For Richer, for Poorer: The Impact of Macroeconomic Conditions on Union Dissolution Rates in the Netherlands 1972–1996

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Most studies on union dissolution of couples focus on explanations at the individual or household level. Consequently, our knowledge on the association between macrolevel conditions and union dissolution rates is limited. In this article, we shift our focus from individual characteristics to contextual conditions as explanations for differences in union dissolution rates. We examine the effects of macroeconomic conditions on union dissolution and control these effects for changes in the cultural climate and in the financial institutions for those needing support. We use data from the Dutch Fertility and Family Surveys 1988, 1993, and 1998 (Statistics Netherlands). In these data, 12,135 female respondents started a first union between 1960 and 1996. About 20 per cent of these unions were dissolved at the time of the interview. Using hazard analyses with time-varying covariates, we estimate the effects of changing contextual conditions on union dissolution risks of cohabiting and married couples. We control the analyses for individual characteristics to rule out the role of possible composition effects on changes in union dissolution rates. The results show a linear and negative relationship between consumer confidence and union dissolution rates of women, irrespective of their level of education.

Introduction

Most of the literature on determinants of divorce focuses on the effects of individual and couple characteristics on union dissolution rates. Studies show that union dissolution rates depend on, among others, the ages of the spouses at the start of cohabitation or marriage (Morgan and Rindfuss, 1985; Martin and Bumpass, 1989; Brines and Joyner, 1999; Poortman and Kalmijn, 2001), working hours of the wife (Tzeng and Mare, 1995), religion (Thornton, 1989), the marital history of the parents (Diekmann and Schmidheiny, 2002), the level of education

of the spouses (South and Spitze, 1986; Poortman, 2002), the number and age of children in the union (Andersson, 1997; Brines and Joyner, 1999), and household income (Brines and Joyner, 1999).

Next to individual and couple characteristics, the context in which people live may also affect their union dissolution rate (White, 1990; Goode, 1993; Wang, 2001). However, although many authors put forward theoretical arguments about the association between macrolevel conditions and union dissolution rates (Van De Kaa, 1987; Cherlin, 1992; Goode, 1993), studies that actually examine this relationship are scarce. In

addition, most studies focusing on the impact of mac-rolevel conditions on union dissolution study macrolevel union dissolution rates (South, 1985; Cherlin, 1992; Cameron, 1996). Analysing microlevel union dissolution rates, as will be done in the current study, may improve the current knowledge about the effects of macrolevel conditions for at least three reasons. First, macrolevel divorce rates are affected by changing patterns in other demographic events such as the timing of union formation and the timing of the birth of children.[1] This may affect the estimates for the macro-determinant of interest. Childbirth, for example, is known to decrease union dissolution risks (Brines and Joyner, 1999), and fertility decisions in their turn are also affected by macroeconomic conditions (CBS, 2004). An economic recession, therefore, may alter the composition of the population with respect to the number of children. Accordingly, a possibly negative effect of an economic recession on union stability might not reflect an independent effect of economic conditions on union stability but might be because of a change in the proportion of married couples with children. Second, with a microlevel study, we have the opportunity to examine whether the effect of macro-conditions differs across groups within a society. One of the hypotheses in this study is that the effect of macroeconomic conditions on union dissolution differs between educational categories. This hypothesis can only be tested with microdata in which the union history can be linked to socioeconomic characteristics at an individual basis. Third, at the macrolevel, only dissolution rates from formal marriage can be studied. We argue that it is important to include the dissolution of cohabitations as well. Nowadays, an increasing number of unions start with cohabitation, and the percentage of unions that never become a marriage increases as well. Therefore, married spouses may become a selective group of all spouses who may have different behaviour with respect to union dissolution. An important consequence in this respect is that the more fragile unions are less likely to become a marriage today than they were in the past.

Only a few studies examine the effects of macrolevel conditions on divorce at the microlevel (Thornton and Rodgers, 1987; Ruggles, 1997; Ono, 1999). However, these studies are based on cross-sectional data and only allow examining whether people were divorced at the time of the census or interview. In this study, we use retrospective life-course data that enable analysing the impact of macro-conditions on people's divorce rates over their lifetime.

Basically, two opposing hypotheses about the impact of cyclical macroeconomic conditions on union dissolution have been suggested. On the one hand, one could argue that, in economically bad times, it will be more difficult to cover the cost of divorce, and bleak economic prospects restrain people from opting for divorce. This leads to the expectation that dissolution rates are *lower* in times of unfavourable economic conditions. On the other hand, one could argue that couples experience more stress during periods of economic hardship, leading to a higher risk of union dissolution. This leads to the expectation that dissolution rates are *higher* in times of unfavourable economic conditions.

This study focuses on the impact of cyclical macroeconomic conditions on individual union dissolution rates in the Netherlands between 1972 and 1996. Although the overall pattern shows a rising divorce rate from the beginning of the 1970s until today, substantial variation around this trend exists (Figure 1). We will examine whether variation in microlevel union dissolution rates is related to variation in macrolevel consumer confidence. The association will be controlled both for a set of individual and couple characteristics and for two major non-economic macro-conditions: cultural and institutional conditions. Controlling for individual and couple characteristics is useful because, as we argued before, changes in the composition of unions on characteristics such as the age of the spouses at the time the union started or the number of children in the union may bias the association between dissolution rates and economic conditions. Controlling for non-economic macro-conditions is useful because associations between economic, institutional, and cultural conditions in society may distort the observed effects of interest.

Next to hypotheses on the overall association between macroeconomic conditions and union dissolution rates, we will examine whether the association differs across subgroups of respondents. Fluctuations in the economy may have a stronger impact on the lives of people with fewer educational resources and may therefore increase the dissolution rates of this group more strongly than the dissolution rates of higher educated people. Finally, whereas most of the literature on the dissolution of unions focuses on divorce rates of marriage, this article studies the dissolution of both unmarried cohabitations and marriages.

How do Macroeconomic Conditions Affect Union Dissolution Risks? Theory and Previous Findings

In this section, we elaborate on *how* macroeconomic conditions affect union dissolution rates. Although we

are especially interested in the association between macroeconomic conditions and divorce rates, the theoretical arguments presented to formulate the hypotheses are at the microlevel as the processes that eventually lead to divorce take place at this level. Macroeconomic conditions affect both the gains of a union and the perception of spouses on the direct and indirect costs of a possible union dissolution. These different mechanisms lead to opposite predictions about the association between economic conditions and union dissolution rates.

The first argument focuses on the fact that economic hardship puts a partner relationship under pressure. According to this *relational stress* argument, unfavourable economic conditions increase the risk that a family suffers from financial stress and the risk that ambitions to get appropriate housing or desired luxury goods are frustrated. The impact of economic conditions on relational stress will be the strongest in families who are, as a consequence of the bad economic climate, hit by unemployment. These families are probably to be under stress because of financial problems (Cherlin, 1992), psychological problems of the unemployed spouse, social isolation of the family, and an abundance of interaction time between the spouses. However, stress is probably to be present in other families too as an economic recession decreases job security of the employed as well. Moreover, the cost of living may increase as a result of rising prices of consumer goods and higher insurance contributions. Finally, even the psychological impact of economic uncertainty may be found among both unemployed and employed families. The presence of stress, setbacks, and disappointments is associated with a higher risk of union dissolution (Hannan *et al.*, 1977; Conger *et al.,* 1990; Waters and Ressler, 1997). Moreover, unfavourable economic conditions decrease people's willingness and opportunities to make investments in union-specific capital (house, furniture, and car). Lower levels of union-specific capital are associated with higher union dissolution rates (Wagner and Weiss, 2004). Taken together, the *relational stress* argument predicts that unfavourable macroeconomic conditions lead to higher union dissolution rates.

The second argument focuses on the costs of divorce. This *relative cost* argument suggests that, during an economic recession, spouses may have more problems to cover the direct costs of divorce, such as costs of lawyers and court fees, the costs of moving of one or both spouses, and costs of furnishing the new apartment or new apartments. In addition, during a recession, it will be harder for non-working spouses to find a job after the dissolution. Such negative financial prospects

about the post-dissolution situation may restrain people from union dissolution (South, 1985; Cherlin, 1992; Hoffman and Duncan, 1995). In addition, in economically more prosperous times, household efficiency becomes less important and strong specialization (Becker *et al.*, 1977, Becker, 1981; Willis, 1987) can be substituted by individual development, i.e. investment in education and the entrance into employment for wives. The emotional, social, and (potential) financial independence gained in this way can lead to increased union dissolution risks. On the basis of this *relative cost* argument, we would expect that unfavourable macroeconomic conditions lead to lower union dissolution rates.

Just a few studies examine the association between economic conditions and union dissolution rates, with mixed conclusions. Willcox (1893) was the first to conclude that the divorce rate was influenced by business conditions; in times of depression, divorce rates were low. These findings were reproduced some decades later (Ogburn and Thomas, 1922; Gulden, 1939). These studies explain their findings by stating that a divorce is expensive, as they involve lawyer and court fees and alimony. At the end of the 1970s and beginning of the 1980s, the association between the union dissolution rates and the business cycle was studied again, and this time, the conclusions were that an economic recession increases dissolution rates (Preston and McDonald, 1979; South, 1985). Accordingly, Statistics Netherlands (CBS, 1999) and Fokkema (2002) concluded for the Netherlands, that in periods with a higher level of consumer confidence, divorce rates are lower.

The limited empirical evidence suggests that the effect of economic conditions on union dissolution rates changed over time. Early on, during the 20th century, the *relative cost* argument seems predominant. Divorce may have been too expensive, either economically or socially for the major part of married people during the early decades of the past century, and therefore, people in bad marriages may have abandoned formal divorce or waited for more prosperous times before filing for a divorce (Gulden, 1939). Later on, during the 20th century, partly as a result of the creation of the welfare state, divorce became within reach of a larger share of the population, and financial arguments became less important. As a result, the *relational stress* argument may have become more important, and the effect of macroeconomic conditions on divorce rates may have reversed. Our study focuses on union dissolution rates between 1972 and 1996, a period in which union dissolution was (economically) within reach of the major share of the

population. Therefore, we expect that the relational stress argument is more important than the relative costs argument, and thus, we hypothesize *that unfavourable macroeconomic conditions will increase union dissolution rates.*

In addition, we test whether the relationship between macroeconomic conditions and dissolution rates is linear. It might be that people's decisions are not very sensitive to minor changes in economic conditions but that people only adjust their behaviour to strong economic shocks. If relationships are put under particularly strong pressure during periods of economic hardship, one would expect a non-linear relationship between macroeconomic conditions and dissolution rates.

Finally, the effect of macroeconomic conditions on union dissolution rates is unlikely to be the same for all social economic status (SES) groups. In times of recession, people with low SES will be the first to experience financial troubles and the concomitant relational stress this entails. Therefore, we expect that unfavourable economic conditions increase union dissolution rates of people with low SES more strongly than dissolution rates of people with high SES.

Cultural and Institutional Changes and Dissolution Rates

The decades between 1972 and 1996 were characterized by major changes in values and norms on family life, intimate relationships, and male–female role patterns. Modernization, urbanization, and an increase in the standard of living caused a shift from survival values to values stressing well-being. Together with secularization, this leads to more individualistic values and an increased interest in self-fulfilment (Lesthaeghe and Meekers, 1987; Van De Kaa, 1987; Inglehart, 1997). These changing values led to a decrease in the gains of the traditional marriage, improved prospects for spouses after union dissolution, and lower social barriers for union dissolution. Although these cultural changes are not at the focus of attention in this article, we argue that it is important to control for these cultural changes when studying the effects of macroeconomic conditions on union dissolution risks.

A second area of change is that of institutions. Both legislation on divorce and financial regulations are likely to affect union dissolution rates. In this study, we do not include indicators for changing divorce legislation because only marginal changes have occurred in the Netherlands in the period between 1972 and 1996. We focus on financial regulations and especially those that affect the post-dissolution situation of spouses. The introduction of the 'Algemene Bijstandswet' (ABW) in 1965 strongly improved the post-union dissolution situation of spouses by guaranteeing every citizen an income above poverty level (Rigter *et al.*, 1995). Therefore, the introduction of the ABW is considered as an important condition for the rise in the union dissolution rate in the 1970s (Rigter *et al.*, 1995). In addition, fluctuations in the *level* of welfare may have an effect on dissolution rates of unions. The better the welfare situation of spouses after divorce, the less likely it is that spouses will stay together for financial reasons. We control for this factor to rule out the possibility that the association between macroeconomic conditions and union dissolution rates we may find in this study is because of changes in the level of welfare.

Methodology

Data

This study uses pooled data from three waves of the Dutch Fertility and Family Survey (1988, 1993, 1998), organized by Statistics Netherlands. This survey focuses on relationship and family formation of people in the Netherlands. It is based on a stratified sample of respondents in communities, with respondents being between ages 18 and 42 years at the time of the interview. Face-to-face interviews were conducted in which information was collected on respondents' household situation, social status and activities, education, parental characteristics, and norms and values. Moreover, complete partner and fertility histories were collected. Unfortunately, there was no information on respondents' employment histories in the data, making it impossible to control for the impact of employment status. In this article, we selected all female respondents who started a first union (cohabitation or marriage) before 1996 and did not separate before 1972. We start estimating divorce rates in 1972, because this is the first year for which information was available about our indicator for macroeconomic conditions. We included the unions starting before 1972 to have unions of different durations, and not only short-term unions, also in the first years after 1972. This may be important because the effects of different determinants on union dissolution rates differ across union durations (Jalovaara, 2002). A disadvantage of this design is that the marriages starting before 1972 that are still intact at 1972 represent a positive selection of the more stable marriages, and such a selection bias may suppress possible effects of the

determinants of interest. However, because the number of union dissolutions before 1972 is very small (0.25 per cent of all unions in the data were dissolved before 1972), we did not expect that this selection bias would affect our estimates.[2] Our analyses are based on 12,135 respondents. The sample is weighted on the basis of year of birth, marital status, position in the household, nationality, size of the municipality, and number of children.

In this article, we study dissolution risks in the first union only. Of all respondents who entered into a first union before 1996, 20 per cent (2,437 women) experienced a union dissolution. As a consequence of the strong increase in the number of dissolutions over time, the mean year of dissolution is 1987.

To answer our research questions on the impact of macroeconomic conditions on union dissolution risks, we added time-dependent macrolevel indicators to the microdata from the Fertility and Family Surveys. The sources from which these indicators are derived will be discussed in the section on the measurement of the variables.

Variables

In this section, the variables are discussed. First, the dependent variable is discussed, followed by a description of the macrolevel and individual-level covariates.

First Union Dissolution Rate

The dependent variable in this analysis is the time (in months since the start of a union) at which a woman experiences the dissolution of the first union. This first union could be either a marriage or a consensual union. In Figure 2, the yearly trend in this rate is plotted. There is a clear increase in first union dissolution rates, although this increase seems to be somewhat stronger during the period 1972–1984, than from 1985 onwards. This partly mirrors the trend in the crude divorce rate shown in Figure 1. However, Figure 2 includes dissolution of both marriages and unmarried cohabitations, whereas Figure 1 is only based on marital dissolutions.

Macroeconomic Conditions

The indicator we use for the macroeconomic conditions in society is an index of the confidence of consumers about the economic situation in society. It is one of the standard measures in the 'Consumer Business Cycle Study', conducted regularly by Statistics Netherlands (Consumenten Conjunctuuronderzoek CCO; Statline;
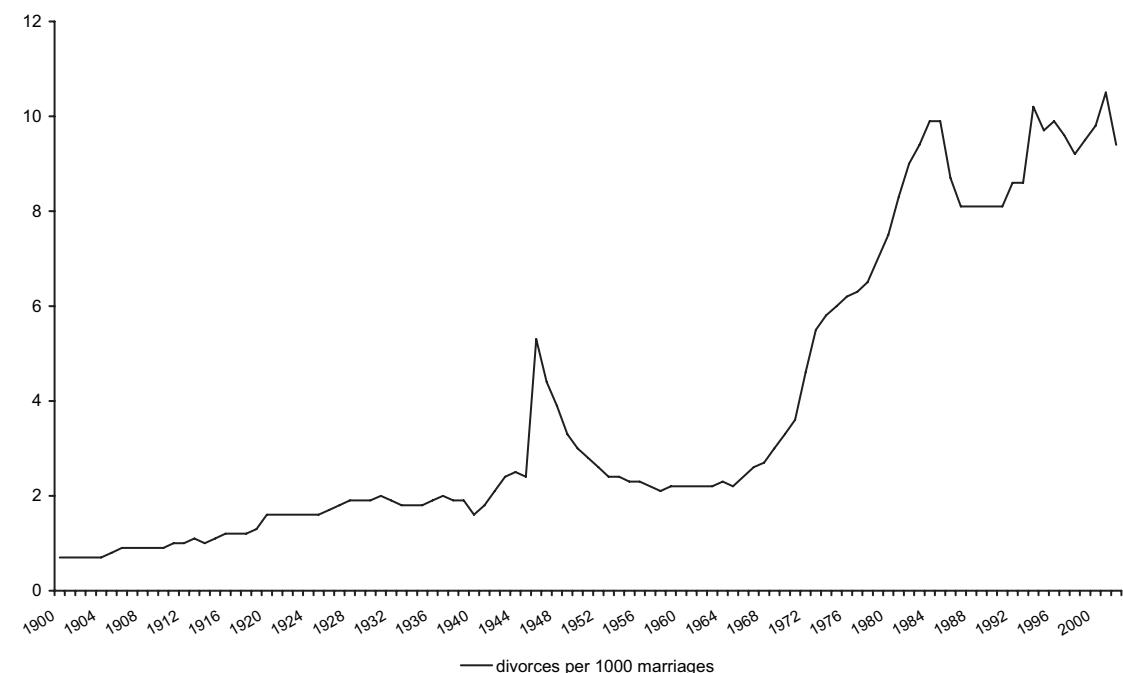

Figure 1 Crude divorce rates in the Netherlands 1900–2000 (Statline, Statistics Netherlands).
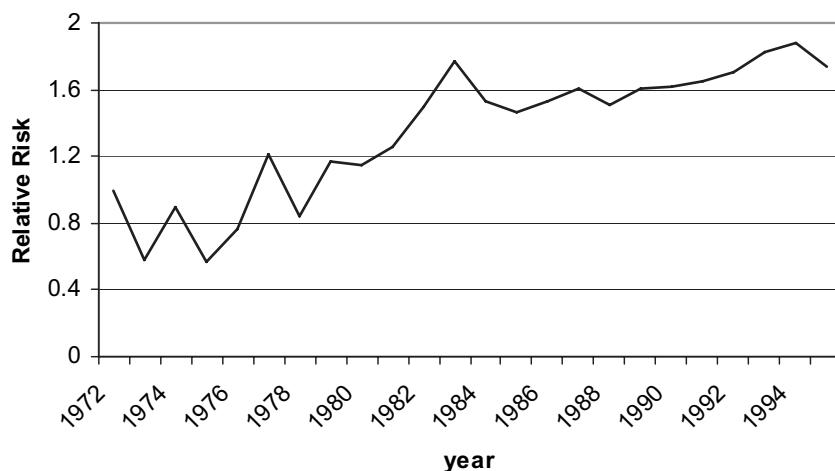
Figure 2 Union dissolution rates in cumulative file of FFS-NL 1988, 1993, and 1998.

Jansen, 2003). The consumer confidence index is based on five questions. These questions are

1. Do you think that the general economic situation in our country has improved, deteriorated, or remained the same during the last 12 months?

2. What is your opinion on the next 12 months? Will the general economic situation in the Netherlands improve, deteriorate, or remain the same?

3. In your opinion, has the financial situation of your household improved, deteriorated, or remained the same during the last 12 months?

4. What do you expect of the financial situation of your own household? Will it improve, deteriorate, or remain the same in the next 12 months?

5. Do you think it is the right or wrong time, or neither, to make large purchases such as furniture, a washing machine, or a television set?

The index is calculated as the average of the positive and negative replies to these five questions, expressed as a percentage. The indicator ranges from −100 to +100. If the value of the indicator is zero, the number of pessimists and optimists is the same. Thus, neutral answers and the response category 'do not know' are not taken into account. A score of −100 means that everyone is pessimistic on all five items, whereas a score of +100 implies that everyone is optimistic. The index is measured by Statistics Netherlands from 1972 onwards. Between 1972 and 1983, it was measured thrice a year; in 1984 and 1985, it was measured twice a year; and from 1986 onwards, it was measured monthly. We use yearly averages for the entire period.

The first panel in Figure 3 shows that the index of consumer confidence varies between −44 and +13 and that it has a negative value for most of the years. These findings indicate that, during the period under study, pessimism about the economic situation in society is more prevalent than optimism. The lowest levels of consumer confidence are recorded between 1981 and 1983, whereas the highest level is recorded in 1989.

Control Variables at the Macrolevel

Next to trends in economic conditions, indicators for societal change with respect to the dominant norms and values and with respect to institutional arrangements were included in the models. We measured value change by using information on the acceptance of divorce in the general population. The 'Cultural Change in the Netherlands' surveys, conducted by the Social and Cultural Planning Bureau (SCP, 1972–1996), provide the percentage of respondents who agreed with the statement that 'If, in a family with small children, husband and wife cannot get along with each other, it is better to have a divorce'. The second panel in Figure 3 shows that the variation in the acceptance of divorce is limited and that the measure shows an increasing trend.

We control for the impact of financial regulations by measuring the monthly amount of money paid to families on welfare in constant guilders of 1970.[3] The third panel in Figure 3 shows this information for couples without children, a single-parent family with one child, and a single-person household. It appears that the trends develop parallel; so, it is empirically not very important

Consumer confidence (index)

% of population accepting divorce in a family with small children

Amounts of welfare in constant Dutch guilders of 1970

— couple without kids ■ single parent family ▲ single person
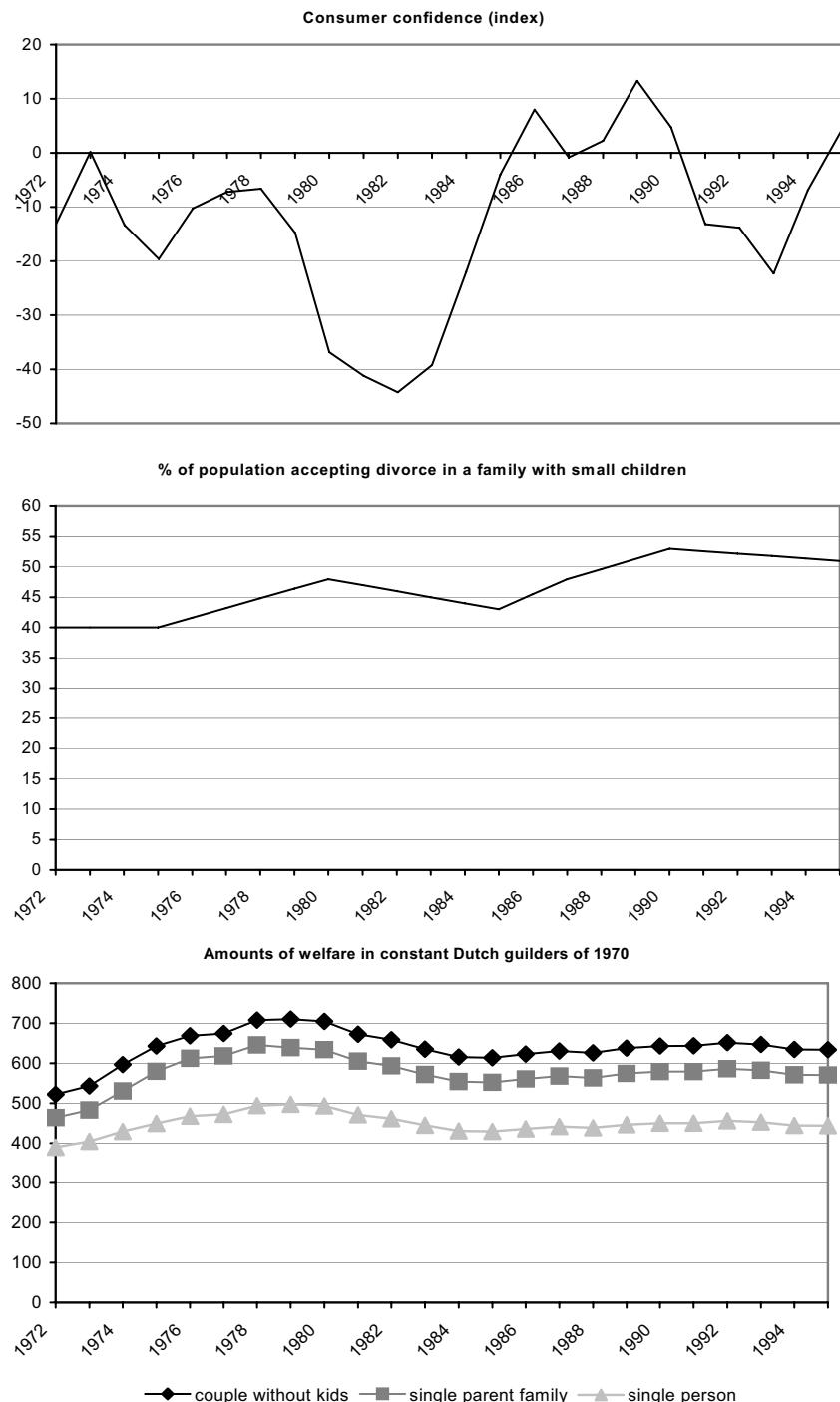
Figure 3 Trends in contextual conditions.

which measure to use. We expect that the average indirect costs of divorce depend more on the level of welfare for single-parent family than on any of the other types.

The percentage of the population dependent on welfare was 5.5 per cent in 1990 (SCP, 2003, p. 97). At the same time, about 50 per cent of all single-parent families were

welfare dependent (Statline, 2003). Therefore, the measure for the level of welfare for single-parent families will be the best indicator for the overall costs of union dissolution.

Individual Characteristics

We include demographic, socioeconomic, and cultural characteristics of the individuals in the analyses to control, as much as possible, for composition effects.

Three time-varying demographic characteristics are included in our models. A first covariate indicates whether *the spouses are married* (1) or *cohabiting* (0). As explained before, we focus on union dissolution rates in this study. Some unions start as cohabitation and turn into marriage at a later moment. This transition into marriage is expected to decrease union dissolution rates. The second covariate indicates whether a *first child is born*, and third covariate indicates whether a *second child is born*. Also, for childbirth, the expectation is that it decreases union dissolution rates. A fourth demographic characteristic included is *the age of the respondent at the start of the union*. Studies on union stability show that a higher age at the start of a union has a stabilizing effect on the union (Morgan and Rindfuss, 1985; Berrington and Diamond, 1999).

The only socioeconomic characteristic that is available is *the level of education of the respondent*. To find possible non-linear effects of the level of education, we estimated the effects of four dummy variables, with the reference category being respondents having higher secondary education (the middle group). Most Dutch studies show a positive effect of the level of education on union dissolution risks (Kalmijn *et al.*, 2004). Recently, however, the discussion was started whether this effect is changing over time (Dronkers, 2002; Härkönen and Dronkers, 2006).

Two cultural characteristics are included as control variables. The first one is *the religion of the parents* (Catholic, Protestant, and other); respondents with non-religious parents are the reference group. We use a measure of religion of the parents and not that of the respondents themselves because the causality of the relationship between respondent's religion and union dissolution may also be in the reverse direction. We expect that respondents with religious parents have a lower union dissolution risk (Somogyi, 1941; Booth *et al.*, 1995; Berggren, 1997). Second, we measure whether the respondent has a *migrant status*. Union dissolution risks of migrants are shown to be higher in general than those of the native population (Poortman, 2002).

In Table 1, descriptive information on individual characteristics is summarized. For time-constant variables, the distribution across individuals is presented. For time-varying variables, the proportion of time spent in each status while being at risk of union dissolution is presented. For instance, respondents spend on average 70 per cent of their time in the examined relationship

Table 1 Descriptive information of the individual-level variables included in the analysis

	Minimum	Maximum	Mean	Standard deviation
Proportion of months married versus total months (0–1)	0	1	0.70	0.41
Proportion of months with first child versus total months (0–1)	0	1	0.44	0.38
Proportion of months with second child versus total months (0–1)	0	1	0.26	0.32
Age at start union [months (years)]	180 (15)	534 (44.5)	263.0 (21.9)	35.91 (3.0)
Low education (0/1) (6 years)	0	1	0.13	0.33
Lower secondary (0/1) (10 years)	0	1	0.27	0.45
Higher secondary (0/1) (12 years)	0	1	0.43	0.49
Lower tertiary (0/1) (14 years)	0	1	0.14	0.35
Higher tertiary (0/1) (16 years)	0	1	0.03	0.18
Respondent is migrant (0/1)	0	1	0.06	0.25
Parents catholic (0/1)	0	1	0.29	0.45
Parents protestant (0/1)	0	1	0.20	0.40
Parents other religion (0/1)	0	1	0.04	0.20
Parents no religion (0/1)	0	1	0.48	0.50

Sources: FFS88, FFS93, FFS98; $N_{persons}$ = 12,135.

being married (and therefore 30 per cent is spent while cohabiting unmarried). The mean age at which respondents started their first relationship is about 22 years.

Methods and Models

In this study, we focus on the effects of a set of covariates on the union dissolution rate. We examine the hazard rate of dissolving the first union at time t, given that the union is intact until time t. Moreover, we estimate the effects of both time-constant and time-varying covariates. Because we are interested in the magnitude and direction of the effects of the observed covariates rather than in the time dependence of the process, we employ the semi-parametric Cox model. The functional form of this model is

$$r_j(t) = h_j(t) \exp[A^{(j)}(t)\alpha^{(j)}]$$

A series of multivariate models are estimated. We start from a model that only includes the effect of year, represented by a two-dimensional spline function for the year in which the dissolution risk is estimated. On the basis of the shape of the graph representing the relative risks of divorce per year in the Fertility and Family Survey (FFS) data (Figure 2), we choose the node of the spline function in 1984. The coefficients for these covariates (years between 1972 and 1996 and between 1984 and 1996) represent the effect of moving ahead 1 year in time on the dissolution rate of unions. The coefficient of the first covariate represents the effect on union dissolution in the period 1972–1984. The effect of time on union dissolution in the second period (1984–1996) is achieved by adding the coefficients of the first and the second covariate. Put differently, the first covariate represents the base effect for the whole period, and the second covariate represents the difference in the time effect between the two periods.

The second model adds selected time-varying and time-constant variables at the individual level. The third model adds the effect of consumer confidence. In the theory section, it was suggested that people may adjust their behaviour only in times of really deep recessions. If so, the effect of consumer confidence will be non-linear. To test for this possibility, model 4 extends model 3 with the quadratic term and the cubed term of consumer confidence. If these added terms are statistically significant, they imply that consumer confidence has the strongest effect if it is really low or really high. In model 5, measures for cultural and institutional macro-conditions are added to model 3 to test whether changes in these conditions cause spurious or suppressed relationships between economic conditions and the dissolution rate. Finally, in model 6, interaction terms of economic conditions and respondent's level of education are introduced to examine whether the effect of economic conditions varies systematically across educational groups.

Multivariate Results

The first model of Table 2 shows to what extent the dissolution rate for first unions differs across time. This effect is captured by a spline function with a node in 1984. Between 1972 and 1984, the relative risk of union dissolution increases with 7 per cent each year. However, from 1984 onwards, no further increase in the union dissolution rate is observed, as the positive coefficient of 0.071 is compensated by a negative coefficient of –0.062, leading to a total non-significant effect of 0.009 for the period from 1984 onwards. This implies that the risk that a first union would dissolve increased between 1972 and 1984 but stabilized between 1984 and 1996.

In model 2, individual-level covariates are added to the model. Marriage, having a first child, having a second child, and the age at start of the union all show the expected effects on the union dissolution rate. The risk of a union dissolution is lower if women are married, have one or two children, and enter their union at a relatively high age. The effect of the level of education is non-linear. The relatively small proportion of respondents, with a very low level of educational attainment (primary school or less), has by far the highest union dissolution rates. However, respondents in the second-lowest educational category (lower secondary education) have lower union dissolution rates than respondents with higher secondary education or more. There are no differences in union dissolution rates between respondents having higher secondary, lower tertiary, and higher tertiary education. Migrants have, as expected, higher union dissolution rates, but the effect of parents' religion is weaker than expected: only the effect of parents having a religion other than Catholic or Protestant is on the borderline significant ($P = 0.07$). Women with catholic or protestant parents have the same union dissolution rates as women having non-religious parents.

The introduction of these control variables leads to a sharp decrease in the effect of the year variables, suggesting that more than half of the yearly increase in the risk of first union dissolution results from a change in the composition of individual-level variables. The most important variable in this respect is marriage. It alone

Table 2 Cox-regression of dissolution rates on macroeconomic conditions and selected control variables

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Macroeconomic indicators						
Consumer confidence (−44 to +13)			−0.003* (0.001)	−0.002 (0.003)	−0.003* (0.001)	−0.005* (0.002)
Consumer confidence squared				0.000 (0.000)		
Consumer confidence cubed				0.000 (0.000)		
Consumer confidence × low education						0.006*** (0.003)
Consumer confidence × lower secondary						0.002 (0.003)
Ref.: consumer confidence × higher secondary						
Consumer confidence × lower tertiary						0.004 (0.004)
Consumer confidence × higher tertiary						−0.007 (0.006)
Control macro-characteristics						
Acceptation divorce (0–13)					0.008 (0.014)	0.008 (0.014)
Welfare (7.13–189.36)					−0.001 (0.001)	−0.001 (0.001)
Control individual characteristics						
Married (0/1)		−1.554** (0.056)	−1.555** (0.056)	−1.555** (0.056)	−1.555** (0.056)	−1.554** (0.056)
First child (0/1)		−0.188** (0.068)	−0.187** (0.068)	−0.187** (0.068)	−0.188** (0.068)	−0.188** (0.068)
Second child (0/1)		−0.330** (0.074)	−0.331** (0.074)	−0.331** (0.074)	−0.329** (0.074)	−0.330** (0.074)
Age at start union (180–534)		−0.007** (0.001)	−0.007** (0.001)	−0.007** (0.001)	−0.007** (0.001)	−0.007** (0.001)
Low education (0/1) (6 years)		0.245** (0.061)	0.245** (0.061)	0.245** (0.061)	0.245** (0.061)	0.327** (0.077)
Lower secondary (0/1) (10 years)		−0.129* (0.054)	−0.128* (0.054)	−0.128* (0.054)	−0.128* (0.054)	−0.104 (0.068)
Ref.: higher secondary (0/1) (12 years)						
Lower tertiary (0/1) (14 years)		0.043 (0.062)	0.043 (0.062)	0.043 (0.062)	0.043 (0.062)	0.090 (0.078)
Higher tertiary (0/1) (16 years)		0.006 (0.102)	0.005 (0.102)	0.005 (0.102)	0.006 (0.102)	−0.102 (0.136)
Migrant (0/1)		0.476** (0.067)	0.475** (0.067)	0.475** (0.067)	0.475** (0.067)	0.476** (0.067)
Parents catholic (0/1)		−0.052 (0.049)	−0.052 (0.049)	−0.052 (0.049)	−0.054 (0.050)	−0.055 (0.050)
Parents protestant (0/1)		−0.082 (0.057)	−0.081 (0.057)	−0.081 (0.057)	−0.082 (0.057)	−0.082 (0.057)
Parents other religion (0/1)		−0.179*** (0.101)	−0.178*** (0.101)	−0.178*** (0.101)	−0.180*** (0.101)	−0.185* (0.101)
Ref.: parents no religion						
Years between 1972 and 1996	0.071** (0.008)	0.025** (0.008)	0.024** (0.008)	0.023** (0.009)	0.020* (0.010)	0.020* (0.010)
Years between 1984 and 1996	−0.062** (0.013)	−0.031* (0.013)	−0.024*** (0.014)	−0.023 (0.015)	−0.025*** (0.015)	−0.025*** (0.015)
Log likelihood	−21,585	−20,863	−20,861	−20,861	−20,860	−20,857

Ref., reference category.

$N_{persons}$ = 12,135; $N_{episodes}$ = 144,877; N_{events} = 2,437; **P < 0.01; *P < 0.05; ***P < 0.10.

Sources: FFS1988, FFS1993, FFS1998.

accounts for almost the entire decrease in the impact of year, suggesting that the rise of first union dissolution rates results to a large extent, but not completely, from the increase in unmarried cohabitation.

The third model tests the central hypothesis whether the level of consumer confidence is inversely related to the union dissolution rate. In line with our hypothesis, an increase of 10 points in consumer confidence leads to a decrease of 3 per cent in the relative risk of union dissolution. To test whether the impact of consumer confidence is linear or not, model 4 adds quadratic and cubed effects of consumer confidence. This addition does not lead to a better model fit than the linear effect in model 3. Therefore, it can be concluded that the impact of consumer confidence on union dissolution is linear rather than non-linear.

In model 5, we test whether the linear impact of consumer confidence on union dissolution changes once we control for macrolevel indicators of cultural and institutional conditions in society. Neither the proportion of the population that accepts divorce of spouses with young children nor the level of welfare for a single-parent family exerts a statistically significant effect on dissolution rates. At the same time, including these control variables does not change the effect of consumer confidence on union dissolution. Therefore, consumer confidence has an impact on union dissolution net of the impact of other societal influences and net of the impact of a number of important individual-level characteristics.

Finally, model 6 addresses the question whether the association between consumer confidence and union dissolution differs according to level of education. This model shows the interaction of consumer confidence with women's educational level in five categories. Just the difference between women with primary education and women with higher secondary education is marginally significant. This suggests that the union dissolution rates of women with a very low level of education are not affected by changes in the economic conditions in society. The other educational categories do not differ in a statistically significant way from each other with respect to the impact of consumer confidence. We also estimated a model in which we contrasted the effect of consumer confidence for the lowest category of education with the average effect for the other four categories together. This contrast is not significant ($P = 0.104$).

Conclusions and Discussion

In this article, we have investigated the impact of macroeconomic conditions on union dissolution rates in the Netherlands. We expected to find a negative relationship between macroeconomic conditions and union dissolution rates, i.e. with a higher level of consumer confidence union dissolution rates are lower. We also examined whether the relationship between consumer confidence and union dissolution rates is linear. Finally, we expected to find stronger effects of economic conditions on union dissolution rates of lower educated than on union dissolution rates of higher educated spouses.

To test our hypotheses, we used microdata from the Dutch Fertility and Family Surveys 1988, 1993, and 1998, providing information on union dissolution rates between 1972 and 1996. These data enabled us to control for possible changes in the composition of individual characteristics such as the marriage rate, the age at start of the union, and fertility rates over time. Next, macrolevel information on economic conditions in the years of study was linked to the microdata. We also checked whether differences in the aggregated norms on family life and in the level of welfare payments over time led to spurious effects of consumer confidence.

The results support the general hypothesis that unfavourable economic conditions increase union dissolution rates. This is in line with the relational stress argument that suggests that unfavourable economic conditions increase the stress within the spousal relationship. In addition, a linear specification of the relationship between consumer confidence and the union dissolution rate fits the data as good as a more general non-linear model. Therefore, it can be concluded that the effect of consumer confidence is the same at high, middle, and low levels of consumer confidence.

The second aim of this article was to find out whether the effects of the macroeconomic conditions on union dissolution differ between women with different educational levels. The findings on differences in the effects of the macroeconomic conditions between respondents with different levels of education did not support our hypothesis. Women from all educational levels react in the same way to changes in economic conditions. There is one potential exception: women who have completed only primary education seem to be less disturbed by changes in the business cycle. The reason for this could be that this constitutes a selective group of women with poor relational skills. If so, they may simply lack the skills of holding on to a relationship. While other couples are better able to sustain their relationship if the economic situation is more favourable, the relationship of very low-educated women is not protected in this way by favourable conditions. This explanation received further support from the fact that women with a very

low level of education have a much higher union dissolution rate than other categories of women. Again, this suggests the lack of appropriate skills to maintain a relationship. The evidence however is weak; so, we must be cautious with our conclusions. We stress that further analyses testing the hypothesis are necessary.

The main effect of level of education on union dissolution turns out to be non-linear. Three categories can be distinguished; women with a very low level of education have the highest union dissolution rates, women with only lower secondary education have the lowest dissolution rates, and women with higher secondary education or more have intermediate dissolution rates. This non-linear effect of education contrasts with findings from existing studies on marriage dissolution in the Netherlands (Fokkema and Liefbroer, 2004; Kalmijn *et al.*, 2004). In these studies, a higher level of education was found to increase the union dissolution rate. An important reason for the difference with earlier studies could be the inclusion of women with very low levels of education. As discussed above, these women seem to lack some basic skills to maintain partner relationships. In addition, this study concerns couples from more recent marriage cohorts than most existing studies in the Netherlands. According to Dronkers (2002), the effects of education on union dissolution are changing in the Netherlands, and these findings support this hypothesis.

The major finding of this study is that union dissolution rates are higher during periods of economic recession. Unfortunately, it is not possible to draw definite conclusions about the mechanisms causing this effect. On the one hand, it could be that the awareness of bad economic prospects influences all couples in society and increases the strain on all couples, irrespective of their position in the labour market. On the other hand, it could be that the awareness of bad economic prospects only influences couples who are in insecure employment situations. It is among them that the highest level of relational stress can be expected. The fact that the impact of consumer confidence is the same for different educational levels seems to favour the first explanation. However, including information on the employment status of women (and, even better, of men as well) would provide an even stronger test of the mechanisms at work. Unfortunately, this data set does not allow this kind of analysis as employment histories are lacking. However, this data set has an advantage compared with other data sets in that the number of observations and the number of union dissolutions are sufficiently large to analyse changes in union dissolution over time and the impact of macroeconomic factors.

Summarizing, we conclude that studying the effects of macrolevel conditions on individual union dissolution rates contributes to a better understanding of differences in union dissolution rates over time and between individuals. By extending this study to a cross-country analysis on the effects of time-varying macrolevel conditions on union dissolution rates, we may find out whether the conclusions from this study hold in an international perspective. Moreover, a cross-country analysis may provide more variation in the macrolevel variables and more power in the analyses, and this has at least two major advantages. First, when testing hypotheses on various macrolevel conditions simultaneously in a complete model, it is more likely that effects will stay significant. Second, it enables us to put cultural and institutional indicators in the centre of attention too, because a cross-country design will provide more non-linear variation in these variables.

Notes

1. They are also affected by changes in the age distribution of the population unless cohort standardized divorce rates are used. However, given their limited availability, standardized rates are rarely used.

2. We also checked this by repeating the analyses with a selection of unions that started after 1971 and found no substantive differences in the effects or significance levels of the effects.

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