown to be of importance for marital stability (Wolfinger 2003), a third dummy variable is set to one if both spouses' families of origin has dissolved.

To create our indicator of parents' education, we choose the highest level of education of the spouse's father and the spouse's mother. There are two measurements for each parent, one taken from the census of 1970 and one from the census of 1980, which gives us four measurements of parental education for each spouse. As a large number of older parents lack information on education variables, we choose the highest of the four measurements as the spouse's value on the parental education variable. The variable is then collapsed into three levels. The threshold of the middle level is defined as basic secondary training, and the highest level is defined as having completed a secondary education. The larger proportion of the couples' parents included in the data set was born during the 1930s. Primary education is the highest level of educational qualifications for more than half of these cohorts.

Urban environment

We define an urban environment as the municipalities of the five largest cities in Norway. If the couple resides in one of these five municipalities, the couple is counted as being urbanites and the urbanite indicator is set to one. Otherwise, it is set to zero.

Other control variables

Age at marriage, one of the strongest predictors of divorce, is measured for both spouses and categorized. Two dummy variables measure age heterogamy in either direction (husband older than wife or wife older than husband). If the husband is more than 5 years older or more than three years younger than his wife, the couples is regarded as heterogamous.

We measure the annual income of both spouses. Only income from work is included in our definition of income. All annual incomes are adjusted for inflation with 1980 as a baseline year. A cateogorical variable is constructed on the basis on each spouse's adjusted income.

Each spouse's educational attainment is grouped into a three-level scale: Primary education, secondary education (mostly three years of either vocational training or academic preparatory courses), and tertiary education (university-level degree). Educational activity is also included as separate dummy variables, but it is not distinguished between the different types and levels of education that the spouse is currently acquiring. All educational attainment and activity variables are time-varying covariates.

Parity and age of youngest child is included as a set of dummy regressors measuring combinations of the two variables. An indicator of premarital childbearing, defined as 1 if the first conception took place more than half a year before marriage, is included. Three dummy variables measure whether any, or both, of the spouses have had children with a person other than their first spouse before the start of the marriage.

Results and Discussion

We estimate four separate models of divorce. A basic set of explanatory variables is included in all models. The urbanite indicator, parental divorce variables, and the variables measuring parents' average income are left out from the basic model, and added in the subsequent

models in successive steps to assess their role as possible sources of spuriousity or indirect effects.

Estimates from the basic model (model A)

As a first step in the analysis, we estimate a basic model with the baseline duration dependency, parents' education, and all basic control variables. Relative hazards of divorce by the spouses' parental education levels are shown in table 1A. The pattern displayed by the matrix of relative hazards is not wholly symmetrical, but clearly shows positive effects of parents' education on divorce risk for both husband and wife.

(table 1A-D about here or below)

Estimates with controls for urbanite indicator (model B)

There is some suspicion that the positive effect of parents' education on the risk of divorce is an artefact of features of the couple's place of residence. In particular, whether the couple live in an urban or a rural environment might be of importance. Therefore, we include an extra variable to control for whether or not the spouses are urbanites or not.

The estimates change slightly when this variable is included, but not very much. The largest change is for couples where both spouses have parents with educations at the highest end of the three-level scale. For the couples of this category, the relative hazard is 0,06 lower than in the basic model, leaving the couples with a divorce risk that is 28% higher than the baseline group. In general the relative hazards of divorce by parents' education levels are slightly lower, but the main features of the pattern found in the basic model are also found in these results: Couples with highly educated parents run higher divorce risks, and they do so regardless of which spouse have parents with longer educations.

Estimates with controls for urbanite indicator and parental divorce (model C)

After having controlled for parents' own divorce, the effect of parental education is still disruptive: The couples with highly educated parents run higher risks of divorce than other couples do. There is no evidence to feed the suspicion that the super risk of marital dissolution for couples with highly educated parents disappears once the parents' marital history is taken into account. An urban environment has an effect on divorce risk. Urbanites run higher risks of dissolving their marriages.

Estimates with all available control variables (complete model)

As argued above, parents' economic resources might influence a couple's divorce risk, and may at the same time be correlated with parents' education. To remove the potential indirect effect of parents' economic resources, variables measuring the average income of both spouses' parents are included in the complete model.

From the results for this model, we learn that parents' economic resources, measured by their average income, do not seem to matter very much for a couple's divorce risk. The relative hazards are in the range 0,90-1,06, with the highest risks reported for the higher income categories of the wife's parents. The two parameters measuring the impact of no or missing income are both negative. This category is mostly made up of couples where both parents of the spouse have retired, or, in a minority of cases, have died.

However, it might be that the control for parents' average income does not adequately capture their economic resources. Our income variables measure all income from labour or direct private enterprises, but not capital incomes such as stock dividends. Although this might be adequate, the lack of information on wealth might still pose a problem for our analysis. Future studies should be conducted where wealth is included as a control variable.

The results show a pattern of relative hazards of divorce that is very similar to those obtained from the previous models. The effect of parents' education on divorce risk is positive. The couples where both spouses have parents whose educations lie in the "High" category run a risk of marital dissolution that is 25% higher than that of couples whose parents have only a minimum of schooling. The pattern is still asymmetrical in that it shows slightly higher risks for couples where only *her* parents hold longer educations compared with couples where only *his* parents have similar qualifications. However, the standard errors of the estimates are all in the range of 0.02. This indicates that it is not possible to differentiate wholly between all of the estimated effects, and only between the baseline group, which consists of couples with parents that hold no qualifications beyond compulsory schooling, and the other categories, which for the most part are couples with parents that do hold some higher education or more.

Thus, the main finding of this study is that couples whose parents have longer-than-average educations have a higher risk of divorce than other couples do. The added control variables let us rule out some suspicions that hampered the earlier findings of elevated divorce risks for couples with highly educated parents. The observed effect is not an artefact of the couples and their parents living in an urban environment. And neither is it a by-product of the diffusion of divorce throughout Norwegian society the last decades, nor is it mediating an effect of the parents' economic resources.

Of the explanations suggested in this paper, of both substantive and methodological character, only one remains. This is the suggestion by Hoem and Hoem (1992) that families where the parents hold longer educations are different from other families because of some unspecified factor found in the "bourgeois culture".

We speculate that behind this unspecified factor are several types of social influcences, of which many may be interrelated. For example may the group of couples with

highly educated parents be subject to a comparatively stronger tendency towards individualism or a lesser degree of religiousity than other couples. A higher adherence to religiously prescribed behaviours among lesser-educated parents could lower divorce rates for their children through higher expectations of their children's marital stability. Several of the earlier studies have observed a higher risk for couples with highly educated parents also when crude indicators of religiousity are included in the model (Hoem and Hoem 1992; Kravdal 1994), but this indicator is only measured for one spouse and not for any of the spouses' parents.

Differences in socialization across social strata are well established in sociological literature, and might also be the source of gradients in divorce risks. Such ideas are routinely employed to explain effects of social background on demographic behaviour (Barber 2000; Duvander 1999; Hoem 1995). The appropriateness of such explanations cannot be examined in this analysis, as variables measuring ideational factors are not available. It will therefore be useful to study the impact of social origin on divorce with data collections that contain more data on on religiousity, family values, and similar information.

Duration pattern

The duration pattern was approximated with a piece-wise linear spline with seven nodes. The slopes display the familiar pattern of rapidly increasing divorce risks at early duration, a peak at the sixth year, and a subsequent decline. Period effects, measured by a two-node spline, show a strong increase in the divorce risk during the quarter of a century studied. Complete results for the basic model and the complete model, with all control variables included, are listed in table 2.

It is often thought that an attrition process, where the low-risk couples stay in the analysis until censoring and the high-risk couples are "weeded out" by divorce, causes the

hazard to decline at higher durations. An additional model, with unobserved heterogeneity included, confirmed this. The effects of most regressors were in this model slightly stronger and the intercept was lower. The substantive conclusions were unaffected.

Results for control variables

Estimates for the other control variables are mostly as we would expect, and in line with most of the recent studies on divorce determinants. Both for husbands and wives divorce risk declines with age at marriage. Those who married in their late thirties enjoy particularly low risks. If the couple is heterogamous with respect to age, the divorce risk is higher.

The number and age of the couples' children are important predictors of divorce risk. The protective effect of having children wanes as the youngest child grows older. Couples of higher parities enjoy even lower risks of dissolving their marriage. Not surprisingly, the lowest risk is among couples that recently had a second or third child. A first child might be mistimed or the results of a "contraception accident". The direction of the causal relationship between childbearing and divorce is disputed because of a degree of simultaneity in fertility and divorce decision-making: Poor marital quality might deter the spouses from having children, as they might fear a divorce nearing. However, when this selectivity is taken into account (either through simultaneous modelling or use of intermediary variables), couples with children still run lower divorce risks than childless couples (Lillard and Waite 1993; Brüderl and Kalter 2001).

Premarital childbearing is detrimental to marital stability. This is well established in the literature, and our results corroborate this finding. The couples that initiated childbearing before they married, which for the larger part will be former cohabitants, run a higher risk than couples who waited until after their marriage. Although this effect is likely to be caused

by a selection effect of couples that either hold more traditional family values or decides to marry after getting pregnant, i.e. "shotgun marriages" (Kravdal 1988).

A couple where one or both spouses already have children with someone else that their first marital partner is likely to have a higher risk of divorce than others. Although the living arrangements of any non-marital children are unknown, the child will in any case strain the spouse's economic resources, and may affect marital relations. It might also signal that the spouse holds relatively liberal attitudes with respect to how much marital strain a couple should endure before considering divorce.

The spouses' own educational attainment has been shown in several recent Scandinavian studies to have a strong, negative impact on divorce risk (Jalovaara 2003; Lyngstad 2004). This is the case also in the present study: Both the husband's and the wife's education seem to reduce divorce risk. The risk of divorce for couples where both have educational credentials at university level is only a third of the risk of divorce for couples where both have the minimum amount of schooling only.

The effects of spouses' annual incomes conform to the latest results reported from Norway (Lyngstad 2004): A higher income for the wife increases divorce risk. The relationship seems like a threshold-function, where it is at it's strongest for the very lowest incomes. The effects of husband's income show a curvilinear pattern. The risk is higher if his earnings are low, but also slightly higher if his earnings are in the highest category. Interpretations of these results must be done with caution because as data on working hours are not available. Without these data, the estimates do not properly reflect the spouses' economic potentials but merely how much they earned during a specific year.

Conclusion

In the analysis provided in the present paper, we employed continuous-time hazard models to estimate effects of parental education on divorce risks and a number of other divorce determinants. We have learned that the effect of parental education operates separately from effects of the couple's place of residence, their parents' marital history, and their parents' economic resources as measured by average income. These results make it possible to rule out several potential interpretations of the earlier finding that having parents with higher educations is a risk factor for divorce. We can still not exclude the possibility that a sociocultural factor is what connects having highly educated parents to a higher divorce risk: The "bourgeois culture" hypothesis launched by Hoem and Hoem (1992) is not rejected by our results, and this direction will therefore be useful to follow in further research on social origin gradients in divorce risks.

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Table 1A-1D. Effects of parents' education on divorce risk

All estimates are relative hazards

1A. Basic model

		Husband's background		
		Low	*Medium*	*High*
Wife's background	*Low*	*1,00*	*1,08*	*1,24*
	Medium	*1,15*	*1,21*	*1,29*
	High	*1,28*	*1,32*	*1,34*

1B. Control for urban/rural indicator

		Husband's background		
		Low	*Medium*	*High*
Wife's background	*Low*	*1,00*	*1,07*	*1,21*
	Medium	*1,14*	*1,20*	*1,26*
	High	*1,26*	*1,30*	*1,28*

1C. Controls for urban/rural indicator and parents' divorce

		Husband's background		
		Low	*Medium*	*High*
Wife's background	*Low*	*1,00*	*1,08*	*1,21*
	Medium	*1,15*	*1,19*	*1,25*
	High	*1,26*	*1,29*	*1,28*

1D. All control variables included

		Husband's background		
		Low	*Medium*	*High*
Wife's background	*Low*	*1,00*	*1,08*	*1,21*
	Medium	*1,14*	*1,18*	*1,23*
	High	*1,25*	*1,27*	*1,25*

Table 2. Estimates with standard errors from basic and complete models

		Basic model			Complete model		
Variable	**Category**	**Beta**	**SE(Beta)**	**Relative risk**	**Beta**	**SE(Beta)**	**Relative risk**
Intercept	-	-13,84	0,38		-14,01	0,38	
Duration spline slopes	0-2	4,55	0,20	N/A	4,55	0,20	N/A
	2-3	0,83	0,05	N/A	0,83	0,05	N/A
	3-4	0,35	0,03	N/A	0,35	0,03	N/A
	4-5	0,12	0,03	N/A	0,12	0,03	N/A
	5-6	0,09	0,03	N/A	0,09	0,03	N/A
	6-10	-0,05	0,01	N/A	-0,05	0,01	N/A
	10-17	-0,11	0,00	N/A	-0,10	0,00	N/A
	17-24	-0,04	0,01	N/A	-0,04	0,01	N/A
Period spline slopes	1980-1990	0,07	0,00	N/A	0,07	0,00	N/A
	1990-2000	0,04	0,00	N/A	0,03	0,00	N/A
	2000-	-0,07	0,01	N/A	-0,07	0,01	N/A
Husband's age at marriage	--24	0,17	0,01	1,18	0,16	0,01	1,18
	25-29	0,00	--	1,00	0,00	--	1,00
	30-34	-0,18	0,01	0,84	-0,17	0,01	0,84
	35--	-0,42	0,03	0,66	-0,43	0,03	0,65
Wife's age at marriage	--19	0,67	0,02	1,96	0,67	0,02	1,95
	20--24	0,30	0,01	1,35	0,30	0,01	1,35
	25-29	0,00	--	1,00	0,00	--	1,00
	30-34	-0,35	0,02	0,70	-0,35	0,02	0,71
	35--	-0,77	0,04	0,46	-0,83	0,04	0,44
Age heterogamy	*No*	0,00	--	1,00	0,00	--	1,00
	Husband more than 5 years older	0,23	0,01	1,26	0,23	0,01	1,26
	Husband more than 3 years younger	0,24	0,03	1,27	0,22	0,03	1,25
Marriage cohort	*1980-84*	0,00	--	1,00	0,00	--	1,00
	1985-89	0,00	0,01	1,00	-0,01	0,01	0,99
	1990-94	-0,08	0,02	0,92	-0,08	0,02	0,92
	1995-99	0,03	0,03	1,03	0,02	0,03	1,02
Premarital childbearing	*No*	0,00	--	1,00	0,00	--	1,00
	Yes	0,73	0,01	2,07	0,70	0,01	2,01
Children with others than spouse	*None*	0,00	--	1,00	0,00	--	1,00
	Husband	0,47	0,02	1,59	0,41	0,02	1,51
	Wife	-0,14	0,02	0,87	-0,18	0,02	0,84
	Both	0,39	0,03	1,48	0,28	0,03	1,33
Children and age of youngest	*None*	0,00	--	1,00	0,00	--	1,00
	1, youngest child 0	-1,02	0,02	0,36	-1,00	0,02	0,37
	1, youngest child 1-6	-0,81	0,02	0,45	-0,79	0,02	0,45
	1, youngest child 7+	-0,24	0,03	0,79	-0,24	0,02	0,79
	2, youngest child 0	-2,30	0,03	0,10	-2,28	0,03	0,10
	2, youngest child 1-6	-1,53	0,02	0,22	-1,51	0,02	0,22
	2, youngest child 7+	-1,00	0,02	0,37	-0,97	0,02	0,38
	3, youngest child 0	-4,04	0,09	0,02	-3,99	0,09	0,02
	3, youngest child 1-6	-1,97	0,02	0,14	-1,93	0,02	0,14
	3, youngest child 7+	-1,17	0,03	0,31	-1,13	0,03	0,32
Educational attainment	*Low/Low*	0,00	--	1,00	0,00	--	1,00
(husband/wife)	Low/Med	-0,23	0,01	0,79	-0,19	0,01	0,83
	Low/High	-0,52	0,04	0,59	-0,44	0,04	0,64
	Med/Low	-0,24	0,01	0,79	-0,21	0,01	0,81
	Med/Med	-0,55	0,01	0,58	-0,48	0,01	0,62
	Med/High	-0,87	0,02	0,42	-0,78	0,02	0,46
	High/Low	-0,45	0,04	0,64	-0,41	0,04	0,67
	High/Med	-0,77	0,02	0,46	-0,70	0,02	0,50
	High/High	-1,06	0,02	0,35	-0,98	0,02	0,38
Educational activity	*None*	0,00	--	1,00	0,00	--	1,00
	Husband	0,37	0,01	1,45	0,35	0,01	1,41
	Wife	0,16	0,02	1,18	0,14	0,02	1,15
	Both	0,36	0,02	1,43	0,32	0,02	1,38

(continued on next page)

Husband's income	<50K	0,17	0,02	1,19	0,15	0,02	1,16
	<100K	0,03	0,01	1,03	0,04	0,01	1,04
	<150K	0,00	--	1,00	0,00	--	1,00
	>150K	0,04	0,02	1,04	0,02	0,02	1,02
	>200K	0,13	0,02	1,14	0,10	0,02	1,10
Wife's income	<25K	-0,57	0,02	0,56	-0,55	0,02	0,58
	<50K	-0,52	0,02	0,59	-0,49	0,02	0,61
	<100K	-0,41	0,02	0,66	-0,38	0,02	0,68
	<150K	0,00	--	1,00	0,00	--	1,00
	>150K	0,09	0,04	1,10	0,08	0,04	1,08
Parent's education	*Low/Low*	0,00	--	1,00	0,00	--	1,00
	Low/Med	0,14	0,02	1,15	0,13	0,02	1,14
	Low/High	0,25	0,02	1,28	0,22	0,02	1,24
	Med/Low	0,08	0,02	1,08	0,08	0,02	1,08
	Med/Med	0,19	0,02	1,21	0,17	0,02	1,18
	Med/High	0,28	0,02	1,32	0,24	0,02	1,27
	High/Low	0,22	0,02	1,24	0,19	0,02	1,20
	High/Med	0,26	0,02	1,29	0,21	0,02	1,23
	High/High	0,29	0,02	1,33	0,22	0,02	1,25
Urbanites	*No*				0,00	--	1,00
	Yes				0,13	0,01	1,14
Parental divorce	*None*				0,00	--	1,00
	Husband				0,31	0,01	1,37
	Wife				0,44	0,01	1,55
	Both				0,60	0,02	1,82
Husband's parents' income	<50K				0,00	0,01	1,00
	<100K				-0,02	0,01	0,98
	<150K				0,00	--	1,00
	<200K				-0,02	0,02	0,98
	>200K				-0,04	0,03	0,96
	No income/Missing				-0,10	0,02	0,90
Wife's parents income	<50K				0,03	0,01	1,03
	<100K				-0,03	0,01	0,97
	<150K				0,00	--	1,00
	<200K				0,04	0,02	1,04
	>200K				0,06	0,03	1,06
	No income/Missing				-0,06	0,02	0,94
-2 log likelihood		-267107,24			-265 735,70		
n		291052			291052		