The dynamic relationships between role specialization, separation, and women's post-separation employment: A life-history analysis of 12 countries *

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ABSTRACT

Traditional role specialization during the union is generally considered an important factor explaining the divorce risk. This effect is generally attributed to the higher economic exit costs of specializing women. Although this reasoning is often used as an interpretation, it is rarely tested empirically. In this paper, we test for 12 countries to what extent specialization during the union leads to separation and to lower employment chances after separation. Furthermore, we examine the effect of separation on employment, taking selectivity bias into account. We use the Fertility and Family Surveys and measure specialization via the work history that separated women had during their union. Results from event history analyses confirm for most countries the finding that women's employment increases the odds of separation. Furthermore, fixed effects logistic analyses show that a separation indeed increases the odds of employment, but only for those who do not repartner. Moreover, we find that women who specialized less during the union are more likely to work after separation, especially those who were not working at the time of separation.

INTRODUCTION

Several scholars have found that the more women engage in domestic work and the less they participate in paid labor during their partnership the lower their risk of divorce (Brines & Joyner, 1999; Kalmijn, Loeve & Manting, 2007; Liefbroer & Dourleijn, 2006; Poortman & Kalmijn, 2002; Rogers, 2004; South, 2001). This effect is generally attributed to the higher economic exit costs of specializing women; the more women specialize, the more their human capital depreciates, and the fewer economic resources they will have outside the union. Moreover, specialization is assumed to lead to higher economic gains of the partnership for both men and women, and therefore also results in higher economic costs when the union dissolves. Although this reasoning is often used as an interpretation, it is rarely empirically tested. Do women who separate indeed have better economic resources, and thereby, higher employment probabilities after separation? And do women who specialized during the partnership indeed have lower employment chances after separation? By asking these questions we combine two lines of research: Research on the economic causes of divorce and research on the economic consequences of divorce. Scholars have investigated the effect of role specialization or women's employment within marriage on the divorce risk as well as the effect of divorce on women's post-divorce employment (e.g., Covizzi, 2008; Jenkins, 2008; Van Damme, Kalmijn & Uunk, 2008). So far, no study has combined the two lines of research into one study.

To address these issues, we use the retrospective data of the Fertility and Family Surveys (FFS) of 12 countries. The data of these countries have life histories of 52,200 women covering about 40 years of history. We use 41,248 women who married or cohabited in the period 1955-1999. Of these partnered women 26 per cent separated at

least once in the period 1957-1999. Using the FFS, we first examine the effect of task specialization within the household on separation, thereby re-examining this link for 12 countries. Second, we describe to what extent women who separate have higher employment probabilities after separation than before. Post-separation employment is examined for a 10-year period, which is longer than previous studies have considered. Third, we examine if specialization during the union leads to lower post-separation employment chances. This is an improvement upon previous research which mainly examined the recent work experience. In examining this last issue, we take into account that the women who separate are a selective group (see below).

Specialization is measured using the work and fertility history of separated women during their union. Scholars have also used the relative income or earnings of partners to measure specialization, but this is rarely done with retrospective data (like our data), because such data rarely include income measures. Although we do not have information on the employment status of the spouse, we believe that the employment status of the wife is a good proxy for specialization within the couple. The employment status of women is used in many important studies on specialization and divorce (Poortman & Kalmijn, 2002; South, 2001). Moreover, the majority of men are employed. Only in countries with a high unemployment level our proxy might be less adequate. Hence, our measure probably overestimates specialization within the household in the Southern European countries included in our data.

We examine the relationships between specialization, separation, and employment in 12 different countries. We also examine if these relationships are similar across countries and to what extent they are different. We expect that in countries where gender equality is higher, the effects of specialization on separation, of separation on employment, and of specialization on post-separation employment will be weaker. In

these countries the economic exit costs may be lower and women may take the economic gains of the union less strongly into account when making the decision to separate. We elaborate on these macro-level effects later on.

THEORY AND HYPOTHESES

To what extent is the underlying theoretical mechanism explaining the relationship between specialization and separation empirically valid? That is, do women who specialized during the union indeed have higher economic exit costs – lower post-separation employment probabilities – than non-specializing women? To answer this question, we investigate three relationships. First, we examine to what extent specialization during the union affects the risk of separation. Next, we assess the effect of separation: to what extent does separation increase women's employment? Last, and most importantly, we examine to what extent specialization during the union leads to lower employment chances after union dissolution.

The effect of specialization on separation

Although a few studies showed positive (e.g., Ono, 1998) or insignificant effects (e.g., Sayer & Bianchi, 2000), most studies have shown negative effects of role specialization on the chances to divorce. Poortman & Kalmijn (2002) for instance, found higher divorce risks for couples where the wife works more, has a higher job status, has more potential labor market success, and has a better labor market position compared to her husband. Many other studies have found similar results (Brines & Joyner, 1999; De Rose, 1992; Jalovaara, 2003; Liefbroer & Dourleijn, 2006; South, 2001). This negative effect of

specialization on divorce is often explained from an economic perspective: Role specialization is assumed to be beneficial to marriage because couples increase their household utility (income) by specializing in the tasks in which they are the most productive (compared to their partner) (Becker, 1981). Women are considered to be the most productive in doing domestic work, whereas men in performing paid work. Women (and men) are thus economic dependent upon their spouse. Hence, for women the economic costs to exit marriage are higher; outside the marriage they have fewer economic resources than inside the marriage. Another explanation for the negative association between specialization and divorce might be derived from a (functionalist) sociological perspective. Parsons (1949) argued that role specialization within marriage has a function: It would avoid marital conflict (because of occupational competition between spouses) and thus lower the risk of divorce. Yet, scholars have raised some counter-arguments (Oppenheimer, 1997). First, specialization is a risky and inflexible family strategy. Second, the concept of economic independence may refer to both absolute and relative independence. The first definition means being able to earn a living independently (even though it would be at the minimum income level). The second deals with relative economic independence of one's partner. We do not consider this definition, because we only focus on women, not their partners, and because we believe that economic independence in absolute terms is the most relevant one in women's separation and employment decisions. Hence, we expect that: *The more women specialize during the partnership, the less likely it is that they will separate (hypothesis 1a).*

Obviously, emotional and social-psychological reasons may be more important factors in women's divorce decision, outweighing the negative economic exit costs. However, given equal social-psychological costs and benefits of marriage and separation, lower economic exit costs can still reduce the barrier to separate. Because the FFS does

not allow us to control for relationship quality or satisfaction, our results may apply more to women exiting bad unions than to women exiting all partnerships, regardless of the quality (Sayer & Bianchi, 2000). Furthermore, men also have a say in the divorce decision. However, we believe that women's decision to divorce is more important because they are most often the ones who initiate the divorce (Kalmijn & Poortman, 2006).

The effect of separation on employment

Do women who separate indeed have better economic resources, thus higher employment probabilities after separation? Many studies have found a positive relationship between divorce or separation and post-divorce employment (Bouman, 2005; Bradbury & Katz, 2002; Duncan & Hoffman, 1985; Finnie, 1993; Haurin, 1989; Johnson & Skinner, 1986; Peterson, 1989; Van Damme et al., 2008). Some studies found no effect (Mueller, 2005) or a negative effect (Covizzi, 2008; Jenkins, 2008). An increase in post-separation employment is typically explained in terms of financial needs. A separation implies a financial cutback for women, because of the loss of economies of scale and insufficient alimony payments. Especially in traditional male-breadwinner type households, women have no own income source (yet) and can no longer rely on their spouse's income after the split up. Women may compensate this drop in adjusted household income after separation through an increase in employment. That some studies find no or a negative effect may be explained by women's alternative income sources. Some women may receive welfare or sufficient alimony after divorce and thus do not need to work. Others may remarry quickly or move in with their parents or other relatives. This may also reduce their need to work.

Our study investigates the employment changes within a separated person. In this way, we can take into account selection bias in the characteristics of the group of separated women compared to those of the partnered women. Because separated women may have specialized less during the union, and thus have more potential labor market success, the observed separation effect can be (partly) attributed to the lower degree of specialization of separated women. We formulate the following hypothesis: *Separated women will be more likely to be employed than non-separated women (hypothesis 2a).*

The effect of specialization on post-separation employment

In the literature, the negative influence of specialization during marriage on women's post-divorce employment is suggested to be the underlying reason for the effect of specialization on divorce. Specialization during the union may have a negative influence on women's post-divorce employment because investments in domestic work rather than in paid work lead to a depreciation of human capital, which in turn reduces employed chances after divorce (Johnson & Skinner, 1986; Van Damme et al., 2008). According to Becker (1964), investments in education and labor market experience result in better jobs and higher income levels. This will also apply to women's situation after separation. Employers prefer women who are more productive, which makes it more likely for women with more human capital to find a job after separation. In addition, more productive women get higher wages and higher wages may form a stronger incentive to be employed after union dissolution. Hence, we expect that: *The more women specialize during their partnership, the less likely they will be employed after separation (hypothesis 3a).*

Note that this hypothesis applies to separated women. Thus, the empirical test of this hypothesis does not include partnered women as comparison group. For this reason,

we have to take selection bias into account. Not only human capital in terms of education or work experience may give women better labor market opportunities after separation, personality traits such as self-confidence, work ethic (the preference to work), and being more emancipated, provide women with higher labor market potential as well. We particularly have in mind housewives from older cohorts who would have liked to work, but did not because of the strong adverse normative environment. Hence, women who primarily engaged in domestic work during the union and nevertheless separated, may be the economic strong ones in terms of these unmeasured traits. Not including such variables in our analyses would bias the observed effect of specialization downwards (the least specialized women incorrectly appear to have good labor market outcomes). Because these characteristics are unobserved, we use a two-step Heckman model to correct for the possible selection bias in the specialization effect on post-separation employment. We expect to find a selection effect: *The more separation-prone women are, the more likely they will be employed after separation (hypothesis 3b).*

Are the interrelationships between specialization, separation and employment weaker in more gender egalitarian countries?

In the first instance, our paper is an attempt to test the three hypotheses in multiple countries rather than in just one country. In all countries, we expect to find all three relationships: the negative specialization effect on separation, the positive separation effect on employment, and the negative effect of specialization during the union on post-separation employment. However, there may also be differences in the magnitude of these effects. We expect to find cross-national differences due to two reasons: differences in the (actual and perceived) economic costs of separation, and differences in the importance

that women's attach to the economic exit costs in the divorce decision compared to other considerations like preferences, values, and psychological characteristics.

It is well-known that in some countries, the trend towards gender egalitarianism has occurred more quickly and more strongly than in other countries. Given the fact that we study the relationships between gender-role specialization and divorce on the micro-level, it seems plausible that gender egalitarianism on the macro-level is a factor which may condition some of the relationships we study. We make a distinction between economic and cultural gender equality in countries. By the *economic* dimension of gender equality we refer to the degree of equal opportunities of both genders on the labor market and women's economic independence. In the last decades of the previous century, women's employment rate increased, and more generous family supportive policies – like public child care provisions and parental leave – facilitate the combination of work and care for women in many industrial societies. Moreover, in countries where divorce is more institutionalized, better safety net arrangements for the divorced – like alimony arrangements and single parent allowances – are implemented. All of these processes contribute to economic gender equality (England, 2005; Oppenheimer, 1994, 1997; Orloff, 1993). These processes coincide with individualization processes. People act more independently from the general social norms and norms and values in the field of family and work become less traditional. In other words, people are more tolerant of divorce, adhere less to the nuclear family as the cornerstone of society, and have more egalitarian gender role values. This is what we call the *cultural* dimension of gender equality: the degree of adherence to egalitarian gender role norms.

In more gender egalitarian societies, specialization within the household is less valued and equality in the division of household labor is preferred. For instance, on the micro-level women with more egalitarian gender role values are more satisfied with their

marriage if they divide household tasks equally with their spouse; for these women, specialization has a weaker negative, or even a positive effect on the divorce risk (Brines & Joyner, 1999; Kalmijn et al., 2007; Rogers, 2004). If we aggregate this expectation to the macro-level, we expect that in more gender egalitarian countries the specialization effect on separation will be less negative.

A similar expectation can be derived from the degree of economic gender equality in a country. More economic gender equality may reduce the economic exit costs of separation. In more economic gender egalitarian countries the income loss due to divorce may be (partly) compensated for by non-labor income. State income support provides a safety net for divorced women without an own income source (Uunk, 2004) and reduces the necessity to work after divorce (Van Damme et al., 2008). Similarly, more employment opportunities for women and institutional arrangements supporting women's work may increase the likelihood to find a job after separation (South, 2001). This may not only lead to lower *actual* economic costs, but also to lower *expected* costs (as perceived by partnered women); even specializing partnered women may expect to find a paid job to compensate their income loss, should they separate. Hence, we expect that in more economic gender egalitarian countries, women are more likely to divorce or separate, also those who were primarily involved in domestic labor during the partnership. In sum: *The higher the degree of gender equality in a country, the less negative the effect of specialization on separation is (hypothesis 1b).*[1]

A result of a weaker effect of specialization on separation is that the selection of women with separation-prone characteristics into employment is reduced; there is less

[1] It would be interesting to disentangle the effects of women's employment opportunities, institutional support for separated women, and gender role norms. However, with 12 countries we do not have enough statistical power to estimate these effects. Moreover, these macro-level factors are highly correlated (see Table 2). It is therefore more interesting to look at the 'package' of these measures as indicators of the degree of gender egalitarianism.

upward bias in the separation effect on employment. Thus, we expect that: *The higher the degree of gender equality in a country, the less positive the separation effect on post-separation employment (hypothesis 2b).*

More equal employment opportunities for men and women may also lower the effect of specialization on women's post-separation employment. In countries with more gender equal employment opportunities, even women who were specializing may be more likely to be employed after separation. We do not expect that state income support weakens the specialization effect on women's employment probabilities, because women who were specializing during the union may still have lower chances to be employed after separation; for specializing women, work may be less attractive compared to alimony or welfare, due to their higher eligibility for alimony or welfare (they are more likely to have a lower post-separation income) in combination with their relatively poor labor market prospects. However, we believe that in general more gender equality in a country will encourage all separated women's post-separation employment probabilities. Thus, we expect weaker effects of specialization on women's post-separation employment: *The higher the degree of gender equality in a country, the less negative the specialization effect on post-separation employment is (hypothesis 3c).*

METHODS

Data

We use the retrospective data of the Fertility and Family Surveys (FFS), which include information on four histories: fertility, family, education, and occupational histories. The data collection took place between 1988 and 1999 in 24 countries and was coordinated by

the Population Activities Unit (PAU) of the United Nations Economic Commission for Europe (UNECE). Between 1,700 and 10,500 women (on average around 4,000) per country were interviewed. The country surveys differ in the age groups that were sampled. Most countries interviewed women of age 18 through 49. Moreover, in Norway and Sweden single year birth cohorts were sampled.[2] We do not select specific cohorts or age groups in most of our analyses, because we control for age and year (and thus indirectly for cohort) in our models. However, for the descriptive figures and the estimation of the separation effect on employment, we do select women aged 18 to 49 to enhance cross-national comparability. For a detailed discussion of FFS comparability issues, see Festy and Prioux (2002).

Using the retrospective information of start and end dates (year and month), we created a person-month file for each country including the histories of unions, employment, occupations, education, and children. We have comparable information on all histories for 12 countries (see Table 1). Our analytical sample consists of married/cohabiting and divorced/separated women aged 18 and older who were not in full-time education. In total our dataset consists of 41,248 women (see Table 1 for the number of cases and person-months per country). We observe on average 12 years of union history and 7.5 years after separation. Given the age selection of the FFS, we observe unions in their early and mid period, but not late in the union. Hence, we cannot generalize our findings to dissolutions of unions with a long duration. To keep the analyses simple, we only consider first marriages or cohabitations and, if relevant, their separations. Spells after a separation transition of a repartnered woman (i.e., a second separation transition) and spells after a transition into widowhood are censored.

[2] In both countries birth cohorts five years apart were interviewed. For example, in Sweden in the years 1949, 1954, 1959, 1964, 1969. Women born in these years are assumed to be representative for the entire five-year birth cohort they belong to.

[Table 1]

Analytical approach and measures

We first replicate previous research by estimating the effect of role specialization on separation by a discrete-time event history model on the person-month file. The dependent variable is the probability of separation, conditional on being at risk of separation. Women are censored at the separation transition, at a transition into widowhood, or at the time of interview. We define *separation* as a transition from marriage or cohabitation in one month (t_{-1}) to not living as a couple in the subsequent month (t_0) due to divorce or separation.

Specialization during the union is the main independent variable for which we use five (time-varying) measures: (1) Women's current *employment status* (employed or not). Only spells of at least three consecutive months of paid employment were considered. Spells of full-time education are excluded from the analysis. (2) The *average job status during the union*: the average International Socioeconomic Index (ISEI) score during the union up to the current month. During non-working spells, respondents were assigned the job status of the previous job; (3) The average change in job status during the union up to the current month. This measures to what degree the respondent makes *career progress*; (4) The *duration of the union*; and (5) Being *married*. The first three indicators are the most direct measures of specialization in domestic work, whereas the last two are more indirectly related to specialization. We assume that married women and women in longer lasting unions specialize more in domestic work than cohabiting women and those in unions of short duration (Brines & Joyner, 1999; Kalmijn et al., 2007). Marriage indicates a stronger commitment between partners, making it less risky for women to specialize in unpaid household labor. Moreover, the longer the union lasts, the more time women may

have spent on domestic work during the union and the more their human capital diminishes. As control variables, we include parental divorce, urbanization of the residence when young, church attendance, and age at union. These variables are known to affect the risk of divorce (Amato & DeBoer, 2001; Kalmijn, De Graaf & Poortman, 2004; Kiernan & Cherlin, 1999; Lillard, Brien & Waite, 1995; Wolfinger, 2005).

Second, we estimate the separation effect on employment status. Using graphs, we compare the employment status over the union duration of partnered women with that of separated women before and after separation. Subsequently, we perform a fixed effects logistic regression analysis on the person-month file with the *probability of being employed* as the dependent variable. Such a model enables us to estimate the separation effect adequately by not only taking observed differences in specialization between partnered and separated women into account, but also unobserved differences in specialization, and personality traits and work preferences. Hence, we can specify to what extent separation indeed leads to higher employment probabilities. We examine employment probabilities, not changes in employment (employment entry and exit), because we do not have good theoretical arguments of why the mechanisms of entry and exit would differ. Moreover, separated women may change their employment status on the short and long term. Looking at the employment probability, we observe the entire available period after separation and not just the first transition after divorce or separation.

Third, we examine the effect of role specialization during the union on post-separation employment, using the *sample of separated women*. We use a logistic regression analysis with the probability of being employed in the period after separation as dependent variable. For each woman, each month after separation is a separate record. For this reason, we use random effects logistic regression. *Specialization* is measured

similarly as in the first model where we estimate the specialization effect on separation, but now the variables are *time constant.* Employment during the union was measured by the proportion of months a woman was working during the union measured at the time of separation.[3] This effect will be distorted by the fact that women working at the time of separation are highly inclined to continue working after the separation as well. The effect will probably be more relevant for women who do not work at the time of separation, although one could also argue that work experience makes employment exits less likely, just as they make employment entries more likely. To find this out, we include the employment status of women in the month before separation and the interaction with the work history variable. Hence, the effect of work history on post-separation employment is separately analyzed for those working at separation and for those not working at separation. For the effects of the other variables, we do not expect to find differences depending on women's employment status at separation. Indeed, research by Van Damme, et al. (2008) demonstrated that the effects of human capital, children, being married before separation, and repartnering are reversed for entry and exit models. The duration (in years) since separation is also included in the model.

As explained in the theoretical section, also unobserved differences in work values and personality traits (like self-confidence) may be relevant. To correct for this selection bias, we perform a two-step Heckman approach. First, we estimate the conditional probability of separation by a discrete-time event history probit model (the selection model).[4] Using this model, we calculate the predicted probability to separate for

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[3] This measure is created by a meter counting all the months a woman was in employment during the union. The meter starts running when an employment spell starts and remains unchanged during non-employment spells. Per month, we divided the score on the meter by the union duration in that particular month. Moreover, we included a penalty for part time work (less than 35 hours); the meter adds half a month instead of one month if a woman was in part time employment.

[4] This model is the same as the model that was used for the first analysis. One difference is that the selection model was estimated using a probit model, as Heckman prescribes (the first analysis uses a

all separated women. Next, we perform the random effects logistic regression on the probability of being employed after separation (the outcome model). In this model we include the *predicted* separation probability. By including this latent trait, the bias in the effects of specialization on post-separation employment due to selection bias is diminished (Heckman, 1979). Following Heckman's two-step approach, the separation probability was transformed into an Inverse Mills Ratio before it was included in the model. We use the average predicted separation probabilities of the last three years of separated women's union to reduce the amount of instability in the probabilities. The selection model needs to include at least one identifying variable which affects the probability of separation, but does not affect the probability of being employed. As identifying instruments we use parental divorce/separation, the degree of urbanization of the area where the respondent was raised, and church attendance frequency. It is plausible that these variables do not affect post-separation employment and it is known that they do affect the separation risk.[5]

Finally, we pool the countries and test to what extent specialization and selection effects on employment are similar across countries. In case of significant differences between countries, we estimate to what extent the effects are weaker in countries that have a higher degree of gender egalitarianism. Such countries are defined by more egalitarian gender role norms, higher employment rates, and higher institutional support for divorced women and for women in general (see Table 2).

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logistic regression model). [accidentally, we based the lambda on the results of logistic analyses instead of probit analyses. This error hardly affects the results]

[5] Although studies have shown that the current urbanization of the respondent's residence influences women's post-separation employment probabilities, the urbanization of the area were the respondent was raised in, is hardly correlated with women's post-separation employment in most of the countries. Therefore, we did not include the degree of urbanization in the 'outcome' model. However, in a next version we might perform sensitivity analyses for most countries with this variable in the 'outcome' model as well.

[Table 2]

Control variables

In all models, we control for education, age, year, and the age of the youngest child. The *highest level of education* (time constant) is measured at the time of interview in 7 ISCED categories. We include the variable as an interval variable, recoded relative to the country's educational composition.[6] We control for *year* and *year squared* to take period effects into account.

RESULTS

Descriptives

To what extent does the employment status of partnered and separated women differ in each country? In figure 1 the employment rates of partnered (married and cohabiting) and separated women per country are presented. We first concentrate on the figure for Finland. The solid (upper) line reflects the change in the employment rate for an average separated woman in the period before and after separation. The upper x-axis represents the duration of the union of separated women up to the time of separation and the duration of time after separation. In other words, the line describes the periods before *and* after the separation. The time of separation is located at the average union duration at the time of separation. We compare this line with the change in employment rate during the partnership of an average partnered woman (dashed line). The scale on the bottom x-axis

[6] Not classifiable and missing levels are coded 3. We include a dummy for whether education was missing or not classifiable (only in Greece a substantial amount was missing (15% of the women))

is the duration for women who did not separate. This scale starts at the first year of marriage and goes up to twice the duration of separated unions. The two scales are thus connected. We have corrected the yearly employment rates for the period trend in the (Finnish) average employment rate.

The figure shows three effects. First, women only moderately increase their employment after separation and decrease it slightly in the long term. Second, the employment rate of separated women is already higher than that of partnered women before the separation. Hence, in Finland separation is a selective phenomenon; women mostly seem to separate when they can afford it, when they are employed, thus when they specialized less during their partnership. Third, women increase their employment already in the months *before* the separation. This may have to do with anticipation. Women might anticipate a separation by returning to work or by increasing their work hours to compensate for the upcoming income loss after the split up (Johnson & Skinner, 1986; Poortman, 2005). An alternative explanation is that the period around separation coincides with the stage in which the children become older and in which (some) women return to the labor market. Exactly in these life stages, women are the most likely to divorce (Brines & Joyner, 1999; Waite & Lillard, 1991). Note that we do not have many women in the empty nest phase, due to the young age sample of the FFS.

[Figure 1]

Looking at all the country figures, we see a clear increase in post-separation employment in Italy, Spain, and Switzerland. In Sweden and Austria (next to Finland), the increase in employment is modest, while in the US the change is very smoothly spread over two years. In the other countries we observe no change.

Furthermore, the pictures show that separation is highly selective in terms of employment in Switzerland, Italy, Spain, and Greece, whereas in the other countries the employment rate of separated women differs less from that of partnered women. In Latvia and Hungary we do not observe differences between the two groups. At first glance, selection seems to be higher in countries that are less gender egalitarian. However, Finland, Sweden, and the Czech Republic are an exception with high overall employment rates and institutional support, but also significantly higher employment rates for separated women compared to partnered women. Additionally, Finland, Sweden, Germany, Austria, Switzerland, and Spain show possible anticipation effects – meaning that employment increases just before the separation.

In sum, the differences in employment rates between separated and partnered women might partly or fully be caused by selection (and marginal anticipation) effects. The selectivity of separated women might be twofold: On the one hand they can differ on overall (static) characteristics (they specialized less during the partnership, for instance) and on the other hand they can be in a different stage of their life course (in which also partnered women specialize less). We will first test to what extent specialization leads to higher separation risks. Then, we estimate the net separation effect, controlling for life course variables. Finally, we examine the effect of specialization on women's post-separation employment.

The effect of specialization on separation

To what extent does specialization cause a higher risk of separation? Table 3 shows the estimates of effects of specialization measures on the probability to separate using a discrete-time event history model. This is a replication and an improvement on previous research, because we analyze the relationship for a large number of countries (in a

uniform fashion). Later on, we will use the estimated separation probabilities from this analysis to correct for selection bias in the analysis of the specialization effect on post-separation employment.

Overall effects – Like in previous research (Brines & Joyner, 1999; De Rose, 1992; Jalovaara, 2003; Liefbroer & Dourleijn, 2006; Poortman & Kalmijn, 2002; South, 2001), we find that in most countries women's employment significantly increases the risk of separation. For instance, in the US working women are 31% [exp(0.268)] more likely to separate than non-working women. However, in Sweden, Latvia, Czech Republic, and Hungary there is no significant effect of women's work on separation. Other measures of specialization during the union (the average job status and career woman) do not have a significant influence, except in Spain where women with a higher job status have a higher separation risk than women with a lower job status. In all countries, married women are less likely to separate than cohabiting women, confirming what has been shown before (Brines & Joyner, 1999; Kalmijn et al., 2007; Liefbroer & Dourleijn, 2006).

In six countries, union duration initially increases the risk of separation, but this effect slows down and decreases after about seven to twelve years of union, depending on the country. The US is an outlier with a negative (U-shaped) duration effect. Previous studies on American data reported mixed results. South (2001) and Sayer and Bianchi (2000) found a negative duration effect, whereas Ono (1998) found a positive heap in the first five union years. In Sweden, Finland, Czech Republic, Greece, and Spain, no significant duration effects are found.

Parental divorce, the degree of urbanization, and church attendance all have the expected effects. Women whose parents divorced or separated when they were younger than age 18, are more likely to separate themselves. Although in some countries the

estimates are not significant, they are always in the expected direction. Furthermore, the more urbanized the area where women lived when they were young, the higher the risk of separation. Women who attend church frequently are less likely to separate than women who do not attend church. Latvia is an outlier with an unexpected positive effect of church attendance. These variables are valid identifying instruments for the selection equation, because they are uncorrelated with women's current employment status.

The effects of the control variables are as expected as well. The risk of separation increases significantly over time in half of the countries. Furthermore, the older the age of women at their first union, the lower the separation risk. The influence of education differs between countries. In about half of the countries education does not significantly affect women's risk of separation, whereas in Sweden, Italy, and Spain, higher education increases the separation risk, and in the Czech Republic and Austria the reverse is true. Härkönen & Dronkers (2006) had similar findings, except for a larger effect in Greece and a smaller effect in Sweden.[7] Lastly, women with children – especially children below the age of 6 – are less likely to separate than women without children in most of the countries. The US and Germany[8] are outliers with positive child effects. Note that the effect of children is a mix of the number and the ages of children, which makes it difficult to disentangle each effect (Waite & Lillard, 1991). Additionally, this effect is averaged over birth cohorts, union cohorts, and age groups,. If we only focus on women born before 1955 or women who formed a union in the sixties, the effects are in the expected (negative) direction (although not significant) for both child age groups. If we only focus on women older than 30, we also find a negative effect for the youngest child age group in the US. Apparently, for younger women in the US, children form less

[7] For Greece, the larger effect might be due to not controlling for the work effect. For Sweden, we do not know the cause of the difference yet.
[8] All results for Germany are preliminary. Analyses for former East- and West-Germany have to be done.

of a barrier to divorce. An explanation might be that these are more often so-called shotgun marriages, which have a higher risk of divorce (Janssen, 2001).

[Table 3]

Country differences – To what extent are the differences in the work effect on separation related to the extent of gender egalitarianism in a country? In figure 2, we present a scatter plot with the effect of work on the vertical axis and the degree of gender equality in a country on the horizontal axis. As argued in the theoretical section, we expected that in more gender egalitarian countries, specialization has a less negative effect on the risk of separation. We expect this because of lower expected exit costs and because in more gender egalitarian countries, women may prefer a more equal division of labor between men and women in the household. If we consider Finland as an outlier, we indeed observe a negative relationship between a country's gender equality and the work effect on separation. Finland might be an outlier, because its FFS birth cohort sample includes relatively old cohorts. Härkönen and Dronkers (2006) also found unexpected results for Finland in their study with the FFS data.

[Figure 2]

The effect of separation on employment

To what extent are separated women more likely to be employed? We examine changes in employment probabilities using a fixed effects logistic regression analyses.[9] This

[9] Additional analyses have to confirm the robustness of the results, since for several countries the models did not converge.

model takes unobserved differences in the time-constant characteristics of separated and partnered women into account, like differences in specialization, work preferences, more liberal sex-role values, or personality traits. All the variance *between* persons is cancelled out and we only estimate the effects of changes between observations (within a person). Hence, the model only consists of time-varying variables. To take into account the life course stage women are in, we control for the age of the woman, having children, and the age of the youngest child. We present the results of the models in figure 3. Additionally, we compare these results with random-effects models comparing separated women with married women.

[Figure 3]

Overall effects – The first (upward) bars in the figure show per country the separation effect, that is the log odds of being employed for separated women compared to partnered women (controlled for a period effect). The figures clearly show that separated women on average are more likely to be employed than partnered women at a particular moment in time. However, repartnering strongly decreases the probability to be employed (see the downward bars). Repartnering is included by a cumulative dummy, meaning that separated repartnered women are compared with separated non-repartnered women.[10] In Sweden, Finland, US, Latvia, Czech Republic, and Germany repartnered women end up being *less* likely to be employed than *partnered* women. In the other countries, repartnered women are still more likely to be employed than never-separated partnered women.

[10] We created three groups: 1. partnered; 2. separated and not repartnered 3. separated and repartnered. Subsequently, we created two dummy's (1 (0) vs. 2 + 3 (1)) and (1 + 2 (0) vs. 3 (1)).

Comparing the results of the fixed effects analyses (the third bars) with the random-effects results, we observe a decrease in the separation effect, the better we control for selectivity bias. The first bar shows the gross separation effect using random-effects models (controlled for period effects). The second bar presents the separation effect adjusted for control variables like education and life course (age of the woman and of the youngest child). In most countries we find a decrease in the separation effect when we control for these variables. We observe a further reduction of the separation effect if we take unobserved differences between partnered and separated women into account – for instance differences in specialization, work preferences, and personality traits (compare the second and third bars).

Country differences – The (fixed effects) separation effect is strongest in Switzerland, Spain, Italy, and Greece, and weakest in the Czech Republic and Latvia. This is more or less consistent with what we would have expected from the descriptive figures. Swiss separated women are about 4.3 times [exp(1.47)] more likely to be employed than partnered women, whereas Czech separated women have a 1.35 [exp(0.30)] higher odds to be employed compared to their partnered counterparts. Again, assuming that Finland is an outlier, the separation effect seems smallest in more egalitarian countries (figure 4). This is what we expected, because in those countries the perceived and actual costs of exiting the union are lower.

[Figure 4]

The effect of specialization on post-separation employment

To what extent does specialization during the union lead to lower employment probabilities after separation? In table 4, we present the estimates of the effect of specialization during the union on women's post-separation employment probability. This is the first step of the empirical test of the theoretical underlying mechanism that may explain the specialization effect on separation. To save space we initially present only the pooled model (controlled for country (dummies)).

Overall effects – First, we discuss Model 1 in which no correction for selection bias is made. Because women's employment status at the time of separation will be correlated with the effect of women's work union history, we include an interaction with women's employment status at the time of separation. Hence, we estimate the effect of work history separately for women who were working and for those who were not working at the time of separation. Generally, we can conclude from the table that the less women specialized during the union, the higher their employment chances after separation. The effect of women's work history during the union is in the expected direction and statistically significant. For non-working women at the time of separation, the odds of employment are 19 times higher [exp(2.97)] when comparing women who never worked during the union with those who worked full-time all the time. Work history also affects post-separation employment for women who were working at the time of separation: the odds are 3.1 [exp(2.97-1.85)] times higher when comparing the two extremes. Model 1 does not include women's average job status during the union and the degree to which women make career progress, because this information is available only for seven countries. The pooled model with the countries that do have job status information (Finland, Czech Republic, Hungary, Germany, Switzerland, Greece, and Spain) is

presented in Model 3. We observe that women who were working in jobs with a higher status are more likely to be employed after separation than those who had a lower job status during the union. Moreover, the stronger the increase in job status during the union (measuring women's career progress), the higher women's post-separation employment probability is.

We find mixed effects of the more indirect measures of specialization on women's post-separation employment chances. Union duration – unexpectedly – increases separated women's employment probabilities. Furthermore, women who were married before the separation are more likely to be employed after separation, and not less likely – as we expected.

Is the employment increase after separation temporary? Looking at the post-separation duration effect, we observe that separated women are more likely to be employed up to eight years after separation compared to the year of separation, but the employment probabilities gradually decrease each year.

We now discuss some of the other effects in the model. We find a period and an age effect. The period effect is curvilinear. In the sixties separated women were more likely to be non-employed than employed, whereas in the seventies and eighties they were more likely to be employed. From the mid-eighties onwards, non-employment is again more common among separated women. Age also has a curvilinear influence on women's post-separation employment. Employment chances increase with age up to age 35 and then decrease. Repartnering is negatively associated with post-separation employment. Apparently, a new partner reduces the need for employment to compensate income loss due to separation (Dewilde & Uunk, 2008). Furthermore, the younger the age of the child, the lower women's employment probability after separation. Education and being in part-time education increase the likelihood to be employed after separation.

[Table 4]

The selection effect – To what extent are the women who separate a selective group (those with higher employment probabilities)? The second model of Table 4 corrects the estimates for selection bias. It includes the Inverse Mills Ratio (Lambda) which was calculated from the selection model in Table 3. We used the separation probabilities of the last three years of the separation to compute the Inverse Mills Ratio (the probability of *not* being selected into the separated sample). To facilitate the interpretation we reverse the sign of the "Inverse Mills Ratio". On average, we do not find that selection matters, as indicated by the insignificant effect of Lambda. This means that women who were more prone to separate (i.e., more likely to be 'selected' in the separation category) are not significantly more likely to be employed after separation.

Country differences in the specialization effect – In table 5 we show the specialization effect for each country. We present the model with (Model 1) and without the selection correction (Model 2). In Model 3 and 4, we also include job status variables when available in the data. We focus our interpretation on the effects of Model 2, which are controlled for the selection effect. First of all, we observe that the work history effect is positive in almost all countries and that it is significant in seven countries (for non-working women at the time of separation). For working women, work history has a significant influence only in two countries – the US and Spain –, whereas in Greece, Czech Republic, Switzerland, Austria, and Sweden, the work history effect is in the negative direction. In addition, women's average job status during the union appears to increase their employment probability in Finland, Hungary, Germany, and Spain. Hungary and Germany are the only countries where more career progress during the

union leads to higher post-separation employment chances (Model 4). Furthermore, union duration has a positive significant influence on women's post-separation employment in seven countries. Only in three countries (Finland, the US, and Greece), do we observe that women who were married before the separation are more likely to be employed. In the other countries we do not find a significant effect.

[Table 5]

Country differences in the selection effect – Contrary to what we found in the pooled model in Table 4, we observe selection effects in some countries. In four countries, the selection effect is in the – expected – positive direction. In Finland and the US, the selection effect is also significant, while in Greece and Spain, it is not. This can be due to factors like personality, work preferences, and more liberal gender-role attitudes. Hence, the ones who separate are the ones with the best labor market perspectives (ceteris paribus), the ones for whom the economic exit costs are the lowest. A typical example would be housewives of the older cohorts in our sample. These women may have preferred to work during their union, but never could work because of disapproval in their family or network. This is an additional empirical confirmation of the theoretical underlying mechanism explaining the effect of specialization on separation.

Unexpected is the significant negative selection effect in the Eastern European countries and Germany. This implies that more separation-prone women have lower employment probabilities. An explanation could be that in these countries, other problems than economic costs are more important, like mental health and alcoholism (Table 3 shows for these countries no work effect and lower educated women are more likely to separate).

Why is the selection effect so large in Finland and the US and not in other countries? It could be that in Finland and the US, unmeasured specialization, work preferences or motivation and personality are also important on the labor market, regardless of women's pre-separation employment status and human capital. That implies that in the other countries these unmeasured characteristics are already reflected in the human capital and pre-separation employment measures. For most countries, it may thus be sufficient to control the model for human capital measures like education and women's work union history.[11] However, methodological reasons like model specification errors may also cause instability in the selection effects.

To what extent does the selection effect influence the effect of specialization on post-separation employment? If the selection effect is taken into account, the effect of work experience during the union increases for women who were not working at the time of separation in five countries. In Finland for instance, the increase is 28%. Hence, the effect of specialization in Model 1 was biased downwards due to not taking into account unmeasured traits. This confirms our expectation of a possible unmeasured cohort effect. Even separated women who were specializing during the union are the ones with better labor market potential – they have for instance more self-confidence and more work oriented values. We observe an increase in the job status effect as well after controlling for selection bias. For the other countries this interpretation does not apply. In the US, Greece, and Spain (countries with a positive selection effect), the specialization effect was biased upwards.

To summarize, for almost all countries we found that specialization during the union matters to some extent. For some countries the employment history during the

[11] Indeed, if we delete the work history and the employment status in the month before separation, the selection-effect becomes significantly positive in the Southern European countries, and weakens in the Eastern European countries

union matters, for other countries job status during the union, or making good career progress matters. Although most effects are in the same direction, they differ in their magnitude. We try to understand these differences in terms of gender equality in a country. For both women working and those not working at the time of separation, the effect of specialization during the union on post-separation employment (as measured by women's work history) is only slightly weaker in countries with more gender equality (figure 5). This does not provide support for our hypothesis.

[Figure 5]

CONCLUSION AND DISCUSSION

In this paper, we advanced upon previous research by combining two strands of literature: studies on the economic causes of separation and studies on the economic consequences of separation. In previous studies, the effect of role specialization on separation is often explained by the higher economic exit costs for women who were specializing during their partnership. Role specialization – with men specializing in market-based tasks and women in home-based tasks – would be beneficial for marriage. As a result of this specialization, women's human capital depreciates during the union which may lead to lower employment probabilities after separation. We examined to what extent specialization indeed increases women's employment probabilities after separation, using the Fertility and Family Surveys for 12 countries with 41,248 women covering union histories of on average 12 years.

We first replicated previous research on the effect of specialization on the risk of separation. Our findings are in line with what most studies so far have shown: Specialization increases the risk of separation. In most countries, women's employment increases the risk of separation. Only in three Eastern European countries and in Sweden, we did not find a significant positive effect. Moreover, in all countries, married women are less likely to separate than cohabiting women.

Second, we tested to what extent separated women indeed have higher employment probabilities than partnered women, using a fixed effects model. In this model, we control for the better labor market perspective of separated women compared to partnered women; thus, we accounted for selectivity bias due to (unmeasured) time constant differences between partnered and separated women. The results confirm our expectations. Separated (but not repartnered) women are indeed more often employed than partnered women. The separation effect varies from an odds ratio of the probability to be employed of 4.3 in Switzerland to 1.4 in the Czech Republic. The most plausible explanation for the remaining separation effect is the income decline due to loss of economies of scale and the fact that women cannot rely on their spouse's income anymore.

Third, we find empirical evidence for the theoretical argument that explains the specialization effect on separation. The more separated women specialized during the partnership, the lower their employment probabilities after separation. On the pooled model for all countries, we found effects of the work history on post-separation employment. For a subsample of countries (seven countries), we also found significant positive effects of two other (non-)specialization indicators: job status and career progress. However, we did not find the expected significant negative effects of the union duration and marriage versus cohabitation on post-separation employment. Moreover,

these specialization effects are somewhat biased downward because specializing women who separated may have certain unmeasured traits that increase their employment chances after separation. We corrected for this downward selection bias by a two-step Heckman approach. The selection effect was significantly positive in two countries and negative in three countries.

We tested the hypotheses for 12 countries which makes our tests more powerful. For most countries, we found negative effects of specialization on post-separation employment for women who were not working at the time of separation. These effects differed significantly in magnitude. Furthermore, countries differed with regard to the selectivity of separation. In general, countries with more gender equality seem to have lower effects of specialization on separation than more gender unequal countries. We also find that the effect of separation on employment is lower in more gender egalitarian countries. The effects of specialization on post-separation employment are only slightly weaker in more gender egalitarian countries.

We conclude that the expected higher economic costs of leaving a partnership for specializing women indeed seem to play a role. But less gender egalitarian countries (with lower employment opportunities, less institutional support, and more traditional gender role norms) seem to have higher exit costs. This may be the reason that they show higher separation effects on employment and higher effects of specialization on employment than more gender egalitarian countries. In less gender egalitarian countries, fewer women separate and those who separate are the ones who expect relatively low exit costs because they are not specializing during the union. In more gender egalitarian countries, this mechanism may be losing its value. Here, both women who can and those who cannot economically afford to separate, may make the decision to separate.

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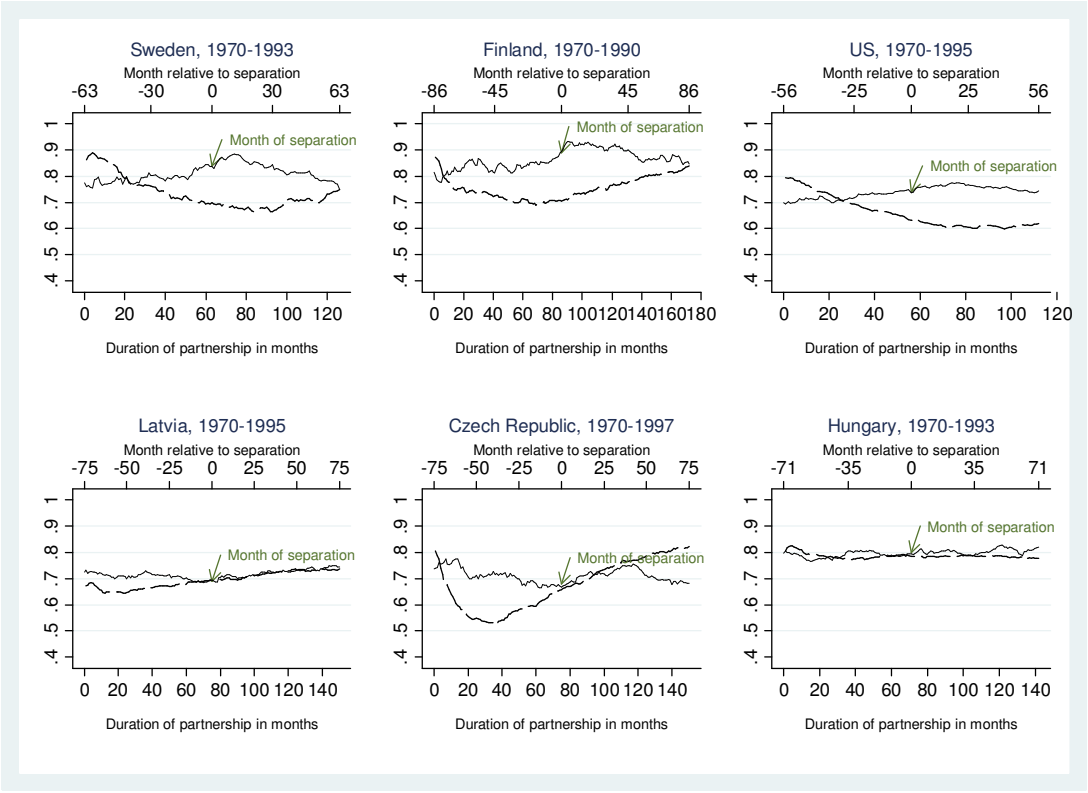
FIGURES

Figure 1. Employment of average separated and non-separated women



Note: only first separations; women aged 18-49 and not in full-time education; repartnered women included; employment rates adjusted for yearly trend; SE age<44, US age<45, CZ age<45, HU age<42, DE age<41

Figure 2. Specialization effect on separation by degree of gender equality in a country

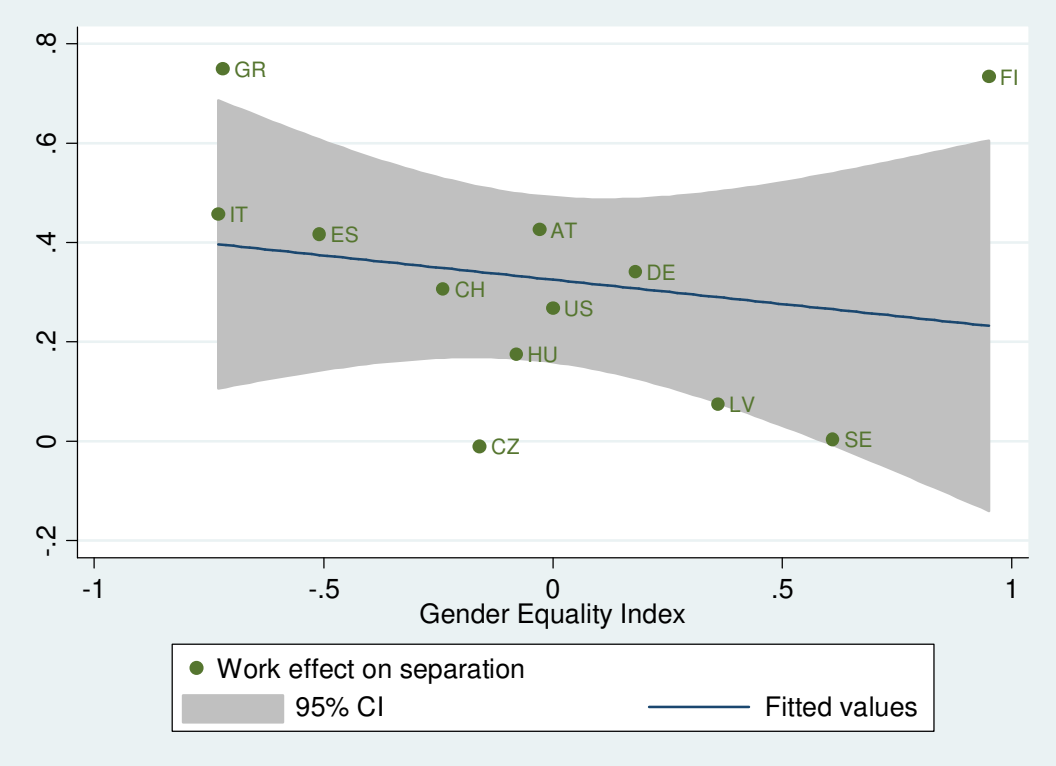


Figure 3. Effect of separated vs. partnered and repartnered vs. separated on employment (log (odds))

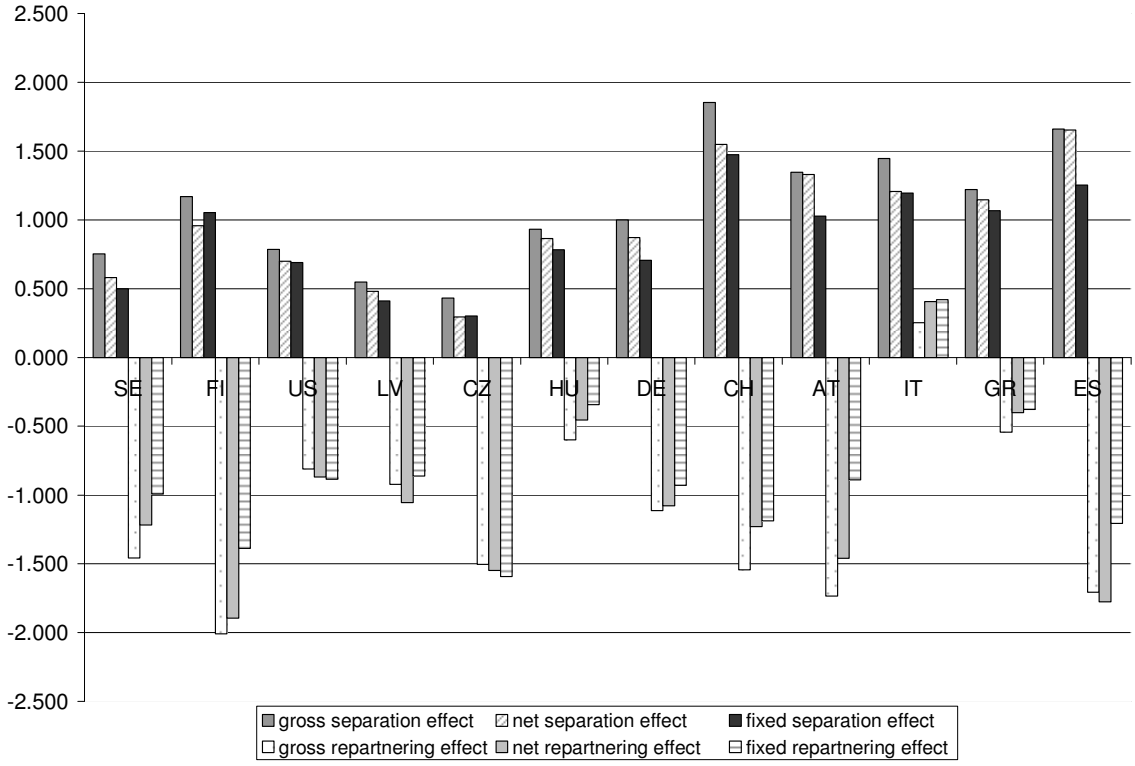


Figure 4. Separation effect on employment by degree of gender equality in a country

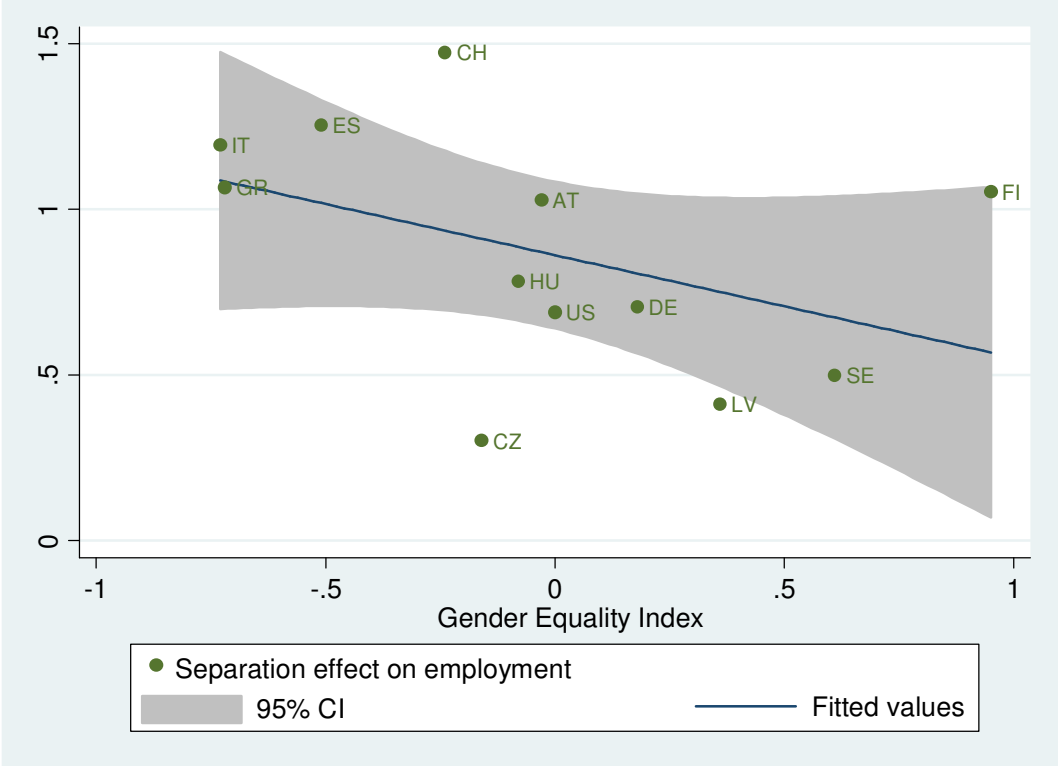
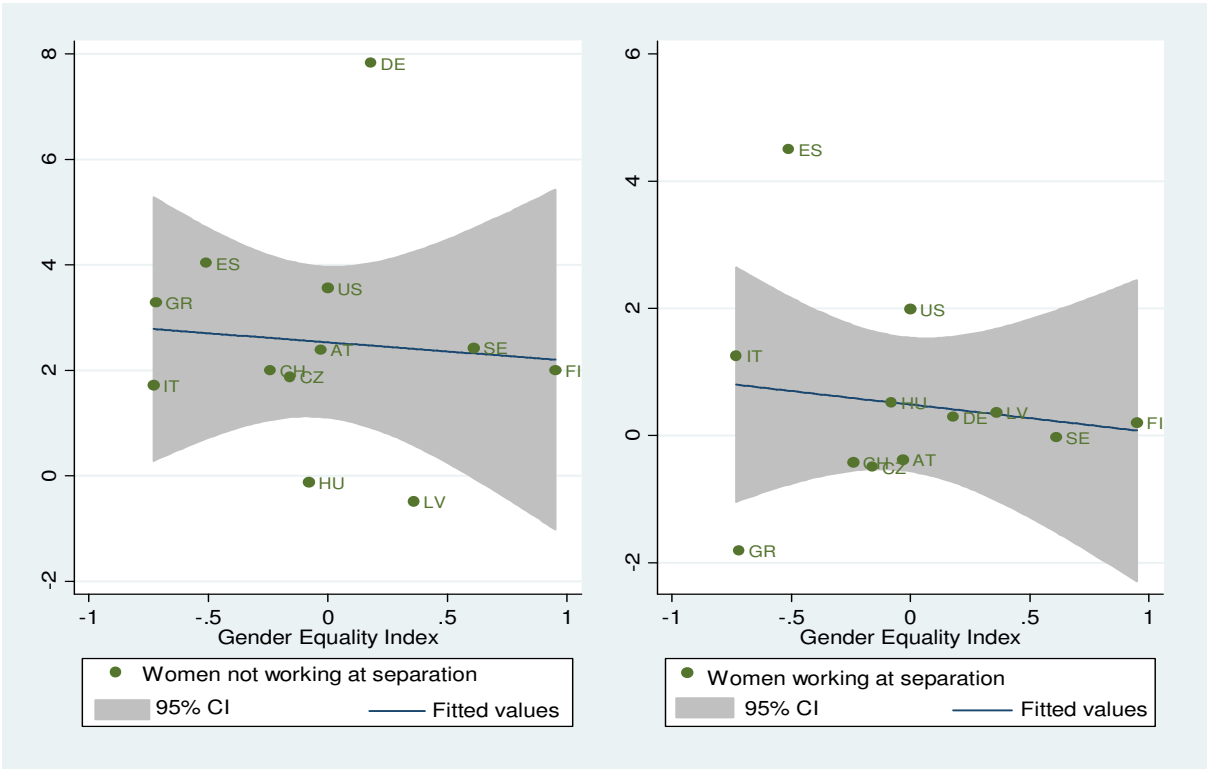


Figure 5. Specialization effects on post-separation employment by degree of gender equality in a country



TABLES

Table 1. Number of cases, 12 countries, 1955 – 1999

	ALL	SE	FI	LV	CZ	HU	US	DE	AT	CH	IT	GR	ES
Persons	41,248	3,007	3,706	2,314	1,371	2,976	8,017	4,121	3,900	3,493	3,321	2,172	2,850
First separations	10,905	1,115	889	729	341	554	3,772	1,053	952	854	208	222	216
% first separations	26	37	24	32	25	19	47	26	24	24	6	10	8
Person months	4,890,010	380,673	592,436	362,092	190,675	369,781	965,303	442,907	688,998	513,187	539,063	372,381	428,608
Year of first union	55-99	63 - 93	55 - 89	63 - 95	69 - 97	65 - 93	65 - 95	54 - 92	58 - 96	62 - 95	59 - 95	63 - 99	60 - 95
Year of first separation	57-99	65 - 93	57 - 90	66 - 95	74 - 97	70 - 93	66 - 95	71 - 92	63 - 96	63 - 95	73 - 95	68 - 99	73 - 95
Average year of first union	77	76	70	77	81	78	78		74		76	79	78
Average year of separation	85	81	79	83	87	83	83		84		87	86	86

Table 2. Measures indicating a country's degree of gender equality in cultural norms and in economic opportunities

	Gender role values	Single Parent Allowance	Child maintenance	Guaranteed child maintenance	Women's employment rate	Public child care provisions	Parental leave	Summary Index
Finland (FI)	2.70	492	150	70	78.96	31	156	**0.95**
Sweden (SE)	2.63	492 [b]	135	90	75.80	29	64	**0.61**
Latvia (LV)	2.48	114 [c]			90.45	42		**0.36**
Germany (DE)	2.44	553	350	145	66.27	2	96	**0.18**
United States (US)	2.46	492 [d]	575	0	61.78	26 [h]	0	**0**
Austria (AT)	2.35	574	550	105	62.13	3	96	**-0.03**
Hungary (HU)	2.40	354 [e]			74.09	8	156 [j]	**-0.08**
Czech Republic (CZ)	2.47	354 [c]			88.60	1 [i]		**-0.16**
Switzerland (CH)	2.35 [a]	553 [f]			62.10		0	**-0.24**
Spain (ES)	2.56	225	0	0	41.18	5	0	**-0.51**
Greece (GR)	2.46	225 [g]	0	0	43.33	4	0	**-0.72**
Italy (IT)	2.35	502	0	0	48.77	5	24	**-0.73**

[a] For Switzerland, estimated gender role values score is equal to Austria. Gender role value questions are not asked in EVS for Switzerland.
[b] For Sweden, estimated single parent allowance is equal to Finland. This amount still has to be computed.
[c] For Latvia and Czech Republic, figures are for 2004. For LV estimated single parent allowance is that of EE. I still have to find the PPP for LV.
[d] For the US the level of single parent allowance is assumed to be equal to that of Finland and Sweden on the basis of the SaMip database (2008, http://www2.sofi.su.se/~kne/).
[e] Hungary does not have a general scheme. Single parent allowance is assumed to be equal to the level in Czech Republic.
[f] For Switzerland, the level of single parent allowance is assumed to be equal to that of Germany on the basis of the SaMip database (2008, http://www2.sofi.su.se/~kne/).
[g] Greece does not have a general scheme. Single parent allowance is assumed to be equal to the level in Spain.
[h] For the US, figure refers to 1996. Source: The Clearinghouse on International Developments on Child, Youth and Family Policies (2004).
[i] For the Czech Republic, figure refers to 2000. Source: The Clearinghouse on International Developments on Child, Youth and Family Policies (2004).
[j] For Hungary, figure refers to 1995. Source: The Clearinghouse on International Developments on Child, Youth and Family Policies (2004).
Definitions:
Gender role values: Scale of 4 items, average of period 1990-1999: 1. 'A working mother can establish just as warm and secure a relationship with her children as a mother who does not work'; 2. 'a pre-school child is likely to suffer if his or her mother works'; 3. 'A job is alright but what most women really want is a home and children'; 4. 'Being a housewife is just as fulfilling as working for pay'. Source: European Values Study (1990/1999).
Single parent allowance: Level of net guaranteed monthly allowance for a single parent with one child of ten years old (in PPP, 1996): sum of three allowances (if present in the country): 1. basic allowance for welfare dependency; 2. single parent allowance; 3. child allowance. Source: Mutual Information System on Social Protection (MISSOC), European Commission (1997, 2002).
Child maintenance: formal child maintenance liabilities (amount that will be paid by fathers with 1.5 average income who want to divorce from mothers with average part-time income, having 2 children, 5/6 and 9 years old); £ppp/month; 1997. Source: Corden (1999, p. 34, Vignette B); US: Corden & Meyer (2000).
Guaranteed child maintenance: relative value of advance maintenance; £/month/child in PPP; 1997. Source: Corden (1999, p. 45).
Women's employment rate: Age standardized employment rates for women aged 20-54; Average rate of period 1970-2000. Source: UN Statistics Division.
Public child care provision: The number of public childcare places per 100 children under age three in publicly funded day care services (1988-1993). Source: Tietze & Cryer (1999).
Parental leave: The number of fully paid weeks of parental/child care leave for a mother with 2 children (excluding leave to care for a sick child). Source:
Summary Index: Average of standardized scores on 3 dimensions: 1. gender equality in gender role values; 2. institutional income support for divorce women's economic independence (single parent allowance, alimony, guaranteed alimony); 3. gender equality in employment opportunities (employment rate, public child care provisions, parental leave).

Table 3. Discrete-time event history analyses of the odds of a first separation for partnered women, 12 countries, 1955 – 1999

	SE	FI	LV	CZ	HU	US	DE	AT	CH	IT	GR	ES
Role specialization												
Working (lagged one month)	0.004	0.733***	0.074	-0.011	0.175	0.268***	0.341***	0.426***	0.306**	0.457**	0.749***	0.417**
Job status in partnership	-	-0.003	-	-0.002	-0.001	-	0.003	-	0.000	-	-0.003	0.011*
Career woman	-	-0.000	-	0.000	-0.001	-	0.000	-	-0.000	-	0.001	-0.000
Union duration (centered)	-0.002	-0.000	0.003*	-0.004	0.002	-0.009***	0.001	0.003**	0.012***	0.008*	-0.002	0.001
Union duration (centered)2	-0.000	-0.000	-0.000***	-0.000	-0.000**	0.000**	-0.000***	-0.000***	-0.000***	-0.000***	-0.000	-0.000
Married	-0.909***	-1.154***	-0.995***	-0.973***	-1.219***	-1.282***	-1.186***	-1.090***	-1.526***	-1.533***	-1.626***	-2.132***
Identifying variables												
Parents divorced (respondent < age 18)	0.241**	-	0.257**	0.323*	0.109	0.159***	0.550***	0.428***	0.599***	1.203***	0.748**	0.351
Parents divorced (respondent => age 18) [a]	- [c]	0.612***	0.377*	0.178	0.069	0.169*	0.233	0.530**	0.254	0.246	0.405	0.329
Urbanization of area respondent was raised [b]	0.172***	-	0.126***	0.244***	0.247***	-	0.132***	0.160***	0.094*	0.122	0.273***	0.271***
Frequency of church attendance	-0.033	-0.211***	0.050	-0.059	-0.137***	-0.105***	-0.130***	-	-0.075**	-0.281***	-0.164*	-0.136**
Control variables												
Year (centred)	0.024*	0.016	-0.000	0.067**	0.016	0.011*	0.058**	0.044***	-0.014	0.063	0.017	0.066*
Year (centred) 2	0.000	-0.000	0.001	-0.002	0.000	0.000	-0.001	-0.000	0.001	-0.001	-0.002	-0.002
Age at union	-0.107***	-0.079***	-0.074***	-0.116***	-0.080***	-0.082***	-0.063***	-0.103***	-0.099***	-0.106***	-0.036	-0.092***
Youngest child 0-6	-0.539***	-0.023	-0.384***	0.008	-0.734***	0.101*	-0.101	-0.123	-0.417**	-1.346***	-0.646**	-0.222
Youngest child 7-17	-0.325*	0.062	-0.270	0.129	-0.259	0.332***	0.263*	-0.223*	0.253	-0.765**	-0.262	-0.621*
Educational level	0.248*	0.125	-0.098	-0.565*	-0.200	0.029	-0.198	-0.339**	0.087	0.976**	0.028	0.681*
Constant	-3.618***	-4.343***	-3.729***	-3.477***	-3.931***	-2.491***	-4.682***	-4.254***	-3.573***	-4.529***	-5.519***	-5.438***
Chi-square (df)	530 (13)***	492 (15)***	216 (15)***	145 (16)***	271 (16)***	2310 (13)***	530 (17)***	634 (14)***	542 (16)***	180 (14)***	206 (17)***	298 (16)***
Pseudo-R2	0.045***	0.043***	0.024***	0.033***	0.038***	0.058***	0.045***	0.051***	0.062***	0.068***	0.075***	0.089***
N (first) separations	932	805	554	306	483	3,219	905	836	819	149	167	198
N person months	287,141	503,492	271,843	158,079	303,638	679,766	345,385	578,923	330,254	466,681	327,426	402,688

*Unstandardized coefficients; * P < 0.05; ** P < 0.01; *** P < 0.001, one-tailed tested.*

[a] *In Finland, the age of the respondent at the time of parental divorce is not asked. We included a dummy for whether the respondent's parents divorced or not.*

[b] *In Latvia, 12% of the respondents had a missing value on the degree of urbanization. We recoded the missings into category 3 and included a dummy for missingness on this variable.*

[c] *In Sweden, only experience of a parental divorce before age 16 was asked.*

Table 4. Random effects logistic regression analyses of the odds of employment for separated women, pooled models, 1955 – 1999

	M1	M2	M3	M4
Specialization				
Working at separation	5.894***	6.362***	6.679***	7.211***
Proportion worked during union [a]	2.970***	3.302***	2.332***	2.730***
Proportion worked during union [a] * working at separation	-1.854***	-2.045***	-2.094***	-2.237***
Job status during union			0.026**	0.036***
Career woman			0.003**	0.001
Married before separation	0.606***	0.819***	0.837***	0.790***
Union duration	0.003***	0.005***	0.008***	0.008***
Post-separation duration				
1 Year after separation	0.363***	0.371***	0.502***	0.485***
2 Years after separation	0.355***	0.374***	0.561***	0.550***
3 Years after separation	0.308***	0.339***	0.590***	0.577***
4 Years after separation	0.205***	0.251***	0.479***	0.478***
5 Years after separation	0.157***	0.214***	0.397***	0.387***
6 Years after separation	0.123***	0.203***	0.418***	0.464***
7 Years after separation	0.091**	0.184***	0.401***	0.470***
8 Years after separation	-0.010	0.116**	0.240***	0.357***
9 Years after separation	-0.090**	0.072*	0.358***	0.550***
10 Years after separation	-0.040	0.142**	0.468***	0.649***
Control variables				
Year (centred)	0.047***	0.041***	0.043***	0.035**
Year (centred) [2]	-0.003***	-0.003***	-0.003***	-0.003***
Age (centred)	0.184***	0.165***	0.075***	0.040**
Age (centred) [2]	-0.006***	-0.005***	-0.003***	-0.003***
Repartnered (lagged)	-0.932***	-0.958***	-1.047***	-0.983***
Youngest child 0-6	-2.227***	-2.294***	-2.318***	-2.444***
Youngest child 7-17	-1.121***	-1.139***	-1.216***	-1.169***
Educational level	2.599***	2.297***	2.054***	1.444***
In part-time education (lagged)	0.294***	0.204***	0.472***	0.309***
Constant	-2.936***	-2.867***	-3.127***	-3.506***
Selection effect (- Lambda)		0.090		-0.149
Chi-square (df)	34,098 (36)***	31,436 (37)***	13,941 (33)***	12,629 (34)***
Sigma person level	4.249***	4.192***	4.511***	4.454***
Rho	0.846***	0.842***	0.861***	0.858***
N (first) separations	10,098	9,141	3,851	3,386
N person months	881,087	794,025	334,397	291,668

*Unstandardized coefficients; * P < 0.05; ** P < 0.01; *** P < 0.001, one-tailed tested; M1: no correction for selection bias, all countries; M2: M1 + correction for selection bias, all countries; M3: no correction for selection bias, FI, CZ, HU, DE, CH, GR, ES; M4: M3 + correction for selection bias, FI, CZ, HU, DE, CH, GR, ES.*

[a] *For Austria, this measure does not include a part-time penalty because the number of working hours were only asked for the most recent job spell.*

Table 5. Selection and role specialization effects on the odds of employment for separated women, 12 countries, 1955 – 1999

	pooled	Countries differ?	SE	FI	LV	CZ	HU	US	DE	AT	CH	IT	GR	ES
Women not working at separation														
Proportion worked during union M1[a]	2.970***	***	1.397**	1.563*	-1.507	1.318	0.154	3.627***	8.583***	1.810*	1.729*	2.443	3.416*	4.578***
Proportion worked during union M2 [a]	3.302***		2.418***	2.001*	-0.486	1.883	-0.125	3.560***	7.822***	2.390**	1.997*	1.726	3.278	4.038**
Proportion worked during union M3 [a]	2.332***		-	0.539	-	1.133	-0.068	-	7.703***	-	1.039	-	5.072*	2.953*
Proportion worked during union M4 [a]	2.730***		-	1.170	-	1.586	-0.699	-	6.288***	-	1.801	-	3.640	2.779*
Women working at separation														
Proportion worked during union M1[a]	1.116***	*	0.015	0.201	0.611	0.422	1.119	1.793***	0.056	-0.290	-1.021*	1.211	-0.778	4.368***
Proportion worked during union M2 [a]	1.257***		-0.034	0.200	0.363	-0.494	0.517	1.986***	0.290	-0.384	-0.427	1.257	-1.812	4.502***
Proportion worked during union M3 [a]	0.238***		-	-0.012	-	0.371	0.215	-	-0.328	-	-1.150*	-	-0.476	3.772***
Proportion worked during union M4 [a]	0.493***		-	-0.014	-	-0.477	-0.501	-	-0.040	-	-0.467	-	-1.901	3.996***
Other specialization variables														
Job status during union M3	0.026**	***	-	0.027**	-	0.006	-0.002	-	0.016	-	0.021*	-	-0.033	0.059**
Job status during union M4	0.036**		-	0.031**	-	0.011	0.014**	-	0.051**	-	0.013	-	-0.005	0.059**
Career woman M3	0.003**		-	0.002	-	-0.000	0.008	-	0.020***	-	0.001	-	-0.001	0.008*
Career woman M4	0.001		-	0.002	-	-0.000	0.016**	-	0.013**	-	-0.001	-	-0.004	0.008
Union duration M1	0.003***	***	0.008***	0.007**	-0.000	-0.002	0.003	-0.006***	-0.002	0.008***	0.011***	0.005	0.014**	0.010*
Union duration M2	0.005***		0.008***	0.008***	0.002	-0.004	0.008*	0.001	0.001	0.011***	0.014***	-0.001	0.014**	0.011*
Union duration M3	0.008***		-	0.008***	-	-0.002	0.005	-	0.000	-	0.010***	-	0.016**	0.012*
Union duration M4	0.008***		-	0.008***	-	-0.004	0.009*	-	0.002	-	0.014***	-	0.014**	0.013*
Married before separation M1	0.606***	ns	-0.125	0.429	0.174	1.806**	0.433	0.737***	0.908*	0.461	0.830**	-1.190	2.041**	0.483
Married before separation M2	0.819***		-0.107	0.959**	-0.190	0.229	-0.988	1.780***	0.349	-0.214	0.556	-1.371	4.011***	0.544
Married before separation M3	0.837***		-	0.389	-	1.784**	0.529	-	0.980*	-	0.809**	-	2.143**	0.495
Married before separation M4	0.790***		-	0.996**	-	0.248	-0.927	-	0.283	-	0.492	-	4.081***	-0.106
Selection effect														
Selection effect (- Lambda) M2	0.090	*	-0.143	0.380*	-0.254	-1.785***	-0.935**	0.814***	-1.210**	-0.462	-0.041	-0.240	0.574	0.343
Selection effect (- Lambda) M4	-0.149		-	0.448*	-	-1.761**	-0.957**	-	-1.264**	-	-0.063	-	0.604	0.028
Chi-square (df) M2	31,436(37)***		4,700(25)***	3,308(26)***	3,370(25)***	1,381(25)***	1,152(25)***	7,952(25)***	2,320(25)***	6,545(26)***	5,387(25)***	483(25)***	630(26)***	634(25)***
Sigma person level M2	4.192***		2.502***	3.254***	5.124***	4.644***	5.288***	4.086***	6.454***	5.107***	3.681***	6.417***	5.461***	4.044***
Rho M2	0.842***		0.656***	0.763***	0.889***	0.868***	0.895***	0.835***	.927***	0.888***	0.805***	0.926***	0.901***	0.833***
N (first) separations M2	9,141		927	799	657	305	478	3,195	840	831	605	145	163	198
N person months M2	794,025		78,976	75,427	68,114	26,197	39,766	258,658	55,898	84,259	60,191	12,350	18,978	15,211

*Unstandardized coefficients; * P < 0.05; ** P < 0.01; *** P < 0.001, one-tailed tested; Significance of country differences tested by including interactions of the relevant variable with country in the pooled model (two-tailed tested); M1: no correction for selection bias, all countries; M2: M1 + correction for selection bias, all countries; M3: no correction for selection bias, FI, CZ, HU, DE, CH, GR, ES; M4: M3 + correction for selection bias, FI, CZ, HU, DE, CH, GR, ES.*

[a] *For Austria, this measure does not include a part-time penalty because the number of working hours were only asked for the most recent job spell.*