



Fathers' Use of Parental Leave and Union Dissolution

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Abstract: With increasing union dissolution and changing gender behaviour, questions have emerged about possible links between gender behaviour and union stability. The aim of this article is to examine whether, and how early, father involvement in child-rearing is associated with union dissolution in three Nordic countries. Our analysis uses father's parental leave as a proxy for his involvement in child-rearing, to show that couples where the father uses parental leave have a lower risk of union dissolution. The pattern is consistent for all countries, for the whole study period 1993-2011, and to cohabiting couples. However, we do not find support for asserting that the couples with greatest gender equality, in terms of fathers taking long leave, are the most stable unions, as the pattern is not uniform in the three countries. Nevertheless, gender equality within the family in the Nordic countries is still an ongoing process, and the relationship between gender behaviour and union stability is still in flux. At this stage, it is clear that policies set up to change gender relations in families do have unintended consequences in terms of greater union stability among couples making use of the policy.

Keywords: Parental leave, union dissolution, fathers, Sweden, Norway, Iceland



Introduction

With increasing union dissolution and changing gender behaviour, questions have emerged about possible links between gender behaviour and union stability. Theoretical explanations have changed over time. In the past, women's economic dependence on their spouses was an important reason for union stability, and it was argued that increasing risk of union dissolution was linked to increasing female employment (Oppenheimer 1994). The mechanism involved is that women in paid work become less economically dependent on their partner and have less to gain from marriage, which predicts greater risk of divorce (Becker 1981). Nowadays many countries are experiencing more gender-equal sharing of family responsibilities. When societies experience increased gender equality within the family, unions may be more stable and the risk of union dissolution may decrease (Goldscheider, Bernhardt and Lappegård 2015). The postulated mechanism is that more equal sharing of family responsibilities leads to greater couple satisfaction and more investment in the children by the fathers, which results in a higher threshold for couples to dissolve their relationship (Goldscheider et al. 2015).

The Nordic countries have a long tradition of promoting gender equality through family policy, both in the labour market and in the family. Developments in gender relations in the family and the actual policies and policy discourse are closely interrelated. With an explicit goal of gender equality, policies has actively supported employment for mothers with young children. There are also policies that aim for earlier father involvement in child-rearing and changes in how parents share unpaid work in general. The aims of these policies are equal sharing of family responsibilities between partners and/or more father involvement in child-rearing from an earlier age. The policies may also have unintended consequences in other

areas of life, and an under-studied area is the relationship between use of parental leave and union dissolution. The point of departure for this study is the theoretical postulation that greater gender equality within the family has a stabilizing effect on the union (Goldscheider et al. 2015), which means that when couples share family obligations more equally they will be less likely to dissolve their unions.

The aim is to examine whether and how early father involvement in child-rearing is associated with union dissolution in three Nordic countries – Iceland, Norway and Sweden. These countries rank highest on measures of gender equality, e.g. the UN Gender Empowerment Measure (GEM), the Gender Development Index (GDI), and the World Economic Forum Global Gender Gap Index (GGGI). They also have similar family policies and relatively similar political, social and economic conditions as well as similar patterns of family dynamics. We focus on one family policy, the parental leave programme, which promotes both female employment and early father involvement in child-rearing. We use administrative registers of the whole populations of men and women in Iceland, Norway and Sweden to consider leave used by fathers as a proxy for their involvement in child-rearing –measured here in the first 18 months after the first child is born. In all three countries, parents receive generous paid compensation for more than one year for staying at home with their new baby, with part of the leave reserved for the father, and not transferrable to the other parent. The father's quota policy started as a unique Nordic feature more than twenty years ago, with the direct aim of increasing gender equality in the family. Iceland, Norway and Sweden have had a father's quota for a substantial period of time, and studies shows fathers use the reserved leave (Dahl, Løken and Mogstad 2014; Duvander and Johansson 2012; Duvander and Lammi-Taskula 2011; Arnalds, Eydal and Gíslason 2011). In the two other Nordic countries, Denmark and Finland,

policies have been less consistent with respect to reserving part of the parental leave for the father.

Following the implementation of the father's quota, the taking of leave by fathers developed into a social norm in all three countries, with expectations that fathers should take at least the father's quota. In the present study, we use the father's quota regulations to group couples according to different types of behaviour. Fathers taking no leave represent "non-policy-norm" behaviour, where justification for such behaviour is often expected. Fathers who take up to their quota thus represent "policy-norm" behaviour, while fathers taking more than their quota represent "gender egalitarian" behaviour. By examining union dissolution among these groups, we provide new insights into how a policy with the explicit aim of changing the division of unpaid responsibilities within the family is associated with union stability. By replicating our analysis in three contexts, we provide evidence that the postulated relationship between early father involvement and union stability has a general application.

The Nordic parental leave programme

The paid parental leave systems in Iceland, Norway and Sweden are quite similar, but with some distinct differences. The Nordic countries are often described as welfare states that use policies to support an earner-carer family model (Ferrarini and Duvander 2010; Eydal and Gíslason 2011). The parental leave programme gives parents the possibility of staying at home with their children after birth without suffering financially or losing their jobs. The programme gives parents financial compensation during the leave period and the legal right to return to their jobs afterwards. Today the total length of parental leave is 14 months in Norway, 16

months in Sweden and somewhat less in Iceland, at 9 months. In all three countries, for reasons of gender equality (Duvander and Lammi-Taskula 2011), the leave is divided into three parts: one part reserved for the father, one for the mother, and one to be shared between the parents.

The issue of a father's quota was being debated in Sweden in the 1970s already (Cedstrand 2011), but was not implemented until 1995. At the time of implementation, the father's quota in Sweden was four weeks and it was extended to eight weeks in 2002. The father's quota in Norway was introduced in 1993, and as in Sweden, it was four weeks when initially implemented. From 2005, the quota was extended incrementally, first to five weeks in 2005, then to six weeks in 2006, ten weeks in 2009, twelve weeks in 2011 and fourteen weeks in 2013. After a change of government, the father's quota was reduced to 10 weeks in 2014. In Iceland, the quota was introduced in four-week increments over a three year period (2001–2003) up to the current twelve weeks. The radical policy of three months reserved for each parent made Iceland the leading country as regards gender equality.

There is extensive variation in father's use of parental leave (see Figure 1). The general tendency in all countries is that more fathers are taking leave and that they are taking longer leaves. However, Iceland has the largest proportion of fathers taking leave, Norway the largest proportion of fathers not taking leave, and Sweden the largest proportion of fathers taking more than the father's quota.

Income compensation is around 80 per cent, up to a relatively high earnings ceiling in all three countries. For earnings above the ceiling there are often collective agreements supplementing the benefit with extra payment to compensate, partly or wholly, for income over the ceiling. In Iceland, however, income compensation was reduced to 75 per cent in 2010, in response to the financial crisis. The ceiling had

already been lowered in 2009 to an amount well below the mean monthly regular salary for men in that same year, which resulted in fathers' taking less leave (Eydal and Gíslason 2014).

Fathers' eligibility for parental leave varies somewhat across the three countries. In both Sweden and Iceland, all parents are included in the parental leave programme, while in Norway eligibility is dependent on employment prior to childbirth. Until 2000, father's eligibility for parental leave benefits in Norway was dependent on mother's employment prior to childbirth, but after that, fathers gained an individual right to parental leave, except for the father's quota, which is still dependent on mothers' employment. In Sweden and Iceland, parents with no earnings prior to the taking of leave receive a low, flat compensation rate. All parents in Sweden receive compensation at a low, flat rate for three months of the total leave. In Norway, mothers who are not entitled to leave receive a lump sum, tax-free cash payment on the birth of the child.

The parental leave programme is flexible in the sense that the parent on leave does not need to take all the leave at once, but can divide it up as they like. For instance, if the mother takes leave first, the father may take some leave for a period and then the mother may take more leave, or the mother and the father may divide the week between them. In Sweden and Iceland, parents may also combine paid and unpaid days of leave as well as full and half days, and this flexibility is widely used by parents.

Background

The gender revolution and union dissolution

Let us follow two sets of arguments that lead to contradictory interpretations of the relationship between gender behaviour and union stability (Cooke 2006). Firstly, in traditional male breadwinner-female caregiver societies, gender specialization increases couples' mutual dependence (Becker 1981) and thereby maintains union stability (Oppenheimer 1994). As the number of dual-earner couples increases, women's economic empowerment reduces their dependence upon men, which becomes a threat to the benefits of specialization, and thus increases the risk of divorce (Cooke 2006). Secondly, when both men and women participate in the labour market, the division of both paid and unpaid work becomes the result of negotiations between the spouses (Cooke 2006). Hence, alternatives to marriage are important determinants of bargaining power. This means that women's empowerment may give rise to a credible threat of divorce when spouses bargain over division of domestic labour, and thus an equal share of domestic work should decrease the risk of divorce (Breen and Cooke 2005). In other words, when women and men contribute more equally to the family economy, an unequal share of responsibility for domestic work becomes perceived as both unfair and problematic and thus generates a demand for a more equal division of domestic work among women and men.

The two arguments relate to the phases of the gender revolution. In the first half of the gender revolution there was a dramatic increase in female employment, while in the second men became increasingly involved in family life (Goldscheider et al. 2015). The first half can be linked to the first interpretation, where increasing union dissolution is linked to women's empowerment. In other words, the movement

towards more dual-earner couples is seen as a weakening of the family in the sense that despite taking on more financial responsibilities, the mother still bore the main share of domestic responsibilities. The second half of the gender revolution can be linked to the interpretation that increasing union dissolution is linked to men not taking the same responsibility for domestic obligations as women were taking for financial responsibilities. The second half of the gender revolution predicts that when men do assume a more equal share of domestic responsibility, a new balance may emerge due to a more gender-equal relationship between the partners, resulting in greater union stability (Goldscheider et al. 2015).

There is evidence in support of both interpretations, which seem to be dependent on the social context. For instance, in countries with greater gender equality within the family, marriages were more stable (Cooke 2006). Comparing the United States and Germany, Cooke (2006) finds that in Germany, any move away from gender specialization increases the risk of divorce, while in the United States, greater gender equality in the family is associated with greater union stability. Similarly, in a comparison between Sweden and Hungary, Oláh (2001) finds a positive association between equal sharing of domestic responsibilities and family stability in Sweden, while there is no similar association in Hungary. A study from the United Kingdom supports the argument that there is a link between gender equality and family stability, showing that the divorce rate is lower when fathers are significantly engaged in unpaid work and childcare, regardless of their wives' employment status (Sigle-Rushton 2010). Similarly, Cooke et al. (2013) suggest in a comparison of eleven Western countries that the stabilizing effects of a gendered division of labour have ebbed, and in countries with policies supporting gender equality, wives' employment is negatively associated with divorce risk (Cooke et al.

2013).

Father involvement and union dissolution

Although we are not able to disentangle them empirically, we consider two main mechanisms for why fathers' use of parental leave would increase union stability: how more equal sharing of family obligations may lead to more couple satisfaction, and how more father investment in children may lead to stronger family commitment.

Let us start with the couple relationship. The prediction is that father's use of parental leave leads to equal sharing of domestic responsibilities and shows greater investment in the union and commitment to the partner, which results in greater couple satisfaction. First, the prediction assumes that fathers' use of parental leave is related to the time they spend on paid and unpaid work. Changing the allocation of time spent on housework and childcare would mean less specialization of the partners. Studies from Norway and Sweden suggest changes in parents' allocation of paid and unpaid work attributable to the parental leave programme. For instance, a Swedish study based on a survey from 2003 finds that fathers who take parental leave work less hours than other fathers (Duvander and Jans 2009). A Swedish study that used register data to focus on long-term paid employment reports that parental leave is found to decrease the future earnings of both parents, but father's leave has a larger positive effect on mother's earnings than a similar reduction in the leave she takes (Johansson, 2010). A Norwegian study that also using register data finds that the father's quota had no effect for the first batch of fathers exposed to the father's quota reform, but that fathers who had children later on experienced a decrease in their subsequent earnings (Rege and Solli 2013). Two Swedish studies that focused on household work and examined the share of days parents spent at

home with sick children find contradictory results. One, using the difference-in-difference approach, finds evidence that the introduction of the father's quota led to more equal sharing of the number of days mother and fathers stay at home to care for sick children, mainly because the mother reduced the number of days for which she received benefits (Duvander and Johansson, 2015). However, another study, using the same measure, but comparing only those exposed to the reform with a control group, does not find that the introduction of the father's quota has any effect on how parents share the number of days staying at home with sick children (Ekberg et al. 2013). A Norwegian study that combined register data with survey data finds that the father's quota reform affected the division of housework 14–15 years after the implementation of the reform (Kotsadam and Finseraas 2011). However, this study does not reveal whether equal sharing of housework is a result of mothers doing less, fathers doing more or both.

Second, our predictions also assume that more gender-equal allocation of domestic duties results in greater couple satisfaction. For instance, a study from Norway finds that more gender-equal sharing of housework is associated with a higher relationship quality for women (Barstad 2014). However, men seem to experience little difference in relationship quality as a result of the division of housework (Barstad 2014). On the other hand, a study from Sweden does not find a significant correlation between men's share of parental leave and relationship satisfaction (Brandén, Duvander and Ohlsson-Wijk 2016). They do, however, find that satisfaction, especially for men, with the division of parental leave is associated with couple satisfaction and union dissolution (Brandén et al. 2016). When men are not satisfied with the division of parental leave, it most likely means they have spent less time with the child than they had wished for and can be related to norms about

how much leave they are expected to take or how much leave they consider to be their “fair share”. All in all, the empirical evidence suggests that the Nordic parental leave policy has changed couples’ allocation of time spent on paid and unpaid work, and also that more equal allocation of time is positively associated with greater couple satisfaction, which predicts a lower risk of union dissolution.

The prediction for the father-child relationship is that when fathers invest in their children it will result in stronger family ties and there will be stronger barriers against break-up of a couple’s relationship and they will thus be more reluctant to dissolve the union. Firstly, fathers taking parental leave who spend time alone with their children develop competence and knowledge that strengthen their chances to become engaged and equal parents (Brandth and Kvande 2003a). The first period of a child’s life is the time when they need most attention and is harder work than when the child is older. However, such early childhood bonding may be of great significance for the father-child relationship. In the Nordic context, father involvement has become a normative behaviour and child orientation has become part of the male identity. For instance, a comparative study of why fathers did or did not take parental leave in Sweden and France suggests that Swedish fathers express an orientation towards the care of young children and do not explicitly state that taking care of the children is the mother’s job, while this was not found among French fathers (Almqvist 2005). A study based on Swedish survey data of fathers working in large private companies in Sweden shows that fathers who take parental leave and participate in childcare are more satisfied with the contact with their children (Haas and Hwang 2008). Secondly, co-parenting and increased father involvement is a predictor of father’s continued involvement after separation (Carlson et al. 2008). Psychological studies that have focused on father’s psychological reaction to the

loss, either actual or threatened, of the father-child relationship, suggest a pronounced reaction as a consequence of fathers having been more involved with and attached to their children prior to a divorce (Kruk 2010). A Swedish study found that use of parental leave by fathers is positively associated with more contact between separated fathers and their children (Duvander and Jans 2009). Overall, there is empirical evidence that the Nordic parental leave policy is positively associated with more contact between father and child. When fathers have invested more in their children and developed stronger bonds there may be stronger barriers against a couple's break-up.

In light of these considerations regarding the mechanisms underlying the relationship between father involvement and union dissolution, we formulate the following hypothesis:

H1: Couples where the father takes parental leave are at lower risk of union dissolution than couples where the father does not take leave.

So far, we have argued that couples where the father takes parental leave are significantly different from couples where the father does not take leave. The meaning and the consequences of fathers' use of parental leave may also depend on whether he takes more than the father's quota or not. The majority of fathers in the three countries take some leave. In none of the countries do the parents share the leave equally on an aggregate level, and the mothers take the lion's share. There might be different reasons why some fathers choose to take long leave. Fathers who use their quota use their right, and their use of leave may be less a result of negotiation with their partner and with their employer. Fathers who take more than

their quota may, on the other hand, be a result of negotiations between the couples. They may also be less protected vis-à-vis their employer, as their behaviour is less usual. We argue that fathers who take more leave than their quota may be more family-oriented and/or they may be more committed to a more equal sharing of family obligations. We accordingly formulate the following hypothesis:

H2: Couples where the father has taken more parental leave than the statutory father's quota have lower risk of union dissolution than couples where the father takes only up to the quota.

However, there might be factors that work against this hypothesis. For instance, we cannot rule out that longer periods of leave can be both challenging and demanding. A study by Brandth and Kvande (2003b) suggests that fathers who use more than the father's quota experience negative feedback from their employers. Such work-related conflicts may indeed affect the relationship between the parents. Similarly, the father's use of leave might be residual, being what is left when the mother chooses to return to work (Sundstöm and Duvander 2002). Depending on whether he uses what the mother allowed or persuaded him to take, such couple-related conflicts may also affect the longer-term relationship between the parents.

In the Nordic countries, many cohabitants live in long-term stable relationships and cohabitation has become an accepted way of life (Lappegård and Noack 2015). Nonetheless, cohabitants are a more diverse group than married couples, also in the Nordic countries (Hiekel, Liefbroer and Portman 2014). In our analysis, we consider whether the relationship between fathers' use of parental leave and the risk of union dissolution is different for cohabitants and married couples. The general idea is that

gender-equal sharing in the family gives greater couple satisfaction and more reluctance to break the father-child relationship, which implies lower risk of union dissolution. This means that we assume that greater father involvement acts as protection against union dissolution. The question is whether this protection is stronger among cohabitants than married couples or vice versa. Cohabitation is generally less stable than marriage, also when children are involved. For instance, a country comparison finds that cohabitants more often had break-up plans, and were less satisfied with their relationship than married couples, but the gap was smallest in the countries where cohabitation is most prevalent, i.e. the Nordic countries (Wiik, Keizer and Lappegård 2012). This suggests that married couples are more satisfied with and more committed to their relationships. In the Nordic countries, many marry after the transition to parenthood (Holland 2013; Perelli-Harris et al. 2012) and couples married at the time of the first birth might be more traditional and conventional than couples who marry later. While married couples are more satisfied with their relationship and more committed to it, cohabitants might be a group that need to do more to stay together. We argue that more father involvement and gender-equal use of parental leave has a stronger protective role among cohabitants and the association between fathers' use of parental leave and the risk of union dissolution is different among married couples and cohabitants. Therefore, we formulate the following hypothesis:

H3: There is an interaction between union status at first birth and father's use of parental leave on the risk of union dissolution.

We also consider whether the association between fathers' use of parental

leave and the risk of union dissolution changes over time. When the father's quota was introduced, those taking leave might have been a more select group in terms of gender behaviour, e.g. more committed to sharing family obligations more equally with their partner. Thus we suggest that there is more variation in the risk of union dissolution in the first period after the father's quota was introduced than in the later periods, and we formulate the following hypothesis:

H4: There is an interaction between time period and father's use of parental leave on the risk of union dissolution.

So far, we have discussed the relationship between fathers' use of parental leave and union stability in general, but it may play out different in the three countries, due to some key differences in the policy discourse and gender context. As we cannot merge the data from the three countries we cannot test a specific hypothesis about country differences, but we will nevertheless discuss some potential differences. For instance, Sweden has had a more consistent orientation towards gender equality, while Norway has a longer history of dualistic family policies that both support dual-earner couples and provide direct family support. Iceland lagged behind in family policy generosity until the turn of the century and then underwent the most radical transition to a gender-equal parental leave policy by giving fathers the opportunity of paid parental leave for the first time and by reserving a large proportion of the leave for fathers.

For our analysis, we predict a difference in the risk of union dissolution depending on whether the father has taken parental leave or not. Due to the regulations in the three countries, there are differences in the proportion of fathers

taking parental leave. Thus, in Norway, a larger proportion of fathers do not take any leave. This may lead to a stronger polarization of family behaviour and thus a strong association between father's use of parental leave and union dissolution. We also predict a difference in the risk of union dissolution depending on whether fathers use more than the father's quota or not. In Sweden, use of parental leave is more flexible than in Iceland and Norway, and fathers' use of leave is less influenced by the regulations regarding the father's quota. This may lead to less difference in dissolution risk between those using the father's quota and those using more than the quota. The risk of union dissolution due to fathers' use of parental leave is predicted to be stronger in the initial period after the introduction of the father's quota, as fathers taking parental leave would be a more select group in the first period than later. In Sweden, a larger proportion of fathers were already using parental leave at the time of the introduction of the father's quota, and expectations about fathers taking leave were already established. Thus, fathers taking parental leave in Sweden during the first period may be a less select group than in Iceland and Norway, resulting in less difference over time.

Data and methods

We use data from the national population registers that cover the whole population. A unique identification number identifies each person. This allows us to link data from different administrative registers and we construct datasets that contain longitudinal information on union status. The data cover almost twenty years and include the period 1993 to 2011. Most importantly, we have information on use of parental leave, and we focus on the period in which there has been a father's quota as part of the parental leave programme in each country. This means that the period

observed is somewhat shorter in Iceland than in Norway and Sweden. The samples contain cohabiting and married couples who have their first child together. We have excluded couples with children born abroad and with multiple births from the sample.

We make use of a discrete-time hazard model in which we estimate the association between father's use of parental leave and the risk of parents dissolving their union. The estimated risk reflects both the timing and the quantum of the event we study. We start following couples when they have their first child together and we only consider parental leave taken for the first child. The couples may have additional children during the exposure time, but we do not consider the use of parental leave for these children as this will give us problems with endogeneity. In general, there is a similar pattern in the use of parental leave but first-child parents share somewhat more equally than higher parity parents (Sundström and Duvander 2002; Lappegård 2010). Although there is a possibility that some couples may change their use of parental leave between parities, we consider use of leave in connection with the first birth to be a good proxy for father involvement in general.

We start the clock at t_3 , where t_1 is defined as the year of birth of the couple's first child together. Couples are followed until the union dissolves, t_2 or 2011 (2012 in Sweden) whichever comes first. We also stop following the couples if one of the parents dies or moves abroad. The reason for starting at t_3 is the manner in which union status is defined. We have annual information about union status, which means that if there is a change in union status from one year to the next year, we do not know at what point during the year the change has occurred. In the registers there may be a lag in the registration of people's residential addresses, which means that some cohabiting couples are not officially registered as cohabiting until the year after the child is born. In order to have the most accurate information about union

status at the time of the birth, we use the year after the birth (t_2) for measuring the union status. This means that we miss union dissolution that occurs the first year after the child is born.

Use of parental leave is our main explanatory variable. We distinguish between three groups of use of parental leave; fathers not taking any leave, fathers taking leave but not more than the father's quota, and fathers taking more than this quota. The father's quota may have a special function in itself, and there may be variation in the length of use of the father's quota and of more than the quota over time and between countries. This means that the time when most of the leave is used may vary. To make sure we capture the major part of the use of parental leave, we measure use of leave up to 18 months after the child is born. Such a long time window is most important in Sweden, where they have the longest leave period, but in order to maintain a comparative design, we choose this time window for all three countries. We only include the parents of children born between January and June. We do this to avoid endogeneity, as we measure the use of parental leave also after we have started the clock. One strategy for avoiding endogeneity would be to start the clock later, but then we would miss couples breaking up in t_3 . Therefore, we choose only to include the parents of children born between January and June and we measure all use of parental leave before we start the clock at t_3 . Since we use register data, we still have a large number of observations.

The couples may have additional children during the exposure time and the number of children is included as a time-varying variable. We control for the ages of the parents, whether the parents were born abroad, union status at first birth (cohabiting or married at t_2), education (measured the year before the first birth), and time period in which the first birth occurs. The time period of the first birth differs

somewhat across countries and the first period includes the year when the father's quota was introduced in each country. Although some cohabitants may marry after they have their first child, we only consider whether there are differences between couples cohabiting or married at the time they had their first child. For descriptive statistics of all variables included in the analysis, see Table 1.

Results

Table 2 shows risk of union dissolution for couples with at least one child in Iceland, Norway and Sweden. We are primarily interested in the connection with fathers' use of parental leave (see Figure 2). The overall picture is similar in all countries: couples where the father has taken any parental leave have a lower risk of union dissolution than couples where the father has not taken leave, which accordingly supports hypothesis 1. In general, this supports our theoretical expectation that early father involvement is positively associated with union stability. In our second hypothesis, we assume a linear relationship between fathers' use of parental leave and union dissolution, where gender-equal couples are the least likely to dissolve their union. This is not supported, as there are country differences in use of leave and the propensity to dissolve the union. In Iceland, although the estimate for fathers taking up to the quota is not significant, there is a linear relationship between fathers' use of parental leave and union dissolution. In other words, couples where the father takes more than the quota have the lowest risk of union dissolution. In Norway, couples where the father takes up to the quota have lower risk of union dissolution than couples where the father has taken the longest leave. Similarly in Sweden, couples where father takes the longest leave have higher union dissolution risk than couples where father takes up to the quota. It should be noted that the difference seems to

be somewhat stronger in Norway than in Sweden. In Sweden the difference between the two groups is significant but the confidence interval for the two groups is very close.

Before we continue with the other hypothesis, we will briefly comment on the control variables included in the model. In all countries, married couples have lower risk of union dissolution than cohabitants. The difference seems significantly larger in Norway than in Iceland and Sweden. In addition, the risk of union dissolution in all countries decreases with both mother's and father's level of education, mother's and father's ages, and the number of children. The risk of union dissolution increases if one of the parents is born abroad, especially if the father is born abroad. The pattern is similar in all three countries. For the time period of the first birth there is a different pattern in the risk of union dissolution in the three countries. In Iceland, there is a lower risk of union dissolution in the period 2005-2009 than in the period 2001-2004. In Norway the risk of union dissolution increases over time, while in Sweden, it first increases slightly and then decreases slightly. As a sensitivity test, we ran the model without including the number of children, as other studies have found an association between fathers' use of parental leave and having more than one child (Duvander, Lappegård and Andersson 2010; Lappegård 2010). The general pattern remains the same when the number of children is not included (numbers not shown).

Our third hypothesis predicts that there is an interaction between union status at first birth and fathers' use of parental leave on the risk of union dissolution. To investigate this, we included an interaction between father's use of parental leave and union status. Table 3 shows the computed odds ratios for the risk of union dissolution due to fathers' use of parental leave and union status. Among married couples in Iceland, not all the estimates are significant (see Table A1). There is no

significant difference between married couples where the father takes more than the father's quota, and couples where the father does not take leave. The estimate for couples where the father uses up to the quota is significant, but the odds ratio of 0.98 shows that there is not much difference in the risk of union dissolution between those not taking leave and those taking some leave. Among cohabitants, there is a clear pattern that couples where the father has taken leave (either up to or in excess of the father's quota) have a lower risk of union dissolution compared to couples where the father has not taken any leave. However, there is no significant difference between the two groups in which the father uses leave. In Norway, the pattern is similar for cohabitants and married couples. It is the same as the general pattern when all couples are considered together: father's taking of parental leave is associated with lower union dissolution, and couples taking the father's quota have the least propensity to dissolve the union. In Sweden there is hardly any difference among married couples, while there is a significant difference among cohabitants; couples where the father has taken up to the father's quota have lower risk of union dissolution than couples where he takes more than the quota. Summarizing the patterns of interaction between father's use of parental leave and union status on the risk of union dissolution in the three countries yields the following results: in Iceland and Sweden, there are more differences between the three groups of couples among cohabitants than among married couples. The pattern is more similar among cohabitants and married couples in Norway.

Our last hypothesis (hypothesis 4) predicts that there is an interaction between the period in which the first birth occurs and fathers' use of parental leave on the risk of union dissolution. To investigate this, we included an interaction between father's use of parental leave and the period of first birth on the risk of union

dissolution. Table 4 shows the computed odds ratios for the risk of union dissolution by father's use of parental leave and the time period. In Iceland, we only distinguish between two time periods, 2001-2004 and 2005-2009, and the results shows that there are few significant estimates. There are no significant differences in the risk of union dissolution in the first period the father's quota was available, but in the second period both estimates are significant. This means that both couples where the father used up to the father's quota and couples where the father used more than the quota have a lower risk of ending their union than couples where fathers did not take any leave. However, as the confidence intervals for the two estimates overlap, there is no significant difference between the two groups of couples where father takes parental leave. Nevertheless, these findings show that there are more differences in the risk of union dissolution associated with fathers' parental leave in the second period than in the first period with a father's quota in Iceland. In both Norway and Sweden there is similarly a significant difference in all periods observed between couples where the father does not take any leave and couples where the father does take leave. In Norway there are significant differences between couples where the father takes the father's quota and couples where the father takes more than this quota in the first two periods or until 2000. Here the pattern is the same as the overall pattern, where couples in which the father takes up to the quota have the lowest risk of union dissolution. Interestingly, this pattern changes, and from 2001 there is no longer a significant difference. In Sweden there are no significant differences in the different time periods. In the main model, the confidence intervals do not overlap, but they are very close, which might explain why there are no significant differences when different periods are considered. Overall, these results show that the general findings are consistent over time in each country: couples where fathers use parental leave

are less likely to dissolve their union. The pattern for how different use of leave plays out over time in each country differs. In Iceland there are no differences in the first two periods, but there is in the last period; in Norway there are only differences in the first two periods after the introduction of the policy, while in Sweden there are no differences in any of the time periods.

Discussion

This study investigates the relationship between gender behaviour and union stability in three countries that are recognized as forerunners in gender equality. There has been a change in the theoretical assumptions about such a relationship, and the role of gender equality in the family is receiving increasing attention. That is, there has been a shift from where female employment reduced gain from marriage and predicted greater risk of divorce (Becker 1981), to where more gender-equal sharing of family responsibilities, resulting in greater couple satisfaction, more investment in children and predicted lower risk of union dissolution (Goldscheider et al. 2015). Changing gender behaviour is an ongoing process, and changes in the labour market have advanced more than changes within the family. Although the Nordic countries have moved further ahead in the process towards greater gender equality, also in the family, a situation where men and women contribute equally to the unpaid domestic responsibilities is still a long way off. In the Nordic countries, gender equality is an expressed aim, and policies are implemented with the intention of changing gender behaviour. The relationship between early father involvement and union dissolution has been studied in this article. More specifically, we have analysed the relationship between father's use of parental leave and union dissolution in Iceland, Norway and Sweden. We use the father's quota regulations in

the three countries as our starting point, and differentiate between couples where the father does not take any leave, where he takes the statutory father's quota, and where he takes more than the quota, and thus takes part of the shared leave. We use this distinction because they represent different normative behaviours in terms of father's use of parental leave, i.e. "non-policy-norm" behaviour, "policy-norm" behaviour and "gender-equal" behaviour.

Our main theoretical prediction, that couples where father uses parental leave have lower risk of union dissolution, finds support in all three countries (Table 2). The pattern holds for all time periods and to cohabiting couples, as shown in the interaction models (Tables 3 and 4). Thus, the general pattern is that father's use of parental leave is negatively associated with union dissolution, and that cohabiting couples mainly drive this. Theoretically, we consider the negative association between father's use of parental leave and union dissolution risk driven by two mechanisms. On the one hand, equal sharing of family obligations may lead to greater couple satisfaction and thus lessen the risk of union dissolution. On the other hand, more investment in children by father may lead to stronger family ties and thus create stronger barriers against the breakup of the relationship. However, it is not possible to distinguish empirically between the two mechanisms. Our results do support the gender revolution theory, which predicts more stable unions in the second half of the gender revolution, in which men become increasingly involved in family life (Goldscheider et al. 2015). Our results also support the argument that increasing union dissolution in dual-earner societies can be seen as a response to men's lack of involvement in the home (Cooke 2006).

As our theoretical prediction assumes that greater father involvement acts as protection against union dissolution, we argue that this protection is stronger among

cohabitants than among married couples. Our result did not support this hypothesis in Norway, where the pattern is similar among cohabitants and married couples. In Iceland and Sweden however, there is only variation among cohabitants in the relative risk of union dissolution between couples where father takes parental leave and couples where he does not take leave. Both Iceland and Sweden have a very high proportion of cohabiting couples: 65 per cent and 59 per cent, respectively (see Table 1), and couples who are married at the time of the first birth may have become a more select group, where father's use of parental leave has less effect.

Another theoretical prediction was that couples where the father used more than the father's quota – "gender-equal" behaviour – have lower risk of union dissolution than couples where the father only uses the father's quota – "policy-norm" behaviour – as we assume couples with "gender-equal behaviour" to be more committed to gender-equal sharing of family obligations. However, the estimates from the model did not support this. In Iceland there is no significant difference between couples where the father uses the statutory father's quota and couples where the father uses in excess of this quota. In both Norway and Sweden, couples that use the father's quota have the lowest propensity to dissolve the union. However, when we look at relationships over time, it is only in Norway, in the first period after the introduction of the quota policy, that there is a significant difference in risk of union dissolution between the different groups of couples defined by father's use of parental leave.

The father's quota policy was aiming at generating more father involvement and gender equality in the family. When the policy was introduced in Sweden, the taking of leave by fathers was already spreading, and the policy functioned more as a nudge to even more fathers to take leave. One reason why there are no

differences in father's use of parental leave in the different time periods in Sweden may be that father involvement per se is more important than how much leave is taken. The parental leave system in Sweden is also very flexible, and parents use this flexibility in various ways, and there may be less focus on whether the father's quota has been used. When the father's quota was introduced in Norway the taking of leave by fathers was rare, and the policy had more the function of a kick-start. When introduced it was a policy-dictated norm, and couples where the father took the quota were responding to what was expected of them through the policy. One reason why there is only differences in the risk of union dissolution by whether fathers use the father's quota or not or more than this quota in the first period in Norway might be that couples where the father used more than the quota were a more select group than later on. Fathers taking more leave than the father's quota went beyond the policy-norm as a result of negotiations with their partners and their employers. These fathers may have faced more work-related conflicts in the initial years after the introduction of the policy, and before employers got used to the idea that their male employees would take time off to care for their children, especially in cases when that time off exceeded the policy norm. When the father's quota was introduced in Iceland, it was considered quite radical in terms of promoting gender equality, but the three-month extension of the total leave to nine months was also very welcome to the parents. Female employment is very high in Iceland, also among mothers of young children, and many face a childcare gap when the leave period ends before the child starts in kindergarten. One reason why there were no differences in the risk of union dissolution in the first period in Iceland may be that there was little difference between couples where fathers took leave and couples where did fathers not take leave in terms of gender behaviour. Couples where the

father took leave may have done so mostly as a necessity for childcare. Later, when the leave was more established, fathers who did not take any leave may have been a more select group.

It is important to underline that our findings cannot distinguish selection effects from causality, and we cannot conclude that gender equality leads to union stability. Nevertheless, we do conclude that early father involvement is positively associated with union stability. Active participation in child-rearing seems to be a desired activity as reflected by fathers' taking leave and there is a consistent pattern that couples where the father takes leave are less likely to dissolve their union. We do not find support for asserting that the most gender-equal couples in terms of fathers taking the longest leave are the most stable unions, as the pattern is not uniform in the three countries, or over time. Thus, our results indicate that the theoretical predictions that greater gender equality within the family will result in more stable unions (Breen and Cooke 2005; Goldscheider et al. 2015) needs to be nuanced. Gender equality within the family in the Nordic countries is still an ongoing process and the relationship between gender behaviour and union stability is still in flux. At this stage it is clear that policies set up to change the gender relations in families do have unintended consequences in terms of more union stability among couples making use of the policy.

Funding: This work is part of the project "Nordic Family Policy and Demographic Consequences (NORDiC)" supported by the Research Council of Norway (217915/F10), SPaDE (Gerda Neyer) and FamiliesAndSocieties (Gerda Neyer and Ann-Zofie Duvander)

References

- Almqvist, A. 2005. "To Care or not to Care? Arguments about the use of paid parental leave in French and Swedish families". In *The care of children: A cross-national comparison of parents' expectations and experiences*. Doctoral thesis. Umeå University, Faculty of Social Sciences, Department of Sociology.
- Arnalds, A. A, Eydal, G. B. and Gíslason, I. G. (2011). "Equal rights to paid parental leave and caring father- the case of Iceland." *Stjórnmal & stjórnsýsla* 1:34-56.
- Avdic, D. and A. Karimi. 2016. "Modern Family? Paternity Leave and Marital Stability." *Unpublished manuscript*.
- Barstad, A. 2014. "Equality is bliss? Relationship quality and the gender division of household labour," *Journal of Family Issues* 35(7): 972–992.
- Becker, G. 1981. *A treatise on the family*. London/Cambridge: Harvard University Press.
- Brandén, M., A-Z Duvander and S. Ohlsson-Wijk. 2016. "Sharing the Caring: Attitude-Behaviour Discrepancies and Partnership Dynamics." *Stockholm Research Reports in Demography* 2016:17.
- Brandth, B. and E. Kvande. 2003a. *Fleksible fedre [Flexible fathers]*. Oslo: Universitetsforlaget.
- Brandth, B. and E. Kvande. 2003b. "Father presence in childcare". In A-M Jensen and L. (eds.). *Children and the changing family* (pp. 61-75). London: Routledge Falmer.
- Breen, R. and L. P. Cooke. 2005. The persistence of the gendered division of domestic labour. *European Sociological Review*, 21: 43–57.
- Carlson, Marcia J., Sara S. McLanahan and Jeanne Brooks-Gunn. 2008. "Coparenting and Nonresident Fathers' Involvement with Young Children after a Nonmarital Birth." *Demography* 45(2):461-488.
- Cedstrand, Sofie. 2011. *Från ide till politisk verklighet. Föräldrapolitiken i Sverige og Danmark*. [From idea to political reality. Parental politics in Sweden and Denmark]. Doctoral Dissertation, School of Public Administration, University of Gothenburg.
- Cooke, L. P. 2006. "Doing" gender in context: Household bargaining and risk of divorce in Germany and the United States. *American Journal of Sociology*, 112: 442–472.
- Cooke, L. P., J. Erola, M. Evertsson, M. Gähler, J. Härkönen, B. Hewitt, M. Jalovaara, M-Y. Kan, T. H. Lyngstad, L. Mencarini, J-F. Mignot, D. Mortelmans, A-R. Poortman, C. McKee Schmitt and H. Trappe. 2013. Labour and Love: Wives' Employment and Divorce Risk in its Socio-Political Context. *Social Politics*, 4: 482–509.
- Dahl, G.B., Løken, K.V. and Mogstad, M. 2014. Peer effects in programme participation. *American Economic Review* 104(7): 2049-2074.
- Duvander, A-Z. and Jans, A-K. 2009. "Consequences of Fathers' Use of parental

- leave: Evidence from Sweden". *Finnish Yearbook of Population Research* 2009: 49-62.
- Duvander, A-Z., Lappegård, T. and Andersson, G. 2010. "Family policy and fertility: fathers' and mothers' use of parental leave and continued childbearing in Norway and Sweden". *Journal of European Social Policy* 20(1): 45–57.
- Duvander, A-Z. and Johansson, M. 2012. "What are the effects of reforms promoting fathers' use of parental leave?" *Journal of European Social Policy* 22: 319-330.
- Duvander, A-Z. and Johansson, M. 2015. "Reforms in the Swedish Parental Leave System and their Effects on Gender Equality", *Working Paper 2015: 8*. Stockholm University Linnaeus Center on Social Policy and Family Dynamics in Europe, SPaDE.
- Duvander, A. and Lammi-Taskula, J. (2011). Parental leave. Pp.29-62 in I. Gíslason och G.B. Eydal (eds), *Parental leave, childcare and gender equality in the Nordic countries* Tema Nord 2011:562, Nordic Council of Ministers, Copenhagen.
- Ekberg, J., Eriksson, R. and Friebel, G. 2013 "Parental leave — A policy evaluation of the Swedish "Daddy-Month" reform". *Journal of Public Economics* 97: 131–143.
- Eydal, G. and Gíslason, I. (2011). *Parental leave, childcare and gender equality in the Nordic countries*. Tema Nord 2011:562, Nordic Council of Ministers, Copenhagen.
- Eydal, G. and Gíslason, I. (2014). Hrunið og fæðingaorlof Áhrif á foreldra og löggjöf, [The financial crash and parental leave: The effect on parents and the law]. *Íslenska þjóðfélagið* 5 (2): 77-93.
- Eydal, G., Gíslason, I., Rostgaard, T., Brandth, B., Duvander, A. Lammi-Taskula, J. (2015). Trends in parental leave in the Nordic countries: has the forward march of gender equality halted? *Community, Work and Family* 18(2): 167-181.
- Ferrarini, T. and A-Z. Duvander. 2010. "Earner-carer Model at the Crossroads: Reforms and Outcomes of Sweden's Family Policy in a Comparative Perspective". *International Journal of Health Services* 40(3): 373–98.
- Goldscheider, F. Bernhardt, E. Lappegård, T. (2015). The gender revolution: A framework for understanding changing family and demographic behaviour. *Population and Development Review* 41(2):207-239.
- Haas, L. and Hwang, P. 2008. "The impact of taking parental leave on fathers' participation in childcare and relationships with children: Lessons from Sweden". *Community, Work & Family* 11(1): 85-104.
- Hiekel, N., Liefbroer, A. C. and Poortman, A-R. 2014. "Understanding Diversity in the Meaning of Cohabitation Across Europe". *European Journal of Population* 30(4): 391-410.
- Holland. 2013. "Love, marriage and the baby carriage? Marriage timing and childbearing in Sweden." *Demographic Research* 29(11): 275-306.
- Johansson, Elly-Ann. 2010. The effect of won and spousal parental leave on

- earnings. *Working paper* 210:4. Institute for Labour Market Policy Evaluation.
- Kotsadam, A. and Finseraas, H. 2011. "The state intervenes in the battle of the sexes: Causal effects of paternity leave". *Social Science Research* 40 (2011) 1611–1622.
- Kruk, E. 2010. "Parental and social institutional responsibilities to children's needs in the divorce transition: Fathers' Perspective." *The Journal of Men's Studies* 18(2): 159-178.
- Lappegård, T. 2010. "Family Policies and Fertility in Norway". *European Journal of Population* 26:99–116.
- Oláh, L. S. 2001. Gender and family stability: Dissolution of the first parental union in Sweden and Hungary. *Demographic Research* 4: 27–96.
- Oppenheimer, V. K. 1994. Women's rising employment and the future of the family in industrial societies. *Population and Development Review* 20: 293–343.
- Perelli-Harris, B., M. Kreyenfeld, W. Sigle-Rushton, R. Keizer, T. Lappegård, A. Jasilioniene, C. Berghammer and P. Di Giulio. 2012. Changes in union status during the transition to parenthood: An examination of 11 European countries. *Population Studies: A Journal of Demography*, 66(2):167-182
- Rege, M. and Solli, I. F. 2013. The Impact of Paternity Leave on Fathers' Future Earnings. *Demography* 50: 2255–2277.
- Sigle-Rushton, W. 2010. Men's unpaid Work and Divorce: Reassessing Specialization and Trade in British Families. *Feminist Economics* 16: 1–26.
- Steingrimsdottir, H. and A. Vardardottir. 2015. "How Does Daddy at Home Affect Marital Stability?" *Unpublished manuscript*.
- Sundström, M. and Duvander, A-Z. 2002. "Gender Division of Childcare and the Sharing of Parental Leave among New Parents in Sweden". *European Sociological Review* 18(4): 433-447.
- Wiik, K. Aa., R. Keizer and T. Lappegård. 2012. Relationship Quality in Marital and Cohabiting Unions Across Europe. *Journal of Marriage and Family* 74 (June 2012): 389 – 398.

Table 1. Descriptive statistics of variables included in analysis. Iceland, Norway and Sweden. Per cent (numbers correspond to exposure time).

	Iceland	Norway	Sweden
Union dissolutions			
Yes	9.5	18.7	13.2
No	90,5	81,3	86,8
Father's use of parental leave			
Not used	6.7	44.5	27.3
Up to quota	73.4	37.8	39.8
More than quota	19.9	17.7	32.9
Union status at first birth			
Cohabiting	65.2	50.3	59.3
Married	34.8	49.7	40.7
Time period at first birth			
1994-1997 ¹		36.5	24.3
1998-2000		25.4	22.9
2001-2004	65.9	35.6	30.1
2005-2009 ²	34.1	12.5	22.7
Mother's education			
Low	12.8	5.0	6.8
Medium	23.4	48.9	53.1
High	57.2	42.7	37.3
Missing	6.6	3.5	2.9
Father's education			
Low	14.9	6.5	9.1
Medium	30.9	57.6	61.5
High	41.0	33.7	27.0
Missing	13.3	2.3	2.4
Immigrant background			
Neither born abroad	87.6	83.1	78.7
Father born abroad	2.8	4.7	5.8
Mother born abroad	6.1	6.1	6.0
Both born abroad	3.6	6.2	9.5
Mother's age (mean)	27.2	28.1	28.1
Father's age (mean)	29.9	31.1	30.4
Number of children (continuous)			
1	16.2	25.1	24.3
2	63.4	58.9	63.6
3+	20.4	16.1	12.1
Number of observations	19,085	919,348	1,476,611

¹ 1995 for Sweden

² 2007 for Norway

Table 2. Risk of union dissolution for couples with at least one child. Iceland, Norway and Sweden. Odds ratio.

	Iceland		Norway		Sweden	
	Estimate	CI	Estimate	CI	Estimate	CI
Father's use of parental leave						
Not used	1		1		1	
Up to quota	0.78	0.59-1.02	0.75**	0.73-0.77	0.88**	0.86-0.90
More than quota	0.72*	0.52-0.99	0.82**	0.80-0.85	0.93**	0.91-0.96
Union status at first birth						
Cohabiting	1		1		1	
Married	0.74*	0.60-0.91	0.41**	0.40-0.42	0.73**	0.72-0.75
Time period at first birth						
1994-1997 ¹			1		1	
1998-2000			1.23**	1.20-1.27	1.04**	1.02-1.07
2001-2004	1		1.46**	1.42-1.51	0.91**	0.89-0.93
2005-2009 ²	0.76*	0.63-0.91	2.37**	2.29-2.44	0.89**	0.87-0.91
Mother's education						
Low	0.98	0.78-1.24	1.18**	1.13-1.23	1.46**	1.42-1.50
Medium	1		1	1	1	
High	0.73*	0.59-0.89	0.92**	0.89-0.94	0.77**	0.76-0.79
Father's education						
Low	1.17	0.94-1.46	1.22**	1.17-1.26	1.27**	1.23-1.30
Medium	1		1		1	
High	0.80*	0.64-0.99	0.89**	0.87-0.92	0.92**	0.89-0.94
Immigrant background						
Neither born abroad	1		1		1	
Father born abroad	1.60*	0.07-2.38	1.32**	1.25-1.38	1.61**	1.56-1.66
Mother born abroad	1.04	0.71-1.53	1.13**	1.08-1.19	1.33**	1.29-1.38
Both born abroad	0.90	0.58-1.41	0.81**	0.77-0.86	1.28**	1.24-1.32
Mothers age	0.79*	0.67-0.94	0.83**	0.81-0.85	0.85**	0.83-0.86
Mothers age sq	1.00	1.00-1.00	1.00**	1.00-1.00	1.00**	1.00-1.00
Fathers age	0.88*	0.79-0.97	0.99	0.98-1.01	0.92**	0.91-0.93
Fathers age sq	1.00	1.00-1.00	1.00	1.00-1.00	1.00**	1.00-1.00
Number of children (continuous)						
1	1		1		1	
2	0.27**	0.22-0.32	0.42**	0.41-0.43	0.43**	0.43-0.44
3+	0.17**	0.12-0.23	0.28**	0.27-0.29	0.31**	0.30-0.32
Log likelihood	-2,324.16		-147,504.38		-202,146.72	
Number of observations	19,085		919,348		1,476,611	

**0.001 *0.05

¹ 1995 for Sweden

² 2007 for Norway

Table 3. Risk of union dissolution for couples with at least one child. Iceland, Norway and Sweden. Computed odds ratios. Father's use of parental leave and union status.

	Iceland		Norway		Sweden	
	Cohabitants	Married	Cohabitants	Married	Cohabitants	Married
Not used	1	1	1	1	1	1
Up to quota	0.72	0.98	0.79	0.64	0.84	0.97
More than quota	0.61	1.17	0.87	0.71	0.89	1.01

Controlled for: time period, mother's/father's age, education and immigrant background, and number of children. See Table A2 for details.

Table A1 Risk of union dissolution for couples with at least one child. Iceland, Norway and Sweden. Odds ratio. Including interaction between father's use of parental leave and union status.

	Iceland		Norway		Sweden	
	Estimate	CI	Estimate	CI	Estimate	CI
Father's use of parental leave* time period at first birth						
Not used*cohabiting	1		1		1	
Up to quota* cohabiting	0.72*	0.53-0.98	0.79**	0.77-0.81	0.84**	0.82-0.86
More than quota* cohabiting	0.61*	0.43-0.88	0.87**	0.84-0.90	0.89**	0.87-0.92
Not used*married	0.53*	0.29-0.96	0.45**	0.44-0.47	0.67**	0.64-0.69
Up to quota* married	0.52*	0.36-0.74	0.29**	0.27-0.30	0.65**	0.63-0.67
More than quota* married	0.62	0.39-1.01	0.32**	0.30-0.33	0.68**	0.66-0.70
Log likelihood	-2322.4592		-147,462.24		-202,122.13	
Number of observations	19,085		919,348		1,476,611	

**0.001 *0.05; ¹ 1995 for Sweden; ² 2007 for Norway

Table 4. Risk of union dissolution for couples with at least one child. Iceland, Norway and Sweden. Computed odds ratios. Father's use of parental leave and time period.

	Iceland				Norway				Sweden			
	1994-1997	1998-2000	2001-2004	2005-2009	1994-1997	1998-2000	2001-2004	2005-2009	1994-1997	1998-2000	2001-2004	2005-2009
Not used			1	1	1	1	1	1	1	1	1	1
Up to quota			0.81	0.72	0.64	0.73	0.80	0.91	0.86	0.90	0.92	0.84
More than quota			0.83	0.59	0.78	0.82	0.85	0.89	0.95	0.97	0.98	0.84

Controlled for: union status at first birth, mother's/father's age, education, immigrant background, and number of children. See Table A2 for details.

Table A2 Risk of union dissolution for couples with at least one child. Iceland, Norway and Sweden. Odds ratio. Including interaction between father's use of parental leave and time period.

	Iceland		Norway		Sweden	
	Estimate	CI	Estimate	CI	Estimate	CI
Fathers use of parental leave* time period at first birth						
Not used*1994-1997			1		1	
Up to quota*1994-1997			0.64**	0.61-0.66	0.86**	0.83-0.90
More than quota*1994-1997			0.78**	0.74-0.83	0.95*	0.90-0.99
Not used*1998-2000			1.19**	1.15-1.23	1.02	0.98-1.06
Up to quota*1998-2000			0.87**	0.83-0.90	0.92**	0.88-0.96
More than quota*1998-2000			0.97	0.91-1.03	0.99	0.95-1.04
Not used*2001-2004	1		1.36**	1.31-1.41	0.88**	0.85-0.92
Up to quota*2001-2004	0.81	0.58-1.14	1.09**	1.04-1.13	0.81**	0.78-0.84
More than quota*2001-2004	0.83	0.55-1.25	1.15**	1.09-1.22	0.86**	0.82-0.89
Not used*2005-2009	0.88	0.52-1.48	2.09**	2.01-2.18	0.93*	0.89-0.98
Up to quota*2005-2009	0.63*	0.44-0.91	1.90**	1.82-2.00	0.78**	0.75-0.82
More than quota*2005-2009	0.52*	0.34-0.79	1.85**	1.75-1.95	0.78**	0.75-0.82
Log likelihood	-2323.4682		-147443.75		-202131.68	
Number of observations	19,085		919,348		1,476,611	

**0.001 *0.05; Same model as Table 2

Figure 1 Father's use of the father's quota by birth year of first child. Iceland, Norway and Sweden. Per cent.

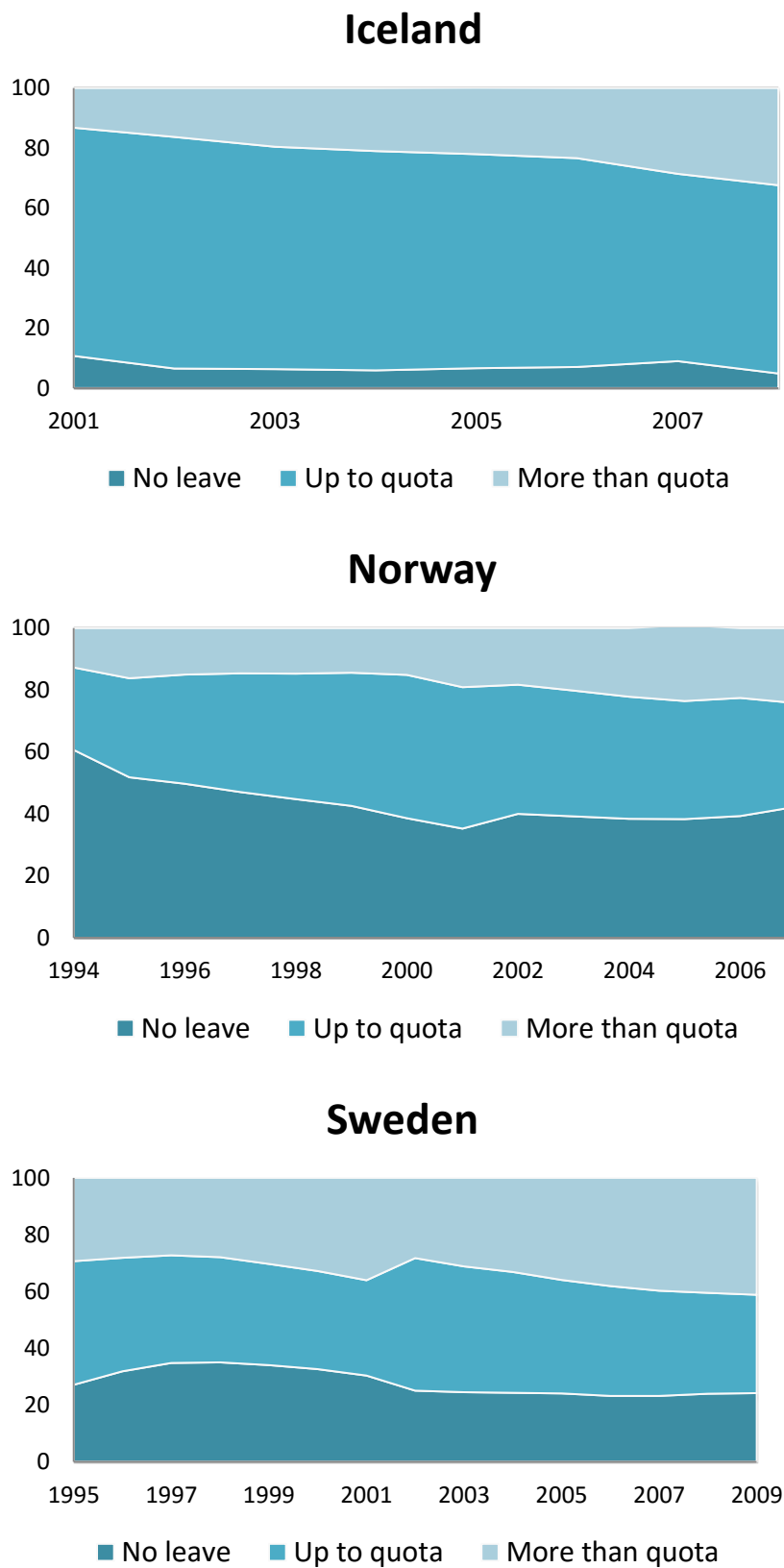
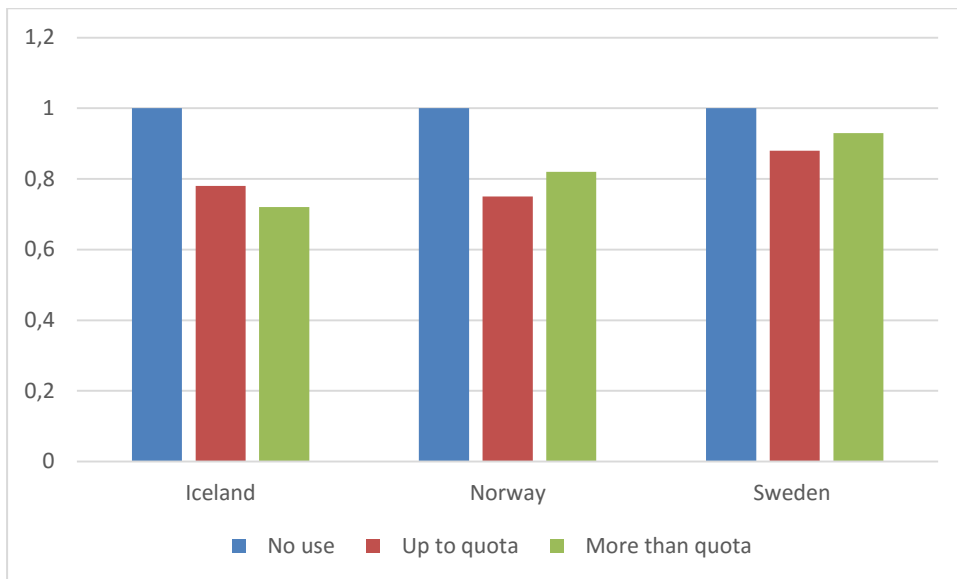


Figure 2. Risk of union dissolution for couples with at least one child. Iceland. Norway and Sweden. Odds ratio.



Note: Estimates from Table 2.

Stockholm Research Reports in Demography
Stockholm University, 106 91 Stockholm, Sweden
www.su.se | info@su.se | ISSN 2002-617X



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