GOETHE UNIVERSITÄT FRANKFURT AM MAIN

VERSION: 10 FEBRUARY 2018

Why does unemployment lead to divorce? Male-breadwinner norms and divorce risk in 30 countries

European Research Council

Established by the European Commission

CORRODE WORKING PAPER #6

PILAR GOÑALONS-PONS AND MARKUS GANGL

UNIVERSITY OF PENNSYLVANIA AND

GOETHE UNIVERSITY FRANKFURT AM MAIN

DISCLAIMER:

This work represents original research by the authors. The authors gratefully acknowledge funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2013, ERC grant agreement n° ERC-2013-CoG-615246-CORRODE). Neither the European Research Council nor the primary data collectors and the providers of the data used in this research bear any responsibility for the analysis and the conclusions of this paper.

We welcome comments and suggestions on this research, please contact the authors at:

pgonalon@sas.upenn.edu or mgangl@soz.uni-frankfurt.de

SUGGESTED CITATION:
Pilar Goñalons-Pons and Markus Gangl. 2018. Why does unemployment lead to divorce? Male-breadwinner norms and divorce risk in 30 countries. CORRODE Working Paper #6. Frankfurt: Goethe University. Retrieved from www.corrode-project.org, version dated 10 February 2018.

www.corrode-project.org

Why does unemployment lead to divorce?

Male-breadwinner norms and divorce risk in 30 countries

Pilar Goñalons-Pons and Markus Gangl

CORRODE Working Paper #6

Abstract

It is well known that unemployment and financial strain put pressure on relationships and increase the risk of divorce or separation. This applies to men's unemployment in particular, and earlier research has suggested that gender norms about employment in marriage might be relevant to explain why his job loss spurs more marital conflict than hers. While theoretically intuitive, most of the available empirical evidence is indirect. With the present paper, we conduct a direct test of the proposition that gender norms generate a gendered association between unemployment and divorce. Using harmonized household panel data for 30 countries for the years 2004 to 2014 and country-level measures for the prevalence of male-breadwinner norms, we show that husbands' unemployment increases the risk of divorce more in countries with greater prevalence of male-breadwinner norms and in situations in which the male-breadwinner identity is most salient, namely among married couples with children.

Keywords

divorce, gender, gender role norms, unemployment, cross-country comparison

Acknowledgements

The EU-SILC, SIPP, BHPS, UKHLS, GSOEP, ISSP and ESS data used in this research have kindly been made available by Eurostat, the United States Census Bureau, the Institute for Social and Economic Research (ISER) at the University of Essex, the German Institute for Economic Research (DIW), the International Social Survey Programme hosted at the GESIS-Leibniz Institute for the Social Sciences in Mannheim, and the European Social Survey European Research Infrastructure Consortium at the City University of London. Of course, the data providers are not responsible for any aspect of our analysis or for our interpretation of results. For helpful comments and suggestions on earlier versions of this work we are grateful to David Calnitsky, Kelly Musick, Christine Schwartz, Jan Brülle, Rona Geffen, Carlotta Giustozzi, Anne Kronberg, Timo Lepper, Kristina Lindemann, and Fabian Ochsenfeld. We gratefully acknowledge funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2013, ERC grant agreement n° ERC-2013-CoG-615246-CORRODE) for this research.

INTRODUCTION

It is well known that unemployment and financial strain put pressure on relationships. Classic and contemporary studies show that couples experiencing unemployment are at higher risk of divorce (e.g. Jahoda, Lazarsfeld, & Zeisel, 2009; Komarovsky, 1971; Liker & Elder, 1983; L. C. Sayer, England, Allison, & Kangas, 2011) but the mechanisms at play are more complex than a purely economic model would suggest. Among heterosexual couples, men's unemployment leads to greater risk of divorce than women's (Eliason, 2012; Jalovaara, 2003; Jensen & Smith, 1990; L. C. Sayer et al., 2011), suggesting that gender norms and expectations which structure our societies and relationships may play an important role in how unemployment is perceived and experienced. With the present paper, we contribute to this literature with the first direct empirical test of this proposition, using harmonized household panel survey data from 30 countries and a direct measure of gender norms about male-breadwinning. Our empirical analyses show that gender norms are responsible for the gendered association between unemployment and divorce. As support for male-breadwinning increases, so does the association between husbands' unemployment and the risk of divorce. When support for male-breadwinning is low, husbands' unemployment is not more likely to increase divorce than wives'.

Research on the effect of unemployment on divorce typically focuses on the economic consequences of job loss. The idea is that job loss puts families under financial stress, increasing marital conflict and the risk of divorce (e.g. Conger et al., 1990; Elder, Conger, Foster, & Ardelt, 1992; Hansen, 2005). But several findings in the literature suggest that this explanation is insufficient. Studies regularly find that, net of earnings differentials between the husband and wife, men's unemployment increases the risk of divorce *more* than women's (Eliason, 2012; Jalovaara, 2003; Jensen & Smith, 1990) and that husband's unemployment increases the risk of

divorce *more* than other events that produce similar declines in earnings, such as disability onset (Charles & Stephens, 2004; Doiron & Medolia, 2011). These patterns suggest that something beyond financial stress is responsible for how unemployment increases the risk of divorce. Some scholars suggest that gender norms about marriage and employment can provide an additional explanation for these patterns (Killewald, 2016; L. C. Sayer et al., 2011). This argument posits that husbands' job losses challenge socially prescribed gender norms about male-breadwinning and are more likely to lead to lower marital satisfaction. For instance, a man's identity as a provider for his family may be threatened more than a woman's due to unemployment (Rao, 2017). Additionally, other family or friends may judge unemployed men more negatively, reinforcing the expectation of the male-breadwinner model (Cooper, 2014; Lamont, 2002).

Evidence supporting the role that gender norms play in mediating how unemployment determines the risk of divorce is largely indirect. Some researchers point to gender norms to interpret how husbands' unemployment increases the risk of divorce (Jalovaara, 2003; Killewald, 2016; L. C. Sayer et al., 2011), but none of these studies includes an explicit measure or test of this hypothesis. Gender norms have been shown to shape marriage and divorce rates (Pessin, 2018), but not individual-level mechanisms of divorce. Moreover, discussion about the role of gender norms and divorce has focused on wives by considering how wives' increased power challenge gender norms about women's roles in marriage (e.g. L. Sayer & Bianchi, 2000). Less attention has been paid to how changes in husbands' economic positions affect families by challenging related gender norms. With the exception of Killewald (2016), studies typically assume that husbands' weak economic position is negative for marital stability solely due to economic stress, rather than stress caused by a break of gender norms (e.g. Oppenheimer, 1997; Schoen et al 2002).

This paper is the first to include direct tests to see if gender norms, in particular male-breadwinning norms, mediate the association between unemployment and divorce. We do this in two ways. First, we leverage cross-national variation in popular support for the male-breadwinner role and examine whether the effect of husbands' unemployment varies with the prevalence of this gender norm. We harmonized panel data for 30 countries from 2004 to 2014 and use the International Social Survey Programme and the European Social Survey to generate measures about male-breadwinner norms. Second, we examine differences between married and cohabiting couples as well as couples with children and childless couples to see whether husbands' unemployment increases the risk of divorce even more when the male-breadwinner identity is most salient.

This study focuses on unemployment among heterosexual marital and cohabiting unions. Note that unemployment is distinct from non-employment or inactivity. Unemployed individuals are those who are involuntarily jobless and actively looking for a job. Our analysis covers the period of the Great Recession, which provides a particularly interesting time to examine this relationship, as many countries saw a dramatic increase in unemployment and the risk of job loss became arguably more exogenous and less linked to individual's attributes. We use the terms divorce, husband, and wife, as general concepts applicable to either married or cohabiting unions. These concepts substitute the more precise but uncommon terms of union dissolution, male-partner, and female-partner, respectively.

Our results show that male-breadwinner norms condition how job losses affect the risk of divorce. We find that husbands' unemployment is most likely to lead to divorce in countries where there is high support for the male-breadwinner role and in situations in which this identity is most salient, namely among married couples with children. Wives' unemployment also

increases the risk of divorce but to a much lesser extent than husbands', and this effect is largely insensitive to variation in gender norms or to other couple characteristics. In contrast to the approaches focusing on the economic aspects of unemployment, our results provide strong support for the role of social norms shaping how couples experience unemployment.

BACKGROUND

The standard approach to explain the relationship between unemployment and divorce focuses on the economic consequences of job loss (Conger et al., 1990; Elder et al., 1992; Hansen, 2005; Jalovaara, 2003; Liker & Elder, 1983). This emphasis is consistent with the *financial strain* approach, which posits that marriages are destabilized by lack of income (Brines & Joyner, 1999; Dechter, 1992). When couples face financial difficulties, marital conflict becomes more likely and couples are at higher risk of splitting up (Komarovsky, 1971; Liker & Elder, 1983). Some studies find evidence suggesting that financial strain is a major factor. Hansen (2005) finds that in Norway the negative effect of men's unemployment disappears when they receive social assistance that compensates for earnings losses. Similarly, Blekesaunae (2008) shows that in the UK, male unemployment does not raise the risk of divorce if financial satisfaction is taken into account, suggesting that as long as male unemployment does not produce financial strain, other factors associated with it do not seem to increase marital instability. The financial strain approach would suggest that any event that produces a loss of income from either husbands or wives can increase the risk of divorce –e.g. if her earnings are higher than his, then the loss of her job would be more likely to increase marital instability than the loss of his job. Thus, net of earnings differentials, husbands' and wives' unemployment is expected to increase the risk of divorce in similar magnitude.

The *exchange/bargaining* approach provides another lens to examine the relationship between unemployment and divorce. This model is based on the idea that individuals choose to enter into marriage when it increases their wellbeing, that marital happiness depends on bargaining for ones' own wishes, and that employment and earnings provide an individual with increased bargaining power (e.g. Lundberg & Pollak, 1996). This approach has been used extensively to examine the effect of wives' employment on divorce (sometimes called the independence hypothesis). The idea is that wives' employment and potential economic independence make the threat of divorce credible and allow her to bargain for better marital relations or to exit poor quality marriages (L. C. Sayer et al., 2011). The reverse dynamic is also true; studies show that economic dependency lowers the risk of divorce (Heckert, Nowak, & Snyder, 1998; Nock, 2001; Rogers, 2004; Schwartz & Gonalons-Pons, 2016). Both wives and husbands are less likely to initiate divorce if they are economically dependent on their partner (L. C. Sayer et al., 2011). Unemployment increases the economic dependency of one partner and the relative bargaining power of the other, the first dimension should reduce the risk of divorce but the second could either reduce or increase the risk of divorce. Regardless of which dimension dominates, like the financial strain perspective, this approach does not expect a gender pattern in how unemployment links to divorce after income differences between husbands' and wives' are taken into account.

With a few exceptions, studies regularly find that the link between unemployment and divorce is gendered (Eliason, 2012; but see Hansen 2005; Jalovaara, 2003; e.g. Jensen & Smith, 1990; L. C. Sayer et al., 2011). The financial strain and bargaining approaches offer no explanation for this pattern beyond the income differentials between husbands and wives. The *marriage as a gendered institution* approach however, focuses explicitly on how gender norms

shape marital stability beyond purely financial mechanisms (Killewald, 2016; L. C. Sayer et al., 2011). This approach posits that gender norms and performance are central to marriage, and that deviations from normative gender relations in marriage bring increased emotions, tensions, and conflicts, as individuals are forced to account for their deviance (West & Zimmerman, 1987). Because there are strong social norms about the gender division of labor in marriage, couples who do not follow these norms are more at risk of divorce. Most research using this approach has focused on women's employment and economic superiority as a form of deviance from gender norms. Studies show that when women earn more than their husbands the likelihood of divorce increases (for a review see L. Sayer & Bianchi, 2000). Because gender is done in multiple realms at once, the disruptive effect of deviating from gender norms in one realm can be neutralized by over-performing gender norms in a different realm (Tichenor, 2005). Cooke (2006), for example, finds that wives' earnings are more weakly linked to divorce among couples who have a conventional gender division of housework. Relatedly, because gender norms about the division of labor can change over time and vary in strength across societies, the effects of these patterns can shift. The rise of egalitarian marriage norms would be consistent with results in Schwartz & Gonalons-Pons (2017), who show that wives out-earning their husbands in the US were more likely to divorce in the 70s and 80s, but that since the 90s this is no longer the case.

Wives who out-earn their husbands might challenge conventional gender norms about the division of labor in marriage, as do unemployed husbands. The male-breadwinner model is a strongly held gender norm that is deeply rooted in societal constructions of marriage. In fact, some argue that gender norms about women's work have changed while norms about men's work have changed much less (England, 2010; Killewald, 2016). This may help explain why wives' employment or economic dominance is no longer likely to increase the risk of divorce in

the US (Schwartz & Gonalons-Pons, 2016), but husbands failure to fulfil the male-breadwinner role is still a significant factor that increases divorce (Killewald, 2016). The marriage as a gendered institution approach expects the effect of husbands' unemployment to be stronger than that of wives' as a result of gender norms that support the male-breadwinner model. This pattern should be strongest among married couples, because compared to cohabiting couples their accomplishment of gender is most sensitive to traditional norms about the division of labor (Brines & Joyner, 1999; Shelton & John, 1993; South & Spitze, 1994). Other couple characteristics, such as parenthood status, might similarly heighten gendered expectations.

Another approach that also anticipates a gendered association between unemployment and divorce is Becker's (1991) theory of marriage. This theory posits that marriage is most beneficial when couples specialize consistently with husbands' higher relative productivity in paid work and wives' higher relative productivity in home production. From this perspective, husbands' unemployment increases the risk of divorce because it declines the gains of marriage, while wives' unemployment should increase the gains of marriage by adding home production. Jensen and Smith (1990) use this framework to interpret their finding that husbands' but not wives' unemployment rises the risk of divorce. Similarly, Weiss and Willis (1997) support Becker's framework showing that husbands' positive earnings shock reduce the risk of divorce but wives' positive earnings shock increase the risk of divorce. Unlike the marriage as a gendered institution approach, Becker's gendered pattern is a function of the gains to marriage given wives' and husbands' relative market productivities and it is not expected to vary across gender norms or couple status.

It is possible that multiple mechanisms are at play at the same time. For instance, husbands' unemployment could increase both financial strain and also marital stress due to

gender deviance, both increasing the risk of divorce. A stronger effect of husbands' unemployment than wives' is consistent with both the gendered institution approach and Becker's theory of marriage. Thus far, studies have offered limited empirical evidence about the different mechanisms implied in these two theoretical approaches, in part due to lack of direct measures about gender norms. A few studies tried to get at the effect of gender norms by leveraging change over time, assuming that gender norms about employment in marriage have changed over time (Killewald, 2016; Schwartz & Gonalons-Pons, 2016). While important, these tests are indirect and cannot conclude whether gender norms are pivotal. We fill this gap and offer direct empirical evidence about the role of gender norms in shaping how unemployment is associated with the risk of divorce.

DATA, MEASURES, AND METHODS

Data

We use panel data on married and cohabiting couples in 30 countries from 2004 to 2014. We harmonized five major panel surveys: the US Survey of Income and Program Participation (SIPP), the European Union Survey on Income and Living Conditions (EU-SILC), the German Socioeconomic Panel (GSOEP), the British Household Panel Study (BHPS), and the Understanding Societies Survey (UKHLS). All these household surveys contain the most high-quality longitudinal information on family income dynamics in the United States and Europe. Because each survey has a different design, we harmonized all datasets to reflect the EU-SILC design that offers the minimum common denominator. The EU-SILC has a four-year rotating panel structure and interviews households once per year.

Our sample is comprised of 337,866 heterosexual couples who are married or cohabiting and both partners under sixty years of age at the time of the first interview. Couples are followed for four consecutive years and report their marital status and partner id in each survey wave. We construct a couple-year file with couples' union status (our dependent variable), husband's and wives' unemployment incidence (our key independent variable), and all other relevant demographic and economic variables. Next, we describe all our variables in detail.

Key measures

Divorce is measured as the end of a cohabiting or marital union by the following interview. A couple is identified as dissolving when either partner changes their marital/cohabiting status and the couple is no longer living together. Cohabiting couples who marry during the survey are right-censored and do not contribute to the married sample.

Unemployment incidence is identified using respondents' employment status at the time of the interview. A respondent is unemployed when she or he does not currently have a job and is looking for one. This is the only measure of unemployment available for all countries and years. In sensitivity tests, we use employment calendar data for the year prior to the interview that is available for a subset of countries. This refined measure allows us to distinguish between unemployment spells preceded by inactivity from unemployment spells preceded by employment, the latter being a more direct measure of job losses (see robustness check section below).

Male-breadwinner norms are measured as the proportion of people who agree with the idea that man's primary role is to be breadwinners. We use data from the International Social Survey Programme (ISSP) and the European Social Survey (ESS) to cover the 30 countries in

our dataset. ISSP 2012-2013 asks respondents whether they agree/disagree with the following statement: “Men’s job is to earn money, women’s job to look after home.” ESS 2004 and 2008 asks respondents whether they agree/disagree with the following statement: “Men should have more right to job than women when jobs are scarce.” Despite differences in these statements, expressing agreement with either one implies support for the male-breadwinner model. Because some countries participate in both surveys while others only participate in one (i.e. US data is only available in ISSP), our final measure uses ISSP data for the US and Latvia, and ESS data for the remaining countries. We use averages for countries that only have data for one year and use linear interpolation for countries that have data for multiple years. Our results are robust to alternative specifications of this measure, such as using only ESS or ISSP data (results available upon request).

Individual-level control variables

Our models include standard control variables to eliminate potential confounders. To identify the association between unemployment and divorce net of financial strain and income differentials between partners, we use *income* measures from husbands’ and wives’ earnings reports for the year prior to the interview. Earnings are harmonized to 2010 US dollars. This lag of one year follows standard practice to avoid earnings adjustments in anticipation of divorce (Poortman, 2005; Teachman, 2010). This measure is somewhat imperfect because it encompasses a mix of pre- and post- unemployment earnings depending on when the unemployment began. The short nature of the panel precludes us from including more specific measures of pre-unemployment income and/or income loss. We are confident, however, that the annual earnings for the year prior to the interview provides a good approximation for the magnitude of potential income loss

associated with unemployment and the pre-unemployment pattern of economic dependence between partners.

Analyses also include controls for standard sociodemographic characteristics. Age is coded as a continuous variable and is time-varying. Education level is summarized in three categories (1 = high school or less; 2 = post-secondary no college degree; 3 = college degree and above) and is time-invariant. We include age and education measures for both partners. Following standard practice, we also include two time-varying indicators of couple investments: children and home ownership. We use dummy variables for both these measures, and also add a measure for whether the couple has a dependent child in the household (youngest child age 18 or below). We are unable to include other detailed information on martial duration or order, because this data is not available in the EUSILC. Age is an imperfect control for marital duration or order. Thus, our coefficients average across different types and stages of unions, and are equivalent to models including information on marital duration without modelling interactions between duration and covariates of interest, or assuming parallel hazard rates. This is not problematic for our analyses because the coefficients of interests are unlikely driven by an unobserved interaction with union duration (South & Spitze, 1986) and sensitivity analyses show results to be robust to different populations (e.g. young couples with wives below age 45, results available upon request).

Country-level control variables

We include controls for country-level characteristics that can shape the relationship between unemployment and divorce and correlate with the prevalence of male-breadwinner norms. We use OECD data on the generosity of unemployment protection policies, unemployment rate,

women's employment rate, and GDP. Differences across countries in unemployment policies and rates are important because they can determine the extent to which unemployment incidence leads to substantial income losses and economic uncertainty. If countries with weak unemployment benefits were also countries with greater support for the male-breadwinner model, the interaction between male-breadwinner norms and husbands' unemployment could be spurious and reflect underlying differences in unemployment benefits. The rationale for including unemployment rate is similar. Controls for GDP and women's employment rate are meant to capture cross-national variation and over-time variation in countries' macroeconomic environment and women's opportunities in the labor market.

Table 1 provides a summary of our macro-level variables; countries are ranked by the prevalence of male-breadwinner values. Sweden (SE) shows the lowest score in male-breadwinner values, only 4% of the population agree with the statement that men's primary role is breadwinning; while Greece has the highest score in this measure, 47% of the population holds values that support the male-breadwinner model. Countries with low support for the male breadwinner model tend to have more generous unemployment protection policies, lower rates of unemployment, and higher rates of women's employment.

Methods and analysis plan

We use multi-level discrete-time event history models to accommodate the nested structure of our data; marriage/cohabiting spells nested in countries and nested in panel-years (defined by the starting point of the rotating panel). More specifically, we estimate three-level logistic regressions with random intercepts at the country and panel-year levels. Country-level random intercepts allow for couples from the same country to be more similar than couples from

different countries, while panel-year random intercepts allow for couples within the same panel-years to share more similarities than couples that start in different panel-years (e.g. couples we start observing in 2004 are more similar amongst themselves than couples we start observing in 2010). The baseline model can be written as follows,

$$logit(h_{ict}) = \beta_{0ct} + \beta_1 HDU_{ict} + \beta_2 HDU_{ict} + \boldsymbol{\beta}_r \boldsymbol{X}_{ictr} + \omega_t + u_c + \varepsilon_i$$

Where h_{ict} is the hazard of divorce for a couple in country *c* and panel-year *t*; β_{0ct} is the intercept that varies across countries and panel-years, $\beta_1$is the coefficient for husbands' unemployment, $\beta_2$the coefficient for wives' unemployment, and $\boldsymbol{\beta_r}$ is a series of coefficients for the remaining individual-level control variables. Terms ω_t, u_c and ε_i are random errors at the panel-year, country and couple levels, respectively.

The analysis proceeds in four steps. First, we estimate a baseline model with random intercepts at the country and panel-year levels. This allows divorce rates to vary across country and panel-years but the effects of covariates are assumed to be fixed across countries, e.g. the effect of husbands' unemployment on divorce is the same in the US as in Germany. Second, we estimate models including random slopes for individual-level covariates at the country level, allowing for the effects of covariates to vary across countries; e.g. the effect of husbands' unemployment on divorce can be different in the US and in Germany. Third, we test for cross-level interactions between unemployment and the prevalence of male-breadwinner values. This model provides the key test for the central idea of this study, namely that the negative effect of husbands' unemployment on divorce is in part a function of the prevalence of male-breadwinner values in the country. Lastly, we test whether the relevance of gender norms is contingent on

marital status by comparing married and cohabiting couples. The equation for our full model (step 3), can be written as follows,

$$logit(h_{ict}) = \beta_{0ct} + \beta_{1c}HDU_{ict} + \beta_{2c}HDU_{ict} + \beta_3\boldsymbol{BWV}_{ct} + \boldsymbol{\beta}_{cr}\boldsymbol{X}_{ictr} + \boldsymbol{\beta}_g\boldsymbol{Z}_{ctg} + \omega_t + u_c + \varepsilon_i$$

$$\beta_{0ct} = \gamma_{o0} + \gamma_{01}\boldsymbol{BWV}_{ct} + \gamma_{0g}\boldsymbol{Z}_{ctg} + u_{0ct}$$

$$\beta_{1c} = \gamma_{10} + \gamma_{11}\boldsymbol{BWV}_{ct} + u_{1c}$$

$$\beta_{2c} = \gamma_{20} + \gamma_{21}\boldsymbol{BWV}_{ct} + u_{2c}$$

Where β_{0ct} is the random intercept modelled with explanatory variables at the country-level, β_{1c}, β_{2c}, and β_{cr} are random slopes that allow the coefficients to vary across countries, β_{1c} and β_{1c} random slopes vary as a function of male-breadwinner values BWV, and $\boldsymbol{\beta}_g$ is a battery of coefficients for country-level controls.

RESULTS

Table 2 shows descriptive statistics for our full pooled sample and by country. In our sample of 337,866 couples, we observe 13,796 divorce events (4% of the sample), and 17% of divorce instances are preceded by either his or her unemployment. Married couples constitute the majority of our sample, cohabiting couples comprise 20% of the overall. The prevalence of unemployment is similar for wives and husbands, about 7% report being unemployed at some point during the survey. Wives are on average slightly younger than husbands and more likely to hold a college degree, a pattern that is consistent with the reversal of the gender gap in education.

With a few exceptions, these patterns are largely replicated across all countries in the dataset. As expected, however, countries vary in the prevalence of divorce, unemployment, and marriage.

If husbands' unemployment is most prone to divorce when gender norms are more traditional, we should observe a greater proportion of couples splitting up among those who experience husbands' unemployment than among those who do not experience it in countries with widespread support for the male breadwinner model. Figure 1 offers a descriptive picture to assess this by plotting the odds ratio of divorce for couples that experience husbands' unemployment. Values above one indicate that the odds of divorce are higher among couples with unemployed husbands. For instance, the 2.16 value for the US indicates that the odds of splitting up are more than twice as high for couples with unemployed husbands. Figure 1 shows that there is considerable cross-country variation in the extent to which husbands' unemployment is linked to higher risk of divorce. It also shows that countries with high levels of male-breadwinner values only tend to display a slightly greater concentration of divorce among couples that experience husbands' unemployment. However, because Figure 1 does not account for differences in the composition of couples or differences in how other couple characteristics are associated with the risk of divorce, it cannot confirm whether the hypothesis is consistent with evidence controlling for these factors. Regression analyses presented next will formally test for this hypothesis.

Table 3 presents regression results for five models. We will first discuss the baseline model (Model 1) and then move to test our hypotheses in subsequent models. Consistent with previous studies, we find that unemployment clearly increases the risk of divorce. Model 1 estimates that, compared to couples who do not experience unemployment, couples in which either partner experienced unemployment are more likely to be divorced in the following year.

The size of the coefficient for his unemployment is about double that for her unemployment. This pattern is consistent with previous studies (Eliason, 2012; but see Hansen 2005; Jalovaara, 2003; Jensen & Smith, 1990; L. C. Sayer et al., 2011). Because the baseline model does not control for earnings yet, the difference between her and his unemployment could be merely a result of the fact that his earnings are typically higher than hers and that, consistent with the financial strain approach, his job loss puts the family under greater financial stress. The coefficients of control variables are as expected. Cohabiting couples have a much higher risk of dissolution than married couples. Higher levels of education of either spouse lower the risk of divorce as do both types of marital investments, having young children and home ownership.

Model 2 incorporates controls for his and her earnings in the previous year and finds that the coefficients for her and his unemployment remain unaltered after controlling for earnings. This means that regardless of whether the husband or wife was the primary wage earner the previous year, if the husband is unemployed this year the likelihood that they will split up by next year is nearly double than if the wife is unemployed this year. This result is inconsistent with the financial strain and exchange/bargaining approaches because neither the effect of unemployment nor the difference between husbands' and wives' unemployment is explained by differences in earnings. Because our measure of income does not capture exact income loss, we cannot rule out the possibility that we miss capturing some effects of couples at different income levels experiencing different income losses. Perhaps a more specific measure of income could bring the coefficients slightly down. However, it is unlikely that income loss accounts for a large share of the overall effect –there are clearly additional mechanisms linking unemployment and divorce risk that operate above and beyond financial stress.

Model 3 incorporates random slopes for her and his unemployment and other individual-level control variables. This tests for country-level variation in individual covariates and confirms that the size of the estimated main effects is not driven by a combination of different compositions and effects across countries (Heisig, Schaeffer, & Giescke, 2015). For instance, if the effect of cohabitation on divorce is smaller in countries where cohabitation is more common (Liefbroer & Dourleijn, 2006), we would overestimate the main effect if many of our observations came from countries where cohabitation is rare. We also know that the educational gradient of divorce varies across countries (Kalmijn, 2013) and random slopes guarantee that this variation does not bias the coefficients of interest. Model 3 provides evidence that individual-level effects do vary notably across countries but the size of the fixed coefficients does not change much. The likelihood ratio test comparing Model 3 against Model 2 is statistically significant, indicating that random slopes improve the model fit.

Do gender norms about the male-breadwinner model mediate the relationship between unemployment and divorce? The first indicator of the influence of norms is the gender gap in the effect of unemployment, net of income differentials. The gap estimated in Model 3 says that husbands' unemployment is more than twice as likely to lead to divorce as wives' unemployment. Wives' unemployment increases the risk of divorce by 15 percentage points whereas husbands' unemployment increases the risk by 38 percentage points. However, this gap is a weak test of the gender norms mechanism because it can emerge from a number of unobserved confounders. For instance, it could be that husbands' jobs are higher quality (or more stable) than wives' and thus controlling for earnings is not sufficient to determine to what extent losing his or her job increases financial stress. Because the threat of unobserved confounders can never be totally eliminated, measuring how widespread traditional gender norms are held is a

stronger test of the gender norms mechanism. Model 4 does this by including a cross-level interaction between the prevalence of male-breadwinner norms at the country level and husbands' and wives' unemployment. We find that when he is unemployed the associated increase in the risk of divorce is substantially more pronounced in countries with high prevalence of male-breadwinner values. In countries with average male-breadwinner values the odds of divorce are 37 percentage points higher among couples with unemployed male partners. The odds ratio goes up to 50 percentage points with an increase of one standard deviation in the male-breadwinner values scale. In the case of wives' unemployment, the interaction is not statistically significant. This might seem surprising, since the effect of her unemployment could be thought to vary in the opposite direction of his, if male-breadwinner values were responsible for reducing the relevance of her unemployment in a similar way that they increase the relevance of his unemployment. Instead, results suggest that male-breadwinner values accentuate the consequences of his unemployment with no effect on hers. Figure 2 illustrates this finding by plotting the marginal effects of her and his unemployment across different levels of male-breadwinner norms. It shows that the gender gap in the unemployment coefficients grows as the proportion of the population that supports the male-breadwinner role increases. In countries with below-average male-breadwinner values there is no longer a gender gap in unemployment coefficients, both his and her unemployment are associated with similar increases in the risk of divorce.

To further test our findings, we incorporate several country-level variables that control for possible confounders. It is possible that the cross-level interaction picks up cross-country variation in other things correlated with the prevalence of traditional gender norms. It could be that countries with higher support for the male-breadwinner model are also countries with poor

unemployment insurance programs and where job losses notably increase the risk of poverty and social exclusion. To account for this and other possible confounders we incorporate country-level control variables for GDP, women's employment rate, unemployment rate, and generosity of unemployment protection programs; and test for both main effects and cross-level interactions. Model 5 presents one set of these results (others available upon request). The results are robust to all major potential confounders, which boosts our confidence that the interaction between male-breadwinner values and husbands' unemployment is indeed capturing the effect of gendered norms about employment in marriage. The results support the marriage as a gendered institution framework, showing that gender norms about employment in marriage shape how husbands' unemployment increases the risk of divorce.

Variation by couple status

To further probe the hypothesis that gendered norms about employment in marriage shape how husbands' unemployment increases the risk of divorce, we examine whether this pattern varies by couple status. If our measure is indeed capturing the role of gender norms, we should observe the pattern to be strongest among couples for whom the accomplishment of gender is most sensitive to traditional gender norms. Previous studies suggest that marriage heightens gendered expectations (Brines & Joyner, 1999; Shelton & John, 1993; South & Spitze, 1994) and we consider whether parenthood does so too.

Table 4 presents the results of these analyses. Models 1 contrasts married and cohabiting couples and Model 2 compares couples with and without children. Figure 3 represents the three-way interaction coefficients between unemployment, male-breadwinner norms, and the two

couple status variables: married/cohabiting and parent/childless. The results for cohabitation show that among cohabiting couples the coefficient for his unemployment is insensitive to changes in male-breadwinner norms. Only among married couples do we observe that the greater the prevalence of male-breadwinner support, the greater the coefficient for his unemployment. The result shows that the difference between his or her unemployment is very small among cohabiting couples and that the gendered pattern is exclusively found with married couples. The results for parenthood status are slightly different. We find that the coefficient for husband's unemployment is slightly smaller among childless couples, but that male-breadwinner norms are relevant mediators for both couples with and without children. Perhaps surprisingly, this result suggests that sensitivity to traditional gendered norms might not be all that different for parents and childless couples.

Altogether, both sets of results support the idea that gender norms mediate the relationship between unemployment and divorce, and that couple characteristics condition the saliency of such norms. The results on cohabitation, in particular, are consistent with previous studies (e.g. Brines & Joyner, 1999) and reinforce the idea that both married and cohabiting couples may react poorly to financial strain but that married couples suffer more directly when male unemployment challenges prescribed gender norms.

Other robustness checks

One notable weakness of our analysis is our measure of unemployment, which does not distinguish between job loss and other forms of unemployment, such as looking for jobs after finishing school or after a period of economic inactivity. This is problematic because

unemployment not related to job loss might be both more prevalent among wives and also less prone to spur marital conflict; as suggested by research that disaggregates different types of unemployment and sources of job loss (e.g. layoffs vs plant closure) (Charles & Stephens, 2004; Doiron & Medolia, 2011; Eliason, 2012). We conducted sensitivity analyses using a sub-set of countries for which we have employment calendar information where unemployment solely indicates job loss instances. We used last year's employment calendar to code transitions from employment to unemployment, including left-censored cases (or individuals who are observed unemployed at the beginning of the employment calendar). Because we do not know the origin of left-censored unemployment spells, we include a control variable for labor force attachment to capture cases of unemployment among individuals who have weak attachment to the labor market. All results and patterns discussed above are replicated with this restricted sample, and confirm that our findings reflect job losses and are not a product of differences in men's and women's unemployment experiences.

DISCUSSION

Our study shows that gendered norms about employment in marriage shape the extent to which unemployment increases the risk of dissolution. We find that husbands' unemployment increases the risk of divorce more in countries where the male-breadwinner model is strongly embedded in social and cultural values, i.e., where a large share of the population believes that breadwinning is men's primary role. In these countries, husbands' unemployment increases the risk of divorce much more than wives' unemployment. In countries where only a minority of the population believe that breadwinning is men's primary role, husbands' unemployment is not as strongly

linked to divorce and the effect is no different to wives' unemployment. Our findings are consistent with prior work emphasizing the importance of gender norms to understand stability and satisfaction in marriage (e.g. L. C. Sayer et al., 2011). This study is the first to provide a direct test of how gender norms, particularly the male-breadwinner model, play a role in the relationship between unemployment and divorce. While prior studies have identified the gender norms mechanism indirectly, this study measures the prevalence of support for the male-breadwinner model in different countries and correlates that data with the likelihood of male unemployment to increase the risk of divorce.

In this way, our study provides a strong test of the gender norms mechanism, focusing on the prevalence of the male-breadwinner model. Our results also challenge Becker's claim that the gendered pattern is the result of differences in men's and women's relative productivities. Previous studies suggested that gender norms could explain why husbands' unemployment was particularly strongly linked to divorce than wives' (Killewald, 2016; L. C. Sayer et al., 2011). However, because these studies did not include direct measures of gender norms, they could not address the alternative interpretation that deviations from gender specialization decline the gains to marriage (Becker, 1974; Becker, Landes, & Michael, 1977). By showing that the effect of husbands' unemployment is directly sensitive to cross-country variation in gender norms and to couples' marital status, our results provide compelling support for the gender norms mechanism.

We find that in countries with below-average support for male-breadwinner values, husbands' unemployment is no more likely to lead to divorce than wives' unemployment, *ceteris paribus*. This result is interesting in light of discussions about the rigidity of masculinity norms. The gender revolution framework says that attitudes towards women's economic roles shifted much faster and more drastically than attitudes towards men's economic roles (England, 2010).

This has led some to suggest that shifts in masculine norms are more rigid or lagging behind (Killewald, 2016; L. C. Sayer et al., 2011). Strongly held cultural and social norms change slowly over time. For instance, while voiced support for male-breadwinner values may be low, the emotional response when a man fails to fulfil his previous role as the breadwinner may be stronger. While this phenomenon seems to be playing out in most countries, the results suggest that this is no longer the case in others countries. Our findings suggest that norms about men's employment might be changing despite the rigid association between masculinity and wage-earning.

Gender norms about employment and marriage frame how individuals feel about job loss and how others respond to job loss. While this analysis cannot provide details about the lower-level mechanisms through which gender norms shape the effect of unemployment on divorce, the *marriage as a gendered institution* approach suggests that it can operate through a number of venues. Partners and friends might express higher disappointment and disapproval of his job loss than her job loss (Rijken & Liefbroer, 2016). Men might suffer more emotionally from job loss than women (Rao, 2017). Both husbands and wives might feel a more intense need to account for husbands' job loss than wives' (Tichenor, 2005). Though not the focus of this study, our analyses offer limited support to the *financial strain* and the *bargaining* approaches. Our results show that earnings do not substantially reduce the effect of unemployment on divorce, and that the pattern where his unemployment is more disruptive than hers is not driven by earnings differentials between husbands' and wives'. Rather, our findings support the hypothesis that, where traditional gender norms are held, they play a significant role in shaping the relationship between unemployment and divorce.

REFERENCES

Becker, G. S. (1974). A Theory of Marriage. In T. W. Schultz (Ed.), *Economics of the Family: Marriage, Children, and Human Capital*. Chicago: University of Chicago Press.

Becker, G. S., Landes, E. M., & Michael, R. T. (1977). An Economic Analysis of Marital Instability. *The Journal of Political Economy, 85*(6), 1141-1187.

Blekesaune, M. (2008). *Unemployment and Partnership Dissolution*. Retrieved from

Brines, J., & Joyner, K. (1999). Ties that Bind: Principles of Cohesion in Cohabitation and Marriage. *American Journal of Sociology, 64*(3), 333-355.

Charles, K. K., & Stephens, M. (2004). Job Discplacement, Disability, and Divorce. *Journal of Labor Economics, 22*(2), 489-522.

Conger, R. D., Elder, G. H., Lorenz, F. O., Conger, K. J., Simons, R. L., Whitbeck, L. B., . . . Melby, J. M. (1990). Linking Economic Hardship to Marital Quality and Instability. *Journal of Marriage and Family, 52*(3), 643-656.

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*(2), 442-472.

Cooper, M. (2014). *Cut adrift: families in insecure times*. Berkeley: University of California Press.

Dechter, A. R. (1992). The Effect of Women's Economic Independence on Union Dissolution. *CDE Working Paper 92-28*.

Doiron, D., & Medolia, S. (2011). The Impact of Job Loss on family Dissolution. *Journal of Population Economics, 25*(1), 367-398.

Elder, G. H., Conger, R. D., Foster, E. M., & Ardelt, M. (1992). Families under economic pressure. *Journal of Family Issues, 13*, 5-37.

Eliason, M. (2012). Lost jobs, broken marriages. *Journal of Population Economics, 25*, 1365-1397.

England, P. (2010). The Gender Revolution: Uneven and Stalled. *Gender and Society, 24*(149), 149-166.

Gonalons-Pons, P., & Schwartz, C. (2017). Trends in Economic Homogamy: Changes in Assortative Mating or the Division of Labor in Marriage? *Demography*.

Hansen, H.-T. (2005). Unemployment and Marital Dissolution: A Panel Data Study of Norway. *European Sociological Review, 21*(2), 135-148.

Heckert, A., Nowak, T. C., & Snyder, K. A. (1998). The Impact of Husbands' and Wives' Relative Earnings on Marital Dissolution. *Journal of Marriage and Family, 60*(3), 690-703.

Heisig, J. P., Schaeffer, M., & Giescke, J. (2015). Multilevel Modeling When the Effects of Lower-Level Variables Vary Across Clusters.

Jahoda, M., Lazarsfeld, P. F., & Zeisel, H. (2009). *Marienthal: the sociography of an unemployed community*. New Brunswick: Transaction Publishers.

Jalovaara, M. (2003). The joint effects of marriage partners' socioeconomic positions on the risk of divorce. *Demography, 40*(1), 67-81.

Jensen, P., & Smith, N. (1990). Unemployment and marital dissolution. *Journal of Population Economics, 3*, 215-229.

Kalmijn, M. (2013). The Educational Gradient in Marriage: A Comparison of 25 European Countries. *Demography, 50*, 1499-1520.

Killewald, A. (2016). Money, Work, and Marital Stability: Assessing Change in the Gendered Determinants of Divorce. *American Sociological Review, 81*(4), 696-719.

Komarovsky, M. (1971). *The Unemployed Man and His Family*. New York: Arno Press.

Lamont, M. (2002). *The dignity of working men*. Cambridge: Harvard University Press.

Liefbroer, A. C., & Dourleijn, E. (2006). Unmarried Cohabitation and Union Stability: Testing the Role of Diffusion Using Data from 16 European Countries. *Demography, 43*(2), 203-221.

Liker, J. K., & Elder, G. H. (1983). Economic hardship and marital relations in the 1930s. *American Sociological Review, 48*, 343-359.

Lundberg, S., & Pollak, R. A. (1996). Bargaining and Distribution in Marriage. *Journal of Economic Perspectives, 10*(4), 139-158.

Nock, S. L. (2001). The Marriages of Equally Dependent Spouses. *Journal of Family Issues, 22*(6), 755-775.

Pessin, L. (2018). Changing Gender Norms and Marriage Dynamics in the United States. *J Marriage Fam, 80*(1), 25-41. doi:10.1111/jomf.12444

Poortman, A.-R. (2005). Women's Work and Divorce: A Matter of Anticipation? A Research Note. *European Sociological Review, 21*(3), 301-309.

Rao, A. H. (2017). Stand By Your Man: Wives' Emotion Work During Men's Unemployment. *Journal of Marriage and Family*.

Rijken, A. J., & Liefbroer, A. C. (2016). Differences in Family Norms for Men and Women Across Europe. *Journal of Marriage and Family, 78*(4), 1097-1113. doi:10.1111/jomf.12310

Rogers, S. J. (2004). Dollars, Dependency, and Divorce: Four Perspectives on the Role of Wives' Income. *Journal of Marriage and Family, 66*, 59-74.

Sayer, L., & Bianchi, S. M. (2000). Women's Economic Independence and the Probability of Divorce. *Journal fo Family Issues, 21*(7), 906-943.

Sayer, L. C., England, P., Allison, P. D., & Kangas, N. (2011). She Left, He Left: How Employment and Satisfaction Affect Women's and Men's Decisions to Leave Marriages. *American Journal of Sociology, 116*(6), 1982-2018.

Schwartz, C. R., & Gonalons-Pons, P. (2016). Trends in Relative Earnings and Marital Dissolution: Are Wives Who Outearn Their Husbands Still More Likely to Divorce? *RSF: The Russell Sage Foundation Journal of the Social Sciences*.

Shelton, B. A., & John, S. (1993). Does marital status make a difference? Housework among married and cohabiting women. *Journal of Family Issues, 14*(3), 401-420.

South, S. J., & Spitze, G. (1986). Determinants of Divorce over the Marital Life Course. *American Sociological Review, 51*(4), 583-590.

South, S. J., & Spitze, G. (1994). Housework in marital and nonmarital households. *American Sociological Review, 59*(3), 327-347.

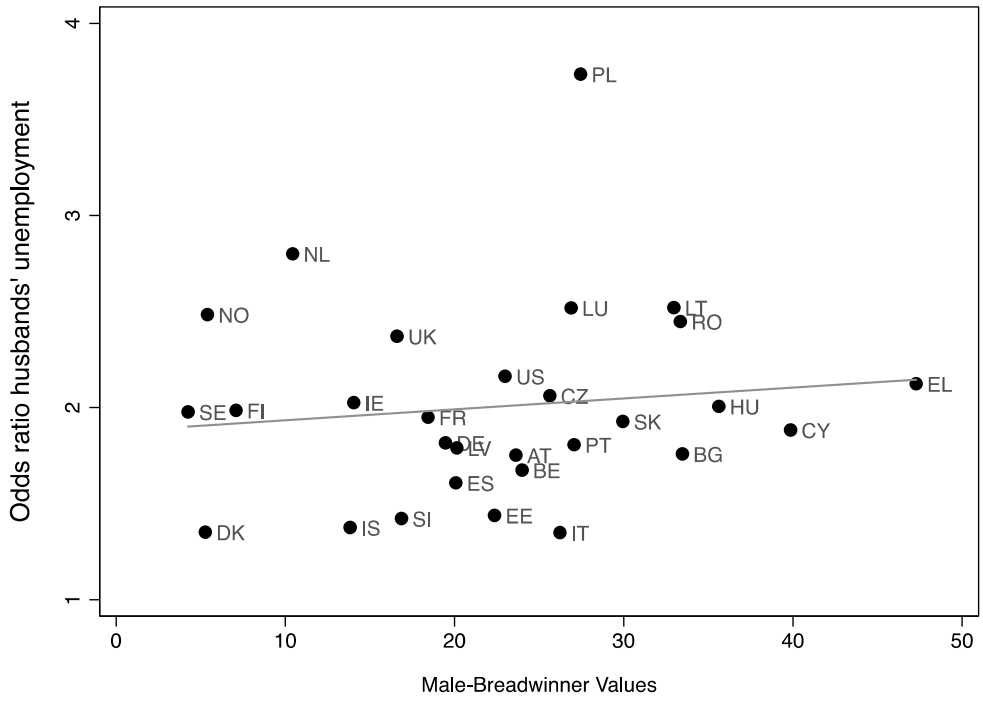
Teachman, J. D. (2010). Wives' Economic Resources and Risk of Divorce. *Journal of Family Issues, 31*(10), 1305-1323.

Tichenor, V. (2005). Maintaining Men's Dominance: Negotiating Identity and Power When She Earns More. *Sex Roles, 53*(3/4), 191-205.

Weiss, Y., & Willis, R. J. (1997). Match quality, new information, and marital dissolution. *Journal of Applied Economics, 15*(1), S293-S329.

West, C., & Zimmerman, D. H. (1987). Doing Gender. *Gender & society, 1*(2), 125-151.

FIGURE 1. DIVORCE ODDS RATIO FOR HUSBANDS' UNEMPLOYMENT BY MALE-BREADWINNER VALUES

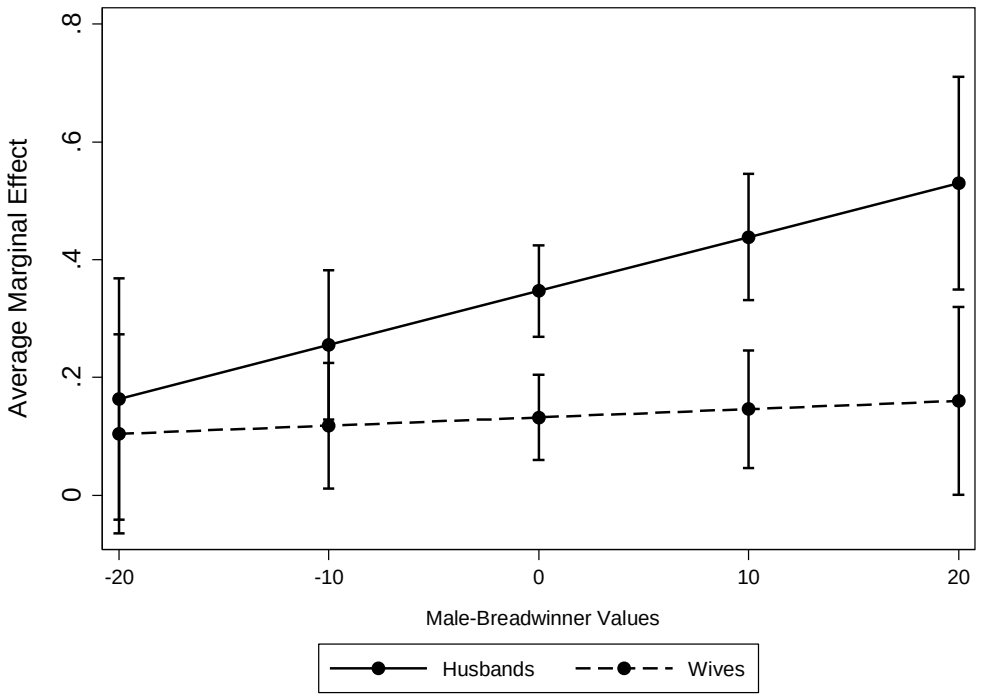


Notes: Plots coefficients from logistic regression with country fixed-effects interacted with husbands' unemployment.

Data sources: SIPP (US), GSOEP (DE), BHPS and UKHLS (UK), EU-SILC (all other countries).

Country legend: AT= Austria, BE= Belgium, BG= Bulgaria, CY= Cyprus, CZ= Check Republic, DE= Germany, DK= Denmark, EE= Estonia, EL= Greece, ES= Spain, FI= Finland, FR= France, HU= Hungary, IE= Ireland, IS= Island, IT= Italy, LT= Lithuania, LU= Luxembourg, LV= Latvia, MT= Malta, NL= Netherlands, NO= Norway, PL= Poland, PT= Portugal, RO= Romania, SE= Sweden, SI= Slovenia, SK= Slovakia, UK= United Kingdom, US= United States.

FIGURE 2. HUSBANDS' AND WIVES' AVERAGE MARGINAL EFFECTS BY MALE-BREADWINNER VALUES

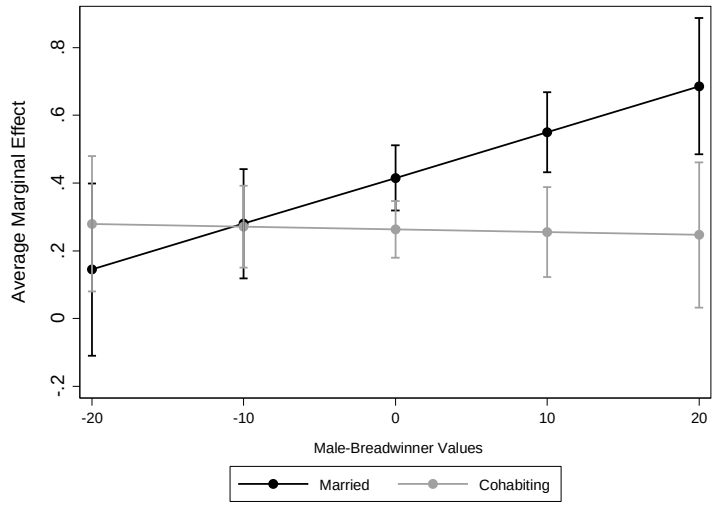


Notes: Male-breadwinner values are mean-centered

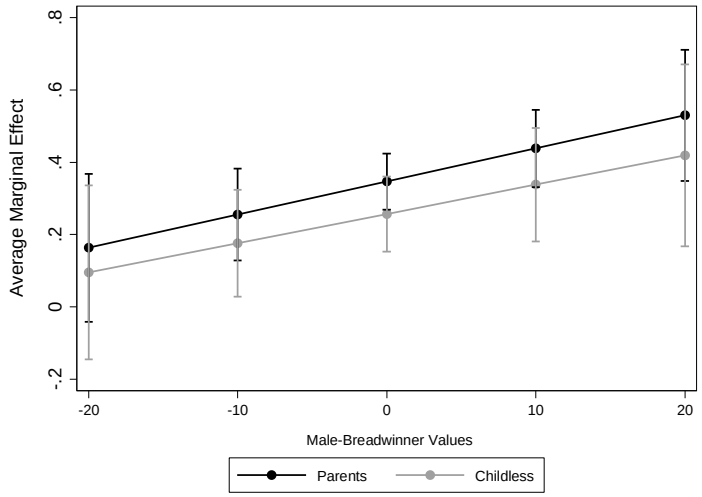
Data sources: SIPP (US), GSOEP (DE), BHPS and UKHLS (UK), EU-SILC (all other countries).

FIGURE 3. HUSBAND'S UNEMPLOYMENT AVERAGE MARGINAL EFFECT BY MALE-BREADWINNER VALUES AND FAMILY STATUS

Panel A. Married and cohabiting couples (Table 4, Model 1)



Panel B. Couples with and without children (Table 4, Model 2)



Notes: Male-breadwinner values are mean-centered

Data sources: SIPP (US), GSOEP (DE), BHPS and UKHLS (UK), EU-SILC (all other countries).

Table 1. *Prevalence of male-breadwinner values and other country-level variables*

Country	Rank	% agree men's primary role is breadwinning (BWV)	Unemployment benefit generosity (UGEN)	Unemployment rate (UR)	% change in GDP (GDP)	Proportion wives employed (WLFP)
SE	1	4.25	88.20	7.49	1.01	0.80
DK	2	5.27	72.88	5.63	1.00	0.81
NO	3	5.40	97.61	3.38	1.00	0.79
FI	4	7.09	92.65	7.84	1.00	0.69
NL	5	10.43	81.27	5.25	1.01	0.73
IS	6	13.83	81.56	5.04	1.01	0.72
IE	7	14.04	92.74	9.51	1.00	0.51
UK	8	16.60	77.36	6.70	1.01	0.69
SI	9	16.86	85.14	7.08	1.01	0.66
FR	10	18.44	71.71	9.25	1.00	0.68
DE	11	19.47	79.54	7.66	1.01	0.64
ES	12	20.08	45.40	17.99	0.99	0.48
LV	13	20.14	82.45	12.93	1.02	0.58
EE	14	22.36	56.07	9.45	1.03	0.63
US	15	22.99	45.94	7.24	1.01	0.61
AT	16	23.63	88.28	5.03	1.01	0.61
BE	17	23.99	72.21	7.88	1.01	0.66
CZ	18	25.63	76.15	6.40	1.02	0.66
IT	19	26.23	0.34	8.48	0.99	0.49
LU	20	26.90	89.70	4.89	1.01	0.57
PT	21	27.07	63.58	12.16	1.00	0.59
PL	22	27.45	70.78	10.05	1.04	0.55
SK	23	29.95	55.59	12.81	1.04	0.70
LT	24	32.96	76.58	11.73	1.03	0.67
RO	25	33.35	34.17	6.64	1.02	0.57
BG	26	33.47	53.61	9.69	1.02	0.58
HU	27	35.62	54.76	9.45	1.01	0.52
CY	28	39.86	104.15	8.44	0.99	0.63
EL	29	47.29	5.17	15.05	0.98	0.47

Data sources: BWV uses ISSP data for US and LT, and ESS data for all other countries; UGEN, UR, GDP use OECD data; WLFP is calculated from sample microdata.
Country legend: AT= Austria, BE= Belgium, BG= Bulgaria, CY= Cyprus, CZ= Check Republic, DE= Germany, DK= Denmark, EE= Estonia, EL= Greece, ES= Spain, FI= Finland, FR= France, HU= Hungary, IE= Ireland, IS= Island, IT= Italy, LT= Lithuania, LU= Luxembourg, LV= Latvia, MT= Malta, NL= Netherlands, NO= Norway, PL= Poland, PT= Portugal, RO= Romania, SE= Sweden, SI= Slovenia, SK= Slovakia, UK= United Kingdom, US= United States.

Table 2. *Sample descriptive statistics, selected variables*

	N couples	divorce	married	Unemployment		Age		College	
				husband	wife	husband	wife	husband	wife
Pooled sample	337866	0.04	0.80	0.07	0.07	43.53	41.06	0.25	0.28
SE	9524	0.10	0.47	0.03	0.04	42.50	40.21	0.29	0.40
NO	7504	0.04	0.67	0.02	0.02	43.24	40.82	0.34	0.41
DK	8897	0.04	0.76	0.02	0.04	44.77	42.62	0.34	0.41
FI	14501	0.04	0.69	0.05	0.05	43.65	41.68	0.35	0.46
NL	16397	0.01	0.79	0.02	0.01	44.37	42.13	0.38	0.33
IS	5381	0.06	0.64	0.03	0.03	42.54	40.64	0.26	0.35
IE	5085	0.02	0.85	0.13	0.04	43.91	41.93	0.39	0.39
SI	18546	0.02	0.77	0.09	0.11	45.59	42.76	0.16	0.23
UK	27747	0.05	0.74	0.06	0.03	41.97	39.75	0.28	0.30
FR	11155	0.05	0.65	0.06	0.08	42.46	40.26	0.30	0.34
LV	6410	0.07	0.77	0.14	0.10	42.89	40.96	0.19	0.30
DE	13104	0.10	0.75	0.08	0.06	41.02	38.24	0.34	0.26
ES	21996	0.03	0.85	0.12	0.14	44.39	41.96	0.27	0.30
US	32286	0.08	0.88	0.06	0.05	42.50	40.54	0.30	0.31
AT	8863	0.05	0.80	0.04	0.04	43.11	40.41	0.23	0.17
EE	7240	0.06	0.65	0.09	0.06	42.22	40.10	0.22	0.35
BE	8647	0.05	0.72	0.06	0.07	42.46	40.13	0.36	0.42
CZ	10240	0.03	0.83	0.04	0.07	43.71	41.17	0.16	0.15
IT	24877	0.02	0.90	0.05	0.07	45.12	42.01	0.12	0.14
LU	6879	0.04	0.78	0.04	0.05	42.24	39.58	0.28	0.28
PL	19160	0.02	0.93	0.08	0.12	43.47	41.08	0.15	0.21
PT	4584	0.02	0.86	0.10	0.12	43.80	41.39	0.09	0.15
SK	4594	0.03	0.96	0.06	0.10	44.13	41.81	0.19	0.20
LT	4269	0.03	1.00	0.10	0.08	45.80	43.86	0.23	0.35
RO	7058	0.01	0.96	0.04	0.02	44.89	41.69	0.13	0.12
BG	5919	0.03	0.86	0.16	0.18	44.11	40.94	0.15	0.23
HU	13082	0.05	0.80	0.08	0.08	43.94	41.30	0.17	0.21
CY	5754	0.03	0.91	0.06	0.07	43.56	40.45	0.30	0.35
EL	8167	0.02	0.97	0.08	0.10	45.33	41.02	0.25	0.25

Data sources: SIPP (US), GSOEP (DE), BHPS and UKHLS (UK), EU-SILC (all other countries).

Country legend: AT= Austria, BE= Belgium, BG= Bulgaria, CY= Cyprus, CZ= Check Republic, DE= Germany, DK= Denmark, EE= Estonia, EL= Greece, ES= Spain, FI= Finland, FR= France, HU= Hungary, IE= Ireland, IS= Island, IT= Italy, LT= Lithuania, LU= Luxembourg, LV= Latvia, MT= Malta, NL= Netherlands, NO= Norway, PL= Poland, PT= Portugal, RO= Romania, SE= Sweden, SI= Slovenia, SK= Slovakia, UK= United Kingdom, US= United States.

Table 3. *Regression on risk of divorce*

VARIABLES	Model 1	Model 2	Model 3	Model 4	Model 5
Wives' unemployment	0.149***	0.149***	0.145***	0.141***	0.140***
	(0.0327)	(0.0337)	(0.0354)	(0.0366)	(0.0366)
Husband's unemployment	0.348***	0.322***	0.323***	0.320***	0.315***
	(0.0309)	(0.0317)	(0.0317)	(0.0323)	(0.0326)
Wives' earnings		5.81e-07	5.86e-07	4.00e-07	3.23e-07
		(6.99e-07)	(6.99e-07)	(7.24e-07)	(7.31e-07)
Husbands' earnings		-2.96e-06***	-2.97e-06***	-2.88e-06***	-2.96e-06***
		(5.24e-07)	(5.24e-07)	(5.32e-07)	(5.35e-07)
Wives' education					
secondary	-0.00193	-0.00118	-0.00115	-0.00407	-0.00329
	(0.0238)	(0.0241)	(0.0241)	(0.0246)	(0.0246)
college	-0.175***	-0.177***	-0.177***	-0.181***	-0.180***
	(0.0296)	(0.0305)	(0.0305)	(0.0310)	(0.0310)
Husbands' education					
secondary	-0.00566	0.00875	0.00865	-0.00217	-0.00115
	(0.0231)	(0.0234)	(0.0234)	(0.0239)	(0.0239)
college	-0.163***	-0.120***	-0.121***	-0.136***	-0.135***
	(0.0295)	(0.0304)	(0.0304)	(0.0309)	(0.0309)
Cohabitation	1.632***	1.619***	1.619***	1.596***	1.596***
	(0.0211)	(0.0213)	(0.0213)	(0.0217)	(0.0217)
Household tenure	-0.407***	-0.398***	-0.398***	-0.408***	-0.405***
	(0.0204)	(0.0208)	(0.0208)	(0.0212)	(0.0212)
Male-breadwinner values				0.000622	0.00720
				(0.00423)	(0.00484)
# W Unemp				0.000936	0.000932
				(0.00376)	(0.00376)
# H Unemp				0.00895**	0.0106***
				(0.00354)	(0.00380)
UGEN					0.00462*
					(0.00247)
# H Unemp					0.00192
					(0.00169)
GDP					-0.00438*
					(0.00235)
Constant	-0.715*	-0.621	-0.620	-0.640	-0.666
	(0.401)	(0.405)	(0.405)	(0.410)	(0.410)
Random intercepts	Yes	Yes	Yes	Yes	Yes
Random slopes	No	No	Yes	Yes	Yes
Observations	842,175	842,175	842,175	842,175	842,175
Number of groups	282	282	282	282	282

Note: models also control for wives' age (quadratic), parental status, and wives and husbands' inactivity
Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1
*** p<0.01, ** p<0.05, * p<0.1

Table 4. *Regression on risk of divorce, by family status*

VARIABLES	Model 1	Model 2
Wives' unemployment	0.151***	0.132***
	(0.0362)	(0.0368)
Husband's unemployment	0.415***	0.347***
	(0.0489)	(0.0396)
Cohabiting	1.627***	1.581***
	(0.0480)	(0.0220)
# H Unemp	-0.152**	
	(0.0631)	
Childless		0.336***
		(0.0348)
# H Unemp		-0.0894
		(0.0643)
Household tenure	-0.401***	-0.395***
	(0.0213)	(0.0213)
Male-breadwinner values	0.00937*	0.0109**
	(0.00550)	(0.00498)
# W Unemp	0.000125	0.00140
	(0.00377)	(0.00377)
# H Unemp	0.0135**	0.00916**
	(0.00531)	(0.00452)
# Cohabiting	0.00351	
	(0.00458)	
# H Unemp # Cohabiting	-0.0143**	
	(0.00713)	
# Childless		-0.00588*
		(0.00327)
# H Unemp # Childless		-0.00105
		(0.00720)
Constant	-0.449	-0.712*
	(0.416)	(0.412)
Random intercepts	Yes	Yes
Random slopes	Yes	Yes
Observations	842,175	842,175
Number of groups	282	282

Note: models also control for wives' age (quadratic), parental status, wives and husbands' inactivity, education and earnings, country's GDP, UGEN and WLFP.

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1