

Cooke, Lynn P. et al.

Article — Accepted Manuscript (Postprint)

Labor and Love: Wives' Employment and Divorce Risk in its Socio-political Context

Social Politics

Provided in Cooperation with:

German Institute for Economic Research (DIW Berlin)

Suggested Citation: Cooke, Lynn P. et al. (2013) : Labor and Love: Wives' Employment and Divorce Risk in its Socio-political Context, Social Politics, ISSN 1072-4745, Oxford University Press, Oxford, Vol. 20, Iss. 4, pp. 482-509,
<https://doi.org/10.1093/sp/jxt016>

This Version is available at:

<https://hdl.handle.net/10419/126215>

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Labor and Love:

Wives' Employment and Divorce Risk in its Socio-Political Context

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This research was made possible by a Leverhulme Trust International Network grant (F/00236/AA).

Acknowledgements: Thanks are due to Gøsta Esping-Andersen for hosting one of the workshops at Pompeu Fabra University, Karl Ulrich Mayer for supporting the participation of two Yale CIQLE researchers at that workshop, and Steven P. Martin and three anonymous *SP* reviewers for helpful comments on earlier drafts. Thanks especially to Barbara Hobson for supporting this ambitious research.

Word count: 9,804 excluding cover page

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**Labor and Love:
Wives' Employment and Divorce Risk in its Socio-Political Context**

Abstract

We theorize how social policy affects marital stability vis-à-vis recent macro- and micro-level effects of wives' employment on divorce risk in 11 Western countries. Correlations among 1990s aggregate data on marriage, divorce and wives' employment rates, along with attitudinal and social policy information seem to support Becker's hypothesis that divorce rates are higher where more wives are employed and where policies support that employment. This is an ecological fallacy, however, because of the nature of the changes in specific countries. At the micro level we harmonize national longitudinal data on the most recent cohort of wives marrying for the first time and find that the stabilizing effects of a gendered division of labor have ebbed. In the United States with its lack of policy support, a wife's employment still significantly increases the risk of divorce. A wife's employment has no significant effect on divorce risk in Australia, Flanders, France, Germany, Italy, the Netherlands and the United Kingdom. In Finland, Norway and Sweden, wives' employment predicts a significantly lower risk of divorce as compared with wives who are out of the labor force. The results indicate that greater policy support for equality reduces and may even reverse the relative divorce risk associated with a wife's employment.

Labor and Love: Wives' Employment and Divorce Risk in its Socio-Political Context

In the West, the post-war increase in married women's labor force participation rates correlated with an increase in divorce rates.¹ The individual-level evidence across the latter part of the last century suggested a causal order behind this correlation, with employed wives in many countries more likely to divorce than wives who remained out of the labor force (Blossfeld and Müller 2002; Chan and Halpin 2002; Cooke 2004, 2006; Henz and Jonsson 2003; Jalovaara 2001; Poortman and Kalmijn 2002; Rogers 2004). Becker (1981) argued that the stability of male breadwinner couples stems from the interdependence fostered by a gendered division of labor within nuclear households. Oppenheimer (1997) countered that Becker's ideal related to the anomalous and brief postwar era of men's lifetime employment, earlier marriage, and larger families. Today, dual-earner couples enjoy greater economic flexibility as well as similar rather than complementary interests, and should therefore be more stable (Blossfeld and Müller 2002; England and Farkas 1986). Others argued further that the relative divorce risk associated with any given wife's employment should attenuate as dual-earner couples become the norm (Cooke and Gash 2010; Poortman and Kalmijn 2002; Sayer and Bianchi 2000).

The normative arguments highlight the importance of situating family, and their gendered relations, within their socio-political contexts (Ferree 1990, 2010; Thorne and Yalom 1982). Even affluent Western countries differ in their marriage and divorce cultures (Kalmijn 2007; Yodanis 2005), and policies and other institutional arrangements shaping wives' employment (Crompton 1999; Pettit and Hook 2005). The scarce comparative evidence from the late 1980s into the 1990s suggests the individual-level divorce risk associated with partnered women's employment differs across countries (Liefbroer and Dourleijn 2006) and welfare (Blossfeld and Müller 2002) or dependency regimes (Kaplan and Stier 2011). Despite this variation in

individual-level risk, Becker's arguments might still be supported at the macro level if countries with greater wives' employment rates had higher divorce rates, and if divorce rates increased as wives' employment rates increased. Oppenheimer's or the normative arguments would be supported at the macro level if divorce rates no longer increase, or indeed decrease, as wives' employment rates increase. Kalmijn (2007) found a strong positive relationship between European female employment and divorce rates across the 1990s, but a much weaker positive relationship between *changes* in the two. The possibility of an ecological fallacy means that inference from macro data can be misleading in terms of the micro-level dynamics (Robinson 1950), but at both the macro and micro levels, the relationship between wives' employment and divorce risk remains ambiguous.

We argue equity in the household division of paid and unpaid work is key to couple stability, with a male breadwinner model representing one equitable, if inequalitarian, possibility (Cooke 2004, 2006). We hypothesize that social policies that de-familialize care work contribute to greater household equality as well as equity in both types of work, and therefore divorce rates and the individual-level risk of divorce associated with a wife's employment should decrease with greater policy support for equality. We test this assertion with macro and micro data for 11 countries. First, we assemble aggregate data on marriage and divorce rates, gender attitudes, wives' employment rates, as well as specific policies affecting wives' employment rates for Australia, Finland, Flanders, France, Germany, Italy, the Netherlands, Norway, Sweden, the United Kingdom and the United States. These countries represent a range of affluent Western societies in their policy support for greater equality in the gendered division of labor. This macro analysis extends that of Kalmijn (2007) by including pertinent social policies and using factor analysis to ascertain the patterns among these aggregate data.

Second, we update the individual-level empirical evidence to include more recent cohorts of first-married wives for whom dual-earning is now common (OECD 2010). Existing comparative datasets such as the United Nations Fertility and Family Surveys have become outdated, whereas others such as the European Community Household Panel exclude non-European English-speaking countries where marriage and divorce rates are high. We circumvent this problem by harmonizing national microdata for each of the 11 countries and then analyzing the effect of wives' employment on divorce risk among women marrying for the first time from the 1990s into the new millennium.

WIVES' EMPLOYMENT AND DIVORCE: MACRO AND MICRO EFFECTS

Marriage, divorce and employment choices are embedded in the socio-economic shifts in the West described as the Second Demographic Transition (Kalmijn 2007; van de Kaa 1987). Hallmarks of this transition include women's greater educational attainment and employment, decreasing marriage rates, and increasing rates of cohabitation and divorce (Lesthaeghe and Neidert 2006). One individual-level explanation for these macro trends comes from Becker's (1981) influential *Treatise on the Family*. Becker argued that the specialization of a gendered division of labor within nuclear families increases the benefits of marriage and therefore enhances stability. In this model, not only are employed women less likely to marry, but an employed wife is more able to leave when marital problems arise (see also Cherlin 1992). The increase in wives' labor force participation rates is therefore Becker's hypothesized causal factor in the postwar increase in divorce rates.

Some sociologists contest Becker's theorized dynamics. Oppenheimer (1997) argued that specialization is a risky strategy for the nuclear families that dominate Western marriages.

The breadwinner or the carer may become disabled or otherwise unable to perform his or her speciality, halting productive or reproductive household work. Instead, dual-earner couples should now be more stable than single-earner households, in what Cooke and Gash (2010) called the “flexibility hypothesis.”

Oppenheimer also argued that specialization does not enhance interdependence if one partner is more replaceable than the other. The greater a wife’s economic dependence on her husband, the fewer alternatives she has to the marriage. In contrast, an economically-active husband can purchase many domestic services. This creates dependence asymmetry within marriage, with the wife more dependent on the marriage than the husband (England and Farkas 1986; Oppenheimer 1997). Such asymmetry encourages subsequent cohorts of young women to pursue further education and careers to reduce their dependence (Blossfeld and Müller 2002; England and Farkas 1986). The intergenerational increases in women’s educational attainment and dual-earner couples seem to support this argument (OECD 2009, 2010). Similarly, a growing body of economic and sociological evidence suggests that an increase in divorce rates may cause an increase in wives’ employment rates, not the other way around (Özcan and Breen 2012).

Some benefits of specialization might be lost as more wives remain employed, but other benefits accrue. Households have more income and marriages are more companionate as couples share more similar interests (Blossfeld and Müller 2002; England and Farkas 1986). In addition, as the proportion of employed wives increases, they no longer represent a select group. Studies of innovation highlight that early adopters of new behaviors have low levels of risk aversion (De Feijter 1991, cited in Liefbroer and Dourleijn 2006). This means it is possible that the select group of wives that were employed when it was *avant-garde* might also have had higher risk of divorce, but that the former did not cause the latter. As wives’ employment

becomes more common, the relative divorce risk associated with it should reduce to general societal levels (Poortman and Kalmijn 2002; Sayer and Bianchi 2000). Evidence of such diffusion effects have been found for other divorce risk factors, such as cohabitation in Europe (Härkönen and Dronkers 2006; Wagner and Weiß 2006). Of course, if Becker's underlying relationship holds, the societal level of divorce might be greater where wives' labor force participation rates are greater, and/or divorce rates should increase as the level of wives' employment increases.

Testing the macro-level assertion, Kalmijn (2007) found that European countries with greater female employment rates between 1990 and 1999 did indeed have significantly higher divorce rates. In his fixed-effects model to assess the impact of changes in female employment rates, however, he found only a weak relationship with changes in divorce rates. This suggests that national divorce rates may correlate with female employment participation, but the relationship is not necessarily causal. In addition, divorce rates in many countries have decreased in recent years even as wives' employment rates continue to increase (Kalmijn 2007).

Evidence at the micro level is also mixed, with the strength of the association between a wife's employment and divorce varying across countries (Chan and Halpin 2002; Cooke 2006; Cooke and Gash 2010; Henz and Jonsson 2003; Jalovaara 2001; Poortman and Kalmijn 2002; Rogers 2004). Other studies find that not only the magnitude, but the direction of the effect of partnered women's employment differs across countries. Based on their analysis of the FFS data collected from 1988 to 1998, Liefbroer and Dourleijn (2006) reported that a partnered woman's employment predicted a significantly greater risk of dissolution among cohabiting and married couples in Austria, Finland, Italy, Lithuania, Poland and West Germany, findings which support Becker's hypothesis. Partnered women's employment predicted a significantly lower risk of

dissolution in France and Latvia, which supports Oppenheimer's hypothesis. In a third set of countries (the Czech Republic, East Germany, Flanders, Hungary, Norway, Slovenia, Spain and Sweden), the effect of partnered women's employment was not statistically significant. Thus neither Becker's nor Oppenheimer's hypothesized dynamics appear to be universal: context matters. The theoretical question is, how?

CONTEXT, WIVES' EMPLOYMENT AND DIVORCE RISK

Oppenheimer argued the benefits of couples' greater employment equality on marital stability, but ignored the impact of dual-earners' divisions of unpaid work. Becker's specialization model is an equitable if not egalitarian one, in that each partner in a couple devotes a similar amount of time to different types of work (paid and unpaid). Cooke (2004, 2006) and Bellani and Esping-Andersen (2011) have argued it is the equity of this model that yields the historic stability of male breadwinner couples. As subsequent generations of women increase their economic activity, the resultant dual-earning couples do not necessarily enjoy equitable divisions of unpaid work. Indeed, partnered men's unpaid work across countries did not immediately increase with women's paid work hours (see Cooke and Baxter 2010 for a review). Hook's (2010) time diary analyses, however, revealed that over time, men do spend more time in cooking and housework where women's employment rates are greater.

Analyses of the only three long-running national panels with suitable data on housework and/or child care support that equity in paid and unpaid work enhances marital stability. A husband's greater participation in domestic tasks offsets the divorce risk predicted by wives' employment in the United Kingdom (Sigle-Rushton 2010) and United States (Cooke 2006). In Germany, both male breadwinner and full-time dual-earning couples with equitable divisions of

work are more stable than couples with inequitable divisions (Bellani and Esping-Andersen 2011). The more recent decrease in divorce rates in many countries with initially high rates could therefore reflect the stabilizing effects of growing equity in housework suggested by Hook's (2010) results. The division of child care, however, still remains more gendered (Cooke and Baxter 2010).

If equity in paid and unpaid work is important, policies also have a role in stabilizing dual-earner marriages. Policies shape relative gender equality in terms of work hours and wages (Cooke and Gash 2010; Kaplan and Stier 2011; Pettit and Hook 2009; Poortman and Kalmijn 2002), and the extent to which households remain responsible for providing child care (Crompton 1999; Gornick and Meyer 2003; Hook 2010; Lewis 1992). Only a handful of comparative studies to date, however, have considered how policies in turn might alter the divorce risk associated with wives' employment (Blossfeld and Müller 2002; Cooke 2006; Cooke and Gash 2010; Kaplan and Stier 2011).

Blossfeld and Müller (2002) were the first to argue how the macro and micro relationships between wives' employment and divorce differ across Esping-Andersen's (1990, 1999) welfare regimes types. They argued the de-commodifying social-democratic policies that reduce reliance on the market for economic well-being and the de-familialization policies that enhance gender employment equality should, à la Becker, increase aggregate divorce rates because such policies decrease women's economic dependence on husbands (Härkönen and Dronkers (2006) offer a similar argument). Kalmijn (2007: 248) also hypothesized, but did not test, that a more generous welfare state enhances women's economic alternatives to marriage and should therefore correlate with higher divorce rates. Blossfeld and Müller went on to argue, however, that the extensive public services such as public child care assume some of the familial

unpaid work burden that can strain dual-earner couples, and therefore should reduce the individual-level risk associated with a wife's employment.

The taxation and family policies of conservative-corporatist and Mediterranean regimes, in contrast, reinforced a male breadwinner model and women's responsibility for unpaid family work (Blossfeld and Müller 2002). Such familialistic policies strengthen Becker's hypothesized mutual interdependence, with divorce rates therefore anticipated to be lowest where wives' dependency is greatest as in Southern Europe (Blossfeld and Müller 2002; Kaplan and Stier 2011). The lack of support for employed wives is evident in the paucity of full-time child care provision, school schedules that send children home for lunch (Gornick and Meyer 2003) and rigid formal labor markets (Blossfeld and Müller 2002). Blossfeld and Müller therefore argued the individual-level divorce risk associated with a wife's employment would be high in these welfare regimes and particularly high for employed wives in the Mediterranean countries.

European Union equality directives since the Treaty of Rome, however, have resulted in even historically strong male breadwinner countries expanding policy supports for wives' employment (Cooke 2011). Others have found that where policies support wives' part-time employment as in West Germany (Cooke 2004; Cooke and Gash 2010) or the Netherlands (Poortman and Kalmijn 2002), this particular level of wives' employment does not significantly increase divorce risk. Yet wives working part-time do not enjoy equitable divisions of unpaid work. Hook (2010: 1505) found that in countries where a large percentage of women works part-time, men spend significantly less time doing housework. This could explain why when considering household divisions of paid plus unpaid work, Bellani and Esping-Andersen (2011) did not find West German couples where the wife worked part-time more stable.

We generalize Blossfeld and Müller's arguments to suggest that policies such as public provision of child care (by substituting state for family care provision) promote greater gender equity in unpaid as well as paid work, and should in turn enhance marital stability when wives are employed. Opposite effects of wives' employment on divorce at macro and micro levels *are* possible, reflecting ecological fallacies (Oppenheimer 1997). But in contrast to Blossfeld and Müller, we anticipate that the individual-level effects associated with policy support for greater equity should "trickle up" across cohorts as a decrease in divorce rates.

The lack of a public safety net in liberal welfare regimes encourages market participation of both partners to ensure family economic security. Without policy supports for dual-earning couples' family demands, however, a wife's employment increases the risk of divorce, reflected as well in high societal divorce rates during the 1970s and 1980s (Blossfeld and Müller 2002). The high income inequality of such regime types, however, fosters development of the low-wage service sector. The expanding service sector provides households with the possibility of purchasing more market substitutes for domestic tasks such as child care and cleaning (Blossfeld and Müller 2002; Heisig 2011; Morgan 2005). Blossfeld and Müller (2002) therefore argued that over time, divorce rates in liberal regimes should decrease as the availability of affordable market substitutes becomes widespread.

We would stress, however, that the greater household equity made possible by purchasing market substitutes is not equally available to all households. Women's higher wages predict fewer household hours in unpaid tasks (Gupta et al. 2010), with Heisig (2011) finding that the income-housework gradient is steeper in more unequal countries. From this we anticipate that, in contrast to countries with social policies promoting greater equity in paid and unpaid work, individual-level divorce risk in liberal regimes would differ more within the population, and

therefore aggregate divorce rates would remain relatively high. The hypothesized individual-level dynamics could explain the negative educational gradient of divorce that has become strongly evident in the United States (McLanahan 2004) and other countries with less-generous welfare states (Härkönen and Dronkers 2006).

METHOD

We compare macro and micro effects of wives' employment and divorce in Australia, Finland, Flanders, France, Germany, Italy, the Netherlands, Norway, Sweden, the United Kingdom and the United States. These countries represent a range of welfare regime types, although, like Blossfeld and Müller (2002), we believe policies differ sufficiently within regime types to analyze national macro and micro effects. We restrict our analyses to Western countries and their nuclear families, as the relationship between wives' employment and divorce differs in the multigenerational living arrangements in the East (Hirschman and Teerawichitchainan 2003).

Macro data & analysis

The relationships among wives' employment, social policies, and couple stability occur within the marriage and divorce cultures that are changing under the Second Demographic Transition. Measures of the demographic cultures across the 1990s and into the new millennium for the 11 countries are presented in Table 1. As fewer people marry, the risk of divorce might decline as legally-married couples represent a select, more conservative group, such as being more religious (Kalmijn 2007). Table 1 therefore includes 1990 and 2000 crude marriage rates, defined as the number of legal marriages performed and recognized per 1,000 mid-year population from various years of the United Nations *Demographic Yearbook*.² Also displayed are the percentages

of *de jure* as compared with *de facto* couples in each country as of 2002 (Cooke and Baxter 2010: Table 1). The crude divorce rates for 1990 and 2000 reflect the number of final divorce decrees granted under civil law per 1,000 mid-year population. These, too, are taken from the UN *Demographic Yearbooks* (see Note 2).

[Table 1 about here]

People's attitudes reflect and constitute divorce and marriage cultures. We therefore include mean responses on two questions from the 2002 (1994 for Italy) International Social Survey Program: "It is better to have a bad marriage than no marriage at all," and "Divorce is usually the best solution when a couple cannot work out their marital problems." Possible answers are on a 5-point Likert scale, with the question on marriage recoded so that for both questions, a larger value indicates more conservative attitudes (5=strongly agree that a bad marriage is better than no marriage, and 5=strongly disagree that divorce is the best solution to marital problems). Presented in Table 1 are the mean responses for women and men aged 25 to 59. An asterisk indicates when a t-test revealed statistically significant gender differences. Where these occurred, men were always more conservative than women.

Table 2 presents aggregate data on pertinent aspects of the macro context and the normative structure of wives' employment. Blossfeld and Müller (2002: 23) conjectured that the greater income inequality of liberal welfare regimes supports the development of low-cost market-based substitutes for unpaid work that could be purchased by more privileged households. Heisig (2011) found that the tradeoff between income and housework time is steeper in more unequal countries. The gini coefficient is a measure of relative income inequality, ranging from zero when there is perfect equality, to one where there is maximum inequality with because one person holds all the wealth. The 1990 and 2000 gini coefficients for

each country are from LIS Key Figures.³ The gini coefficients confirm that income inequality in both time periods is indeed greatest in the liberal UK and US welfare regimes.

[Table 2 about here]

Social expenditure data are from the OECD Social Expenditure database,⁴ and indicate the average percent of GDP spent on social welfare, excluding pensions, between 1990 and 2005. Specific policy provisions supporting wives' employment during the 1990s are the weeks of paid maternity leave and the percent of children aged 0 to 2 in publicly funded child care (Pettit and Hook 2005: Table 3).

Indicators of the level of wives' employment are the percent of partnered women aged 25 to 64 who were employed in the early 1990s and early 2000s, calculated by the author from Waves 3 and 6 LIS data (LIS 1989-2005). These measures are a refinement of Kalmijn's (2007) use of information on all adult women, as one alternative for career-oriented women is to forgo marriage altogether. We also include the percent of employed women working part-time in the mid-1990s (OECD 2010: 286). Our final measure is the mean response from the 2002 ISSP (1994 for Italy) question, "Both should contribute to household income" on a scale from 1 (strongly agree) to 5 (strongly disagree). The asterisk indicates those countries where a t-test revealed statistically significant gender differences in the mean response. Only in Norway are women more conservative than men in this attitude, but the substantive difference is minor.

Four change variables are computed, to assess whether changes as compared with 1990 in marriage rates, divorce rates, wives' employment rates and aggregate inequality (gini) covary. In addition to presenting bivariate correlations, we use factor analysis to reveal patterns of variation among these attitudinal, demographic, economic and policy macro indicators.

Micro data & analysis

We overcome the lack of a suitable current comparative longitudinal dataset by selecting the best available national microdata in each country. These are panel data in Germany, the United Kingdom, and the United States; retrospective data in Australia, Flanders, France, Italy, and the Netherlands; and register data for Finland, Norway, and Sweden (see Note 5 for detailed descriptions of the datasets). Because East German women have historically been more likely to work and divorce than West German women (Cooke 2004), the German data are pooled with a control added indicating wives in the East region of Germany. There were too few East wives in the dataset to analyze separately.

The differences in the nature of the data do give rise to some variability. The register data reflect the population in these countries, not a sample, although they are still subject to error in terms of the data entered. Small random samples of the Finnish, Norwegian and Swedish register data yielded similar results as with the full data. Retrospective data are prone to recall error, a problem that increases with the triviality of events and how long ago they occurred (Czaja and Blair 2005). Information for the panel datasets are for the prior year, whereas for the remaining retrospective datasets, the requested information could pertain to more than a decade prior. Fortunately, most variables used in the models are not trivial—education attained, number and age of children, and the year the woman first married or divorced. Recall on employment status also tends to be quite accurate when compared with currently-gathered information (Mathiowetz and Duncan 1988). Thus, the methods of data collection are not perfectly comparable—if they ever truly can be with multi-country comparisons (Jowell 1998). But the harmonization of the sampling criteria, variable construction, and modeling makes comparison of relative risks of divorce within each country possible.

The sample in each country consists of women born in 1950 or later who legally married for the first time in 1990 or later. The quality of information on cohabitation in the datasets varied, so it was not possible to explore differential dissolution risk for cohabitants in all of the countries. Generally, separation risk is greater for cohabiting as compared with legally-married couples (Liefbroer and Dourleijn 2006). Yet where cohabitation is more prevalent as in the Nordic countries, the difference in risk between *de jure* and *de facto* relationships tends to be much smaller, and frequently not statistically significant (Härkönen and Dronkers 2006; Wagner and Weiß 2006). In the Nordic countries, cohabiting couples with children frequently do marry. This suggests that Nordic samples of legally-married women might reflect a selection bias of women whose relationships survived the volatile first few years. To ensure this potential selection bias does not alter results and interpretation, we ran further analyses comparing only married mothers. The divorce risk for employed mothers is slightly greater than for all employed wives, but results do not change the overall conclusions.

The greatest risk of divorce occurs in the first years of marriage (Oppenheimer 1997), so wives are entered into the sample as of the year they married and remain in the observation window until they divorce and/or separate for more than one year, drop out of the dataset for other reasons such as when the spouse died, or are right censored at the last year of observation.⁶ Individual over-time data are then converted into yearly observations for each wife. Constructing person-year files automatically incorporates the time-varying aspects of the dependent as well as independent variables.

The dependent variable is whether the wife divorced or separated for more than one year, even if no formal divorce is subsequently recorded. The primary independent variable of interest is a wife's employment status, coded 1 if she is employed for pay; 0 otherwise.

Employment status is lagged by one year to increase the probability that its impact precedes rather than results from separation. Seven of the datasets contain some information on hours of work (Australia, Flanders, France, Germany, the Netherlands, the United Kingdom and the United States). In these countries, part-time work generally indicates a slightly lower risk as compared with wives' full-time employment, but this effect is statistically significant only in the US data.

The 11 countries' educational systems differ dramatically, so country education measures are converted into standardized ISCED codes. From these, two indicator variables are created: one for individuals who had completed lower secondary schooling or less (ISCED 0 to 2), and another indicating completion of non-vocational tertiary schooling or more (ISCED 5 and above)—a proxy for a university degree. The referent in all countries is ISCED 3 and 4, or those with an upper secondary degree (high school degree in the United States) or some college. The education variables also provide a proxy for a wife's (and household) income (Kaplan and Stier 2011).

Time-varying controls include a continuous measure of the number of children younger than 18 in the household, and an indicator for when at least one child is younger than 4 years of age. Women's likelihood of employment decreases as the number of children increases (Pettit and Hook 2009). A very young child also represents a short-term barrier to both maternal employment and divorce. The specific age is selected as even the most generous maternity leave does not extend beyond three years, and most European countries have widely-available public child care once children reach the age of 3 (Gornick and Meyers 2003; Pettit and Hook 2005).

There are, of course, other important factors which affect divorce risk, such as marital quality, whether the husband is unemployed, religious conviction, etc. (see Amato 2010; Kalmijn

2007 for reviews). We assume that marital problems precede most divorces, with a wife's employment allowing her to leave an unhappy relationship (Sayer et al. 2010; Schoen et al. 2002). We do not have couple data for all countries, but know from existing evidence that a husband's unemployment increases the risk of divorce regardless of a wife's employment status (Cooke and Gash 2010; Jalovaara 2001; Sayer et al. 2010). In our model, a wife's religious conviction would be most important if it predicted her employment. A separate analysis with 2002 ISSP data (not shown) indicates that attendance at religious services is not a significant predictor of a wife's employment.

To assess the impact of time-varying factors on divorce risk, we conduct a discrete-time event history analysis using logistic regression and robust standard errors to control for the multiple observations for each respondent inherent to a person-year file structure. The key independent variable is a wife's lagged employment status, controlling for education, age at marriage, the number of children, and whether there is a toddler in the household. Also included are period and time controls. Two five-year marriage cohorts are constructed: 1995 to 1999, and 2000 onwards, to contrast with the referent 1990 to 1994 marriage cohort. Duration effects are captured with time since marriage and its square, as the risk of divorce changes over time net of individual factors.

MODERN MARRIAGE, MODERN RISK

Macro factors

The bivariate correlations for the aggregate indicators in Table 3 seem to support the specialization hypothesis. Similar to Kalmijn's (2007) finding, the correlation between wives' 1990 employment rates and 1990 divorce rates is strong (.58) and statistically significant. Also similar to Kalmijn, the relationship between changes in wives' employment rates and changes in

divorce rates across the decade is positive, but not statistically significant. The impact of policies is ambiguous. Social expenditure and the percent of children in care each had small but statistically insignificant negative correlations with the 1990 divorce rate, but larger positive correlations with the change in divorce rates across the decade.

[Table 3 about here]

These effects could reflect competing country differences in trends across the time period. Most of the increase in employment was in countries across regimes types but where women work part-time (correlation .65). Specifically, wives' employment rates across the decade increased in Italy, France, Germany, Australia, Flanders, the Netherlands, Norway and the United Kingdom (Table 2). Wives' employment rates decreased across the decade in countries where they had been high in 1990: the United States, Finland and Sweden. With so few countries, it is impossible to disentangle these competing trends to assess the over-time "trickle up" effects of supportive policies we had anticipated.

The factor analysis resulted in two factors that account for almost two-thirds of the variance among the indicators (Table 4). The first factor bundles high social expenditure, generous maternity leave, public child care provision, and low income inequality. Adults more strongly agree that both should contribute to household income, despite the decrease in wives' employment rates from their 1990 levels. The overall factor pattern indicates *Support for Equality*. This pattern most clearly represents the Nordic countries of Finland, Norway and Sweden, but France also loaded positively on this factor, as did Belgium (slightly). The decline in female employment is driven by the Nordic economic recession of the early 1990s that reduced women's as well as men's participation rates (Kangas and Palme 2005). The demographic profile that loads on this factor is a low 1990 rate of marriage and high proportion

of adults who cohabit. Note as well that 1990 divorce rates load negatively on this factor, whereas the positive loading of the increase in divorce rates across the decade is slight. This provides more support for our hypothesis that a generous welfare state does not equate with high divorce rates, despite the policies supporting high levels of wives' employment.

[Table 4 about here]

The second factor includes high 1990 wives' employment rates with a decrease in these across the decade, high 1990 divorce rates with a decrease in these across the decade, yet more conservative attitudes regarding whether divorce is the best solution to persistent marital problems. The United States loads most highly on this factor, followed by the United Kingdom and Australia. Finland, Norway and Sweden also load positively on this factor, albeit more weakly than the United Kingdom. This pattern reflects the positive correlation between change in wives' employment and change in divorce rates ($p=.08$) that modestly supports Becker's association between the two at the macro level. But that this is a separate factor from the first also highlights the importance of policies in reducing this association.

Italy, Germany and the Netherlands do not load positively on either factor, or any other single factor generated. Given the persistent strength of the cultural male breadwinner model in these three countries, they have neither the supportive policy context indicated by the first factor, nor high employment levels of wives indicated by the second. So the two major factors reflect the contrasts of the social-democratic and liberal welfare regimes, along with more progressive conservative-corporatist regimes.

Individual-level effects

Descriptive statistics for the microdata are presented in Table 5. The first row reveals that the majority of wives are now likely to be employed, with the percentage smallest in Germany at 57 percent. Table 6 presents the odds ratios of divorce associated with each individual characteristic. In strong support for our hypothesis about the role social policies can play in stabilizing dual-earner couples, employed wives in Finland, Norway and Sweden are now significantly *less* likely to divorce than wives who are out of the labor force. In the remaining European countries, the risk of divorce associated with a wife's employment has attenuated.

[Table 5]

[Table 6]

The majority of wives in Flanders, France, Germany, Italy, and the Netherlands is now employed, but these wives are not significantly more likely to divorce than wives out of the labor market. For the first four countries, employed wives are in fact predicted to be less likely to divorce, although this effect does not reach statistical significance. In the Netherlands, employed wives are predicted to have a greater risk of divorce, but it does not reach statistical significance. One reason for the lack of significance could be the very small sample size of the 1990-plus Dutch marriages. But an analysis of Dutch marriages since 1970 that was possible with the larger dataset from which these more recent marriages were drawn suggested similar statistically insignificant effects of a slightly smaller magnitude.

We had also anticipated, like Blossfeld and Müller (2002), that the divorce risk associated with a wife's employment would have also attenuated in the liberal welfare regimes. We had further argued that the high inequality of liberal welfare regimes meant that only privileged women enjoy more stable marriages. One result in support of this argument is that the

impact of a university education on reducing divorce risk is greatest in the three liberal regimes. In the United States, the least-educated are also significantly more likely to divorce. But only in Australia and the United Kingdom is an employed wife no more likely to divorce than one who is out of the labor force. In the United States, in addition to the extreme educational differences in divorce risk, the divorce risk associated with a wife's employment persists.

Some of the US risk might reflect racial differences in US demographic patterns, but a control for Black wives did not alter substantive effects even though Black wives are significantly more likely to divorce (results not shown). It is possible that the over-sampling of poorer households within the PSID is reflecting a higher divorce risk for that more disadvantaged group, but controlling for household income did not eliminate the impact of a wife's employment on divorce risk (results not shown). We therefore have another instance of US exceptionalism (Lesthaeghe and Neidert 2006), which in this case is the only individual-level country result to support Becker's theory.

Can we attribute these results to the policy differences? Figure 1 is a scatterplot of the individual-level odds ratio of an employed wives' divorce risk against the country loading on the *Support for Equality* factor derived from the macro data. This reveals a distinct pattern of a decreasing individual-level divorce risk associated with a wife's employment as policy support for equality increases. A linear regression indicates that the country loading on the *Support for Equality* factor accounts for 60 percent of the variance in the individual-level odds ratio predicting divorce ($p=.003$). Once including this single factor, no other factors account for further variance in risk. As policy support increases, individual-level divorce risk associated with a wife's employment decreases. The general pattern holds when excluding the United States, which is the outlier. Our hypotheses about the impact of policies as compared with market

forces on individual divorce risk therefore are supported. Not only does greater policy support for equality reduce individual-level risk associated with a wife's employment, it can make it a stabilizing factor in modern families.

[Figure 1 about here]

CONCLUSION

Dual-earning couples now comprise the majority in most OECD countries (OECD 2010), a trend that bodes poorly for marriage if the postwar correlation between wives' employment and divorce risk persists. Socio-political factors, however, shape demographic cultures, the nature of wives' employment, and support for families. We argue social policies supporting equality encourage more equitable household divisions of unpaid labor, in turn easing the impact of a wife's employment on divorce risk. In contrast, market-based supports such as private child care in more unequal countries are available only to more advantaged households, contributing to growing differences in risks among households in liberal welfare regimes.

The correlations among the macro indicators seemed to provide support for Becker's specialization hypothesis, but in part because of competing country changes across the decade. This suggests the possibility of an ecological fallacy if inferring relationships among macro indicators of social policies, wives' employment and divorce rates. Our individual-level analyses of harmonized microdata for 11 Western countries, however, revealed that policies that support employment equality more generally and women's employment specifically are correlated with a lower individual-level risk that an employed wife will divorce. Indeed, recent marriage cohorts of employed wives in the three Nordic countries with the most generous

policies are significantly less likely to divorce than wives in these countries who are not employed at all.

Only in the United States did Becker's hypothesis still hold. The United States remains an outlier in terms of both its minimalist policy support for family, as well as its high marriage and divorce rates. At the same time, Americans express more conservative attitudes about divorce than adults in the other countries. Its uniqueness suggests the need to fully explore the gender- and family-related theories developed by US social scientists outside of that milieu.

A weakness in the current project is that the number and nature of countries is limited. New panel data are being gathered for more Eastern countries, so that this limitation can be overcome at a future time. A lack of suitable data for countries in the global South persists. A further limitation of this research is the necessarily simple model that resulted from harmonizing national datasets. There are elements of a wife's employment that might have a more direct effect and also vary in context, such as the time strains resulting from hours of employment or the gender-normative strains that result when wives out-earn their husbands (Cooke and Gash 2010; Kaplan and Stier 2011). We also could not directly test the hypothesized impact of supportive policies on the equity in household divisions of unpaid labor, so our results are only indicative. In particular, there are no suitable data for testing the hypothesis in any social-democratic country.

Despite these limitations, results presented here indicate the importance of the socio-political context in structuring relative gender equality simultaneous with relative family risk. Results also indicate the need to turn theoretical and empirical attention to growing differences in relative gender equality among women (McLanahan 2004). Educational differences in divorce risk were greatest in liberal welfare regimes, but also significant in the social-democratic

countries despite the positive results for employment. Thus even in social-democratic regimes, new, different policy solutions must be found to ease risks for the most vulnerable groups.

Notes

1. This is the opposite of the trend found in many Eastern countries, where modernization has been associated with a decrease in divorce rates (Hirschman and Teerawichitchainan 2003).
2. The United Nations *Demographic Yearbooks* and data can be found online, at <http://unstats.un.org/unsd/demographic/products/dyb/dyb2.htm> (accessed 21 January 2013).
3. LIS Key figures are available on-line at <http://www.lisdatacenter.org/lis-ikf-webapp/app/search-ikf-figures>, accessed 14 January 2013.
4. Social expenditure data are from the OECD Social Expenditure database at http://www.oecd-ilibrary.org/social-issues-migration-health/data/social-expenditure_els-socx-data-en, accessed 10 January 2013.
5. The data for Australia come from the Household, Income and Labour Dynamics in Australia (HILDA) survey, collected between 2001 and 2008. Flanders data from the multi-actor, multi-method “Divorce in Flanders” survey (http://www.researchportal.be/en/project/divorce-and-separation-in-flanders-risk-factors-consequences-and-policy-implications--%28UA_21648%29/). For Finland, the Finnish Census Panel is a longitudinal database compiled from various censuses and administrative registers of a representative sample of approximately 10 percent of the population from 1987 onwards. The French data are from the *Familles et Employeurs* survey (INED 2004-2005) on the relationships between family life and work, which aims at describing the conciliation between family life and work in France in 2004 (Pailhé and Solaz 2009). The German data are from the German Socio-Economic Panel Study (http://www.diw.de/sixcms/detail.php?id=diw_02.c.221178.en), a longitudinal dataset started in 1984 and that represents the German population living in private households. Italian data are from the retrospective 2003 Household Multipurpose Survey, Family and Social Subjects, (FSS),

the first wave of the Italian variant of the Generations and Gender Survey (<http://www.unece.org/pau/ggp/Welcome.html>). The Netherlands Kinship Panel Study is the analogous Dutch participant in the Generations and Gender Program (<http://www.nkps.nl/NKPSEN/nkps.htm>) of nationally comparative surveys and contextual databases. The Norwegian data are drawn from population-wide administrative registers that contain longitudinal information on individuals' and married couples' characteristics from 1990 through 2008. A 5 percent random sample of all first marriages through 2000 between two Norwegian-born individuals is used in this analysis. The Swedish data come from the *Sweden over Time, Activities and Relations* (STAR) database that links several registers covering different aspects of individuals' lives between 1990 and 2007 for all individuals age 16 and older. The British Household Panel Survey (BHPS) (<http://www.iser.essex.ac.uk/survey/bhps>) initially interviewed a representative sample of households in 1991, and subsequently annually interviewed all the original household members, their natural descendants, and all their current household co-residents. For the United States, the Panel Study of Income Dynamics (PSID) was used, which began in 1968 with a representative sample of 4,800 US families that have been followed as members and their children form new households (<http://psidonline.isr.umich.edu/>).

6. Australia is an exception to this, as the retrospective data do not contain employment information and the panel portion of the data does not have many events in the 10 years the data have been gathered. Thus all intact marriages are included, along with a control variable to indicate existing couples.

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Table 1: Indicators of marriage and divorce cultures

	Crude Marriage Rates		Percent of the population over 15 (2002)		Bad marriage better than no marriage (2002) ^a		Crude Divorce Rates		Divorce best solution to bad marriage (2002) ^a	
	1990	2000	Married	Cohabit	Women	Men	1990	2000	Women	Men
Italy	5.4	4.9	59	3	1.4	1.6**	0.5	0.7	2.3	2.5**
United States	9.4	8.5	53	6	1.5	1.7***	4.7	4.2	3.0	3.0
France	5.1	4.9	51	11	1.2	1.4***	1.9	2.0	2.5	2.4
United Kingdom	6.8	5.2	48	9	1.5	1.7***	2.9	2.7	2.5	2.7***
Germany	6.5	5.1	55	10	1.4	1.6*	1.9	2.4	2.1	2.2
Australia	6.8	5.9	51	9	1.5	1.8***	2.5	2.6	2.7	2.6
Flanders	6.6	4.4	52	7	1.6	1.7	2.1	2.6	2.3	2.4**
Netherlands	6.4	5.5	55	10e	1.4	1.5*	1.9	2.2	2.2	2.2
Finland	4.8	4.8	49	12	1.5	1.7***	2.9	2.7	2.4	2.6+
Sweden	4.7	4.5	46	20	1.4	1.6**	2.3	2.4	2.6	2.6
Norway	5.2	5.6	51	18	1.5	1.6***	2.4	2.2	2.7	2.7

Notes: Marriage and divorce rates are from multiple years of the *United Nations Demographic Yearbook*. Crude marriage rates are the number of legal marriages performed and recognized per 1,000 mid-year population; crude divorce rates are the number of final divorce decrees granted under civil law per 1,000 mid-year population. Percent married and cohabiting from Cooke and Baxter (2010: Table 1). The Netherlands national data do not distinguish among type of partnership, so these are estimates derived from percentages computed from survey data (Poortman 2010).

a. Mean responses to the 2002 ISSP (1994 for Italy) attitude questions are based on a scale from 1 (strongly disagree) to 5 (strongly agree). Asterisk indicates significance of t-test of gender differences in mean response, indicating the more conservative gender: + $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 2: Factors relating to gender employment equality

	Gini coefficient		Social expenditure as % GDP (excluding pensions)	Weeks paid maternity leave	% children 0-2 in publicly-funded childcare	Both should contribute to household income ^a (2002)		Percentage of partnered women who are employed		% of employed women working part-time
	1990	2000				Women	Men	early 1990s	early 2000s	
Italy	.29	.33	Average 1990-2005 12.0	mid-1990s 21	mid-1990s 6	1.9	2.2***	35	42	21
United States	.34	.37	9.9	0	5	2.3	2.2	70	69	20
France	.21	.28	18.2	16	23	1.8	1.9	57	64	25
United Kingdom	.34	.35	13.8	18	2	2.4	2.4	64	67	41
Germany	.26	.27	18.0	14	11	2.3	2.3	55	67	28
Australia	.30	.32	12.1	0	5	2.7	2.7	60	63	38
Flanders	.22	.28	19.0	15	30	2.4	2.5	47	64	30
Netherlands	.27	.23	17.0	16	8	2.8	2.8	27	68	55
Finland	.21	.25	19.7	52	21	2.3	2.3	77	71	12
Sweden	.23	.25	21.4	64	33	1.8	1.8	86	79	25
Norway	.23	.25	16.1	42	20	2.2*	2.1	70	76	38

Notes: Gini coefficient from LIS Key Figures (<http://www.lisdatacenter.org/lis-ikf-webapp/app/search-ikf-figures>). Weeks maternity leave and percent of children aged 0 to 2 in publicly funded child care from Pettit and Hook (2005: Table 3). Employment rates calculated by author from Waves 3 and 6 LIS data for partnered women aged 25-64. Part-time employment rates are from OECD (2010: 286).

a. Mean responses to the 2002 ISSP (1994 for Italy) attitude question on a scale from 1 (strongly agree) to 5 (strongly disagree). Asterisk indicates significance of t-test of gender differences in mean, indicating the more conservative gender: * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3 Correlations between aggregate indicators

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Wives' 1990 employment rate	1.0										
(2) 1990 Divorce rate	.58*	1.0									
(3) Change in wives' employment, 1990-2000	-.84**	-.25	1.0								
(4) Change in divorce rate, 1990-2000	-.52*	-.75**	.35	1.0							
(5) Gini coefficient 1990	-.14	.37	.13	-.48+	1.0						
(6) Change in gini 1990-2000	.26	-.03	-.55*	-.08	-.38	1.0					
(7) Average social expenditure % GDP	.23	-.27	-.17	.45+	-.85**	.09	1.0				
(8) % child care for 0 to 2, mid-1990s	.38	-.14	-.44+	.32	-.86**	.45+	.83**	1.0			
(9) Weeks paid maternity leave, mid-1990s	.54*	-.14	-.52*	.00	.75**	.03	.68*	.65*	1.0		
(10) % women working part-time mid-1990s	-.47+	-.14	.66*	.34	.25	-.72**	-.10	-.31	-.28	1.0	
(11) Marriage rate 1990	-.12	.65*	.22	-.38	.75**	-.18	-.68*	-.57**	-.75**	.13	1.0
(12) Change in marriage rate, 1990-2000	.39	-.05	-.26	-.26	-.37	.06	.13	.22	.58*	-.26	-.55*

+ $p < .10$ * $p < .05$ ** $p < .01$

Source: One-tail correlations calculated from the information in Tables 1 and 2.

Table 4 Factor loadings of indicators in Tables 1 and 2

	Support for Equality Factor	High Female Employment Factor
Social expenditures as % GDP, average 1990s-2005	.77	-.40
Wives' employment rate 1990	.54	.75
Change in wives' employment, 1990 to 2000	-.60	-.65
% employed women mid-1990s working part-time	-.47	-.48
Gini coefficient 1990	-.82	.38
Change in gini, 1990 to 2000	.43	.29
Marriage rate 1990	-.81	.41
Divorce rate 1990	-.24	.80
Weeks paid maternity leave mid-1990s	.85	.04
% children age 0 to 2 in public child care, mid-1990s	.85	-.10
Both should contribute to household income	-.71	-.20
Divorce best solution to bad marriage	-.06	.88
Bad marriage better than no marriage	-.30	.26
Percent of adult population cohabiting 2002	.71	.08
Change in marriage rate, 1990 to 2000	.58	.22
Change in divorce rate, 1990 to 2000	.15	-.86
<i>Percent variance explained</i>	<i>39</i>	<i>26</i>

Table 5 Descriptive statistics (based on person-years until divorced or censored)

	Italy	USA	France	UK	Germany	Australia	Flanders	Nether-lands	Finland	Sweden	Norway
Marriage years	1990-2003	1990-2007	1990-2004	1992-2009	1990-2008	1990-2008	1990-2008	1990-2003	1990-2004	1991-2007	1990-2000
Employed %	68	82	75	71	57	69	89	84	69	87	93
ISCED 0-2 %	37	13	20	26	15	21	7	19	10	7	9
ISCED 5 %	13	16	38	22	26	36	58	37	21	36	42
# children	0.9 (0.9)	1.1 (1.2)	1.4 (1.0)	1.1 (1.0)	1.2 (1.0)	1.6 (1.0)	2.1 (0.9)	1.2 (1.0)	1.4 (1.2)	1.5 (1.0)	1.5 (1.1)
Child < 4 %	46	48	55	45	40	47	43	50	47	43	39
Age marry	26.8 (4.4)	25.2 (5.6)	26.2 (4.5)	27.8 (5.6)	26.0 (5.2)	30.0 (5.8)	24.7 (4.2)	27.4 (4.5)	27.0 (4.8)	29.2 (5.3)	27.9 (4.5)
Duration	5.2 (3.2)	6.4 (4.2)	4.6 (3.6)	10.2 (4.3)	6.3 (4.6)	7.2 (4.1)	6.8 (6.0)	4.8 (3.6)	5.2 (4.1)	6.2 (4.2)	6.2 (4.5)
<i>Married 1990 < 95 referent</i>	69	57	54	17	52	30	59	58	43	45	53
Married 1995 < 00 %	27	26	34	42	30	38	28	34	32	30	41
Married 2000+ %	4	17	12	41	18	32	13	8	26	25	7
<i>N person-years</i>	19,340	9,837	11,819	6,797	23,561	6,417	10,378	5,402	57,226	3,231,486	100,664
<i>N wives</i>	2,554	2,471	1,555	795	2,437	1,201	1,088	604	6,728	422,460	8,904
<i>N divorces</i>	210	506	181	136	365	130	803	54	1,528	62,935	3,030

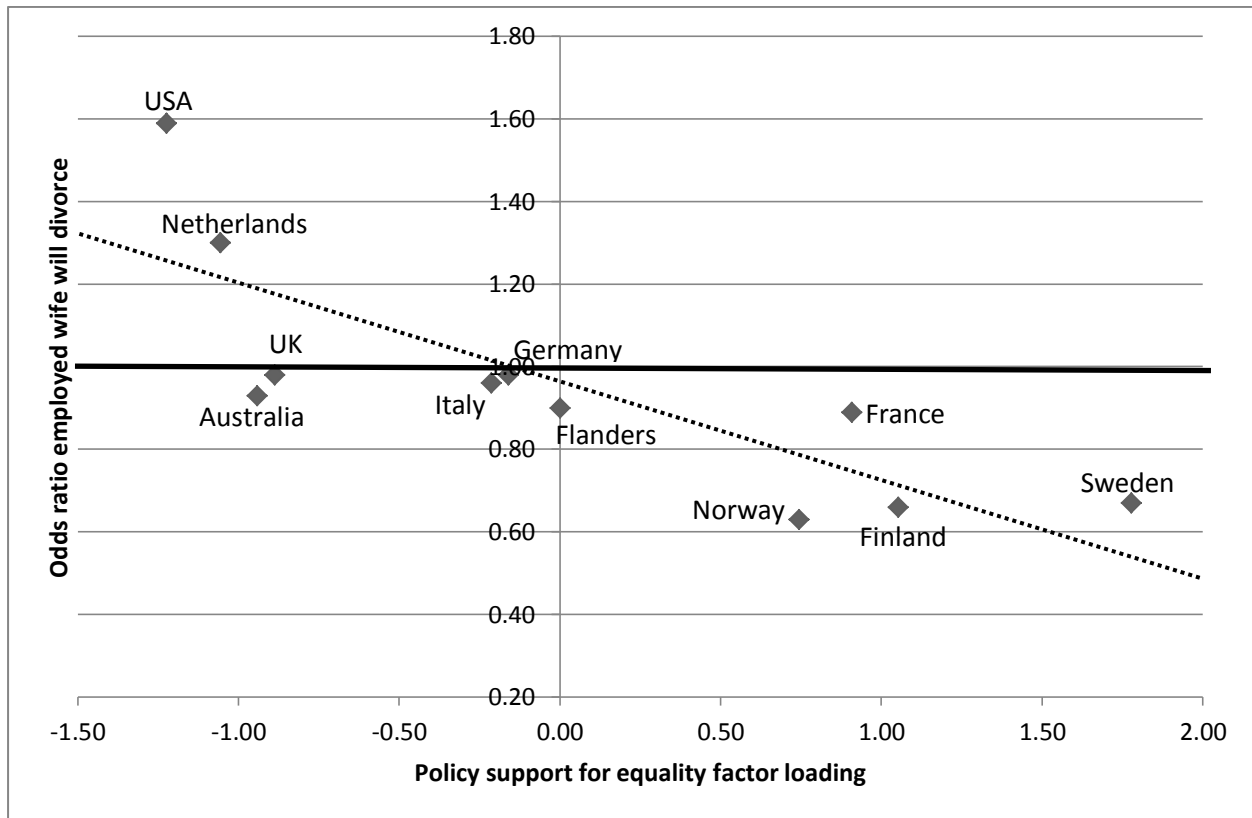
Table 6 Odds ratios of the impact of wives' employment on divorce risk, first marriages 1990+

	Italy	USA	France	UK	Germany	Australia	Flanders	Nether-lands	Finland	Sweden	Norway
Marriage years	1990-2003	1990-2007	1990-2004	1992-2009	1990-2008	1990-2008	1990-2008	1990-2003	1990-2004	1991-2007	1990-2000
Employed	0.96 (.16)	1.59** (.31)	0.89 (.16)	0.98 (.23)	0.96 (.11)	0.86 (.16)	0.90 (.23)	1.30 (.55)	0.66*** (.03)	0.67*** (.01)	0.63*** (.04)
ISCED 0-2	0.91 (.14)	1.56** (.29)	1.18 (.23)	1.08 (.21)	1.41* (.21)	0.92 (.21)	1.44 (.25)	1.26 (.42)	1.93*** (.09)	1.92*** (.02)	1.41*** (.08)
ISCED 5	0.83 (.18)	0.61** (.12)	0.92 (.16)	0.56* (.13)	0.86 (.12)	0.54** (.12)	0.75 (.17)	1.02 (.35)	0.80*** (.04)	0.62*** (.01)	0.76*** (.03)
<i>N person-years</i>	19,340	9,837	11,819	6,797	18,662	6,417	10,378	5,402	57,226	3,231,486	100,664
<i>N divorces</i>	210	506	181	136	365	130	803	54	1,528	62,935	3,030
<i>Log-likelihood</i>	-1127.9	-1032.9	-913.6	-559.5	-2226.4	-618.7	-1789.1	-268.3	-6746.9	-290466.7	-13328.8

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Notes: Controlling for age at marriage, number of children, whether any child is younger than 4 years of age, marriage cohort, duration of marriage and duration squared.

Figure 1 Relationship between odds ratio employed wife will divorce and policy support factor loading



Source: Scatterplot of loadings on policy support for equality factor from Table 4 and employed wives' odds ratio of divorce from Table 6. Dotted regression line indicates that the country loading on the policy support for equality factor explains 60 percent of variance in odds ratio of divorce ($p=.003$).