The heterogeneous effect of job loss on union dissolution. Panel Evidence from Germany and the UK

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Abstract

How does unemployment affect the risk of separation? Job loss may decrease the risk if the main benefit from being in a couple is insurance against negative earning shocks. In contrast, the risk of separation increases if unemployment produces stress that reduces the quality of couple relations. Alternatively, the effect of job loss on couple stability may not be homogeneous, but vary for different income groups. We examine this question and analyze how unemployment affects the risk of separation in Germany and the UK. The use of long-running household panels (SOEP, BHPS, UKHLS) allows us to observe heterosexual couples one year before and three years after an unemployment spell. By combining fixed-effects regressions with a matching method, we obtain a control group of couples who do not experience unemployment, but are similar otherwise. Our results show for both countries that the separation rate after an unemployment spell doubles in the first two years after job loss, increasing from 2 to 4 percent, and remains higher than for the control group for the following two years. In the UK, the risk of separation increases more when men than women lose their job, but the effect does not vary by gender in Germany. In both countries, couples in low-income households face a higher extra-risk of union dissolution after an unemployment spell than middle and high-income couples.

Keywords: job loss, union stability, divorce, panel data, causal design

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Introduction

The experience of unemployment has far-reaching consequences for individuals. It does not only hamper their work careers and lead to economic insecurity (Ehlert 2013), but also affects other life domains such as health and subjective well-being (Ervasti & Venetoklis, 2010; Price, Choi, & Vinokur, 2002). Crucially, the effects of job loss often transcend the individual and may upset the whole household (McKee-Ryan & Maitoza, 2018). Our paper's focus is on how unemployment affects the likelihood of union dissolution among heterosexual couples, regardless whether they are married or cohabiting.

Our starting point is an apparent paradox. Country-level evidence suggests that divorce rates decrease in periods of recessions when unemployment increases (Amato & Beattie, 2011; Cohen, 2014; Schaller, 2013; Kalmijn 2007). When material resources become scarce, the relative cost of separation may increase and thus enhance couple stability. At the same time, individual-level studies indicate that workers who lose their job are also more likely to separate from their partners ((Charles & Stephens, 2004), Doiron & Mendolia, 2012, Eliason 2012, Hansen 2005). Economic hardship produces stress which may, in turn, decrease the quality of couple relations and increase the risk of union dissolution. Of course, the paradox may be only apparent if divorce rates fall during recessions among couples who do not experience unemployment, but who worry about the economy.

Another explanation for contradictory findings regarding the relationship between unemployment and union dissolution is because the effect of unemployment on couple stability may not be homogenous, but vary for different socio-economic groups. We thus analyze the existence of heterogeneous treatment effects of job loss on union dissolution by differentiating the effect for low-income, mid-income and high-income households (Xie et al. 2012). Theoretically, two contrasting expectations exist on this issue. If one of the main benefits from marriage stems

from shared consumption and insurance against negative earning shocks, individuals in low-income households may be less likely to separate after becoming unemployed. On the contrary, if union stability is primarily a function of the resources that individuals possess, couples in low-income households may be at a greater risk of union dissolution after an experience of unemployment (Hansen 2005).

The impact on relationship stability may also vary depending on whether it is men or women who lose their job. If men take home a larger share of the household income, their job loss may be more consequential for the household's economic security. As a result, job loss of men might produce more stress and therefore have a stronger effect on the risk of union dissolution.

Finally, the effect of job loss on union dissolution may vary across institutional contexts. Depending on a country's welfare and family regime, unemployment may have different consequences for couple relationships (Albertini and Kohli 2012, Esping-Andersen 1999, Saraceno and Keck 2011). Our study thus compares Germany and the UK, two West European countries that differ in terms of how paid work and care are supported by public policy and distributed between men and women.

Our analysis is based on longitudinal data from long-running household panels: SOEP 1984-2017 for Germany, BHPS 1999-2008 and UKHLS 2009-2017 for the UK. Our analysis is set at the level of couples and we observe them one year before and three years after one partner loses their job. We combine fixed-effects regressions with a matching method. Matching allows us to construct a control group of couples without unemployment who presented, one year before job loss, the same risk factors for unemployment and union dissolution as couples where one partner would eventually lose his or her job. By comparing the separation rate between couples who experience unemployment (treatment group) and couples who were similar, but were not hit by

unemployment (control group), we obtain a difference-in-differences model that comes closer to the causal effect that job loss has on union dissolution than conventional analyses.

Our paper first presents the mechanisms through which unemployment affects the stability of couples. It then discusses the possibility of heterogeneous effects and distinguishes between his and her unemployment. The methods section presents the data, measures and the matching method used for the analysis. The results section shows how the separation rate varies after an unemployment spell by gender and household income in the two countries under study. The conclusion compares our results with earlier findings.

The relationship between job loss and union dissolution

Schematically, the literature distinguishes three mechanisms through which job loss may be associated with union dissolution. First, job loss may decrease the risk of union dissolution as a result of a relative increase in the costs of separation. Second, job loss may increase the risk of separation by creating stress and thus weakening relationship quality. Third, the association may be spurious and the result of selection if some underlying characteristics hamper both job stability and couple stability.

Evidence at the aggregate level strongly suggests that divorce rates decrease in periods of recessions when unemployment increases – be it in Europe (Kalmijn, 2007) or the United States (Amato & Beattie, 2011; Cohen, 2014; Schaller, 2013). This association is attributed to the increased relative *cost of divorce*: In times of economic uncertainty, job loss may make a separation more costly relative to a spouse's or couple's available resources (Cohen, 2014). A separation may not only lead to legal fees, but also increases the costs of housing and childcare, all the while diminishing the economies of scale that come with a larger household (Browning & Chiappori, 1998). This, in turn, may decrease the probability of union dissolution.

The negative relationship between unemployment rates and divorce rates is evident at the macro-level only. High unemployment rates may thus affect the decision-making of the majority of couples who do not actually experience unemployment, but who are fearful of the general economic context and therefore shy away from divorce. This macro-level explanation does not rule out that at the individual level, workers who actually lose their job may still have a higher likelihood of divorce. The main mechanism through which job loss would increase the risk of union dissolution is that unemployment is a stressful life event (Aneshensel, 1992; Pearlin, Menaghan, Morton, & Mullan, 1981). Losing a job often leads to a loss of income and social status and is associated with lower self-esteem and health problems (Paul, Hassel & Moser, 2018). Unemployment affects both partners by creating common stressors, such as economic hardship, and by the transmission of stress of one partner to the other, jointly leading to a decline in relationship quality (Howe, Levy, & Caplan, 2005), thereby increasing the risk of separation. Economists additionally point out the signaling effect of job loss. Unemployment may signal a lower earnings potential and hence reduce an individual's attractiveness as a partner (Boheim & Ermisch, 2001; Doiron & Mendolia, 2012; Kerwin Kofi Charles & Melvin Stephens, 2004).

There may be a third explanation for the association between job loss and union dissolution, which is that individuals who lose their jobs are more likely to separate because they constitute a selective group. Amato and Beattie (2011) argue that undesirable individual traits, such as mental health problems, personality disorders, anti-social tendencies or substance abuse, may increase the likelihood of experiencing both job loss and union dissolution.

The bulk of studies that analyze the relationship between job loss and union dissolution on the individual level find that workers who lose their job are also more likely to separate from their partner. This is the case for Denmark (Jensen & Smith, 1990), Finland (Jalovaara, 2003), Norway (Hansen, 2005), Germany (Franzese & Rapp, 2013; Kraft, 2001), Sweden (Eliason 2012), the UK

(Boheim & Ermisch, 2001; Doiron & Mendolia, 2012) and the United States (Charles & Stephens, 2004). However, with the notable exception of Eliason (2012), none of these studies explicitly addresses selection by using a counterfactual design and including a control group of workers who did not lose their job but who are otherwise similar to those who do. The presence of a control group with comparable characteristics to displaced workers is crucial to address the selectivity of the group of individuals who lose their jobs, and who may have characteristics that drive both job loss and relationship dissolution.

Nonetheless, given the strong associational evidence that unemployment hampers couple stability, we expect to find that job loss increases the risk of union dissolution. We try to improve on earlier research by assessing if this association is present after accounting for selection effects. Hence, our first hypothesis is:

Hypothesis 1: an unemployment spell increases the risk of union dissolution among married and cohabiting couples.

A heterogeneous effect of job loss and union dissolution

The extent to which negative life events such as job loss produce stress varies depending on an individual's resources as well as on the severity of the event (Pearlin, et al., 1981) and may thus lead to heterogeneous effects of unemployment on couple stability. Stress has been defined as a condition in which the demands of the environment exceed individuals' resources to cope (Amato and Beattie 2011: 706).

If one of the main benefits from being in a couple stems from shared consumption and insurance against negative shocks to household earnings, individuals in low-income households should be less likely to separate after becoming unemployed. Experiencing a period of unemployment increases the economic benefits of marriage to a larger degree for low-income than mid- or high-

income households. On the contrary, if couple stability is primarily a function of the resources that individuals possess – notably in terms of economic means, cultural capital and social networks -, individuals in low-income households may be at a greater risk of union dissolution after becoming unemployed (Hansen, 2005).

Contrasting theoretical arguments have been made as to whether consequences of unemployment are more negative for individuals with a higher or a lower socio-economic status (Paul, et al., 2018). On the one hand, individuals who lose higher status job may suffer more, because they tend to lose a more attractive job, the job may be more central to their identity, and they may feel more stigmatized as the event is rare and harder to justify than losing a blue collar job. On the other hand, in addition to having better financial and social resources, higher educated individuals tend to have better coping strategies (Kulik, 2000; Schaufeli & Van Yperen, 1992), lower unemployment rates make it easier to find reemployment than for lower skilled workers and higher educated individuals can use educational attainment as an alternative provider of identity. Empirical findings from comprehensive meta-analyses are largely in support of the latter: negative consequences of job loss for mental health and wellbeing are more severe for the lower skilled workers (Paul & Moser, 2009; McKee-Ryan, Song, Wanberg, & Kanicki, 2005).

Studies assessing the ways in which unemployment affect partnerships show an important role for economic hardship, increasing depression and anxiety in both partners (Weckström, 2012; Creed & Klisch, 2005, Price, Choi, & Vinokur, 2002), and affecting marital adjustment (Kinnunen & Feldt, 2004). Overall, we thus expect couples with higher income to be less likely to separate following unemployment than couples in lower-income households, because the consequences of unemployment are less severe. This leads to our second hypothesis:

Hypothesis 2: The experience of unemployment increases the risk of union dissolution more if couples' household income is low.

Differences by gender and country

One additional element may crucially affect the link between job loss and union dissolution, namely differences by gender. The impact on couple stability may vary depending on whether it is men or women who lose their job. While unemployment has been found to affect men's health more than women's (Artazcoz et al., 2009), a study based on Swedish data does not find any gender difference (Hammarström et al., 2011). A stronger effect for men could be the result of the gendered division of labor. If men take home a larger share of the household income, their job loss may be more consequential for the household's economic security. As a result, job loss of men might produce more stress and therefore have a stronger effect on the risk of union dissolution. Additionally, regardless of the actual division of labor within the couple, men may still have a stronger identification with work. Losing a job may thus be more detrimental in terms of their self-esteem and be seen as reflecting more negatively on them than on their female partners (Michniewicz, Vandello, & Bosson, 2014).

Empirical support for job loss leading to an increase in divorce if witnessed by men, but not by women, has been found for Denmark in the period of 1979-1985 (Jensen & Smith 1990). More recent data for Finland (Jalovaara 2001) and Hansen (2005) suggest that unemployment among either husbands or wives is positively associated with divorce. Nonetheless, the effect on divorce seems stronger for men's than women's unemployment, be it in Germany (Franzese and Rapp 2013), Finland (Jalovaara 2003) or Sweden (Elisason 2012).

Our third hypothesis expects his unemployment to be more detrimental for couple's stability than her unemployment:

Hypothesis 3: An unemployment spell increases the risk of union dissolution more if the male partner becomes unemployed compared with the female partner.

Finally, the consequences of job loss on union dissolution possibly vary also across countries, as different welfare regimes may provide different resources to unemployed individuals, making the experience of job loss more or less stressful. The meta-analysis by Paul and Moser (2009) suggests that the effect of unemployment is more severe in countries with weak unemployment protection. In line with this finding, unemployed workers who receive benefits seem to fare much better in terms of mental health than those who do not receive any benefits (Artazcoz et al. 2004). Our study of just two countries does not allow us to formally test a country-level hypothesis. However, these theoretical elements suggest that the consequences of job loss on couples should be stronger in institutional settings with low unemployment benefits (such as the UK) than high replacement rates (such as in Germany).

Data and measures

Our analyses are based on three household panels from two European countries, the German Socio-Economic Panel 1984-2016 (SOEP) as well as the British Household Panel Study 1991-2008 (BHPS) and UK Household Longitudinal Study 2009-2017 (UKHLS), also known as Understanding Society. All these panel surveys offer yearly data on individuals and households.

Our analytical sample includes all heterosexual couples at risk of experiencing either unemployment (our treatment variable) or union dissolution (our outcome variable) in the age range from 25 to 64. We thus restrict the analysis to couples where the two partners live in the same household and where at least one member is in the labour force.[1] This leaves us with XY couples and XY couple-years for Britain, XY and XY for Germany.

[1] Everywhere, we rule out couples without a personal identifier for both partners. In the British dataset, we are able to further restrict the sample to the more stable unions that last at least three consecutive waves.

We construct a couple-year dataset featuring a male and female partner, linking individuals' identification numbers to the number of their partners. We then create two samples: a first sample of heterosexual couples in which all male partners were employed at the beginning, but where some men experienced an unemployment spell (the "male sample"), and a second sample of couples in which all female partners were employed at the beginning, but where some women became unemployed (the "female sample").

Our dependent variable is the separation of heterosexual couples, including both cohabiting and married couples. Respondents report annually on the presence of a partner in the household. We consider a couple to be separated when the partners' co-residence terminates, namely when one partner leaves the household, excluding cases of widowhood or institutionalisation of one of the partners.

Our key independent variable is an unemployment spell of an individual, defined as moving from employment to unemployment. In the SHP and SOEP, individuals annually report their employment status on a monthly basis. In UKHLS, personal questionnaires reconstruct the work activity of respondents at the time of the interview as well as any labor market spell that began after the interview of the previous year.[2] An unemployment spell can be as short as one month to be included in the analyses. When unemployment spans across multiple survey waves (e.g., *t* and *t+1*), it is assigned to the first year of job loss (year *t*).

For the analysis of heterogeneous effects, we stratify our analytical sample into three hierarchically ordered income terciles. These terciles are based on post-government household income measured one year before the unemployment spell. Household incomes are deflated with

[2] In the British data, we are able to only restrict unemployment spells to *non-voluntary* job losses caused by 'redundancy', 'dismissal' or 'temporary job termination'. In contrast, the number of unemployment spells is too small in the German data for further distinctions.

the consumer price index and adjusted for household size using the OECD equivalence scale (a weight of 1 for the respondent, 0.5 for other adults and 0.3 for children).

Analytical design

Our analytical strategy tries to approach a causal design by explicitly addressing reverse causality (i.e., partnership problems causing job loss) and selection bias (i.e., people who have lost their jobs have certain traits that render them less likely to keep a job and to maintain a relationship). We thus compare the separation rate of couples that experience unemployment (treatment group) with the separation rate of couples that share similar socio-demographic characteristics, but do not experience job loss (control group).

In formal terms, we thus adopt a potential outcome framework (Rubin, 1974) where each couple has two potential outcomes: $Y(1)_{jt}$ indicates the likelihood of separation that would result if the couple experienced an episode of unemployment, and $Y(0)_{jt}$ indicates the likelihood of separation if the couple did not experience any unemployment. Therefore, for each couple, the causal effect of unemployment on the likelihood of separation is defined as $Y(1)_{jt} - Y(0)_{jt}$. Because each couple is observed only in either the treatment or the control group, either $Y(1)_{jt}$ or $Y(0)_{jt}$ is observed for each couple. This means that the counterfactual separation rate must be estimated for a control group.[3]

We make the treatment and control group as comparable as possible by using a matching approach. For each couple hit by a partner's unemployment (in the treatment group), we try to identify couples in which neither partner witnessed any unemployment (in the control group) but who were the most similar to the couples in the treatment group based on their observable

[3] The parameter we aim to estimate is the *average treatment effect on the treated* (ATT) (Imbens 2004):

$$ATT = \left[Y(1)_{jt} - Y(0)_{jt} \middle| I_{j0} = 1\right]$$

Where $t = 0$ indicates the year of job loss. We interpress the ATT as the estimated average difference in the observed couple status (intact union or dissolved) for treated couples and the partnership status they would have had, if they had not experienced a spell of unemployment.

characteristics. We use the matching method of coarsened exact matching (CEM, Iacus et al. 2011), which involves three steps to make couples with an unemployment spell as similar as possible to their counterfactuals of couples without an unemployment spell. First, we temporarily coarsen each control variable that may confound the influence of job loss on separation by transforming it into categories (age, for example, is coarsened into four categories). Second, we sort all units into strata, each of which has the same values of the coarsened variables. Third, we drop the units in any stratum that do not include at least one treated and one control unit.

The choice of covariates for matching follows the literature and includes for each partner the age (25-34; 35-44; 45-54; 55-64), level of education (ISCED 1-2; 3-4; 5-6), and occupation (ISCO 1-digit 1-2, 3, 4, 5, 6-7-8, 9, missing) and on the survey year. On the couple level we included children in the household (yes/no), being married (yes/no), and partnership duration (less than 2 years, 2-5 years, 5-10 years, 10+ years). We further use indicators for assortative mating which possibly increase couple's stability (Weiss & Willis, 1997, Matysiak et al., 2014), namely the difference in partners' age (woman 2 years older; age difference between -2 and 2 years; man 2 years older) and in educational attainment (male partner higher educated, same education, female partner higher educated). All matching variables are measured with a one-year lag to prevent reverse causality as the exact timing of the separation between two consecutive waves is not known (Doiron & Mendolia, 2012).

For each episode of unemployment, we create a five-year episode (one pre-unemployment year before, the year of job loss, and three years after). The control group consists of all couple-years observations that do not contain any episode of job loss and which span at least two consecutive years. Thus, the comparison group consists of couples where one partner is continuously in employment (and his or her partner not unemployed) since the beginning of the observation period.

Figure 1 illustrates our matching procedure which links treatment and control group on covariates one year before a partner's unemployment spell. For each treated couple that we observe before an unemployment spell, the matching algorithm finds one or more similar counterfactuals in the control groups whose coarsened covariates correspond with the covariates of the treated. Then, the likelihood of separation is compared over time for these couples.

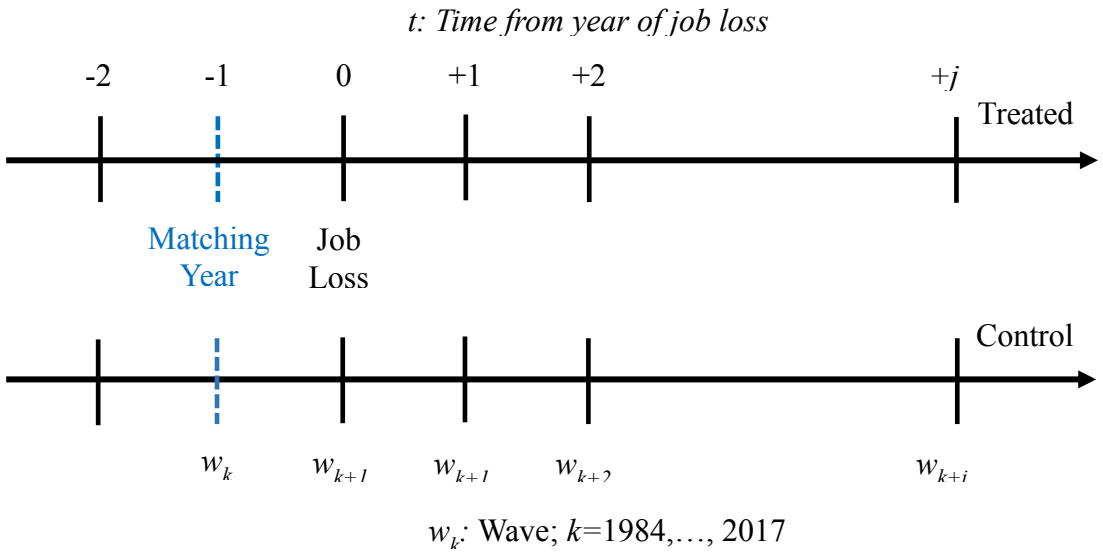

Figure 1. Design of matching method.

Regression model

We estimate the impact of a partner's job loss on a couple's risk of dissolution using a fixed-effects panel model (Hallaby, 2004). This two-step approach *de facto* replicates a difference-in-differences design in which the couple dynamics of the treated and controls are synchronized according to the year of matching. After matching the treated to their counterfactual in the previous step, we then estimate the different rate of separation in the two groups in a time window spanning from t=-1 (the year of matching) to t=3. This model takes advantage of the within-couple variance over time

and nets out any time-constant unobserved heterogeneity, such as personality and abilities, which might affect the dynamics of labour market and partnership stability:

$$Y_{jt} = \alpha_j + \sum_{k=-1}^{3} \beta_k U_k + \sum_{k=-1}^{3} \gamma_k I_{j_g} U_k + \upsilon_{jt} \qquad (1)$$

Where Y_{jt} is a dichotomous indicator for the partnership status *j* (0 = intact; 1= dissolved) at time *t*. One of the advantages of our method is to identify a conditional rate of separation for the control group and an additional (or lower) risk of separation for the treatment group. U_k indicates the time dummies for the *kth* year relative to the year of unemployment, and β_k represents the conditional rate of separation for a couple that is not affected by unemployment in each time interval. I_{j_g} identifies the couples experiencing an unemployment spell and is interacted with the time indicators. The subscript *g* indicates the gender of the partner experiencing a job displacement (0 = female; 1= male). The coefficient γ_k captures the *extra/lower* rate of separation between the couples facing a partner's unemployment and their control group by measuring the effect of time to and from the event of displacement. α_j is the couple's fixed effect, while υ_{jt} captures idiosyncratic errors. We use clustered standard errors at the individual level because the observations are not independent over time.

Our approach seeks to overcome a typical issue affecting event history models that have been used for our research question: the presence of couple-specific, time-invariant and unobserved effects denoted as α_j in Eq. 1. Any variation across couples in unobserved traits that are assumed time-invariant or that change systematically over the course of the union are controlled for by the couple-specific effects. Of course, there may be unobserved, couple-specific and time-varying characteristics that correlate with the occurrence of a job displacement. For instance, consider a particular worker who loses both his job and his partner because he begins to drink heavily. This

issue means that, although we get closer to a causal model, we cannot identify strict causal mechanisms.

Results for the effect of unemployment on separation rates

Our first analysis examines whether job displacement increases the risk of a subsequent union dissolution (Hypothesis 1). The estimates for the United Kingdom are presented in Figures 2 (men's unemployment) and 3 (women's unemployment), and those for Germany in Figures 4 and 5. In the left panel, we display the predicted risk of separation for the control group on a yearly basis, in a five-year window, from the year of matching (t=-1) to the third year after matching (t=3). In the right panel, we show the *excess* risk of separation among couples that experienced unemployment.

In the United Kingdom, the conditional risk of separation for the group of the controls ranges between 1.8% and 2.1% per year in the male sample (Figure 2, left panel) and between 1.6% and 2.1% in the female sample (Figure 3, left panel). In Germany, the predicted probability of separation ranges between 2.5% and 2.8% per year in the male sample (Figure 4, left) and between 2.1% and 2.5% in the female sample (Figure 5, left). These figures correspond to the probability of union dissolution among couples with comparable characteristics to those hit by unemployment.

In the male sample, we observe a statistically significant *excess* risk of dissolution after a job interruption in both countries (Figure 2 and 4, right panel). The estimated excess risk of separation on the year of job loss amounts to 1.2 percentage points in the same year of displacement and reaches 2.7 and 1.8 points one and two years later. In Germany, the excess risk tops 3 percentage points one year after unemployment, and slightly declines thereafter. In the female sample of the UK (Figure 3, right panel), most estimates do not show a significant impact of unemployment at the 95% level, although the coefficients are large. On the second year after a job displacement

(t=2), the model suggests that wives' job displacement leads to an increase in the separation rate of 2 percentage points. In Germany, women's unemployment increases the risk of union solution to a similar extent as men's unemployment – the coefficients are statistically significant and increase steadily after t=0 in our four-year observation window.

Our findings show support for our first hypothesis, with an increase in the rate of separation following unemployment. The impact of unemployment on the risk of separation does not seem constant over time, at least when it comes to the men's sample. Unemployment is not a discrete event, but likely triggers a period of uncertainty marked by unemployment and job-seeking, a re-employment and, possibly, a period of adjustment to the new job. This process is likely to be stressful and to increase marital dissatisfaction and lead to conflict before it eventually causes, in some cases, for a couple to separate. We follow couples in the short and medium run (up to three years after an unemployment spell) and observe in Germany and the UK the highest extra risk of separation *one* year after the male partner becomes unemployment. This extra risk remains high – and significant – two and three years after the unemployment spell begins.

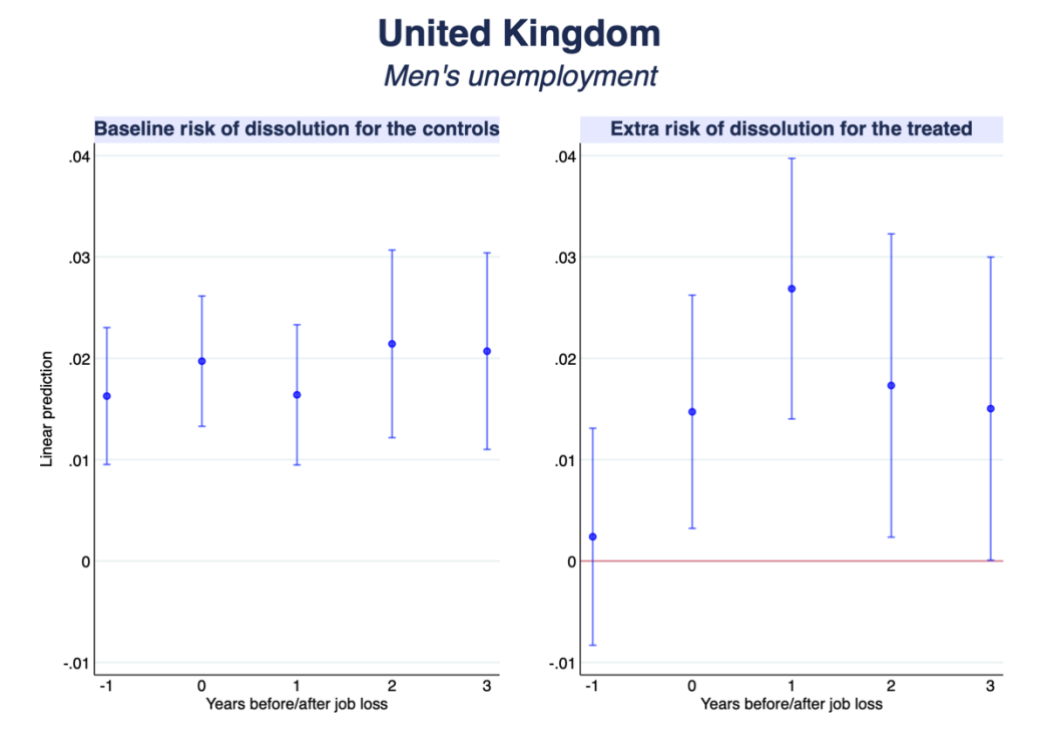

Figure 2. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed men.

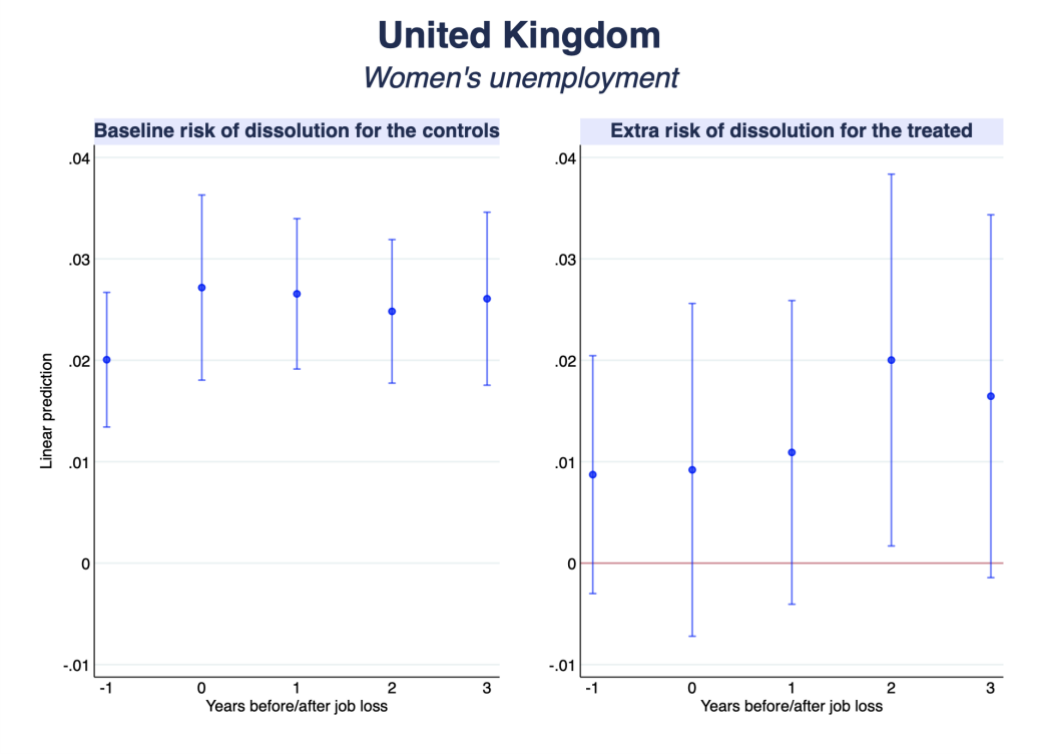

Figure 3. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed women.

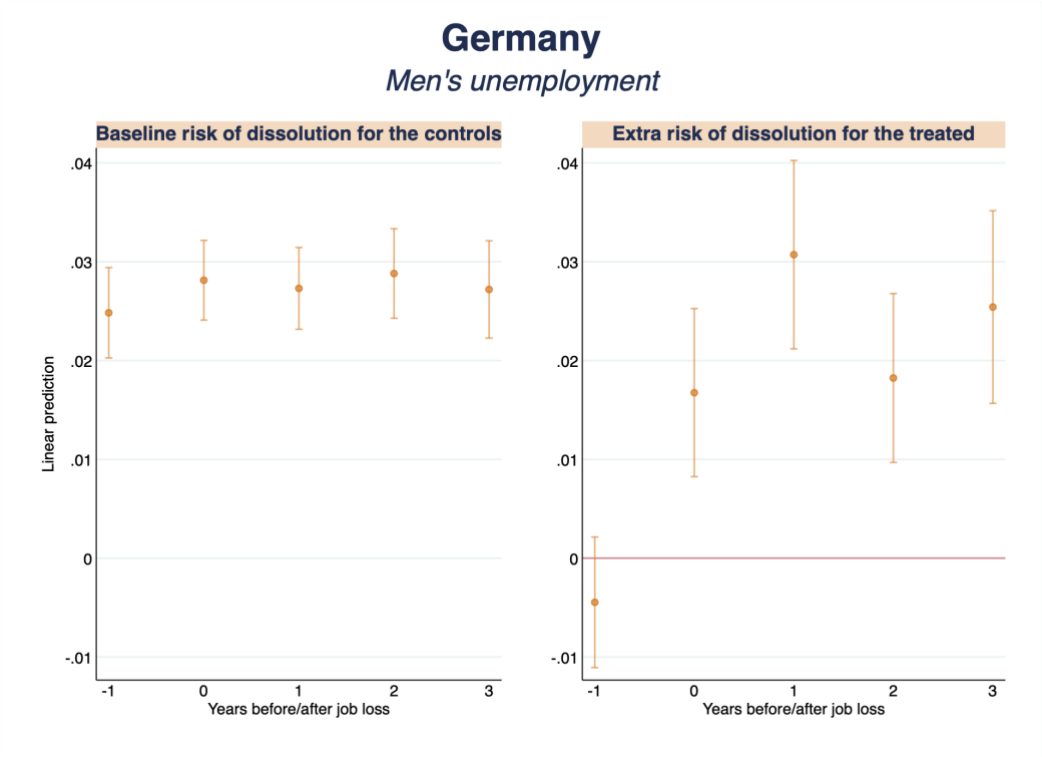

Figure 4. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed men.

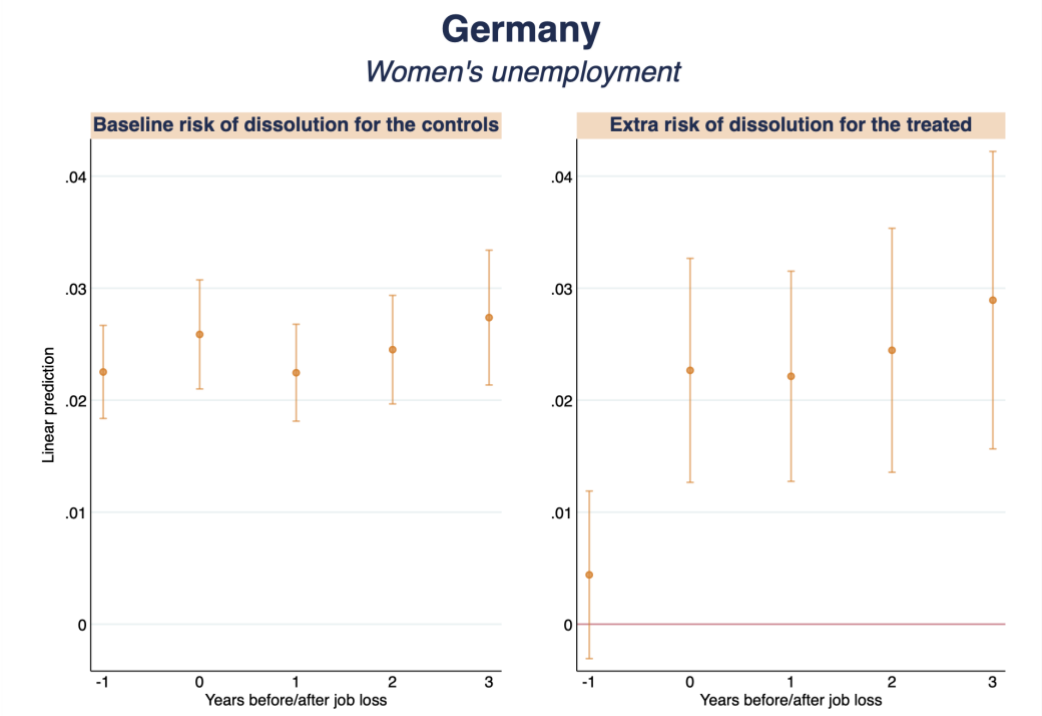

Figure 5. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed women.

Separation rates stratified by couple's household income

We have shown that the separation rate doubles after a spell of unemployment in the three subsequent years – and this effect is larger if the male partner loses his job. To test our second hypothesis, we assess whether the impact of job interruption varies by household income. For these subgroup analyses by income terciles, we present again the estimates of the male and female samples of counterfactuals in the left panels of Figures 6 through 9, whereas extra risk of dissolution for the couples hit by unemployment are shown in the right panels of the same Figures. In the United Kingdom, the couples in the middle income tercile have the lowest risk of partnership break-up, whereas lower and higher-income couples are more likely to separate. In Germany, we observe the income gradient of separation reported in the literature (de Graaf & Kalmijn, 2006; Härkönen & Dronkers, 2006), as couples in the low-income tercile have systematically higher separation rates than those in the high-income tercile, with the middle tercile in-between.

In support of our expectation, for the couples that experience unemployment, we find a protective effect of income in both countries. In the United Kingdom, couples in the highest income tercile do not seem to face an extra risk of separation after unemployment. In contrast, the impact of men's job loss is statistically significant for couples living in household with low and medium income and corresponds to an increased risk of separation that amounts to 1.7 (low tercile) and 2.7 percentage points (medium tercile) at t=0 and 4.0 (low) and 2.5 points (medium) at t=1. It then systematically remains above the 2-percentage point threshold over the subsequent two periods. In Germany, low-income couples appear to be more vulnerable after unemployment, as their predicted probability of separation increases by more than 2 percentage points with respect to the

counterfactual group in all four post-unemployment years. Rather surprisingly, the middle-income tercile is affected only marginally by an extra risk of separation, while couples in the top tercile seem to be almost as prone to separate as the lower income group after unemployment.

While couples with less financial resources appear less protected against the adverse effects of an unemployment spell, this effect is, again, more clear-cut in the male sample and suggests that his unemployment is more detrimental than her unemployment for couple stability.

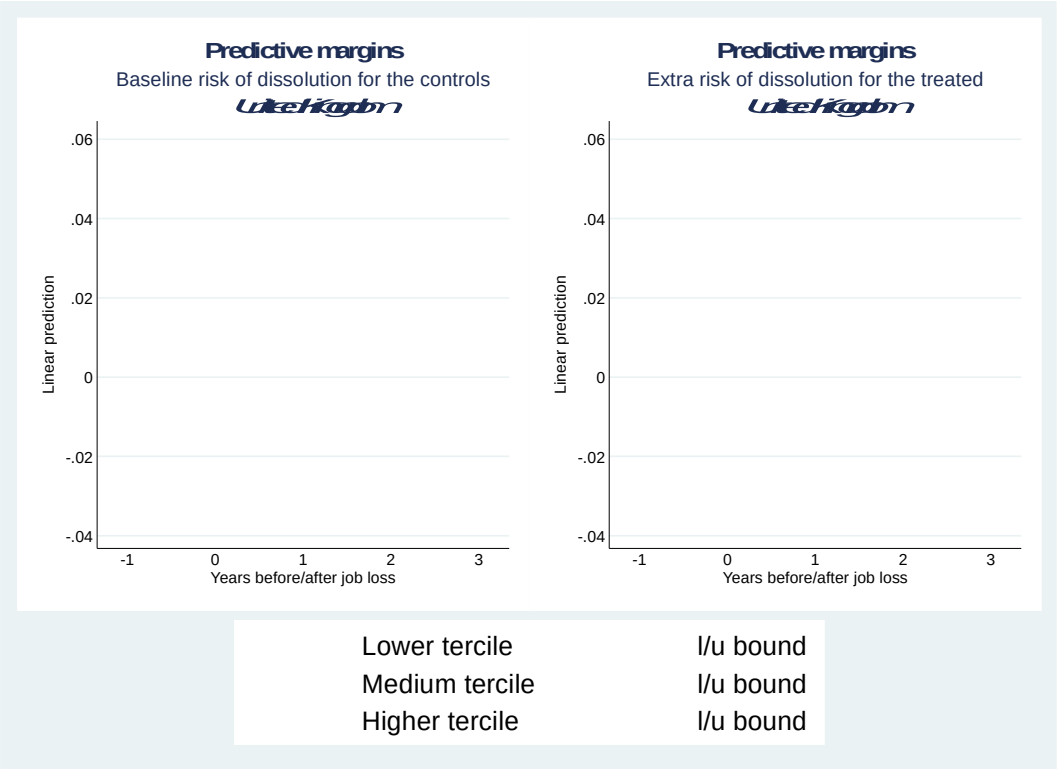

Figure 6. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed men, by terciles of income.

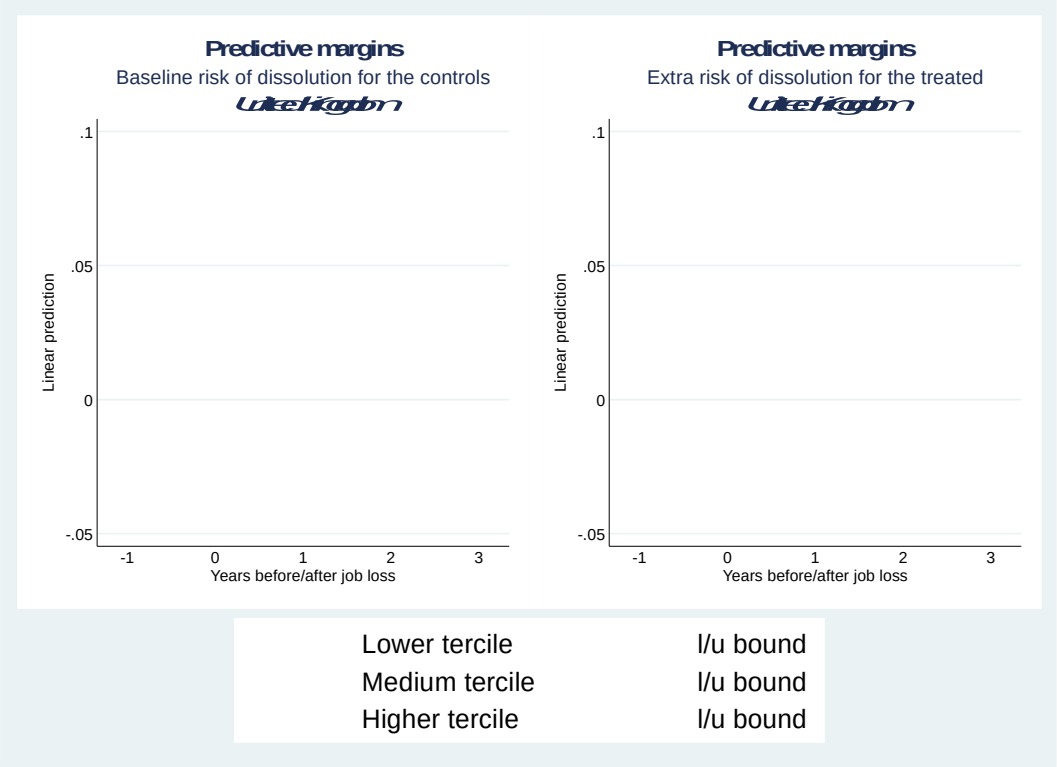

Figure 7. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed women, by terciles of income.

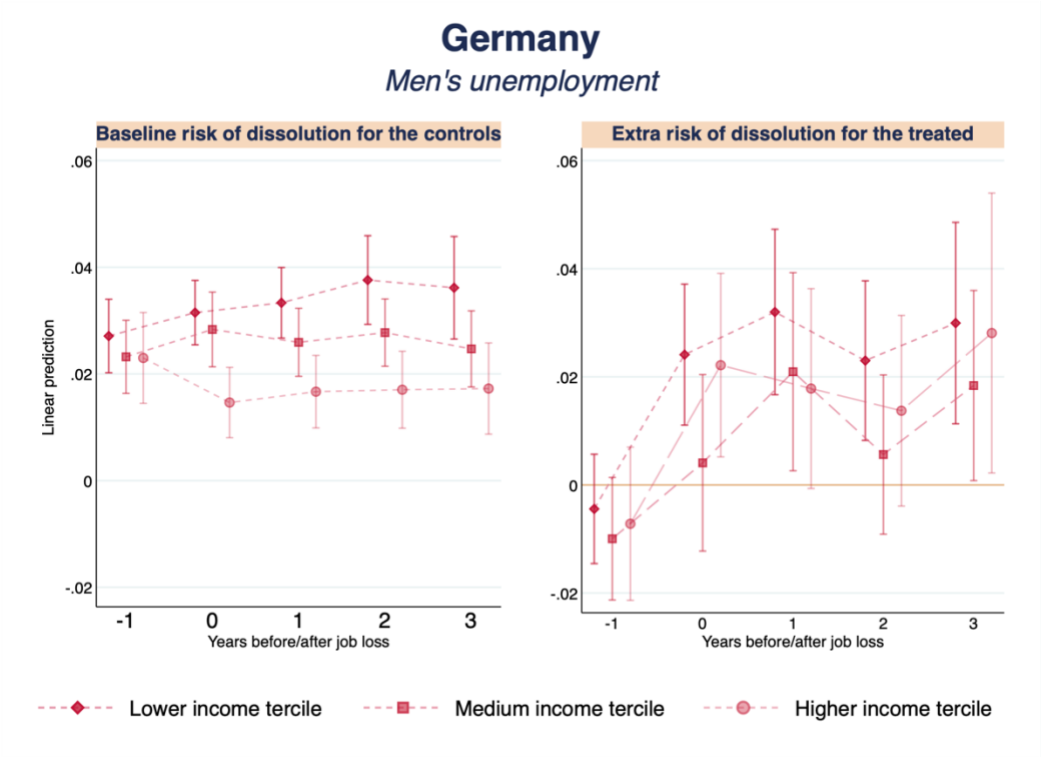

Figure 8. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Couples with unemployed men, by terciles of income.

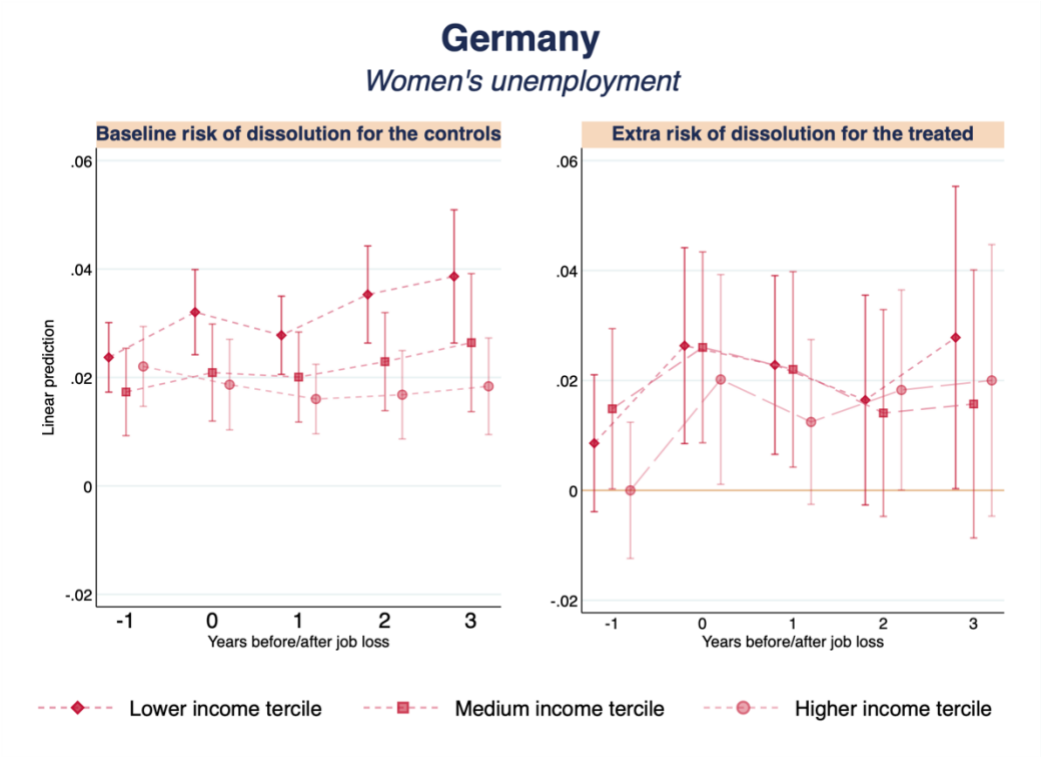

Figure 9. Predicted probability of separation for the controls (left) and predicted differential probability of separation for the treated (right). Stratification by terciles of income.

Conclusion

Unemployment has the potential to alter the premises of a partnership and may thus ultimately trigger a separation or divorce. Losing a job does not only cause earning losses and financial hardship that can hamper the quality of partnerships, it may also affect other domains that are crucial for a couple such as lifestyle, wellbeing or relationships with kin and friends.

This study assesses the consequences of men's and women's unemployment on the stability of a couple in a 4-year time window. The estimates show a positive and statistically significant impact of job loss on the risk of separation. In the United Kingdom and Germany, the risk of separation increases by two percentage points in the year of job loss and further grows in the subsequent year.

While the higher risk of separation due to unemployment tends to decrease thereafter, it remains statistically significant.

These findings are in line with the evidence reported by Eliason (2012) and by Doiron & Mendolia (2012) on the significant effect of job displacement on the risk of divorce in Sweden and the United Kingdom respectively. On the contrary, our results do not support the findings provided by Charles & Stephens (2004) who did not find any significant effect of plant closure (a specific type of job loss) on the risk of divorce risk in the United States.

Our findings reveal that partnerships are not equally affected by men and women's unemployment. In the United Kingdom, the risk of separation is larger if men become unemployed than if women lose their job. For women, job loss seems to increase the separation rate by 1 to 2.1 percentage points in a four-year period. Couples' greater risk of separation after men's unemployment may simply mirror couples' greater economic reliance on *his* earnings. At the same time, in Germany couples where women become unemployed suffer an increase in the risk of separation that is as large as in couples where men lose their jobs. This finding is consistent with prior evidence from Norway (Hansen, 2005) and Sweden (Eliason, 2012), which suggests a comparable effect of men and women's unemployment on union dissolution.

Our analysis points to the presence of heterogeneous effects. In the United Kingdom, men's job loss seems to increase the risk of dissolution more within low and middle-income households than in high-income households where couple stability seems unaltered. Couples who benefit from more economic resources – and thus more financial stability in the long-run – are less affected by the reductions in available income. While the income pattern associated with union dissolution is less clear for Germany, results also suggest that low-income couples experience an extra risk of dissolution if the female and, above all, male partner becomes unemployed. Where our evidence is

unambiguous: unemployment does not strengthen couples, but makes them more vulnerable – and this is even more the case if couples were economically vulnerable to begin with.

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