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## Unemployment and partnership dissolution

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# Unemployment and partnership dissolution

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### **Non-technical summary**

Does unemployment increase the risk of partnership dissolution? Previous research shows that family conflicts are reported to be the most negative consequence of unemployment in the UK, and that unemployment in either partner can predict subsequent marital dissolution. This paper expands on previous research by also including cohabitations, by investigating if unemployment effects are mediated by financial satisfaction and mental distress. It also considers the possibility that it is marital dissolution which leads to unemployment and that there are other stable characteristics of the intervals which could lead to unemployment as well as partnership dissolution.

The results indicate that unemployment increases the risk of partnership dissolution. Female unemployment does not have smaller effect than male unemployment on the probability of marital breakdown, as indicated by previous Scandinavian research. Low financial satisfaction in female partners can help explain why male unemployment is associated with partnership dissolution whereas financial satisfaction among men does not have similar implications. The results imply that the woman's experiences and concerns play a paramount role. They also indicate that men and women have different roles in partnerships. Providing financial security is seemingly more important to men than to women.

# Unemployment and partnership dissolution

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## Abstract

Does unemployment increase the risk of partnership dissolution? This is investigated for 3,586 marital partnerships (marriages or cohabitations) in 15 waves of the British Household Panel Survey. Both short and long term effects are investigated using discrete time hazard regression models. Results indicate that any form of unemployment predicts partnership dissolution. The effect is similar when unemployment hits either a man or a woman. The effect of male unemployment is to a considerable degree mediated by low financial satisfaction among their partners. We find no indications that the unemployment effect can be explained by unobserved heterogeneity.

**Keywords:** divorce, marital dissolution, unemployment, BHPS

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Most of this research was done when I worked at Institute for Social and Economic Research but completed after returning to Norwegian Social Research in Oslo in 2007. I am grateful for comments from John Ermisch and Malcolm Brynin.

## **1. Introduction**

Does unemployment increase the risk of partnership dissolution? This issue is investigated by following 3,586 partnerships in up to 15 waves of the British Household Panel Survey (BHPS). A partnership can be a marriage or cohabitation, or a cohabitation leading to a marriage. The probability of dissolving a partnership is investigated using discrete time hazard regression models. The analysis also investigates which types of partnerships are at risk of termination following unemployment of the man or the woman, and if unemployment effects are mediated by financial satisfaction and mental distress. Heterogeneity between unemployed and non-unemployed samples is also investigated using education level and random component models.

Previous research has shown that people hit by unemployment are at risk to suffer a number of other social problems as well, including partnership dissolution. Some studies have investigated a variety of social consequences of unemployment, particularly in periods of high unemployment such as the Great Depression of the 1930s (e.g. Jahoda, Lazarsfeld and Zeizel 1933; Liker and Elder 1983), the UK of the 1980s (e.g. Gallie, March and Vogler 1994) and transitional countries of the 1990s (e.g. Adler 1997; Smith 2000). Gallie, Gershuny and Vogler (1994) find that family conflicts are reported to be the most negative consequence of unemployment in the UK, even more so than economic problems and loss of self-respect. There is also a more specialised literature investigating the effects of unemployment on subsequent marital dissolution using longitudinal data for individuals or families (e.g. Jensen and Smith 1990; Hansen 2005). This paper reviews this more specialised literature for arguments and findings before presenting an empirical analysis of 15 waves of the British Household Panel Survey (BHPS) spanning from 1991 to 2005.

## **2. Relationships between unemployment and partnership dissolution**

Even if unemployed people are at enhanced risk of terminating their marital partnerships, it is not clear why these events coincide when comparing across people or when following them over time. One explanation could be that it is unemployment as such which leads to the dissolution of partnerships. The reason could be that low and uncertain income makes individuals less attractive as marital partners, or provides them with less influence in the partnership (Blood and Wolfe 1960), which in either case would put stress on a partnership. A somewhat associated reason is that unemployment leads to financial strain which reduces the

satisfaction derived from a partnership (Vinokur, Price and Caplan 1996). A third reason could be that unemployment leads to mental distress (Dooley, Fielding and Levi 1996) which in turn places stress on a partnership (Mastekaasa 1994) with dissolution as a possible outcome. Understanding the reasons why unemployment affects marital partnerships is important since some factors such as compensation levels are affected by social policies. If governments cannot always control unemployment, they can perhaps limit some of the social consequences of unemployment.

An alternative type of explanation, however, could be that it is marital dissolution which leads to unemployment. Research on marital dissolution and health indicates that marital dissolution is a stressful event; the incidence of both mental distress and sick leave peaks in the months surrounding marital dissolutions (Wade and Pevalin 2004; Blekesaune and Barrett 2005): some people are unable to carry out their jobs during the breakdown of a marital partnership. Research on unemployment and health indicates that poor physical and mental health can lead to unemployment (Dooley, Fielding and Levi 1996), and both types of health are likely to suffer as relationships break down. For these reasons, it is also plausible that marital dissolution could increase the risk of unemployment.

There could also be a third factor, or a set of factors, which leads to both unemployment and marital dissolution. People who are not able to hold on to their jobs could, for the very same reason, be unable to hold on to their marital partners as well. This could include stable characteristics of individuals such as a lack of income capability, social ability, or general efficacy, which could make them less attractive as both employees and marital partners.

The last explanation could also include more temporary problems such as a personal crisis, or addiction to drugs or alcohol, which could lead to conflicts with employers as well as partners. But it is difficult to establish the causal order for other temporary problems than those associated with unemployment and partnership transitions. More stable characteristics of individuals, prevailing both before and after employment spells and a partnership dissolution, could at least technically help explain why some people experience both unemployment and partnership dissolution. It is more difficult to demonstrate that “temporary” problems occurring simultaneous to these events can “explain” job and partnership problems rather than merely reflecting such problems.

Thus, we have three types of causal relationships between unemployment and marital dissolution that we can investigate: unemployment leads to marital dissolution, marital dissolution leads to unemployment, and a third stable factor leads to both unemployment and marital dissolution. In real life situations it can be difficult to distinguish between these processes, even for those involved. It is possible, however, to distinguish between these processes by studying the temporal order between the events of unemployment and marital dissolution. This approach can help to distinguish between the first two explanations: does unemployment lead to marital dissolution, or does marital dissolution lead to unemployment?

Another approach is to investigate if those experiencing unemployment and subsequent marital dissolution have stable characteristics which make them different from those not experiencing these events. Stable characteristics can be measured (e.g. education level) or unmeasured (i.e. represented by a random component), typically known as measured and unmeasured heterogeneity. This approach can help distinguish between the first and the last explanation: does unemployment lead to marital dissolution, or is there a third factor leading to both events?

We should also note, however, that unemployment could have the opposite effect to that predicted above. It might prevent people from ending their partnership. By living together people can share expenses to housing and other consumer goods. It is thus more expensive for two adults to live apart than to live together. Low and uncertain income which is associated with unemployment could accordingly prevent some people from splitting up who would have moved apart if their financial situation had been stronger and/or if both parties had a secure income. Unemployment could thus destabilise some partnerships but stabilise others.

### **3. Previous findings**

Research about the consequences of unemployment on family life date from at least the 1930s (e.g. Jahoda, Lazarsfeld and Zeizel 1933). But it is only during recent decades that it has been possible to investigate these issues more systematically using longitudinal data, which makes it possible to follow a large number of people or partnerships over time. Research in the USA and the UK has largely used panels of survey data whereas Scandinavian research has largely used administrative data. These data sources have advantages and disadvantages regarding sample sizes, attrition problems and the extent of information available for each individual

and family household. In general, survey data can provide more information about each individual or household (by including cohabitations, or data about mental distress and financial satisfaction) but at the expense of moderate samples and sometimes considerable attrition problems when people move apart, particularly for men.

In the UK, Lampard (1994) found that unemployment among both husbands and wives increased the odds of marital dissolution by 70 per cent in the following year. But marital dissolution could also predict later unemployment, indicating a two-way causality between unemployment marital dissolution. The author argues that some marriages appear to dissolve as a result of unemployment, even though some individuals appear to have characteristics that can predict both unemployment and marital dissolution. March and Perry (2003) found that partnership dissolution was associated with male unemployment as well as economic hardship when following low and moderate income families over a two year period.

Jensen and Smith (1990) found that unemployment among husbands, but not among wives, predicted the dissolution of married couples in Denmark. This effect could only be seen for the current year, however, and not in the years following male unemployment. Jalovaara (2003) found that unemployment among both husbands and wives predicted divorce among Finnish couples, but the effect of husbands' unemployment was stronger than that for wives. Similarly, Hansen (2005) found that unemployment of both husbands and wives predicted divorce among Norwegian couples, but the effect of husbands' unemployment stronger was than for that of wives. This study also indicates that economic problems can help explain these results, particularly following male unemployment, and that unemployment could catch unmeasured factors which increase the risk of divorce.

Some evidence is also provided by social-psychological research which has investigated a number of factors statistically associated with marital quality or marital satisfaction, some of which also include unemployment (e.g. Vinokur, Price and Caplan 1996). This literature suggests that financial hardship and mental distress can help explain why unemployed people have higher risk of terminating their partnerships (Vinokur, Price and Caplan 1996; McKee-Ryan et al. 2005).

#### **4. Hypotheses**

The principal hypothesis is that unemployment increases the risk of partnership dissolution. Secondly, we hypothesise that male unemployment has a stronger effect than female unemployment. This hypothesis stems partially from previous findings but can also be derived from a traditional division of labour between husbands and wives whereby men carry a principal responsibility for income whereas women are more likely to contribute unpaid work in the household when unemployed.

Beyond gender comparisons, previous research provides few indications of which types of partnerships are at a higher risk of dissolution following unemployment. We hypothesise that married people are at lower risk than cohabiters, and that parents are at lower risk than non-parents. Both hypotheses are based on an assumption that marriage and children provide “glue” to a partnership which reduces the impact of external shocks such as unemployment. We also investigate if unemployment effects vary by age of the partners, and the duration of a partnership.

A third set of hypotheses relates to which factors mediate the effect of unemployment on partnership dissolution. We hypothesise that financial dissatisfaction and any associated mental distress can help explain why unemployment is statically associated with a risk of ending a partnership. Finally, we also investigate if we have reasons to believe that other characteristics of individuals or partnerships than unemployment can help explain why people who have been unemployed are at greater risk of ending their partnerships. Such heterogeneity is investigated by the education level of the partners and by random components in hazard regression models.

#### **5. Data and methods**

The empirical analysis uses the first 15 waves of the British Household Panel Survey (BHPS), collected annually from 1991 to 2005. The analysis is done at the partnership level as partnership dissolution applies to both parties. Since men are typically more difficult to trace after the dissolution of a partnership than women, the data matrix was constructed by following women over time. But information about the dissolution of a partnership could be provided by either partner in subsequent waves/interviews. Each woman can have up to four partnerships in the observation period from wave 2 (autumn 1992) to 14 (autumn 2005). The

analysis includes 29,695 yearly observations for 3,586 partnerships representing 3,575 women and 3,586 men. No age limitations are applied.

The primary explanatory variable is unemployment during the previous year for the man or the women of a partnership. All individual respondents were asked: “I’d like to ask you a few questions now about what you might have been doing since September 1st [last year] in the way of paid work, unemployment, [etc.]”. Respondents were then given a hand calendar to help them fill in all spells of employment, unemployment, etc. The vast majority of these interviews were carried out in September and October each year, but could be done in subsequent months as well. Unemployment was measured in a 12 month observation window from September in the previous year to September of the current year.

The dependent variable is partnership dissolution. This is a binary variable for the event of separation, divorce, or ending of a cohabitation union. This variable is based on a family history file which also uses information from the BHPS retrospective marital history, prepared for 30,549 individuals participating in the survey in at least one panel wave (Pronzato 2007), and observed for a 12 month period, from September to September, in the year following each individual level interview. It is assumed that unemployment in one year would increase the risk of partnership dissolution in the following year. Further analysis also investigates same-year marital dissolution as well as marital dissolution two years after unemployment was recorded, but unfortunately, the timing of separation is not always available for those divorcing. When an individual had entered a new partnership with no data indicating when the previous partnership had ended, the dissolution of the previous partnership was set to one month before the new partnership started.

**Table 1: Descriptive statistics of the BHPS data**

	Mean	S.D.	Low	High
Average age	47.0	14.5	18	92
Age difference	3.7	3.8	0	33
Years partnered	18.3	13.1	1	40
Log of years partnered	2.5	1.0	0	4
Married	88.0%		0	1
Number of children	0.8	1.1	0	7
Man unemployed	6.3%		0	1
Woman unemployed	2.8%		0	1
Financial satisfaction <sup>1</sup> man)	3.9	1.0	1	5
Financial satisfaction <sup>1</sup> woman)	4.0	0.9	1	5
Mental distress <sup>2</sup> man	-0.1	0.9	-2.2	5.0
Mental distress <sup>2</sup> woman	0.1	1.1	-2.2	5.0
Observations	29,695			
Partnerships	3,407			

<sup>1</sup> Coded 1-5 (5 indicating high satisfaction), <sup>2</sup> Standardised variables

The statistical analysis is undertaken using discrete time hazard rate regression models based on yearly observations. Only partnerships lasting at least one year entered the analysis. All analyses control for the mean age of the two partners, the absolute age difference (in years) between them, the duration of the partnership, the legal status of the partnership (i.e. married or cohabiting), and the number of children aged below 16 years living in the household. In the regression analysis, mean age is measured through the use of splines as follows: for ages below 30, 30 to 40, 40 to 50, and age above 50. All age coefficients indicate a 10 year increase in age (using decimals for individual years).

Further variables control for financial satisfaction, mental distress, education level, and unobserved heterogeneity. Financial satisfaction was measured by a single item question: How well would you say you yourself are managing financially these days? Would you say you are 'living comfortably' (1), 'doing alright' (2), 'just about getting by' (3) 'finding it quite difficult' (4), or 'finding it very difficult?' (5). This variable is treated as continuous in order to facilitate presentation and interpretation of the results, which are very similar if treated as a series of categories. Mental distress was measured using the General Health Questionnaire (GHQ), a measure of current mental health originally developed by Goldberg and Blackwell (1970). Each item asks whether the respondent has experienced a particular symptom or behaviour recently. This scale is standardised (with a mean of 0 and a standard deviation of 1). Education level is classified into five categories from degree to no qualification (or missing).

## 6. Results

### *Unemployment and partnership dissolution*

Unemployment is studied within periods of 12 months using three indicators: (1) the incidence of any unemployment in the period, (2) the number of unemployment spells in the period, and (3) the number of weeks unemployed in the period. We first investigate which of these three aspects of unemployment can predict marital dissolution best. More specifically, can the number of unemployment spells or the number of weeks in unemployment predicts partnership dissolution better than the experience of a single unemployment spell of one week?

Table 2 indicates that the unemployment of a married or cohabiting man or woman increases the risk of partnership dissolution (left column). The unemployment coefficients presented in the tables can be recalculated to percentage differences to show that the probability of dissolution is 33% larger when the man has been unemployed ( $\exp(0.29)=1.33$ ) and 83% larger when the woman has been unemployed ( $\exp(0.60)=1.83$ ) compared to partnerships with no unemployment in a previous year. However, the difference between the effects of male and female unemployment is not statistically significant. Further, it is the presence of any unemployment in the previous year which predicts partnership dissolution. Adding the number of unemployment spells (beyond an initial spell in model 2) or number of weeks (beyond an initial week in model 3) does not predict partnership dissolution better than an initial spell of one week duration. Notice that the number of weeks unemployed indicates a 10 week increase in unemployment (using decimals for individual weeks). A relatively large coefficient could perhaps indicate that women having multiple unemployment spells is not associated with increased risk of partnership dissolution, but this is statistically very uncertain because of the low number of women with multiple unemployment spells. There is a tendency, at least in men, that long lasting unemployment is less associated with partnership dissolution than shorter periods of unemployment.

**Table 2: Partnership dissolution by age and unemployment, hazard (cloglog) coefficients**

	Model 1	Model 2	Model 3
Mean age <30	-0.82**	-0.80**	-0.86**
Mean age 30-40	-0.05	-0.06	-0.06
Mean age 40-50	-0.55*	-0.54*	-0.54*
Mean age 50+	-0.49*	-0.49*	-0.48*
Age difference	0.35**	0.35**	0.36**
Years partnered	-0.02	-0.02	-0.02
Married 1/0	-0.99**	-0.99**	-0.99**
Kids	0.19**	0.19**	0.20**
Man unemployed 1/0	0.29*	0.24	0.65**
Woman unemployed 1/0	0.60**	0.64**	0.77**
#Spells man (-1)		0.37	
#Spells woman (-1)		-0.62	
#Weeks (-1)/10 man			-0.14*
#Weeks (-1)/10 woman			-0.09
Constant	-0.91	-0.94	-0.79

\* p<0.05 and \*\* p<0.01 in two tailed tests

Other explanatory variables in this analysis indicate that the risk of partnership dissolution declines with age at ages below 30 years and at ages above 40 years. As duration is being held constant, this picks up the effect of age at the start of the partnership. Partners with a large age difference between them are at higher risk of terminating their partnerships than similarly aged partners. There is little association between partnership duration and risk of dissolution when current age is controlled for. Married individuals are much less likely to move apart than cohabiters. Finally, children do not appear to stabilise partnerships since having more children is associated with increased risk of partnership dissolution. Most of these additional results are also known from previous analyses using BHPS data (e.g. Böheim and Ermisch 2001).

The analysis in Table 2 uses a time lag of one year from unemployment to a marital dissolution. Would these results change when using a longer time lag, or no time lag, between the two events? The short answer is not really. The statistical associations between unemployment and partnership dissolution are of similar magnitude when investigating effects of same-year unemployment, previous year's unemployment, and unemployment two years before a partnership can end, at least for male unemployment. For female unemployment the tendency in the data is that same-year unemployment has a stronger effect than previous year's unemployment, but none of these differences are statistically significant. (These results are not shown in the tables.)

### ***Who is at risk?***

Are all types of partnerships at enhanced risk of termination following unemployment of either partner? This is investigated by comparing marriages and cohabitations, partnerships with and without children, and the mean age of the partners as well as the duration of the partnership.

The results (presented in Table 3) indicate that female unemployment is associated with increased risk of partnership dissolution only when it occurs in partnerships which have lasted several years (model 2). Notice that the interaction term between unemployment and partnership duration uses the natural logarithm of the number of years partnered since this fits the data well. The regression results indicate that female unemployment does not increase the risk of dissolving a partnerships which has lasted only one year (-0.13) which is the starting value in this analysis since shorter partnerships are not investigated. But female unemployment does have a sizeable effect on partnerships that have lasted several years, for example after 5 years female unemployment is associated with an 82% increased risk of partnership dissolution ( $\exp(-0.13+0.45*\ln(5))=1.82$ ) whereas after 15 years it is associated with a 200% increased risk of dissolution ( $\exp(-0.13+0.45*\ln(15))=3.00$ ).

**Table 3: Five interaction effects of unemployment on partnership dissolution, hazard (cloglog) coefficients**

	Model 1	Model 2	Model 3	Model 4
Mean age <30	-0.82**	-0.86**	-0.82**	-0.82**
Mean age 30-40	-0.06	-0.05	-0.05	-0.06
Mean age 40-50	-0.56*	-0.55*	-0.56*	-0.55*
Mean age 50+	-0.49*	-0.45*	-0.48*	-0.49*
Age difference	0.35**	0.36**	0.35**	0.36**
Years partnered	-0.02	-0.02*	-0.02	-0.02
Married 1/0	-0.98**	-0.98**	-1.00**	-0.99**
#Kids (0-7)	0.18**	0.18**	0.19**	0.19**
Man unemployed 1/0	0.56	0.32	0.34	0.43*
Woman unemployed 1/0	-0.08	-0.13	0.42	0.39
Age*man unemployed	-0.08			
Age*women unemployed	0.20			
Ln(years)*man unempl.		-0.02		
Ln(years)*women unem.		0.45**		
Married*man unempl.			-0.12	
Married*woman unempl.			0.38	
#Kids*man unemployed				-0.10
#Kids*woman unempl.				0.20
Constant	-0.90	-0.75	-0.90	-0.91

\* p<0.05 and \*\* p<0.01 in two tailed tests

Male unemployment has, on the other hand, similar effects on the risk of dissolution irrespective of the duration of a partnership. Across genders, unemployment has similar effects on the risk of dissolving partnerships irrespective of the age of the partners (model 1), irrespective of being in a marriage rather than a cohabitation (model 3), and irrespective of the number of children in the family (model 4). A relatively large coefficient could perhaps indicate that female unemployment has more effect on marriages than cohabitations but this result is far from statistically significant.

### ***Mediating effects of unemployment***

Why are unemployed people more likely to terminate their partnerships than other people not experiencing unemployment? This is investigated by two factors which can potentially mediate the estimated effects of unemployment on partnership dissolution: (low) financial satisfaction and mental distress. Both factors are measured separately in (partnered) men and women. Model 1 in Table 4 corresponds to model 1 in Table 2 but this analysis includes only

observations with valid data on financial satisfaction and mental distress in the man as well as the women.

**Table 4: Three mediating effects of unemployment on partnership dissolution, hazard (cloglog) coefficients**

	Model 1	Model 2	Model 3	Model 4
Mean age <30	-0.82**	-0.79**	-0.90**	-0.88**
Mean age 30-40	-0.06	-0.06	-0.10	-0.10
Mean age 40-50	-0.55*	-0.60*	-0.63*	-0.65**
Mean age 50+	-0.54*	-0.54*	-0.48*	-0.48**
Age difference	0.35**	0.32**	0.31**	0.30**
Years partnered	-0.02	-0.01	-0.02	-0.02
Married 1/0	-0.98**	-0.96**	-0.92**	-0.92**
#Kids (0-7)	0.18**	0.14**	0.15**	0.13**
Man unemployed 1/0	0.29*	0.13	0.15	0.10
Woman unemployed 1/0	0.61**	0.53**	0.57**	0.54**
Financial sat. man (1-5)		-0.04		0.05
Financial sat. woman (1-5)		-0.21**		-0.14*
Mental distress man (st)			0.26**	0.25**
Mental distress woman (st)			0.22**	0.20**
Constant	-0.90	-0.02	-0.67	-0.38

\* p<0.05 and \*\* p<0.01 in two tailed tests

Low financial satisfaction among women is strongly associated with increased risk of partnership dissolution (model 2). But there is no correlation between men's financial satisfaction and the risk of partnership dissolution. Low financial satisfaction among partnered women can seemingly mediate 55% of the effect of male unemployment on the risk of partnership dissolution (indicated by comparing the unemployment coefficients in models 1 and 2). Low financial satisfaction among partnered women can only help explain a minor part of the effect of female unemployment on partnership dissolution (estimated as 12% by comparing the female unemployment coefficient in models 1 and 2).

Mental distress in both men and women is associated with increased risk of partnership dissolution (model 3). Mental distress appears to mediate 47% of the effect of male unemployment on partnership dissolution (when comparing model 1 and model 3). But mental distress cannot help explain why female unemployment is also associated with increased risk of partnership dissolution. Further, mental distress can only marginally help explain the effect of unemployment on the risk of partnership dissolution beyond what is already explained by low financial satisfaction (indicated by comparing model 2 and model 4). Thus, low financial satisfaction among partnered women appears to be the more important

of these two factors in explaining why male unemployment is associated with increased risk of dissolution of partnerships. Neither financial satisfaction nor mental distress can help explain why female unemployment is associated with an increased risk of terminating partnerships.

### ***Heterogeneity***

Unemployment is associated with increased risk of partnership dissolution. But is it unemployment as such which is the reason that people who have been unemployed are more likely to have their partnerships terminated, or could there be a third factor which leads to both unemployment and partnership dissolution among these people? This is investigated by controlling for education level as well as normal and gamma distributed random components. Model 1 in Table 5 corresponds to model 1 in Table 2 but is simplified by using a single linear slope for the mean age of the partners and it does not include the number of children living in the household. This simplification is done because the random component models used in this analysis are otherwise difficult to estimate. Model 2 also controls for education level of both partners (using four plus four dummy variables for the highest education of the two partners). The coefficients for education level are not shown in the table but they are far from being statistically significant, and by comparing model 1 and 2 we can say that controlling for education level makes no difference for any of the other estimates in this analysis. Education cannot help explain why unemployment predicts partnership dissolution.

***Table 5: Investigating heterogeneity in the analysis of unemployment and partnership dissolution, hazard (cloglog) coefficients***

	Model 1	Model 2	Model 3	Model 4
Mean age	-0.46**	-0.43**	-0.50**	-0.34**
Age difference	0.39**	0.36**	0.41**	0.34**
Years partnered	-0.01	-0.02	-0.01	-0.02
Married 1/0	-0.87**	-0.85**	-0.94**	-1.06**
Man unemployed 1/0	0.37**	0.35*	0.34*	0.37*
Woman unemployed 1/0	0.55**	0.55**	0.55**	0.58**
Constant	-1.66**	-1.76**	-1.86**	-2.31**

\* p<0.05 and \*\* p<0.01 in two tailed tests

The other approach to controlling for time-invariant factors is the use of a random component which should capture non-observed characteristics of the individuals being studied. The methodology literature labels this factor as “frailty”; in our case factors that lead to a persistently different rate of partnership dissolution. This is investigated assuming that the

unmeasured variables (represented by random components) have a normal distribution (model 3) or a gamma distribution (model 4). The gamma distribution is more flexible and includes the normal distribution. Likelihood ratio tests (not shown in the table) indicate that the random components are statistically significant using either distribution. These results indicate that there are unmeasured factors which this analysis does not control for. But none of the results change much when controlling for unobserved heterogeneity either. The effects of male and female unemployment change only marginally. The difference between marriages and cohabitations is slightly larger when controlling for unobserved characteristics. Other results can vary somewhat between normal and gamma distributed random effects models. In fact, of all characteristics investigated the unemployment effects appear to be those least affected by unobserved factors.

## **7. Discussion**

Our main finding is that unemployment increases the risk of partnership dissolution. It is the presence of any type of unemployment which increases the risk of partnership dissolution; the number of spells or the duration of unemployment spells, does not seem to make much difference. However, at least in men, long lasting unemployment is less associated with partnership dissolution than shorter periods of unemployment. Our estimates indicate that the effect on partnership dissolution is certainly not smaller when unemployment affects the women than when it affects the man in a marriage or cohabitation, even if the gender difference is never statistically significant. This finding is in line with the only similar study from the UK (Lampard 1994) but it is different to Scandinavian studies which indicate stronger effects of male than female unemployment on the dissolution of married partners (Jensen and Smith 1990; Jalovaara 2003; Hansen 2005).

The difference between British and Scandinavian research could reflect some differences between these countries. But it could also reflect a difference between survey data used in British research compared to administrative data used in Scandinavia. The BHPS used in this analysis provides an exceptionally rich source of information about each individual and household. For example, our analysis has compared marriages and cohabitations, and investigated if the effect of unemployment on partnership dissolution is explained by low financial satisfaction and mental distress. But this richness in information comes at the expense of a potential attrition problem which is virtually non-existent in Scandinavian

administrative data. Attrition poses a particular problem when investigating men leaving a partnership. It is possible that the effect of male unemployment on partnership dissolution is underestimated in this analysis. It is thus uncertain how the effects of male and female unemployment compare, and how these associations compare to those of Scandinavian countries.

Female unemployment increases the risk of ending partnerships which have lasted some years but not more recently established partnerships. No such differences by duration are found in the effect of male unemployment. The divorce literature has found that women's economic independence from their men increases the risk of partnership dissolution (Greenstein 1990), at least for less successful marriages (Schoen et al. 2002). It is thus likely that the effect of female unemployment on the dissolution of more mature partnerships reflects a process where some women seek economic independence from their men. A tendency in the data that the effect of female unemployment is stronger for same-year than subsequent year partnership dissolution could also reflect similar processes.

The effect of male unemployment on partnership dissolution is to a considerable degree mediated by low financial satisfaction among their partners, but not their own financial satisfaction. The effect of female unemployment is, on the other hand, not mediated by low financial satisfaction. These results accord with Hansen's (2005) finding that the effect of male unemployment, but not the effect of female unemployment, is mediated by low income. From theory it is possible to argue that financial strain could stabilise and destabilise partnerships; stabilise because it is more expensive to live alone than sharing expenses with a partner, and destabilise because the gains from being partnered could be seen as less than satisfactory. To men it appears that these effects are of similar magnitude since the net effect of low financial satisfaction in men is not associated with partnership dissolution. To women it appears that low financial satisfaction in a partnership clearly outweighs the benefits of sharing expenses with a partner. The difference probably reflects that men and women have different roles in partnerships. Providing financial security is perhaps more important to men than to women.

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