Work, divorce and post-marital living arrangements in Germany: the role of stress, couples' division of labor and alternative partnerships

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Chapter 1 Introduction

1.1 Background and aims of this dissertation

The traditional family, built around a married couple, has lost its monopolistic status in modern societies (e.g. Cherlin 2004). Alternative living arrangements such as cohabitation, living-apart together (LAT) relationships, single parenthood, or living as a singleton are growing in popularity, which is also a result of marital instability. Divorce rates in Germany have been increasing since the mid-1960s, similar to most European countries (Kiernan 2004:26). However, over the last 15 years, data from countries such as the United States (Amato 2010; Härkönen 2014), the United Kingdom, Iceland (Amato and James 2010), Sweden (Andersson and Kolk 2011), and Germany itself (Grünheid 2013) tends to show that increasing divorce rates appear to be slowing. In 2019, the Federal Statistical Office (Destatis 2020a) provided statistics from 149,000 divorces in Germany, of which 74,700 affected minor children. This shows that many other individuals are adversely affected by the various consequences of divorce, and the divorcees themselves often suffer from poor mental and physical health (Amato and James 2010; Hank and Wagner 2013) and economic hardship (although the economic consequences of divorce have decreased over decades, at least in the US (see Raley and Sweeney 2020)). Negative economic consequences also vary by gender and are still, with women being more strongly affected (Bröckel and Andreß 2015). Additionally, divorce strains women in the long-run due to the large income losses, while men tend to suffer only in a short-term reduction in wellbeing (Leopold 2018). Divorce can also be a source of social inequality affecting the divorcing parties (e.g., Amato and James 2010), but can also affect their children, e.g., in terms of their educational outcomes (Amato and James 2010; Amato and Patterson 2017; Diekmann and Engelhardt 1995; Härkönen, Bernardi, and Boertien 2017; Wagner and Weiß 2003). Therefore, it is important to improve our understanding of the determinants of divorce. Furthermore, as research has shown that newly formed relationships can buffer the negative consequences of divorce (Dewilde and Uunk 2008), it is also highly pertinent to attempt to understand partnership and parenthood outcomes after a marital separation.

Analyzing female employment as a driving force in marital instability has a long tradition as female labor force participation and divorce rates have been increasing and have correlated at the macro level for decades (e.g., Bremmer and Kesselring 2004; Ruggles 1997) indicating that there might be also a correlation on the micro level. Research from West Germany has shown that until around the 1970s, the male breadwinner model, with homemaking women and men in paid work, was the dominant family arrangement that found strong normative support (Ostner

and Lewis 1995; Trappe, Pollmann-Schult, and Schmitt 2015). However, since then, women have increased their participation in the labor force (Brenke 2015; OECD 2020), changing the family model into a modified male breadwinner type, with women working part-time and men working full-time (Trappe et al. 2015). Previous research has generally considered the new home economics and the independence hypothesis as an explanatory framework for investigating the associations between female employment and divorce (Özcan and Breen 2012; Wagner and Weiß 2003). In short, according to the independence hypothesis, women have increased their levels of economic independence by participating in the labor market which, in turn, increases the risk of divorce (Becker, Landes, and Michael 1977; Özcan and Breen 2012). However, empirical findings regarding the independence hypothesis are inconclusive (Lyngstad and Jalovaara 2010; Özcan and Breen 2012; Wagner and Weiß 2003).

In the context of Germany, there is evidence that female employment increases divorce risk (Wagner and Weiß 2003), while other studies have shown that part-time work for women can stabilize marriages (Cooke and Gash 2010) or even that women's working hours are unrelated to the risk of divorce (Cooke 2004). Furthermore, a literature review has called for research with more current data analyzing historical trends regarding the independence hypothesis (Özcan and Breen 2012). Due to the inconclusive findings from prior research, I set out to investigate three separate research questions that revolve around the association of women's employment and divorce from different perspectives and applying theories that are separate from the new home economics.

Firstly, as women's employment was found to be both positively (Wagner, Schmid, and Weiß 2015) and negatively (Cooke 2004) related to divorce, it is likely that employment can destabilize marriages under certain conditions, e.g. if working conditions for at least one spouse are precarious. Therefore, I investigate whether the employment conditions of both spouses determine marital stability from a stress theoretical perspective, assuming that potentially stressful employment situations can strain a couple's relationship. Secondly, as women who work will have less time for household chores, it is likely that in such marriages the division of household tasks will have shifted. I set out to investigate whether women's employment and the division of household tasks are relevant characteristics of marital stability particularly as previous research has shown that women's employment increases divorce risk in certain periods of historical time (South 2001) and apply the multiple equilibrium approach (Esping-Andersen and Billari 2015) to the German context. Thirdly, several aspects of employment not only contribute to marital dissolution but can also provide an important resource for repartnering

opportunities and determine the need for a new partner, e.g., in order to increase financial support. Therefore, it is important to investigate whether aspects of employment during the first marriage are related to patterns of post-separation family trajectories.

In summary, I set out to investigate whether employment-related characteristics of couples can explain the ongoing trend of marital instability that has been observed in Germany and other Western countries over the last decades (e.g., Amato and James 2010; Grünheid 2013). I also explore how employment characteristics from a first marriage are related to post-separation living trajectories in Germany. By considering the perspective of how labor is related to both marital stability and post-marital outcomes, my research attempts to answer the question of whether changes in economic dependence between spouses is a driving factor in contemporary family dynamics. In applying theoretical models separate from the new home economics on the association of labor or division of labor on divorce, I attempt to improve the understanding of the divorce process and divorce trends in Germany. Using longitudinal data from the German Socio-Economic Panel (SOEP), I employ quantitative methods from the toolbox of life course research by analyzing divorce from a historical and dyadic perspective and assessing post-separation trajectories.

This first chapter provides an overview of the three studies on determinants and consequences of divorce in Germany, which are presented in Chapters 2 to 4. In the next section of this chapter, I will outline some background information on marriages and marital instability in Germany to provide contextual information for this dissertation. A joint theoretical framework of the three studies conducted in this dissertation is described in Section 1.3 (Theoretical Concept), while I discuss several German survey projects, and the SOEP in particular, that provide information on marital histories and their suitability for this project in Section 1.4. Section 1.5, summarizes the three studies of this dissertation. The first study gives a dyadic perspective to particular employment arrangements of spouses that are likely to produce financial or time stresses and their association with marital dissolution (see Chapter 2). The second study investigates the division of labor and its association with divorce from a historical and dyadic perspective (see Chapter 3). The last paper gives a post-separation perspective on living-arrangements in the 5 years after married individuals have separated, in order to assess post-separation trajectories regarding opportunities in partnership and parenthood (see Chapter 4). Finally, I draw an overall conclusion in Section 1.6.

1.2 Marriage and its stability in context

In this section, I outline background information on marriages and divorce and compare and contrast trends in relationship formation and composition and their association with the stability of marital unions. At the end of the section, I provide an overview of current trends in marital stability according to official data.

A formal requirement of divorce is that two individuals are legally married (Hank and Steinbach 2019) and that there is a legal precedent allowing to break the marriage contract and, thereby, divorce. The divorce law of the Federal Republic of Germany (FRG) is based on regulations dating from the Weimar Republic that, in their original version, permitted divorce on weak fault grounds and incorporated some regulations introduced under National Socialism that enabled a divorce after three years of separation (Gestrich 2013; Smith 2002). However, the principle of fault was replaced by a reform in 1977 and since then, the German Federal Republic has had a *de facto* unilateral divorce law (Gestrich 2013; Kneip and Bauer 2009). Currently, couples can divorce with a judicial decision non-consensually after 3 years of separation and consensually after one year of separation (Krack-Roberg 2011).

Marriage was controlled by the Catholic church and from the 12th century to the end of the 19th century, whereupon marriage in Europe had to be registered with a civil registrar. Until the end of the 19th century, marriage was socially and legally restricted to those individuals that were able to provide for a family (Gestrich 2013; Rosenbaum 2014). Due to these restrictions, marriage was generally only accessible for older individuals or individuals in higher social classes who had appropriate savings. This led to high rates of never married individuals, high numbers of unmarried couples who had children born outside of wedlock. Furthermore, individuals did not typically marry for love; marriages were often arranged by families and driven by economic factors. However, marriage restrictions were abandoned in 1875, and with an increase in societal wealth, the role of love in marriage became more important throughout the German Empire (Rosenbaum 2014).

Referring to US-American families since the 1970s, Cherlin (2004) argued that the meaning of marriage has changed with the diversification of the family unit, with increasing numbers of individuals cohabitating or living in same-sex relationships. In addition, marriage is no longer a precondition for starting a family as the timing of childbearing and marriage have become blurred in both the US and Europe (Musick and Michelmore 2015, 2018). However, the symbolic importance of marriage has increased and is often now seen as a status symbol. Nowadays, marriage is often seen as a personal and choice-based achievement. It has lost its

relevance of social benefit as a familial and community institution (Cherlin 2004) and is more likely to be chosen by individuals who evaluate marriage affectively rather than rationally (Billari and Liefbroer 2016). However, that marriage still has value is seen with the reform of the marriage law in 2017, which allowed same-sex couples to get married in Germany (Hank and Steinbach 2019).

The change in the meaning of marriage is reflected in the trends in lifelong singlehood and proportions of never married individuals. In Germany, the rate of lifelong singletons decreased from 20–30% in the first half of the 19th century to below 10% in the 1950s and 1960s (Gestrich 2013). The period around the 1960s, with its historical peak of married individuals, is known as the golden age of marriage. Nevertheless, family research mostly refers to this exceptional period. Since then, the crude marriage rates i.e., the number of marriages per 1,000 residents in a given year have decreased (see Table 1-1), a trend that was even stronger in West Germany than in East Germany until 1980 (crude marriage rate in 1980 was 5.9 in West Germany and 8.0 in East Germany). With the unification of Germany in 1990, the crude marriage rate declined massively in East Germany (3.9 in 2000) eventually converging with the crude marriage rate of West Germany. In the last decades in Germay, alternatives to marriage have again become more attractive (Hank and Steinbach 2019) and living arrangements, especially those with children, have become more diverse (Wagner and Valdés Cifuentes 2014).

Table 1-1: Crude marriage rates, proportions of never married in certain age groups and the average age at first marriage in Germany, 1950–2015.

	Year	1950	1960	1970	1980	1990	1991	2000	2010	2015
Germany	Marriages per 1,000 residents	11.0	9.5	7.4	6.3	6.5	5.7	5.1	4.7	4.9
	Mean age at 1st marriage, men	.	.	.	.	.	28.5	31.2	33.2	33.8
	Mean age at 1st marriage, women	.	.	.	.	.	26.1	28.4	30.3	31.2
	Never married men aged 50-55; in %	.	.	.	.	.	.	9.6	17.0	19.4
	Never married women aged 50-55; in%	.	.	.	.	.	.	5.6	10.5	11.9
West	Marriages per 1,000 residents	10.7	9.4	7.3	5.9	6.6	6.3	5.4	4.7	4.9
	Mean age at 1st marriage, men	28.1	25.9	25.6	26.1	28.4	28.7	31.3	.	.
	Mean age at 1st marriage, women	25.4	23.7	23	23.4	25.9	26.2	28.5	.	.
East	Marriages per 1,000 residents	11.7	9.7	7.7	8.0	6.3	3.2	3.9	4.8	5.0
	Mean age at 1st marriage, men	.	23.9	24	23.9	25.8	26.6	30.7	.	.
	Mean age at 1st marriage, women	.	22.5	21.9	21.8	23.7	24.5	28	.	.

Source: Statistisches Bundesamt (Destatis) 2005, 2012, 2017a, 2017b;
Legend: . = no values available.

Despite the diversifying trends regarding in living arrangements, in Germany most people still get married, with only 22% of men and 14% of women aged between 50 and 55 remaining unmarried in 2018 (Statistisches Bundesamt (Destatis) 2020b). However, the proportion of never married individuals in this age group has more than doubled since 2000 (for the trend see Table 1-1) – a trend that seems to be stronger in East Germany than in West Germany (BiB 2020a, 2020b). An empirical study has shown that livelong singletons, i.e., individuals that have never cohabited or married by the age of 40, are still rare in Europe (Bellani, Esping-Andersen, and Nedoluzhko 2017). However, being unmarried does not necessarily mean unpartnered. In Germany, couples who do not live together are predominantly never married individuals aged under 25. Living-apart together relationships are more common among more highly educated people (Ermisch and Siedler 2009). While LAT relationships in younger people are seen as a transitional phase and are mostly chosen due to job constraints (Lois and Lois 2012), for older individuals, LAT arrangements are an opted alternative (Asendorpf 2008; Fasang, Huinink, and Pollmann-Schult 2016). From this perspective, LAT relationships are seen as heterogenous partnerships, and their stability is outside the scope of this dissertation.

In addition, cohabiting couples are a heterogeneous family type (Hiekel, Liefbroer, and Poortman 2015) with a lower level of institutionalization than married couples. Their legal status in Germany also remains distinct from married couples (Perelli-Harris and Gassen 2012). In Germany, cohabitation is often a prelude to marriage as most cohabiting couples end up getting married (Hiekel and Fulda 2018). Couples often opt for unmarried cohabitation if they perceive to do not have the financial means to marry, something which is particularly true in eastern European countries (Hiekel, Liefbroer, and Poortman 2014). Marriages and cohabiting unions are equally accepted living arrangements in Germany, but they still differ in meaning between East Germany and West Germany and between other European countries (Fulda 2016; Perelli-Harris et al. 2014). Previous studies have provided evidence that cohabiting and married couples vary in transitions in the family life course (see Perelli-Harris (2014) for the transition to second birth) and also differ in respect to relationship practices as individuals in cohabiting unions report, for example, greater levels of intimacy (Hiekel and Wagner 2020).

Additionally, cohabiting and married relationships differ with respect to stability (Kiernan 2001; Lyngstad and Jalovaara 2010). To assess the stability of most similar couples that differ by their marital status, a study from the US investigated a subsample of cohabiting married and unmarried couples with children. The results showed that unmarried couples with children were more at risk of separating compared to married parents (Musick and Michelmore 2015), a

finding that is also evident in European countries (Musick and Michelmore 2018). In addition to the direct effect on union stability, the influence of premarital cohabitation on divorce varies by the diffusion of cohabitation in the contexts of different countries. In context with low or high prevalence of cohabiting unions, premarital cohabitation increases the risk of divorce (Liefbroer and Dourleijn 2006; Wagner and Weiß 2006).

Even though some of the current research considers married and unmarried cohabiting unions in order to investigate trends in union stability (e.g. Boertien 2020; Jalovaara 2013; Liefbroer and Dourleijn 2006), the findings reviewed above show that marriages differ in several aspects from unmarried couples. As these differences also imply differences in the underlying mechanisms of union stability, it is important to differentiate between married and unmarried partnerships. In this dissertation, I focus on the stability of married couples in order to analyze most comparable units and to respect relationships with lower levels of institutionalization only in the analysis of post-separation living trajectories.

Besides the higher prevalence of non-marital unions, another marital trend is its postponement until later in life, as shown in Table 1-1. In West Germany in 1960, men were 26 years old on average when marrying for the first time and 28 years old in 1990. For women, the average age increased from 24 to 26 for 1960 and 1990, respectively, and is still increasing for both, men and women (34 for men and 31 for women in 2015 (Destatis 2017a, 2017b)). This postponement of marriage is a common pattern found amongst more highly educated people (Fulda 2016) and is also observable in East Germany (see Table 1-1). Previous research on age at the time of marriage has shown that higher age at marriage is related to lower risk of divorce (Lampard 2013; Lehrer 2008; Lehrer and Chen 2013; Wagner and Weiß 2003).

In the US, marriage has an educational gradient, as highly educated people are more likely to marry than less educated (Cherlin 2020; Raley and Sweeney 2020). In Germany, marriage also has an educational gradient that is gender-specific: men's educational level has a positive impact on being married (Kalmijn 2013), while women's higher educational level decreases the odds of being in a union (married or unmarried) (Grünheid 2011; Kalmijn 2013). Current studies show that the role of men's education in marriage formation is stable across cohorts, but the role of women's education has reversed (De Hauw, Grow, and Van Bavel 2017; Goldstein and Kenney 2001). Regarding marital stability, previous research has shown that the impact of education varies by context and has changed over time (Härkönen and Dronkers 2006; Lyngstad and Jalovaara 2010; Matysiak, Styrc, and Vignoli 2014). In Germany, men's higher education

seem to stabilizes marriages, while women's education was not found to be associated with divorce (Härkönen and Dronkers 2006; Wagner and Weiß 2003).

Thus, the postponement of marriages until later in life, the educational gradient in marriage behavior, and the change toward marriage being an individual choice all suggest that marriage should have become more stable across historical time, as individuals seem to select their partner more carefully, have higher socio-economic resources and opt for marriage instead of unmarried unions by choice. Is this reflected in current divorce figures and historical trends?

The total divorce rate represents the divorced marriages by marriage years per 1,000 marriages. In 2017, the total divorce rate of 328.6 indicated that every third marriage, with a marriage duration of between 0 and 25 years, ended in divorce in Germany (Statistisches Bundesamt (Destatis) 2020c). On average, the marital duration at the time of divorce was 15 years and divorcees were mainly in their mid-forties (average age at divorce for men was 46.7 years and for women 43.9 (Statistisches Bundesamt (Destatis) 2020c)).

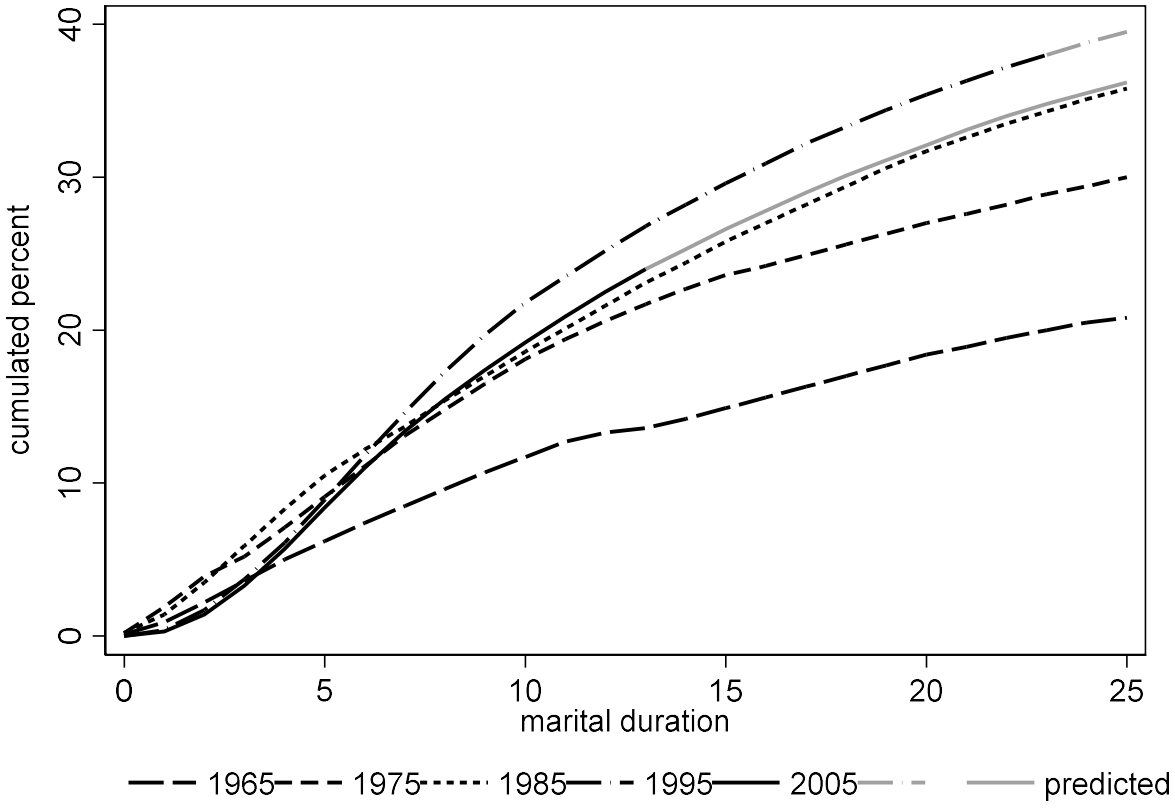

Figure 1-1: Cumulated proportion of divorced marriages by marital duration and marriage cohorts (1965-2005) in Germany. Source: BiB (2020).

The historical trend is reflected in Figure 1-1, which shows the cumulative proportion of divorced marriages by marital duration and separated by marriage cohorts. Overall, these figures, which are taken from official statistics, indicate that divorce rates have increased across marriage cohorts in Germany. While after 25 years of marriage, 21% of marriages formed in 1965 ended in divorce, this proportion had nearly doubled for marriages formed in 1995 (gray lines are predictions). The most recent marriages, formed in 2005, have stabilized, as 19% of marriages ended in divorced after ten years – around three percentage points fewer compared to marriages from 1995. Furthermore, divorces tended to occur later in marriage: until the seventh marital year, marriages from 1995 and 2005 had lower cumulated proportions of divorces compared to marriages from 1985.

Even though Figure 1-1 indicates that the divorce rate increased across cohorts but has leveled off since 2005, the trend in divorce could also be driven by time period. When analyzing time trends in divorce, researcher have to decide whether to analyze trends facilitated by time period or the cohort. Various studies have investigated time trends in general or have tried to disentangle the cohort from the effects of the time period. Findings from the US, suggest a shift in the age pattern of divorce into higher ages (Kennedy and Ruggles 2014). This indicates an underlying effect of the cohort regarding the trend of divorce rates. Additionally, Teachman (2002) provided evidence of increasing divorce rates across marriage cohorts in the US. In line with this, Heaton (2002) concluded that the historical time trend is a cohort effect rather than a period effect in the US. His results showed a declining role of age at marriage across years on the risk of divorce, which suggests cohort effects in the divorce rate. In other words, with the delayed entry in marriages across cohorts, marital instability declined. In contrast, Thornton & Rodgers (1987) suggested that the historical trend was a period effect in the US, while Ono (1999) found evidence for both period and cohort trends on the levels of divorce. To summarize, results from previous studies on time trends are inconclusive regarding the question of whether divorce trends are period or cohort phenomena.

As each of the studies presented in Chapters 2 to 4 are embedded in an overview of previous research on its distinct, related determinants on marital outcomes, I refrain from reviewing further studies on divorce. However, I present relevant findings in the next section. Recent literature reviews on the determinants of divorce are presented by Raley and Sweeney (2020) for the US, and Özcan and Breen (2012), and Lyngstad and Jalovaara (2010) for Europe. Additionally, Wagner and Weiß (2003, 2006) have conducted meta-analyses.

1.3 **Theoretical concept**

Theoretically, this dissertation investigates how employment-related characteristics are associated with marital stability over the life course of the population in Germany, both during and after their first marriage (see Figure 1-2). In particular, female employment and the division of paid and unpaid labor within married couples are investigated as core characteristics of marital stability and as correlates of post-separation family trajectories, both theoretically and empirically. The core idea that connects the three studies within this dissertation is the assumption that employment reduces economic dependence and allows both men and women to act independently of each other. The economic independence thesis is derived from the new home economics (Becker et al. 1977) – a rational choice based micro-level theory which, in addition to the exchange theory, is a theoretical model that is often applied when investigating divorce (Wagner 2012, 2020). Inconclusive findings regarding this thesis (e.g. Özcan and Breen 2012) raise the question of whether the destabilizing momentum of employment on marriages is due to specific working conditions of spouses rather than being independent from the partner. According to stress theories (Aneshensel 1992; Conger, Conger, and Martin 2010; Randall and Bodenmann 2009), work-related stress can spill over into couple's relationship and can jeopardize its stability. Another aspect of women's employment is that women then have less time for homemaking. Thus, the division of household tasks could play an important role in the association between women's employment and divorce risk, an assumption that is discussed in the multiple-equilibrium model (Esping-Andersen and Billari 2015). If the economic dependence on relationships is important, employment characteristics should also determine the dependence from other relationships after marital separation meaning that employment characteristics from the first marriage could be related to the patterns of post-separation living trajectories.

In order to connect several aspects of the behavior of individuals from the micro-level within a macro-level framework, I apply the life course theory – a common interdisciplinary concept that mainly puts the behavior of individuals into contexts of time and societies that shape their lives (Elder 1994; Elder, Kirkpatrick Johnson, and Crosnoe 2003; Hutchison 2011; Mayer 2009). By varying the dimensions of time and timing e.g., marital duration, marriage cohorts, and age at marriage – I want to reveal the different aspects of the life course. Furthermore, the timing of repartnering and post-separation parenthood are aspects that are linked to timing within the life course and to aspects of the first marriage. In the following section, I employ the principles of life course theory to marital stability and link them to different aspects analyzed in this dissertation and to microeconomic theory. Also relevant are the principles of (1) timing

of lives, (2) lives and historical times (and place), and (3) linked lives (Elder 1994; Elder et al. 2003). The life course approach does not provide a theoretical explanation of specific human behaviors, such as divorce; instead, it must be supplemented with a theoretical framework that explains behavior on a micro level.

The *new home economics* suggests that utility maximization is pivotal to marriage stability and respects marital rewards, investments, and costs. In the understanding of Becker, the family is comparable with a firm that produces wealth in a common household (Becker 1991). Marital rewards depend on the costs incurred in the household. Costs are linked to the quality of the marital match, the effectiveness of the division of labor within the couple, and marital investments such as children or homeownership. As Becker et al. (1977) argue, marriages break up if one or both partners expect higher combined gains in separation rather than remaining married, even when accounting for the costs of a separation.

When couples attempt to maximize utility, specialization is a key characteristic. To maximize the utility of marriage, both spouses must specialize in domestic and wage labor, while respecting each other's earning potential. Therefore, an optimal match consists of spouses with complementary production characteristics while having relatively similar personal characteristics (Becker et al. 1977). Regarding production characteristics, each spouse will gain the most from their marriage if they differ in earning potential and specialize in separate tasks. Traditionally, men have a higher earning potential than women; hence, women specialize in domestic tasks while their husbands are employed and provide for the family financially. Such a division of labor creates mutual dependence between the spouses and results in a more stable relationship (Becker et al. 1977). This family model has had a long tradition in Germany as the male breadwinner model has been the dominant family arrangement for decades (Trappe et al. 2015).

However, the gains from marital specialization decrease if women are also employed. Women who work are less financially dependent on their spouses and engage less in coping with any marital problems. This assumption is often called the economic independence thesis (Özcan and Breen 2012; Rogers 2004) and has often been criticized (e.g. Lyngstad and Jalovaara 2010; Oppenheimer 1997; Özcan and Breen 2012). For example, Oppenheimer (1997) argued in her critique of the *specialization and trading model* that women's employment and incomes are not an indicator for their independence per se. Instead, women's employment is an indicator that their husbands are not able to provide enough material wealth for the family due to having a low paying job or being unemployed (Cooke and Gash 2010; Oppenheimer 1997; Özcan and

Breen 2012). According to Oppenheimer (1997), spouses with equal incomes are highly mutually dependent and more stable due to the equal loss in wealth that both partners would experience in the case of divorce, as well as their greater wealth in comparison to traditional husband-earner families or single people. From Oppenheimer's (1997) point of view, it is a very risky strategy to engage in the traditional male breadwinner model because if the breadwinner loses their job due to unemployment or illness, the family loses all its financial grounds. This perspective on the association between women's employment and divorce has been discussed by previous research as the *income effect* (Lyngstad and Jalovaara 2010).

Previous research has shown that the link between women's employment or income and divorce varies by context (e.g., van Damme and Kalmijn 2014; Kaplan and Stier 2016; Liefbroer and Dourleijn 2006). For Europe, a literature review by Lyngstad and Jalovaara (2010) points out that even though women's employment is negatively related to the risk of divorce in most studies, results regarding women's income and divorce risk do not support the economic independence thesis. In Germany, a meta-analysis has shown that divorce risk is positively associated with women's employment, while non-employment and men's employment are not associated with divorce risk (Wagner and Weiß 2003). In line with this, Wagner et al. (2015) have shown that women in West Germany who are in employment have a significantly greater risk of getting divorced. The positive association between women's employment and divorce is stronger in West Germany than in East Germany (Böttcher 2006; Liefbroer and Dourleijn 2006). Additionally, women's working hours are positively related to the instability of marital (and non-marital) cohabiting unions in both East and West Germany (van Damme and Kalmijn 2014). In contrast, further studies have provided mixed evidence of this in the German context, ranging from women's employment having no effect on divorce risk (Cooke et al. 2013; Vignoli et al. 2018), to a positive association between women's full-time employment and divorce with no association of women's part-time employment and divorce risk (Böttcher 2006), to women working part-time having a positive effect on marital stability (Cooke and Gash 2010).

The findings of Vignoli et al. (2018) suggest that the association of women's employment and divorce is an artifact of the selection of women into work, as women with weak family orientations are more likely to be in employment in Germany. Their results also show that there seems to be little anticipation of divorce in Germany, while previous research has found evidence that divorce is more anticipated in the Netherlands (Poortman 2005). In the context of divorce, anticipation means that women enter the labor market as they are anticipating that their marriage may end in divorce. When considering male employment, married couples where the

man is employed and the woman is unemployed (i.e., a traditional male breadwinner couple) are more likely to divorce than couples that do not fit this model (Cooke 2004).

The reviewed studies have exploited several datasets, such as the Fertility and Family Survey (Böttcher 2006; van Damme and Kalmijn 2014; Liefbroer and Dourleijn 2006), the Socio-Economic Panel (Cooke 2004, 2006; Cooke et al. 2013; Cooke and Gash 2010), the Gender and Generation Survey (Vignoli et al. 2018) and the German Life History Study (Wagner et al. 2015) covering different time periods up until 2008 and account for a large variety of control variables. However, it remains unclear why the results differ within the German context and how they have developed since 2008. In the US, studies suggest that the economic independence thesis was only evident for a limited period of time (Killewald 2016; South 2001) while since the mid-1970s, women's employment and their relative earnings have been unrelated to marital stability in younger marriage cohorts (Raley and Sweeney 2020).

In summary, women's employment does not lead to a higher divorce risks per se, even though divorce rates have been increasing in parallel with female employment rates (Ruggles 1997). Thus, participating in paid labor has become more relevant in women's lives and consequently also more relevant in marriages. However, can we conclude that divorce rates are independent of the employment situations of a married couple? As a result of the labor market reforms of the early 2000s, fixed-term, temporary, and part-time employment have all been increasing in Germany (Dietz, Himsel, and Walwei 2013) and I hypothesize in this dissertation that job insecurity and high working time demands in a couple can increase the risk of divorce. Thus, taking the couple as a dyad, the employment situation of both spouses can affect marital stability. On the one hand, employment can reduce the time couples have together if both spouses are employed or work overtime. On the other hand, perceived job insecurity or low incomes can increase the financial stress on couples. Both time and financial pressure can negatively affect partnerships since they can reduce marital rewards, and psychological distress can spill over into the relationship (Aneshensel 1992; Conger et al. 2010; Randall and Bodenmann 2009) and can eventually destabilize marriages.

In addition to the employment conditions, division of paid and unpaid work could be a crucial aspect of marital stability – an aspect that is also incorporated into newer theoretical perspectives (Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegård 2015). As mentioned above, in the understanding of the new home economics, a high level of specialization increases the marital gains but also increases the dependency between the spouses. In marriages that follow the traditional male breadwinner model, spouses depend

highly on each other since women do the housework and are financially dependent on their husbands' income. By participating in the labor market, women reduce their dependency on their husbands thereby increasing the risk of marital dissolution. Taking couples as a dyad, the behavior of men is also relevant, as by participating in household tasks husbands can help to produce specialization gains from their marriages. Therefore, marriages with more equal gender arrangements than male breadwinner/female carer arrangements should in theory be more stable, at least nowadays. Thus, the level of specialization in marriages can vary with historical time and that the association between division of labor and divorce is likely to vary by marriage cohort.

Labor market participation is not only likely to be related to marital stability, but also to be related to repartnering. An individual's financial resources can determine the need for a partner, and can also correlate with the attractiveness as a potential partner meaning that it is associated with alternatives to the current marriage (de Graaf and Kalmijn 2003). Marital breakups are more likely if spouses are not economically dependent on each other and thus, this independence from relationships should also be reflected in post-separation living trajectories. It is important, therefore, to consider post-marital living trajectories and their relationship to employment-related characteristics in order to understand whether these trajectories of living arrangements vary with the economic dependence of spouses from their first marriage. The diversity of post-separation living trajectories could also be related to trends in divorce. If there are common and socially accepted living arrangements after marital separation, the barriers leaving an unfulfilling relationship should decrease (Wagner 2020). Thus, knowledge on post-marital alternatives can help to understand the increase in divorce rates.

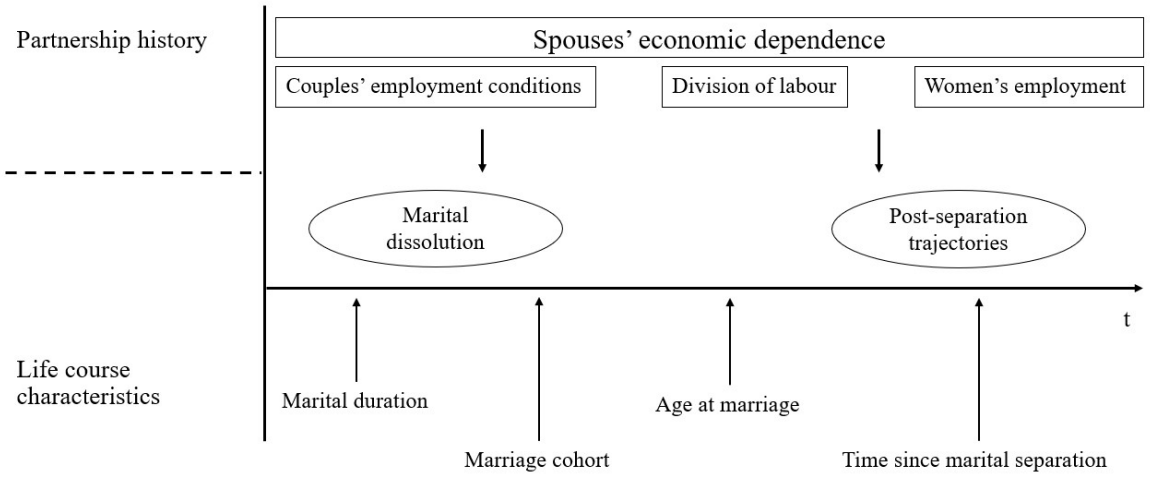

Figure 1-2: Theoretical framework.

Within the *life course paradigm*, different dimensions of time play a central role in explaining events, trajectories and their consequences. The principle of timing refers to age, the role of social timing and age-related social expectations and beliefs (Elder 1994). When applied to marriage and marital stability, social timing can be linked to age at marriage but also to the maturation of marriages, i.e., marital duration. As mentioned in Section 1.2, age at marriage is found to decrease the risk of divorce (Lampard 2013; Wagner and Weiß 2003). It is already evident that marital stability varies with the duration of marriage (e.g., Kulu 2014). Additionally, the time that has elapsed since marital separation is an important aspect, as separation can adversely affect individuals in both the short-run and the long-run (Amato and James 2010; Leopold 2018), and searching for a new partner usually takes time.

The principle of historical time emphasizes historical contexts that offer different constraints and opportunities to individuals, thereby affecting their life courses. According to this principle, cohort or period effects can be expected. In other words, individuals that marry in a historical context experience similar circumstances, e.g., differences in the gender equality within the society or the prevalence of the male breadwinner model. These circumstances at a societal level within a historical time period can affect the stability of a cohort's marriages. Also, historical trends regarding divorce in Germany are currently unexplained (Wagner 2020; Wagner et al. 2015). Closely connected to the historical context is the context of place, meaning that individuals in the same historical context can be affected by differences in cultural or legal regulations. For example, as a result of Germany's division after World War II and the differences in family policies in the German Democratic Republic (GDR) and the FRG, differences between East German and West German family behaviors have persisted, even after the reunification in 1990 (Trappe et al. 2015).

Furthermore, the interdependency between spouses that emerges due to specialization, as outlined above, addresses the life course framework's principle of linked lives which states that individuals and their social worlds interact over their lifespan (Elder 1994). That both spouses working conditions may have an impact on marital stability is also in accordance with the linked-lives perspective. Even though spouses leave a relationship, they still remain linked to their first marriage because earlier life transitions affect later life experiences and events (Elder 1994). For example, their experiences from their first marriage will affect post-separation trajectories, particularly when former spouses have children together.

The theoretical links between marital stability and economic dependence resulting from spouses working conditions and spouses division of labor, its change over historical time, and patterns and antecedents of post-marital living trajectories are elaborated in Chapters 2 to 4. In the next

section, I outline dataset requirements to analyze the employment-related characteristics of marital instability and post-marital outcomes, provide an overview of potentially suitable data sources, and assess the suitability of the SOEP data.

1.4 The suitability of the SOEP data

In Germany, several survey programs provide information on marital biographies, collections of data with information on the dates of when a marriage began and – if not ongoing at the time of interview – ended and the reason why the union was terminated (e.g., death of the partner, separation or divorce). However, in addition to marital histories, this dissertation require data sources showing information regarding partnerships of lower levels of institutionalization, such as cohabiting couples and those that do not live together, in order to investigate post-marital partnerships. Secondly, informative measurements on employment are a central feature of potential data sources for this dissertation, as most theories highlight the importance of paid labor for marital stability. As well as the importance of paid labor, measures on unpaid labor, such as household tasks, are also relevant. A third crucial element is the dimension of time. The data should provide information over a long period of time in order to investigate historical trends and changes in marital behavior in Germany but also to inform about the current situation, as trends in divorce rates appear to have changed markedly over the last two decades. In addition to the requirement of a historical observation window, the data should provide insights into marital biographies from 2005 onwards in order to cover the recent recovery in marital stability outlined above. In this section, I first want to discuss the survey programs that are available in Germany and then to illustrate the suitability and reliability of the SOEP, which is the dataset that I have exploited in this dissertation. The following discussion of survey programs does not claim to cover every available survey program that contains measures of marital biographies in exhaustive detail.[1]

Because of the interest surrounding the latest trends in divorce in Germany, I did not use studies that ended before 2010. Despite their high-quality data, I refrained from analyzing the Mannheim Divorce Study (Babka von Gostomski, Hartmann, and Thum 1997), the Family and Fertility Survey (FFS) (Festy and Prioux 2002), the DJI Family Survey (Bien and Rathgeber 2000), the German Life History Study (GLHS) (Mayer 2015), the Generations and Gender

[1] The overview mainly combines information stemming from an overview on recent data sources for German family sociology as given by Fasang et al. (2016), the data harmonization project HaSpaD that identifies and harmonizes survey programs containing information on marital histories (Haensch et al. 2019) and an overview of German panel studies (RatSWD 2017).

Survey (GGS) (Sauer et al. 2012) and the German General Social Survey (ALLBUS) (Baumann, Schulz, and Thiesen 2019).[2]

Panels that are mostly still ongoing and collecting data on marital biographies include the German Ageing Survey (DEAS), the National Educational Panel Study (NEPS), the German Family Panel (pairfam), the Survey of Health, Ageing and Retirement in Europe (SHARE), and the SOEP. Both, the SHARE[3] (Börsch-Supan et al. 2013) and the DEAS[4] focus on older individuals (Klaus et al. 2017). However, this focus on older individuals does not fit with the research questions of this dissertation, as aspects of paid and unpaid work arrangements and their association with divorce are of major interest.

The NEPS, which is a panel study focusing on educational careers, has been ongoing since 2009. Besides several youth cohorts, the NEPS also has an adult sample that includes the respondents' partnership histories (Fasang et al. 2016)[5]. As information on household tasks is not included, a test of the economic independence thesis outlined above is not testable with the NEPS. Additionally, the survey program suffers from problems with linking partnership histories that have changed their institutional level somewhat (NEPS forum 2018).

The pairfam has been conducted since 2008 and focuses on anchors and their partners that are within their family phase (Huinink et al. 2011). The pairfam is representative of the three birth cohorts 1971–1973, 1981–1983, 1991–1993 interviewed annually. Since Wave 11 (2019), a fourth birth cohort (2001-2003) has been introduced. The questionnaire program focuses on family processes and provides detailed information on attitudes toward relationships, relationship behavior and relationship outcomes. Due to the multi-actor design, information is available on the anchor as well as their partners. Measurements of the division of household labor, and (partial) retrospectively diverse information on employment and partnership histories on different levels of institutionalization are also available. However, the data on the division of household labor is "only" available prospectively since 2008. Due to the cohort design of the

[2] Even though the ALLBUS is an ongoing survey, it is not suitable for use in this dissertation as information on marital biographies and division of domestic tasks are available only in the survey years 1988 and 2000 (Baumann, Schulz, and Thiesen 2019).
[3] The SHARE interviewed individuals aged 50 and older and was conducted between 2008 and 2017 (Börsch-Supan et al. 2013).
[4] The DEAS was conducted in 1996, 2002 and 2008 onwards in three-year-intervals on individuals aged 40 and older in East Germany and West Germany (Klaus et al. 2017).
[5] The NEPS covers birth cohorts between 1944 and 1986 and contains information on the respondents' employment status (Fasang et al. 2016).

study, therefore, it is impossible to draw conclusions that are representative on the total adult German population.

The SOEP has been conducted since 1984 in West Germany and since 1990 in East Germany (Wagner et al. 2008). The SOEP is a panel study designed as a household survey of individuals that are 17 years or older. The SOEP's household survey design also allows analyses on a dyadic level as we have measurements for both spouses if they are coresident. Furthermore, information on marital biographies is collected retrospectively and biographies on living-apart-together couples, cohabiting and married couples are collected prospectively. Employment histories are also collected retrospectively, while various measures around employment, such as contract type and working overtime are available prospectively. The hours that individuals spent on domestic tasks and the satisfaction with the division of housework over several years are surveyed. This means that the SOEP data provides information on household tasks from 1984 until 2018 in its most recent version, v35 (available since February 2020), a time period of 34 years in West Germany and 28 years in East Germany. The SOEP is representative of German households and is not restricted to specific birth cohorts. However, the survey provides far less information on relationship quality compared to the pairfam data.

Overall, a large number of studies that surveyed marital biographies have ceased collecting in the 1990s or the 2000s. Thus, these data sources do not allow us to draw conclusions regarding the instability of current marriages. The outstanding long time period that is covered by the SOEPs annually repeated survey and its detailed information on employment are the most important reasons for using those panel data in this dissertation. Additionally, various studies are analyzing the SOEP data for research on marital stability (e.g. Bellani and Esping-Andersen 2020; Boertien and Mortelmans 2018; Cooke 2006; Cooke and Gash 2010; Milewski and Kulu 2014), and a meta-analysis has shown that the SOEP data was among the top three data sources exploited for research on divorce in Germany (Wagner and Weiß 2003).

To the best of my knowledge, there are no studies that have assesses the data quality of the SOEP concerning marital dissolution. In addition, the quality of other survey data concerning marital stability is rarely assessed in previous research (for exceptions see e.g., Boertien 2020; Bumpass and Raley 2007; O'Connell 2007). In general terms, the findings show that divorce is underestimated in the survey data (Boertien 2020; O'Connell 2007) but they also provide data with high accuracy (Bumpass and Raley 2007). The finding regarding the underestimation of divorce in survey data fit with the results from a study on the panel participation of pairfam

respondents: Müller and Castiglioni (2015), who showed that relationship dissolution of married, unmarried cohabiting and LAT-couples' relationships is related to panel attrition.

To assess the quality of the SOEP data for investigating transitions to divorce, I compared the cumulative proportions of marriages ending in divorce after the first 25 or less from the SOEP data to the reported figures from the Federal Institute for Population Research *(Bundesinstitut für Bevölkerungsforschung* – BiB as presented in Figure 1-1). The figures provided by the BiB report the cumulative proportion of divorced marriages by marital duration separated by marriage cohorts and refer to the official data from Destatis counting all the duration specific total divorce rates for a given marriage cohort (BiB 2020a). In other words, these data refer to officially registered divorces and are thus useful for evaluating the divorces reported in the survey data. The cumulative proportions of divorced marriages estimated from the SOEP are compared with the official data and the deviations per year are calculated. The BiB provides these figures on selected marriage years without confidence intervals, while I estimated the measure on cohorts to have a larger sample. I then estimated the Kaplan-Meier hazard function of divorce in the SOEP data, which shows the cumulative hazard of divorce in a given marriage year.[6] While Figure 1-3 presents the cumulative proportions of divorced marriages in a given marriage year by marriage cohort from the SOEP data (black lines) and the official data (red lines), Table 1-2 presents the mean of the absolute values from deviations (in percentage points) between the data sources across all marriage years by marriage cohorts, as well as the smallest and largest absolute value deviations. In other words, Table 1-2 provides the mean values of the differences (in absolute values) between the black line and red line from Figure 1-3 (see also Table 1.A 1, Appendix).

Table 1-2 shows that, on average, the largest deviation between the data sources persist in marriages beginning in 1975 (BiB), and from 1975 to 1984 (SOEP) (mean $|\Delta| = 2.6$ percentage points). On average, the smallest deviation (absolute values) across the 25 marriage years is found in marriages from 1985 and 1985–1994 (mean $|\Delta| = 0.2$ percentage points). Overall, the deviation means are rather small.

[6] The underlying sample consists of 17,827 women in first (n= 15,478) and higher order (n=2,349) marriages with a marriage begin between 1965 and 2014. In order to use only the representative samples drawn in the SOEP, I excluded individuals from SOEP-samples over-representing high income (sample G), special family structures (samples L1-L3), migrants (samples M1-M2) and refugees (samples M3-M5). For the following estimations, women reporting a marital separation or marital divorce in the next spell are defined as experience a failed outcome: a "divorce". Estimations based on less than ten divorces per marriage year are not presented.

Table 1-2: Absolute values of the deviations (mean, minimum and maximum) of the cumulative proportion of divorced marriages in a given marriage year between SOEP estimations and BiB data across marriage cohorts/marriage years in percentage points.

BiB vs. SOEP	Mean |Δ|	Min |Δ|	Max |Δ|
1965 vs. 1965-74	1.1	0.1	1.9
1975 vs. 1975-84	2.6	0.2	4.1
1985 vs. 1985-94	0.2	0.0	0.7
1995 vs. 1995-04	1.1	0.0	2.4
2005 vs. 2005-14	1.2	0.0	2.1

Source: SOEP v34 and BiB (2020), own calculations.

Figure 1-3 shows the cumulative proportion of divorced marriages for the BiB data (red line) and the SOEP data (black line) for five separate marriage cohorts or time points. The gray lines show the lower and upper limit of the 95%-confidence intervals for the estimated results from the SOEP. If the data from the BiB is within the confidence interval estimated from the SOEP data, the deviation between the survey data and official data can be interpreted as non-significant under the assumption that the officially reported divorces in the BiB data represent the "true value" of divorces. As shown in Figure 1-3, the SOEP data tend to slightly underestimate marital divorce although are mostly accurate for marriages begun in the 1960s, 1980s and 1990s. Furthermore, in the two lower panels, I can observe an overestimation of the cumulated proportions of divorces in the first 10 years of marriages since 1995 in the SOEP data (six marriage years in cohort 2005) that turns into an unsubstantial underestimation afterward in the 1995–2004) marriage cohort. Nevertheless, the failure rate of marriages provided by the BiB is mostly within or slightly above the confidence intervals estimated for women's marital divorce from the SOEP data for these two cohorts.

The results for marriages from 1975(–1984) differ over marriage duration: while the estimates are fairly accurate in the first five years of marriage and higher marital durations, the SOEP estimates are significantly lower than the values reported by the BiB for between five and 20 years of marriage.

A possible explanation for why divorces in the survey data were underestimated could be the recency of the marital transition and the findings from previous research that individuals tend to underreport those recent events in surveys or have higher non-response rates (Boertien 2020; Mitchell 2010). In accordance with this, the findings have shown that separation is related to panel attrition in the pairfam (Müller and Castiglioni 2015).

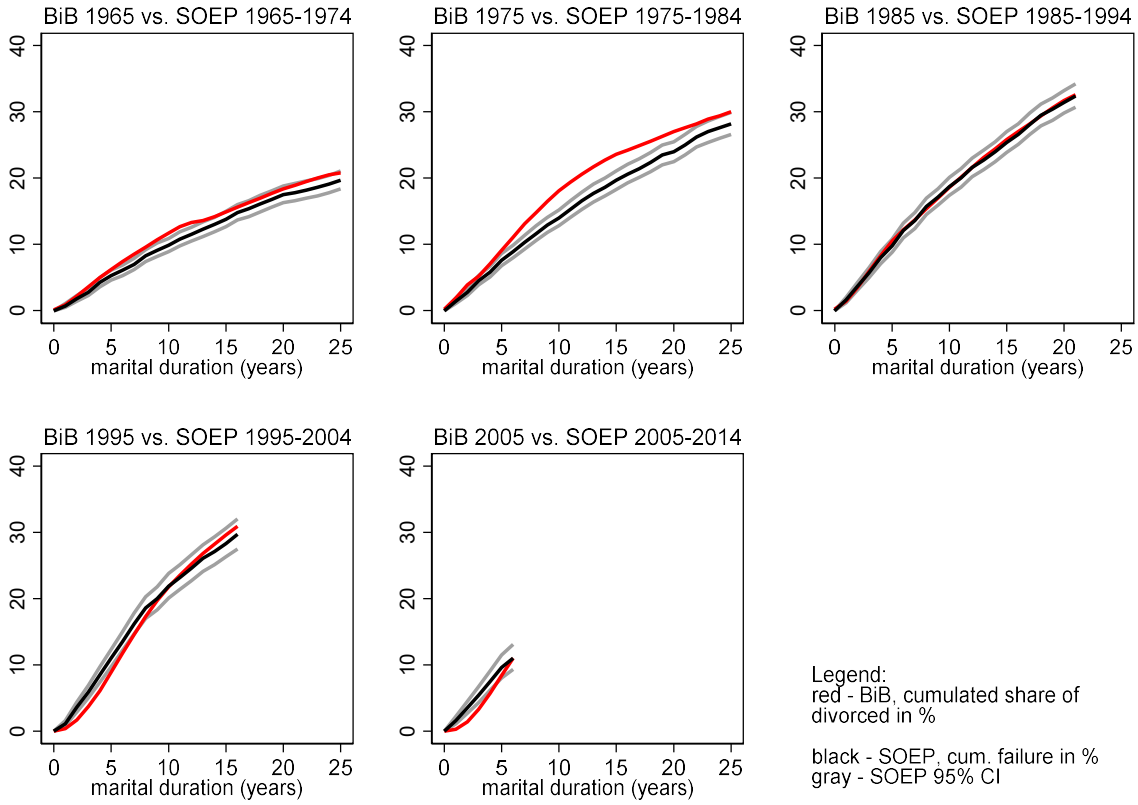

Figure 1-3: Cumulative proportions of divorced marriages in a given marriage year across marriage cohorts: A comparison of estimated failure per marriage cohorts from the SOEP data and the official statistics. Source: SOEP v34, own calculations, and BiB (2020).

To sum up, the SOEP data tend to slightly underestimate transitions to divorce similar to other surveys (O'Connell 2007; Vergauwen et al. 2015). However, the comparison between the SOEP and the official data has shown that the share of divorces reported in the SOEP data seems reasonable as the deviations from the official statistics on divorce are small and are only statistically significant for a small fraction of the data.

1.5 Summary of the three studies of this dissertation[7]

Chapters 2 to 4 are self-contained studies of different aspects of marital stability of first-time married individuals, either as an outcome or as a starting-point of trajectories of post-separation living arrangements. Table 1-3 gives an overview of the core aspects of each of the studies and their current status. The studies have been submitted to scientific journals and are either currently under review (Chapter 2) or have to be resubmitted (Chapters 3 and 4). Each of the chapters investigates different research questions with a particular scope on (post–)marital

[7] In order to respect the co-authors contribution, pronouns vary within this subsection.

outcomes. The empirical analysis of the three studies are all built on the German SOEP, a household panel has been conducted since 1984 (Liebig et al. 2019; Schupp et al. 2017; Wagner et al. 2008). The rationale for choosing the SOEP data to assess the accuracy of the divorce numbers was provided in the previous section. As the comparison with the official data has shown (see Section 1.4), the SOEP is a valuable data source for research on divorce, also from a historical perspective as it offers the opportunity to analyze marriages as dyads from as far back as 1984 due to its design as a household survey.

As outlined in the Section 1.2, married couples differ in several aspects from unmarried couples, particularly if cohabiters do not intend to marry. Therefore, I have focused specifically on the stability of married couples to analyze most comparable units and to solely respect relationships with lower levels of institutionalization in the analysis of post-separation trajectories. In order to meet the current demands of research on marital outcomes, I used the methodological toolbox of life course research and applied event-history analysis and a sequence analysis approach. Sequence analysis is a relatively new method in the field of family sociology, but it fits into the life course approach as it allows us to investigate patterns across life-courses instead of single transitions (Fasang et al. 2016; Mayer 2009). This dissertation combines both holistic (describing and exploring trajectories) and analytical approaches (analyzing transitions and events) of the life course framework (Mayer 2009).

The first study, *Spouses' employment situation and divorce in Germany: A dyadic perspective,* analyzes divorce from a dyadic perspective, by taking both spouses' employment situation into account in order to estimate its influence on marital stability. I build upon existing research by analyzing the financial and time dimensions of employment from the combined perspectives of both husbands and wives. Furthermore, previous research has mainly assessed the association of women's employment and marital stability in terms of the economic independence thesis with the findings being inconclusive. Therefore, the application of stress theories can bring new insights regarding the mechanisms in the association between employment and divorce. Finally, I answer the question of whether precarious job characteristics that straining spouses in terms of time and financial insecurity are associated with marital instability.

The central argument put forward in this paper is that employment situations can put stress on couples, particularly if both partners are working for pay. By referring to various stress theories, I outline that external stress can spill over into the couple's relationship as, e.g., stress from the workday and everyday life can negatively affect their relationship. This negative behavior in a relationship can lead to marital conflicts and can reduce marital quality and stability. I

distinguish between time stress, produced by a reduction of time spent together for dual-earner couples, and financial stress resulting from insecure job situations or a low level of income. Couples who are employed or working overtime not only spend less time together because of their working hours but also because domestic tasks often have to be done after work. Furthermore, having children can also increase the time stress on couples. To sum up, more working hours, children and working overtime can increase the time stress on couples. From the time stress argument, I assume that couples who have a high workload are at increased risk of divorce, an association that should be stronger if children are present in the household.

From stress theories and previous research, I hypothesize that marriages where at least one spouse is in unstable employment, that have a low household income or a complete dependence on one spouse's income can suffer from financial stress. This could place strain on the couple's relationship and may eventually lead to divorce. In addition to its role as a source of stress, economic hardship exhausts couples' coping resources, also bringing marriages at risk of dissolution. Following the financial stress mechanism, I hypothesize that decreasing stability in a couple's employment situation, unequal income structure, and low household income all increase the risk of divorce.

To sum up, I assume that chronic external stress produced by the spouse's employment situation can spill over into their relationship and reduce marital stability. However, while my theoretical model is referring to stress, a subjective feeling or arousal, the indicators I employ are objective proxy-measures of stress. Event-history models are employed on non-retired first-time married couples from the SOEP data (v32) (n=4,932 couples in N=24,739 couple-years) and I conduct my analysis on marriages formed between 1985 and 2014 in West Germany and 1990 and 2014 in East Germany.

The descriptive statistics show that relatively few marriages are confronted with potential financial strain stemming from fixed-term contracts since in 10% of the couple years both spouses hold a fixed-term contract. In 48% of the couple-years, at least one spouse has a fixed-term contract. With respect to the division of paid work, spouses might avoid time stress as spouses are dual-earners in 18% of the couple-years, whereas 71% can be found in traditional arrangements like 1.5 earner and male breadwinner arrangements. In addition, in 29% of couple-years, couples are in a situation where at least one of them has to work overtime.

Table 1-3: Overview of the studies included in this dissertation

	Study 1 (Chapter 2)	**Study 2 (Chapter 3)**	**Study 3 (Chapter 4)**
Authors	Schmid, Lisa	Schmid, Lisa and Michael Wagner	Schmid, Lisa and Sergi Vidal
Research Question(s)	Are precarious job characteristics that are straining spouses in terms of time and financial insecurity associated to marital instability?	Is marital stability across cohorts still a function of spouses division of labor?	RQ1: What are the typical family trajectories after marital separation? RQ2: What are the marital circumstances, including work arrangements of former partners during their 1st marriage, that lead to specific family trajectories after marital separation?
Dependent variable	Marital separation	Divorce	Post-separation living arrangements
Core independent variables	Couples work load, employment stability, and financial situation	Marriage cohort, employment and hours spent on domestic tasks	Marriage cohorts and employment related variables
Data	SOEP v32 (1984-2015)	SOEP v34 (1984-2017)	SOEP v32 (1984-2015)
Observations	Couple-year observations Timepoints nested within couples (first time married couples)	Person-year observations and couple year observations Timepoints nested within persons/couples of first time married women and their partners	Person-months; Timepoints nested within persons Married and first time divorced women and men
Statistical methods	Discrete-time event history analysis	Discrete-time event history analysis	(1) Sequence Analysis and Cluster Analysis (2) Multinomial logistic discrete-time event-history models
Current status	Under review at Journal of Family Issues	To be submitted	To be submitted

Results from discrete-time event history models show that a couple's employment situation does not affect their marital stability substantially. In other words, marital stability does not significantly differ for couples where both spouses are working full-time, when the female is the breadwinner, for 1.5 earner marriages, or underemployed spouses. Working overtime and living with preschool children is not associated with marital stability, but tendencies are higher for couples working overtime and lower for couples who have preschool-aged children, as expected. The results tend to show that it is the work-family balance that strains couples rather than the dependency between spouses or the stress from the spouses' employment situations. When considering the dyadic perspective, the financial stress caused by precarious contracts and its spillover mechanism cannot adequately explain the interplay between employment situation and marital instability. However, my results provide some evidence for the financial stress mechanism in marriages as high strata couples have a lower divorce risk. This is in line with the Family–Stress Model and shows that low-income couples are more vulnerable to divorce as they seem to have fewer coping resources. Nevertheless, additional analyses have shown that low income does not moderate the association between workload and marital stability. These results may indicate that couples who marry despite financial or time stresses seem to be special in their stability.

In the second study, *Spouses division of labor and marital stability in Germany: applying newer theoretical perspectives on cohort trends of divorce*, we attempt to disentangle divorce risks in from a cohort perspective. We investigate whether marital stability is still a function of the division of labor in analyzing task specialization. The guiding research questions are: (1) Has the impact of women's employment on the risk of divorce changed across marriage cohorts? and (2) Does the men's engagement in domestic tasks reduce the risk of divorce? We add to previous research by comparing marital stability between East Germany and West Germany in over a long historical period of time and apply new theoretical frameworks to divorce trends. As previous research has shown that family behavior in East Germany and West Germany still differ from each other (Goldstein and Kreyenfeld 2011; Klärner 2015), analyzing the German context is of special interest. In particular, family arrangements and women's employment differ greatly from each other (dual full-time earner in the East and male-breadwinner/female carer in the West (Trappe et al. 2015)) and thus differences in women's employment and their association with divorce are likely to be observed.

Previous theoretical concepts argued that task specialization is a key characteristic of marital stability, which is still highly relevant in newer theoretical perspectives that suggest an inverse

U-shaped pattern in the divorce trend. While women's employment has led to a decline in marital stability, the newer perspectives like the *multiple equilibrium model* suggest that men can restabilize marriages by changing their roles and taking on more household tasks. We can assume, therefore, that the effect of women's employment on marital stability has changed across marriage cohorts meaning that it becomes irrelevant to stability in younger marriage cohorts. The increase in the number of women in employment is seen as the first part of the gender revolution, while the second part addresses the change in men's and particularly husbands' behavior in a way that increases marital stability. While previous theories argued that women caused the destabilization of marriages, the newer theoretical concepts assume that men can restabilize them by contributing to household tasks. Once men start doing this, the historical increases in marital instability will end and couples will find a new gender balance that will increase marital stability. Additionally, we expect a difference in the pace of these processes in East and West Germany due to the divided history. As it was in the GDR when family policies supported dual-earner families, women's employment was, and still is, much more common in East Germany. Therefore, we expect to find that the influence of women's employment on marital stability has become weaker in East Germany earlier than in West Germany.

By using discrete-time event history models, we analyze data from the SOEP from a historical perspective on women's marriages formed between 1940 and 2017, and from a dyadic perspective with marriages formed since 1990. The results provide evidence for a reversing trend in marital stability across marriage cohorts in East and West Germany. The risk of divorce has been increasing across marriage cohorts; however, in the youngest marriage cohorts, the increase in divorce risk has reduced. Furthermore, the results show the changing associations of women's employment with the risk of divorce, in that the risk is decreasing for women in full-time employment in the youngest marriage cohort, a trend that began earlier in East Germany than in West Germany. The results also suggest that the associations between domestic tasks and divorce risk have changed in West Germany, although only on a small scale. Furthermore, husbands in the younger marriage cohorts spend more hours on household tasks than husbands in marriages formed between 1990 and 2004. Nevertheless, the division of domestic tasks in marriages is found to be negligible in terms of marital instability both in East and West Germany. From a historical perspective, we also detect a suppression effect of age at the time of marriage on the risk of divorce. In other words, the divorce risk of marriage cohorts increases when age at marriage is respected in the models. These findings indicate that the

reversal of the increasing trend in divorce rates has been driven partially by the increase in women's age at marriage rather than by changing gender arrangements.

Study 3, *Family trajectories after marital separation in Germany: Patterns and antecedents*, takes a post-separation perspective and offers answers to the following questions. (1) What are the most common post-marital family trajectories in Germany and (2) what are the pre-separation circumstances that are associated with different trajectories after marital separation? Previous research has often focused on single outcomes, with repartnering or childbearing being separate study objectives. Thus, post-separation trajectories regarding partnership status, its level of institutionalization, and the presence of children have not been adequately studied in Germany. We can add to previous research in exploring the diversity of post-marital family trajectories in Germany by establishing typical trajectories taken after marital separation. Additionally, we can add to our knowledge of antecedents of post-marital trajectories by focusing on the typical determinants of marital separation.

From a theoretical perspective, repartnering depends on the need for a partner, the opportunities for finding a new partner, and the attractiveness of a newly single divorcee to others on the partner market. Resources are closely related to the need for and the attractiveness of a partner. Economic deprivation decreases the attractiveness as a partner but increases the financial need for a partner. Being married at young age signals family orientation and can indicate a great (emotional) need for a partner. The presence of children is supposed to have gendered effects on a divorcee's attractiveness as a partner and the need for a partner. Women, who mostly coreside with their children from prior unions are supposed to have a greater need for a new partner, while their male counterparts are supposed to be highly attractive to others. The opportunities to find a new partner decrease with age as the availability of potential partners is lower, whereas the availability of potential partners is increasing across cohorts. Furthermore, from the linked-lives perspective, we can assume that the circumstances of the first marriage are associated with higher-order partnership and parenthood outcomes.

In order to investigate the typical family trajectories after a marital separation, we drew a sample of 1,144 men and women who had separated from initial spouse, and who had participated in the SOEP between 1991 and 2010. We then followed the trajectories of combined partnership and parenthood episodes for these respondents over a period for 60 months after their marital separation. In order to gather evidence of diversity in post-marital trajectories, we employed sequence and cluster analysis. We distinguish between ten differentiated states that cover partnership status (unpartnered, LAT, cohabiting and married) and the presence of children (no

children, with children/ with previous children, with further children). In order to examine the determinants of post-marital trajectories, we employ discrete-time event history analysis for multinomial outcomes by using all first-time married respondents as the at-risk population and typical predictors of marital separation. The sample for the multinomial event history analysis consists of 236,562 person-years from 24,292 individuals.

Our results reveal that the majority of separated individuals spent the period of 60-months period after marital separation in single living arrangements combined with some episodes of non-cohabiting relationships, and either with (particularly women) or without (particularly men) children from their first marriage. During this early post-marital period, relatively small shares of these respondents remarried or had children with a new partner. In our analysis, we identify five common clusters of post-separation trajectories. “Lone parents” and “No family households” are the most common trajectories after marital separation in our sequences which show fewer family transitions. “Childless in unmarried cohabitation” and “Parents in unmarried cohabitation” are smaller clusters and differ from previous clusters as separated individuals started new cohabiting relationships relatively soon after their marriage broke down. The final cluster is the “Remarriage and childbearing” cluster, containing individuals that experienced rapid and highly institutionalizing family transitions.

The analysis shows that certain post-marital trajectories have specific demographic or socioeconomic profiles. For example, we show that economic resources were more likely to determine the family roles ex-spouses assumed after separation among women than among men. Thus, this study clarifies the development of the post-marital life course, and thus on the consequences of marital separation.

These findings also indicate that recent divorcees generally opt to either enter into less formalized new relationships without children or to have further children in formalized partnerships. Only partly in line with our expectations are the results that repartnering is becoming less institutionalized across marriage cohorts. Getting married earlier in the first marriage is found to be significantly, but not exclusively, related to the formation of new families. Our results show that greater spousal resources lead to higher rates of repartnering. However, in less institutionalized partnership trajectories having more resources is found to be associated with post-separation trajectories for women but not men.

Surprisingly, parents with dependent children did not have fewer opportunities and were not less inclined than childless individuals to start cohabitation in the short term. In addition, the

finding that marital separation had been spreading to older people and lower socioeconomic groups may explain the decreasing opportunities for (rapid) repartnering into stable relationships. We also found that a significant share of the separated men and women who had been identified in previous research as following unpartnered trajectories were actually in committed and stable LAT-relationships. Our results show that the divorcees who had a strong family orientation but no children from their first marriage tended to divorce at younger age and often started a family in a new, formalized relationship with children. In summary, we found that marital circumstances – such as the timing of marriage in the life course and in historical time, spousal resources, and the presence of preschool-aged children – are all linked to post-separation trajectories.

1.6 Conclusion

The role of marriage has changed markedly over the past decades as the family landscape has diversified (Wagner and Valdés Cifuentes 2014). As divorce is one of the main contributors to this diversification and is a source of social inequality for both divorcees and the children of divorcees, investigating marriages and their stability is highly relevant. Current trends in marriage formation, particularly the postponement of marriages until later in life (see Section 1.2) and increased acceptance and prevalence of cohabiting unions, may suggest that marriages have become more stable across the decades. Against this, statistics show that around every third marriage still currently ends in divorce in Germany (Statistisches Bundesamt (Destatis) 2020c). However, the trend of increasing divorce rates has stalled in Germany and other Western societies (e.g., Grünheid 2013) for reasons that remain unexplained in Germany (Wagner 2020; Wagner et al. 2015). Due to the simultaneous increase in female employment, research on women's employment and divorce and the economic independence thesis, in particular, are the subject of many studies (for an overview, see Özcan and Breen 2012). In any case, this previous research on the economic independence thesis produced inconclusive findings (see e.g. Lyngstad and Jalovaara 2010; Özcan and Breen 2012). In addition to women's economic dependence on marriages, increased female labor force participation has likely changed the daily routines of families as a whole. Based on the independence thesis, this dissertation investigated different perspectives on the associations between women's employment and marital instability as well as employment characteristics as antecedents of patterns of post-divorce family trajectories.

By applying theoretical models to the association of characteristics of employment and division of labor on divorce separate from the new home economics, I have attempted to improve the

understanding of both the divorce process and divorce trends in Germany. As both male and female spouses contribute to tasks specialization in marriages, I applied dyadic approaches that considered both partners. Furthermore, I assessed the role of historical time with cohort effects in spouses' task specialization and specifically looked at unpaid work and the specifics of paid work arrangements and their influence on divorce risk and on determinants of patterns of post-separation living arrangements.

Embedded in family stress theories, in Chapter 2, *spouses' employment conditions* are discussed to be linked to marital stability and were also assumed to operate through financial and time stresses that spillover from the spouse's employment arrangements into the relationship. Overall, the results do not indicate that marital stability is reduced because of time stress or financial stress, which was expected to be an alternative explanation for the association of women's employment with divorce. Therefore, the man's contribution to household tasks was taken into account when investigating the association between women's employment and divorce risk applying the multiple equilibrium model in Chapter 3. The results showed that the role of *spouses' division of labor* and thus, economic dependence in marital stability, is still relevant, and has only changed slightly. While men slightly increasing the hours spent on household tasks they take on is unrelated to marital stability, the association between women's employment with divorce risk become less pronounced across marriage cohorts. Furthermore, the findings indicate that the reversal of the increasing trend in divorce rates has been partly driven by the increase in women's ages at marriage but not by their employment. According to the results from Chapter 4, one might suggest that marital (in–)dependence is still relevant after marital separation, and that particularly being unemployment during the first marriage indicates a greater need for a new partner, while employment should be related to a slow repartnering process. Overall, a large proportion of separated individuals follow single trajectories with or without children in the 60 months after their marital separation. As women's economic resources and employment seem to determine post-separation family trajectories, these findings tentatively support the economic independence thesis which suggests that a low financial need for a new partner is reflected in living arrangements without a partner.

With regard to the overall research question of whether employment-related characteristics of couples can explain the ongoing trend of marital instability, I conclude that the spouses' employment conditions, as studied in this dissertation, are negligible regarding marital stability. Mutual dependence is a relevant parameter in divorce trends, as the division of household tasks has changed, and the association of women's employment and divorce has become weaker in

younger marriage cohorts. Furthermore, the relevance of independence is also reflected in the trajectories of post-separation living arrangements. Thus, my results are also in line with some of the previous research that presented evidence for the economic dependence thesis (e.g. van Damme and Kalmijn 2014; Liefbroer and Dourleijn 2006), at least for a certain period (Killewald 2016; South 2001).

My results contribute to previous research by investigating the association of the aspects of work with marital stability from different theoretical perspectives beyond the economic independence thesis, which produced inconclusive findings (Özcan and Breen 2012). Firstly, I discussed a *stress-theoretical perspective* regarding the employment situation of couples and its effect on marital stability. In contrast to previous theoretical models that assumed a steady decline in family reflected in instable marriage (Becker et al. 1977), I applied secondly the *multiple equilibrium model* (Esping-Andersen and Billari 2015) that allows for the assumption of more flexible outcomes regarding trends in marital stability (Cherlin 2016). Thirdly, I prolonged the assumption of spouses' economic independence on patterns of post-separation living trajectories and investigated how aspects of employment during a first marriage are related to the combined partnership and parenthood trajectories after marital separation.

From a life course perspective (Elder 1994; Elder et al. 2003), my results give insights into *historical time and place* with the historical perspective in Study 2 (see Chapter 3) that investigated marriage cohorts from 1940 to 2017 and compared trends in marital stability from East Germany and West Germany, a comparison that no one has thus far presented to this extend with survey data to the best of my knowledge. In line with previous findings (Heaton 2002; Lampard 2013) my results have shown that age at marriage contributs to trends in marital stability across marriage cohorts, and also highlight the importance of the principles of timing and time from the life course perspective. The principle of linked-lives was addressed twofold: Despite their theoretical relevance, men's work situations were often neglected empirically in previous studies (e.g. Böttcher 2006; Wagner et al. 2015). In light of this, I conducted dyadic approaches by considering both the male and female spouses' characteristics of employment or housework (see Chapters 2 and 3). By addressing several characteristics of the first marriage and their association with post-separation trajectories of living arrangements, my results show that former spouses' lives are still linked, even though they have separated. Thus, by applying reliable and relatively new methods that fit into life course research (Fasang et al. 2016; Mayer 2009) the presented results contribute to research on family sociology.

However, because the data are restricted to socio-economic determinants, I could run the risk of having produced structurally biased results (Huinink and Feldhaus 2009), as my analysis empirically neglects psychological characteristics that may be related to decision-making in separation or repartnering processes. Even though the study presented in Chapter 2 discusses time stress and financial stress as operating channels, the measurements grasps potentially stressful conditions instead of perceived individual's stress. Neglecting such characteristics, the observed but negligible role of the spouses' employment conditions may conceal the fact that specific arrangements produce perceived pressure within the dyads.

The findings from this dissertation are limited to married couples as first marriages are the starting point or the unit of analysis in the three studies presented here. However, as higher–order marriages have a higher divorce risk and seeing as cohabiting unions are less stable compared to marriages, my results can be classified as a conservative test of these assumptions. While underestimating divorces is a common phenomenon with survey data due to panel attrition related to relationship dissolution and a tendency toward underreporting very current family transitions (Boertien 2020; Mitchell 2010; O'Connell 2007; Vergauwen et al. 2015), I have shown that the SOEP data are nonetheless a valuable data source.

Despite the quality of the data exploited in this dissertation, and the fact that approximately every third marriage that lasts between 0 and 25 years ends in divorce (Statistisches Bundesamt (Destatis) 2020c), divorce is a rather seldom phenomenon within the single marriage years as we count the event only once in the respected time window. Thus, models estimating the divorce risk on a yearly or on a monthly basis produce rather small effect sizes in single studies, as they estimate the probability of an event in a respective marriage year under the condition that this event has not yet been observed (Allison 2014). The estimates seem to be particularly small when they are presented in average marginal effects that represent the average change in the probability to see a divorce in a specific category of an independent variable compared to the reference group. At first sight, it seems awkward to interpret estimates from such a small size. However, the average marginal effects were shown to offer an opportunity for comparison across models while odds ratios, to quote one example, do not allow for such a comparison (Auspurg and Hinz 2011).

As mentioned above, divorce trends are currently unexplained (Wagner 2020; Wagner et al. 2015). However, the trends in marital formation outlined in Section 1.2, e.g. individuals postponing marriage until later in life, cohabiting unions as a common alternative to marriage, and the educational gradients in the likelihood of marriage, suggest that marriage may be

selective in younger marriage cohorts. In other words, only couples in relatively stable relationships may decide to marry, which is perhaps why increasing divorce rates have stalled. To assess whether this current trend in marital stability is related to selection is beyond the scope of this dissertation. However, future research should address whether the trend of increasing divorce rates has stalled due to a selection of stable relationships into marriages in younger marriage cohorts.

Future research would benefit from developing theories of cultural change in marital stability that also allow assumptions for trends in marital stability due to cultural change within gender roles. The multiple equilibrium model (Esping-Andersen and Billari 2015) allows for more accurate trend analysis as it allows for more flexible assumptions compared to the new home economics theory (Becker et al. 1977). However, the multiple equilibrium model mainly suggests exploring the trend with the same measurements – just framing them within a different theoretical setting. Additionally, this line of argumentation is similar to what Oppenheimer (1997) suggested decades ago. The measures applied so far have already produced inconclusive results (for an overview see Özcan and Breen 2012). Thus, the strand of research regarding marital stability and cultural change should rethink measurements of the change in gender roles highlighting aspects that go beyond the mere division of labor. If change is really something cultural, it should also be visible in other aspects of the lives of individuals than in arrangements of daily routines in paid and unpaid work. In accordance with this, the change in the meaning of marriage (Cherlin 2004), as indicated by marriage being an option instead of a requirement, or the postponement of marriage until later in the life (outlined in Section 1.2), could also be addressed. If the role of love has replaced the role of socio-economic status in marriage formation, research on marital stability will therefore need new concepts as to why marriages break up. A first step in this direction was presented by Hiekel and Wagner (2020) who analyzed how union stability is related to relationship practices. Furthermore, one could assess the norm of monogamy in order to investigate whether the association between infidelity and union stability within relationships has become stronger across cohorts. However, results from more than a decade ago are tend to contradict this assumption, as infidelity as a motive for divorce has become weaker over time (de Graaf and Kalmijn 2006).

1.7 Status of the studies and contribution of co-authors

Study 1: *Spouses' employment situation and marital separation in Germany: A dyadic perspective* is under review at the Journal of Family Issues.

As single author, I developed the research question and the theoretical framework, prepared the data for analyses, conducted the analyses and prepared the manuscript.

Study 2: *Spouses' division of labor and marital stability in Germany: applying newer theoretical perspectives on cohort trends of divorce* is currently under preparation for submission.

As the lead author, I developed the research question and the theoretical framework as well as the papers concept. I prepared the data for analyses, conducted the analyses and prepared the manuscript. The co-author Prof. Dr. Michael Wagner, University of Cologne, commented on the manuscript.

Study 3: *Family trajectories after marital separation in Germany: Patterns and antecedents* is currently under preparation for submission.

As the lead author, I developed the research question and the theoretical framework, prepared the data for analyses, conducted the analyses and prepared the manuscript. The co-author Dr. Sergi Vidal, CED - Centre for Demographic Studies, Universitat Autònoma de Barcelona, assisted in conducting the analyses, commented on the manuscript and assisted in revising the manuscript.

1.8 **References**

Allison, Paul D. 2014. *Event History and Survival Analysis*. Second edition. Los Angeles: SAGE.

Amato, Paul R. 2010. 'Research on Divorce: Continuing Trends and New Developments'. *Journal of Marriage and Family* 72(3):650–66. doi: 10.1111/j.1741-3737.2010.00723.x.

Amato, Paul R., and Spencer James. 2010. 'Divorce in Europe and the United States: Commonalities and Differences across Nations'. *Family Science* 1(1):2–13. doi: 10.1080/19424620903381583.

Amato, Paul R., and Sarah E. Patterson. 2017. 'The Intergenerational Transmission of Union Instability in Early Adulthood: Intergenerational Transmission of Instability'. *Journal of Marriage and Family* 79(3):723–38. doi: 10.1111/jomf.12384.

Andersson, Gunnar, and Martin Kolk. 2011. 'Trends in Childbearing and Nuptiality in Sweden: An Update with Data up to 2007.' *Finnish Yearbook of Population Research* 46:21–29.

Aneshensel, Carol S. 1992. 'Social Stress: Theory and Research'. *Annual Review of Sociology* 18:15–38. doi: https://doi.org/10.1146/annurev.so.18.080192.000311.

Asendorpf, Jens B. 2008. 'Living Apart Together: Alters- und Kohortenabhängigkeit einer heterogenen Lebensform'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 60(4):749–64. doi: 10.1007/s11577-008-0035-4.

Auspurg, Katrin, and Thomas Hinz. 2011. 'Gruppenvergleiche bei Regressionen mit binären abhängigen Variablen – Probleme und Fehleinschätzungen am Beispiel von Bildungschancen im Kohortenverlauf'. *Zeitschrift für Soziologie* 40(1):62–73.

Babka von Gostomski, Christian, Josef Hartmann, and Miriam Thum. 1997. 'Die Mannheimer Scheidungsstudie: Aspekte der Durchführung der telefonischen Befragung zu Determinanten der Ehescheidung'. *ZUMA Nachrichten* 21(41):127–52.

Baumann, Horst, Sonja Schulz, and Sarah Thiesen. 2019. *ALLBUS 2018 - Variable Report*. 2019/6. Köln: GESIS – Leibniz-Institut für Sozialwissenschaften.

Becker, Gary S. 1991. *A Treatise on the Family*. Enlarged Edition. Cambridge, Mass: Harvard University Press.

Becker, Gary S., Elisabeth M. Landes, and Robert T. Michael. 1977. 'An Economic Analysis of Marital Instability'. *Journal of Political Economy* 85(6):1141–87.

Bellani, Daniela, and Gøsta Esping-Andersen. 2020. 'Gendered Time Allocation and Divorce: A Longitudinal Analysis of German and American Couples'. *Family Relations* 69(1):207–26. doi: 10.1111/fare.12405.

Bellani, Daniela, Gøsta Esping-Andersen, and Lesia Nedoluzhko. 2017. 'Never Partnered: A Multilevel Analysis of Lifelong Singlehood'. *Demographic Research* 37(4):53–100. doi: 10.4054/DemRes.2017.37.4.

BiB, Bundesinstitut für Bevölkerungsforschung. 2020. 'Anteil der geschiedenen Ehen der Eheschließungsjahrgänge 1965, 1975, 1985, 1995 und 2005 nach Ehedauer in Deutschland (Stand 2016)'. Retrieved 17 March 2020 (https://www.bib.bund.de/Permalink.html?id=10238144)

BiB, Bundesinstitut für Bevölkerungsforschung. 2020a. 'Glossar - Anteil Der Scheidungen Nach Heiratsjahrgängen'.

BiB, Bundesinstitut für Bevölkerungsforschung. 2020b. *Ledige nach Altersgruppen und Geschlecht in Ostdeutschland (1970-2018)*. Wiesbaden. Retrieved 15 August 2020 (https://www.bib.bund.de/Permalink.html?id=10291686)

BiB, Bundesinstitut für Bevölkerungsforschung. 2020c. *Ledige nach Altersgruppen und Geschlecht in Westdeutschland (1970-2018)*. Wiesbaden. Retrieved 15 August 2020 (https://www.bib.bund.de/Permalink.html?id=10291674)

Bien, Walter, and Richard Rathgeber. 2000. *Die Familie in der Sozialberichterstattung: Ein europäischer Vergleich*. Wiesbaden: VS Verlag für Sozialwissenschaften.

Billari, Francesco C., and Aart C. Liefbroer. 2016. 'Why Still Marry? The Role of Feelings in the Persistence of Marriage as an Institution'. *The British Journal of Sociology* 67(3):516–40. doi: 10.1111/1468-4446.12202.

Boertien, Diederik. 2020. 'The Conceptual and Empirical Challenges of Estimating Trends in Union Stability: Have Unions Become More Stable in Britain?' Pp. 17–36 in *Divorce in Europe*. Vol. 21, *European Studies of Population*, edited by D. Mortelmans. Cham: Springer International Publishing.

Boertien, Diederik, and Dimitri Mortelmans. 2018. 'Does the Relationship between Personality and Divorce Change over Time? A Cross-Country Comparison of Marriage Cohorts'. *Acta Sociologica*, 61(3):300–316. doi: 10.1177/0001699317709048.

Börsch-Supan, Axel, Martina Brandt, Christian Hunkler, Thorsten Kneip, Julie Korbmacher, Frederic Malter, Barbara Schaan, Stephanie Stuck, and Sabrina Zuber. 2013. 'Data Resource Profile: The Survey of Health, Ageing and Retirement in Europe (SHARE)'. *International Journal of Epidemiology* 42(4):992–1001. doi: 10.1093/ije/dyt088.

Böttcher, Karin. 2006. 'Scheidung in Ost- und Westdeutschland: Der Einfluss der Frauenerwerbstätigkeit auf die Ehestabilität'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 58(4):592–616. doi: 10.1007/s11577-006-0258-1.

Bremmer, Dale, and Randy Kesselring. 2004. 'Divorce and Female Labor Force Participation: Evidence from Times-Series Data and Cointegration'. *Atlantic Economic Journal* 32(3):175–90. doi: 10.1007/BF02299436.

Brenke, Karl. 2015. 'Growing Importance of Women in the German Labor Market'. *DIW Economic Bulletin* 5(5):51–61.

Bröckel, Miriam, and Hans-Jürgen Andreß. 2015. 'The Economic Consequences of Divorce in Germany: What Has Changed since the Turn of the Millennium?' *Comparative Population Studies* 40(3): 277–312. doi: 10.12765/CPoS-2015-04en.

Bumpass, Larry, and R. Kelly Raley. 2007. 'Measuring Separation and Divorce: Issues, and Comparability of Estimates acriss Data Sources'. Pp. 127–43 in *Handbook of measurement Issues in Family Research*, edited by S. L. Hofferth and L. M. Casper. Mahwah, N.J: Lawrence Erlbaum Associates.

Cherlin, Andrew J. 2004. 'The Deinstitutionalization of American Marriage'. *Journal of Marriage and Family* 66(4):848–61. doi: 10.1111/j.0022-2445.2004.00058.x.

Cherlin, Andrew J. 2016. 'A Happy Ending to a Half-Century of Family Change?: A Happy Ending to a Half-Century of Family Change?' *Population and Development Review* 42(1):121–29. doi: 10.1111/j.1728-4457.2016.00111.x.

Cherlin, Andrew J. 2020. 'Degrees of Change: An Assessment of the Deinstitutionalization of Marriage Thesis'. *Journal of Marriage and Family* 82(1):62–80. doi: 10.1111/jomf.12605.

Conger, Rand D., Katherine J. Conger, and Monica J. Martin. 2010. 'Socioeconomic Status, Family Processes,and Individual Development'. *Journal of Marriage and Family* 72(3):685–704. doi: 10.1111/j.1741-3737.2010.00725.x.

Cooke, Lynn Prince. 2004. 'The Gendered Division of Labor and Family Outcomes in Germany'. *Journal of Marriage and Family* 66(5):1246–56.

Cooke, Lynn Prince. 2006. '"Doing" Gender in Context: Household Bargaining and the Risk of Divorce in Germany and the United States'. *American Journal of Sociology* 112(2):442–72. doi: 10.1086/506417.

Cooke, Lynn Prince, J. Erola, M. Evertsson, M. Gähler, J. Härkönen, B. Hewitt, M. Jalovaara, M. Y. Kan, T. H. Lyngstad, L. Mencarini, J. F. Mignot, D. Mortelmans, A. R. Poortman, C. Schmitt, and H. Trappe. 2013. 'Labor and Love: Wives' Employment and Divorce Risk in Its Socio-Political Context'. *Social Politics: International Studies in Gender, State & Society* 20(4):482–509. doi: 10.1093/sp/jxt016.

Cooke, Lynn Prince, and V. Gash. 2010. 'Wives' Part-Time Employment and Marital Stability in Great Britain, West Germany and the United States'. *Sociology* 44(6):1091–1108. doi: 10.1177/0038038510381605.

van Damme, Maike, and Matthijs Kalmijn. 2014. 'The Dynamic Relationships between Union Dissolution and Women's Employment: A Life-History Analysis of 16 Countries'. *Social Science Research* 48:261–78. doi: 10.1016/j.ssresearch.2014.06.009.

De Hauw, Yolien, André Grow, and Jan Van Bavel. 2017. 'The Reversed Gender Gap in Education and Assortative Mating in Europe'. *European Journal of Population* 33(4):445–74. doi: 10.1007/s10680-016-9407-z.

Dewilde, C., and W. Uunk. 2008. 'Remarriage as a Way to Overcome the Financial Consequences of Divorce--A Test of the Economic Need Hypothesis for European Women'. *European Sociological Review* 24(3):393–407. doi: 10.1093/esr/jcn025.

Diekmann, Andreas, and Henriette Engelhardt. 1995. 'Die soziale Vererbung des Scheidungsrisikos. Eine empirische Untersuchung der Transmissionshypothese mit dem deutschen Familiensurvey'. *Zeitschrift für Soziologie* 24(3):215–28.

Dietz, Martin, Carina Himsel, and Ulrich Walwei. 2013. 'Wandel der Erwerbsformen: Welche Rolle spielen strukturelle Änderungen am Arbeitsmarkt?' *Arbeit* 22(2):85–104.

Elder, Glen H. 1994. 'Time, Human Agency, and Social Change: Perspectives on the Life Course'. *Social Psychology Quarterly* 57(1):4–15.

Elder, Glen H., Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. 'The Emergence and Development of Life Course Theory'. Pp. 3–19 in *Handbook of the Life Course*, *Handbooks of Sociology and Social Research*, edited by J. T. Mortimer and M. J. Shanahan. Boston, MA: Springer US.

Ermisch, John, and Thomas Siedler. 2009. 'Living Apart Together'. Pp. 29–43 in *Changing Relationships*. Vol. 45, *Routledge Advances in Sociology*, edited by M. Brynin and J. Ermisch. New York: Routledge.

Esping-Andersen, Gøsta, and Francesco C. Billari. 2015. 'Re-Theorizing Family Demographics'. *Population and Development Review* 41(1):1–31. doi: 10.1111/j.1728-4457.2015.00024.x.

Fasang, Anette Eva, Johannes Huinink, and Matthias Pollmann-Schult. 2016. 'Aktuelle Entwicklungen in der deutschen Familiensoziologie: Theorien, Daten und Methoden'. *Zeitschrift für Familienforschung* 28(1):112–43.

Festy, Patrick, and France Prioux. 2002. *An Evaluation of the Fertility and Family Survey Project*. New York and Geneva: United Nations.

Fulda, Barbara E. 2016. 'The Diversity in Longitudinal Partnership Trajectories during the Transition to Adulthood: How Is It Related to Individual Characteristics and Regional Living Conditions?' *Demographic Research* 35(37):1101–34. doi: 10.4054/DemRes.2016.35.37.

Gestrich, Andreas. 2013. *Geschichte der Familie im 19. und 20. Jahrhundert*. 3., um einen Nachtrag erweiterte Auflage. München: Oldenbourg Verlag.

Goldscheider, Frances, Eva Bernhardt, and Trude Lappegård. 2015. 'The Gender Revolution: A Framework for Understanding Changing Family and Demographic Behavior'. *Population and Development Review* 41(2):207–39. doi: 10.1111/j.1728-4457.2015.00045.x.

Goldstein, Joshua, and Catherine Kenney. 2001. 'Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women'. *American Sociological Review* 66(4):506–19. doi: 10.2307/3088920.

Goldstein, Joshua R., and Michaela Kreyenfeld. 2011. 'Has East Germany Overtaken West Germany? Recent Trends in Order-Specific Fertility'. *Population and Development Review* 37(3):453–72. doi: 10.1111/j.1728-4457.2011.00430.x.

de Graaf, Paul M., and Matthijs Kalmijn. 2003. 'Alternative Routes in the Remarriage Market: Competing-Risk Analyses of Union Formation after Divorce'. *Social Forces* 81(4):1459–98. doi: 10.1353/sof.2003.0052

de Graaf, Paul M., and Matthijs Kalmijn. 2006. 'Divorce Motives in a Period of Rising Divorce: Evidence From a Dutch Life-History Survey'. *Journal of Family Issues* 27(4):483–505. doi: 10.1177/0192513X05283982.

Grünheid, Evelyn. 2011. 'Wandel des Heiratsverhaltens in Deutschland. Analysen mit Tafelberechnungen'. in *BiB Working Paper*. Vol. 2. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.

Grünheid, Evelyn. 2013. 'Ehescheidungen in Deutschland: Entwicklungen und Hintergründe'. in *BiB Working Paper*. Vol. 1. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.

Haensch, Anna-Carolina, Sonja Schulz, Sebastian Sterl, and Bernd Weiß. 2019. 'The HaSpaD (Harmonizing and Synthesizing Partnership Histories from Different Research Data Infrastructures) Project'. Newsletter on Survey Data Harmonization in the Social Sciences 5(1).

Hank, Karsten, and Anja Steinbach. 2019. 'Families and Their Institutional Contexts: The Role of Family Policies and Legal Regulations'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 71(S1):375–98. doi: 10.1007/s11577-019-00603-z.

Hank, Karsten, and Michael Wagner. 2013. 'Parenthood, Marital Status, and Well-Being in Later Life: Evidence from SHARE'. *Social Indicators Research* 114(2):639–53. doi: 10.1007/s11205-012-0166-x.

Härkönen, Juho. 2014. 'Divorce: Trends, Patterns, Causes, and Consequences'. Pp. 303–22 in *The Wiley Blackwell Companion to the Sociology of Families*, edited by J. Treas, J. Scott, and M. Richards. Chichester, West Sussex: John Wiley & Sons Inc.

Härkönen, Juho, Fabrizio Bernardi, and Diederik Boertien. 2017. 'Family Dynamics and Child Outcomes: An Overview of Research and Open Questions'. *European Journal of Population* 33(2):163–84. doi: 10.1007/s10680-017-9424-6.

Härkönen, Juho, and Jaap Dronkers. 2006. 'Stability and Change in the Educational Gradient of Divorce. A Comparison of Seventeen Countries'. *European Sociological Review* 22(5):501–17. doi: 10.1093/esr/jcl011.

Heaton, Tim B. 2002. 'Factors Contributing to Increasing Marital Stability in the United States'. *Journal of Family Issues* 23(3):392–409. doi: 10.1177/0192513X02023003004.

Hiekel, Nicole, and Barbara Elisabeth Fulda. 2018. 'Love. Break up. Repeat: The Prevalence and Stability of Serial Cohabitation among West German Women and Men Born in the Early 1970s'. *Demographic Research* 39(30):855–70. doi: 10.4054/DemRes.2018.39.30.

Hiekel, Nicole, Aart C. Liefbroer, and Anne-Rigt Poortman. 2014. 'Understanding Diversity in the Meaning of Cohabitation Across Europe'. *European Journal of Population* 30(4):391–410. doi: 10.1007/s10680-014-9321-1.

Hiekel, Nicole, Aart C. Liefbroer, and Anne-Rigt Poortman. 2015. 'Marriage and Separation Risks among German Cohabiters: Differences between Types of Cohabiter'. *Population Studies* 69(2):237–51. doi: 10.1080/00324728.2015.1037334.

Hiekel, Nicole, and Michael Wagner. 2020. 'Individualized Relationship Practices and Union Dissolution: Differences Between Marriage and Cohabitation'. *European Sociological Review* jcaa021. doi: 10.1093/esr/jcaa021.

Huinink, Johannes, Josef Brüderl, Bernhard Nauck, Sabine Walper, Laura Castiglioni, and Michael Feldhaus. 2011. 'Panel Analysis of Intimate Relationships and Family Dynamics (Pairfam): Conceptual Framework and Design'. *Zeitschrift für Familienforschung* 23(1):77–101.

Huinink, Johannes, and Michael Feldhaus. 2009. 'Family Research from the Life Course Perspective'. *International Sociology* 24(3):299–324. doi: 10.1177/0268580909102910.

Hutchison, Elizabeth D. 2011. 'Life Course Theory'. Pp. 1586–94 in *Encyclopedia of Adolescence*, edited by R. J. R. Levesque. New York, NY: Springer New York.

Jalovaara, Marika. 2013. 'Socioeconomic Resources and the Dissolution of Cohabitations and Marriages'. *European Journal of Population / Revue Européenne de Démographie* 29(2):167–93. doi: 10.1007/s10680-012-9280-3.

Kalmijn, Matthijs. 2013. 'The Educational Gradient in Marriage: A Comparison of 25 European Countries'. *Demography* 50(4):1499–1520. doi: 10.1007/s13524-013-0229-x.

Kaplan, Amit, and Haya Stier. 2016. 'Political Economy of Family Life: Couple's Earnings, Welfare Regime and Union Dissolution'. *Social Science Research* (61):43–56. doi: 10.1016/j.ssresearch.2016.06.014.

Kennedy, Sheela, and Steven Ruggles. 2014. 'Breaking Up Is Hard to Count: The Rise of Divorce in the United States, 1980–2010'. *Demography* 51(2):587–98. doi: 10.1007/s13524-013-0270-9.

Kiernan, K. 2001. 'The Rise of Cohabitation and Childbearing Outside Marriage in Western Europe'. *International Journal of Law, Policy and the Family* 15(1):1–21. doi: 10.1093/lawfam/15.1.1.

Kiernan, Kathleen. 2004. 'Changing European Families: Trends and Issues'. Pp. 17–33 in *The Blackwell companion to the sociology of families*, edited by J. Scott, J. Treas, and M. Richards. Malden, MA, USA: Blackwell Publishing Ltd.

Killewald, Alexandra. 2016. 'Money, Work, and Marital Stability: Assessing Change in the Gendered Determinants of Divorce'. *American Sociological Review* 81(4):696–719. doi: 10.1177/0003122416655340.

Klärner, Andreas. 2015. 'The Low Importance of Marriage in Eastern Germany - Social Norms and the Role of Peoples' Perceptions of the Past'. *Demographic Research* 33:239–72. doi: 10.4054/DemRes.2015.33.9.

Klaus, Daniela, Heribert Engstler, Katharina Mahne, Julia K. Wolff, Julia Simonson, Susanne Wurm, and Clemens Tesch-Römer. 2017. 'Cohort Profile: The German Ageing Survey (DEAS)'. *International Journal of Epidemiology* 46(4):1105–1105g. doi: 10.1093/ije/dyw326.

Kneip, Thorsten, and Gerrit Bauer. 2009. 'Did Unilateral Divorce Laws Raise Divorce Rates in Western Europe?' *Journal of Marriage and Family* 71(3):592–607. doi: 10.1111/j.1741-3737.2009.00621.x.

Krack-Roberg, Elle. 2011. 'Ehescheidungen 2009'. *Wirtschaft und Statistik 12*: 239–55.

Kulu, Hill. 2014. 'Marriage Duration and Divorce: The Seven-Year Itch or a Lifelong Itch?' *Demography* 51(3):881–93. doi: 10.1007/s13524-013-0278-1.

Lampard, Richard. 2013. 'Age at Marriage and the Risk of Divorce in England and Wales'. *Demographic Research* 29(7):167–202. doi: 10.4054/DemRes.2013.29.7.

Lehrer, Evelyn, and Yu Chen. 2013. 'Delayed Entry into First Marriage and Marital Stability: Further Evidence on the Becker-Landes-Michael Hypothesis'. *Demographic Research* 29(20):521–42. doi: 10.4054/DemRes.2013.29.20.

Lehrer, Evelyn L. 2008. 'Age at Marriage and Marital Instability: Revisiting the Becker–Landes–Michael Hypothesis'. *Journal of Population Economics* 21(2):463–84. doi: 10.1007/s00148-006-0092-9.

Leopold, Thomas. 2018. 'Gender Differences in the Consequences of Divorce: A Study of Multiple Outcomes'. *Demography* 55(3):769–97. doi: 10.1007/s13524-018-0667-6.

Liebig, Stefan, Jürgen Schupp, Jan Goebel, David Richter, Carsten Schröder, Charlotte Bartels, Alexandra Fedorets, Andreas Franken, Marco Giesselmann, Markus Grabka, Jannes Jacobsen, Selin Kara, Peter Krause, Hannes Kröger, Martin Kroh, Maria Metzing, Jana Nebelin, Diana Schacht, Paul Schmelzer, Christian Schmitt, Daniel Schnitzlein, Rainer Siegers, Knut Wenzig, Stefan Zimmermann, and Deutsches Institut Für Wirtschaftsforschung (DIW Berlin). 2019. 'Socio-Economic Panel (SOEP), Data from 1984-2017 Sozio-Oekonomisches Panel (SOEP), Daten Der Jahre 1984-2017'. doi: 10.5684/SOEP.V34

Liefbroer, Aart C., and Edith Dourleijn. 2006. 'Unmarried Cohabitation and Union Stability: Testing the Role of Diffusion Using Data from 16 European Countries'. *Demography* 43(2):203–21. doi: 10.1353/dem.2006.0018

Lois, Daniel, and Nadia Lois. 2012. '"Living Apart Together"- Eine dauerhafte Alternative? Zur Bedeutung von beruflichen Lagen und Partnerschaftsbildern für das Leben in getrennten Haushalten'. *Soziale Welt* 63:117–40.

Lyngstad, Torkild, and Marika Jalovaara. 2010. 'A Review of the Antecedents of Union Dissolution'. *Demographic Research* 23(10):257–92. doi: 10.4054/DemRes.2010.23.10.

Matysiak, Anna, Marta Styrc, and Daniele Vignoli. 2014. 'The Educational Gradient in Marital Disruption: A Meta-Analysis of European Research Findings'. *Population Studies* 68(2):197–215. doi: 10.1080/00324728.2013.856459.

Mayer, Karl Ulrich. 2009. 'New Directions in Life Course Research'. *Annual Review of Sociology* 35(1):413–33. doi: 10.1146/annurev.soc.34.040507.134619.

Mayer, Karl Ulrich. 2015. 'The German Life History Study—An Introduction'. *European Sociological Review* 31(2):137–43. doi: 10.1093/esr/jcv011.

Milewski, Nadja, and Hill Kulu. 2014. 'Mixed Marriages in Germany: A High Risk of Divorce for Immigrant-Native Couples'. *European Journal of Population* 30(1):89–113. doi: 10.1007/s10680-013-9298-1.

Mitchell, Colter. 2010. 'Are Divorce Studies Trustworthy? The Effects of Survey Nonresponse and Response Errors'. *Journal of Marriage and Family* 72(4):893–905. doi: 10.1111/j.1741-3737.2010.00737.x.

Müller, Bettina, and Laura Castiglioni. 2015. 'Stable Relationships, Stable Participation? The Effects of Partnership Dissolution and Changes in Relationship Stability on Attrition in a Relationship and Family Panel'. *Survey Research Methods* 9(3):205–219. doi: 10.18148/SRM/2016.V10I1.6207.

Musick, Kelly, and Katherine Michelmore. 2015. 'Change in the Stability of Marital and Cohabiting Unions Following the Birth of a Child'. *Demography* 52(5):1463–85. doi: 10.1007/s13524-015-0425-y.

Musick, Kelly, and Katherine Michelmore. 2018. 'Cross-National Comparisons of Union Stability in Cohabiting and Married Families With Children'. *Demography* 55(4):1389–1421. doi: 10.1007/s13524-018-0683-6.

NEPS forum. 2018. 'SC6: Viele Overlaps bei Partner*innen'. Retrieved 26 April 2020 (https://forum.lifbi.de/t/sc6-viele-overlaps-bei-partner-innen/3501/3).

O'Connell, Martin. 2007. 'The Visible Hand: Editing Marital-History Data From Census Bureau Surveys'. Pp. 145–56 in *Handbook of Measurement Issues in Family Research*, edited by S. L. Hofferth and L. M. Caspar. Mahwah, N.J: Lawrence Erlbaum Associates.

OECD. 2020. 'Labor Force Statistics: LFS by Sex and Age- Indicators: Employment-Population Ratios.' Retrieved 1.11.2020 (https://stats.oecd.org/Index.aspx?QueryId=64196#).

Ono, Hiromi. 1999. 'Historical Time and U.S. Marital Dissolution'. *Social Forces* 77(3):969–97. doi: 10.2307/3005968.

Oppenheimer, Valerie Kincade. 1997. 'Women´s Employment and the Gain to Marriage: The Specialization and Trading Model'. *Annual Review of Sociology* 23:431–53. doi: 10.1146/annurev.soc.23.1.431.

Ostner, Ilona, and Jane Lewis. 1995. 'Gender and the Evolution of European Social Policies'. Pp. 159–93 in *European Social Policy. Between Fragmentation and Integration*, edited by S. Leibfried and P. Pierson. Washington D.C.: Brookings Institution.

Özcan, Berkay, and Richard Breen. 2012. 'Marital Instability and Female Labor Supply'. *Annual Review of Sociology* 38(1):463–81. doi: 10.1146/annurev-soc-071811-145457.

Perelli-Harris, Brienna. 2014. 'How Similar Are Cohabiting and Married Parents? Second Conception Risks by Union Type in the United States and Across Europe'. *European Journal of Population* 30(4):437–64. doi: 10.1007/s10680-014-9320-2.

Perelli-Harris, Brienna, Ann Berrington, Caroline Berghammer, Renske Keizer, Trude Lappegård, Monika Mynarska, Ann Evans, Olga Isupova, Andreas Klaerner, and Daniele Vignoli. 2014. 'Towards a New Understanding of Cohabitation: Insights from Focus Group Research across Europe and Australia'. *Demographic Research* 31(34):1043–78. doi: 10.4054/DemRes.2014.31.34.

Perelli-Harris, Brienna, and Nora Sánchez Gassen. 2012. 'How Similar Are Cohabitation and Marriage? Legal Approaches to Cohabitation across Western Europe'. *Population and Development Review* 38(3):435–67. doi: 10.1111/j.1728-4457.2012.00511.x.

Poortman, Anne-Rigit. 2005. 'Women's Work and Divorce: A Matter of Anticipation? A Research Note'. *European Sociological Review* 21(3):301–9. doi: 10.1093/esr/jci019.

Raley, R. Kelly, and Megan M. Sweeney. 2020. 'Divorce, Repartnering, and Stepfamilies: A Decade in Review'. *Journal of Marriage and Family* 82(1):81–99. doi: 10.1111/jomf.12651.

Rat Für Sozial- Und Wirtschaftsdaten (RatSWD). 2017. „Die sozial-, verhaltens- und wirtschaftswissenschaftliche Survey-Landschaft in Deutschland: Empfehlungen des RatSWD". RatSWD Output Series. doi: 10.17620/02671.5.

Randall, Ashley K., and Guy Bodenmann. 2009. 'The Role of Stress on Close Relationships and Marital Satisfaction'. *Clinical Psychology Review* 29(2):105–15. doi: 10.1016/j.cpr.2008.10.004.

Rogers, Stacy J. 2004. 'Dollars, Dependency, and Divorce: Four Perspectives on the Role of Wives' Income'. *Journal of Marriage and Family* 66(1):59–74. doi: 10.1111/j.1741-3737.2004.00005.x.

Rosenbaum, Heidi. 2014. 'Familienformen Im Historischen Wandel'. Pp. 19–39 in *Familie im Fokus der Wissenschaft*, edited by A. Steinbach, M. Hennig, and O. Arránz Becker. Wiesbaden: Springer VS.

Ruggles, Steven. 1997. 'The Rise of Divorce and Separation in the Unitd States, 1880-1990'. *Demography* 34(4):455. doi: 10.2307/3038300.

Sauer, Lenore, Linda Bayreuther, Andreas Ette, Detlev Lück, Robert Naderi, Ralina Panova, and Kerstin Ruckdeschel. 2012. *Generations and Gender Survey. Documentation of the Second Wave of the Main Survey in Germany*. Issue c. Wiesbaden: Bundesinstitut für Bevölkerungsforschung (BiB).

Schupp, Jürgen, Jan Goebel, Martin Kroh, Carsten Schröder, Charlotte Bartels, Klaudia Erhardt, Alexandra Fedorets, Markus Grabka, Marco Giesselmann, Peter Krause, Simon Kuehne, David Richter, Rainer Siegers, Paul Schmelzer, Christian Schmitt, Daniel Schnitzlein, Knut Wenzig, and German Institute For Economic Research. 2017. 'Socio-Economic Panel (SOEP), Data from 1984-2015'. doi: 10.5684/soep.v32.1

Smith, Ian. 2002. 'European Divorce Laws, Divorce Rates, and Their Consequences'. Pp. 212–29 in *The Law and Economics of Marriage and Divorce*, edited by A. W. Dnes and R. Rowthorn. Cambridge University Press.

South, Scott J. 2001. 'Time-Dependent Effects of Wives' Employment on Marital Dissolution'. *American Sociological Review* 66(2):226–45. doi: 10.2307/2657416.

Statistisches Bundesamt (Destatis). 2005. *Bevölkerung und Erwerbstätigkeit. Bevölkerungsfortschreibung 2000*. Fachserie 1/1/3. Wiesbaden.

Statistisches Bundesamt (Destatis). 2012. *Bevölkerung und Erwerbstätigkeit. Bevölkerungsfortschreibung 2010*. Fachserie 1/1/3. Wiesbaden.

Statistisches Bundesamt (Destatis). 2017a. *Bevölkerung und Erwerbstätigkeit. Bevölkerungsfortschreibung 2015*. Fachserie 1/1/3. Wiesbaden.

Statistisches Bundesamt (Destatis). 2017b. *Bevölkerung und Erwerbstätigkeit. Natürliche Bevölkerungsbewegung 2015*. Fachserie 1, Reihe 1.1. Wiesbaden.

Statistisches Bundesamt (Destatis). 2020a. *Number of Divorces up 0.6% in 2019. Press release No. 268 of 15 July 2020*. Wiesbaden.

Statistisches Bundesamt (Destatis). 2020b. *Bevölkerung und Erwerbstätigkeit. Bevölkerungsfortschreibung auf Grundlage des Zensus 2011. 2018*. Fachserie 1, Reihe 1.3. Wiesbaden.

Statistisches Bundesamt (Destatis). 2020c. 'Marriages, Divorces and Life Partnerships: Statistical Parameters for Divorces 2000 up to 2018'. Retrieved 15 August 2020. (https://www.destatis.de/EN/Themes/Society-Environment/Population/Marriages-Divorces-Life-Partnerships/Tables/statistical-parameters.html).

Teachman, Jay D. 2002. 'Stability across Cohorts in Divorce Risk Factors'. *Demography* 39(2):331–51. doi: 10.1353/dem.2002.0019.

Thornton, Arland, and Willard L. Rodgers. 1987. 'The Influence of Individual and Historical Time on Marital Dissolution'. *Demography* 24(1):1–22. doi: 10.2307/2061505

Trappe, H., M. Pollmann-Schult, and C. Schmitt. 2015. 'The Rise and Decline of the Male Breadwinner Model: Institutional Underpinnings and Future Expectations'. *European Sociological Review* 31(2):230–42. doi: 10.1093/esr/jcv015.

Vergauwen, Jorik, Jonas Wood, David De Wachter, and Karel Neels. 2015. 'Quality of Demographic Data in GGS Wave 1'. *Demographic Research* 32(24):723–74. doi: 10.4054/DemRes.2015.32.24.

Vignoli, Daniele, Anna Matysiak, Marta Styrc, and Valentina Tocchioni. 2018. 'The Positive Impact of Women's Employment on Divorce: Context, Selection, or Anticipation?' *Demographic Research* 38(37):1059–1110. doi: 10.4054/DemRes.2018.38.37.

Wagner, Gert G., Jan Göbel, Peter Krause, Rainer Pischner, and Ingo Sieber. 2008. 'Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)'. *AStA Wirtschafts- und Sozialstatistisches Archiv* 2(4):301–28. doi: 10.1007/s11943-008-0050-y.

Wagner, Michael. 2012. ‘Ehescheidungsrisiken im gesellschaftlichen Kontext. Neuere Befunde komparativer Studien’. Pp. 211–31 in *Die notwendige Vielfalt von Familie und Partnerschaft*. Vol. 29, edited by P. Buhr and M. Feldhaus. Würzburg: Ergon Verlag.

Wagner, Michael. 2020. ‘On Increasing Divorce Risks’. Pp. 37–61 in *Divorce in Europe*. Vol. 21, *European Studies of Population*, edited by D. Mortelmans. Cham: Springer International Publishing.

Wagner, Michael, Lisa Schmid, and Bernd Weiß. 2015. ‘Exploring Increasing Divorce Rates in West Germany: Can We Explain the Iron Law of Increasing Marriage Instability?’ *European Sociological Review* 31(2):211–29. doi: 10.1093/esr/jcv014.

Wagner, Michael, and Isabel Valdés Cifuentes. 2014. ‘Die Pluralisierung Der Lebensformen - Ein Fortlaufender Trend?’ *Comparative Population Studies - Zeitschrift für Bevölkerungswissenschaft* 39(1):73–98. doi: 10.12765/CPoS-2014-03de.

Wagner, Michael, and Bernd Weiß. 2003. ‘Bilanz der deutschen Scheidungsforschung. Versuch einer Meta-Analyse’. *Zeitschrift für Soziologie* 32(1):29–49.

Wagner, Michael, and Bernd Weiß. 2006. ‘On the Variation of Divorce Risks in Europe: Findings from a Meta-Analysis of European Longitudinal Studies’. *European Sociological Review* 22(5):483–500. doi: 10.1093/esr/jcl014.

1.9 **Appendix**

Table 1.A 1: Cumulative proportions of divorced marriages in a given marriage year (SOEP and BiB data, (cumulated in %)) and the absolute values of its deviation (percentage points) across marriage cohorts/marriage years.

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)
Marital duration	BiB 1965	SOEP 1965-74	Δ |A-B|	BiB 1975	SOEP 1975-84	Δ |D-E|	BiB 1985	SOEP 1985-94	Δ |G-H|	BiB 1995	SOEP 1995-04	Δ |J-K|	BiB 2005	SOEP 2005-14	Δ |M-N|
0	0.1	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
1	0.9	0.7	0.2	1.9	1.4	0.5	1.4	1.6	0.2	0.4	1.1	0.7	0.3	1.6	1.3
2	2.2	1.8	0.4	3.9	2.8	1.1	3.5	3.7	0.2	1.7	3.6	1.9	1.4	3.5	2.1
3	3.6	2.8	0.8	5.2	4.5	0.7	5.9	5.7	0.2	3.7	5.9	2.2	3.3	5.4	2.1
4	5.0	4.3	0.7	7.1	5.8	1.3	8.3	8.0	0.3	6.1	8.5	2.4	5.7	7.5	1.8
5	6.2	5.3	0.9	9.1	7.6	1.5	10.5	9.8	0.7	8.9	11.0	2.1	8.4	9.6	1.2
6	7.4	6.1	1.3	11.1	8.9	2.2	12.2	12.1	0.1	11.8	13.5	1.7	11.0	11.0	0.0
7	8.5	7.0	1.5	13.1	10.3	2.8	13.7	13.6	0.1	14.6	16.2	1.6			
8	9.6	8.3	1.3	14.8	11.6	3.2	15.4	15.7	0.3	17.3	18.6	1.3			
9	10.7	9.1	1.6	16.5	12.9	3.6	17.0	17.1	0.1	19.7	20.0	0.3			
10	11.7	9.9	1.8	18.1	14.0	4.1	18.6	18.7	0.1	21.8	21.9	0.1			
11	12.7	10.8	1.9	19.4	15.3	4.1	20.1	20.0	0.1	23.5	23.2	0.3			
12	13.3	11.5	1.8	20.6	16.6	4.0	21.6	21.6	0.0	25.2	24.6	0.6			
13	13.6	12.3	1.3	21.7	17.7	4.0	23.1	22.7	0.4	26.8	26.1	0.7			
14	14.2	13.0	1.2	22.7	18.6	4.1	24.4	24.0	0.4	28.2	27.1	1.1			
15	14.9	13.8	1.1	23.6	19.7	3.9	25.8	25.4	0.4	29.6	28.3	1.3			
16	15.6	14.8	0.8	24.2	20.6	3.6	27.0	26.6	0.4	30.9	29.7	1.2			
17	16.3	15.4	0.9	24.9	21.4	3.5	28.2	28.1	0.1						
18	17.0	16.1	0.9	25.6	22.4	3.2	29.4	29.5	0.1						
19	17.7	16.8	0.9	26.3	23.5	2.8	30.6	30.4	0.2						
20	18.4	17.5	0.9	27.0	24.0	3.0	31.7	31.4	0.3						
21	18.9	17.8	1.1	27.6	25.0	2.6	32.6	32.4	0.2						
22	19.5	18.2	1.3	28.2	26.2	2.0									
23	20.0	18.6	1.4	28.9	27.0	1.9									
24	20.5	19.1	1.4	29.4	27.6	1.8									
25	20.8	19.7	1.1	30.0	28.2	1.8									
Mean |Δ|			1.1			2.6			0.2			1.1			1.2

Source: SOEP v34 and BiB (2020), own calculations.

Chapter 2 Spouses' employment situations and marital separation in Germany: A dyadic perspective

Abstract:

Previous research shows that men's and women's employment situations can affect the stability of marital unions, but results differ by country-context and different measurements. This study models the effect of spouses' employment situations on the risk of divorce. It focuses on time aspects and financial aspects resulting from the employment situation of married spouses in Germany. A broad variety of employment indicators measured in a dyadic perspective lead to an array of hypotheses about marital stability. Event history models on the German Socio Economic Panel (SOEP) data show mixed evidence for spouses' permanency of the job and their relative income. Marriages of couples with higher income are more stable. In addition, the spouses' employment situation does not seem to affect marital stability. The study shows that the precarious job characteristics, that can destabilize marriages in analysis at the individual level, become blurred in analyzing dyads in a 1.5-earner society.

2.1 Introduction

As a consequence of labor market reforms in 2002-2005, fixed-term and temporal employment, as well as part-time employment is increasing in Germany (Dietz, Himsel, and Walwei 2013). Empirical studies have shown that precarious employment conditions are related to financial worries (Mau, Mewes, and Schöneck 2012) and detected an association between the employment protection legislation and well-being (Karabchuk 2016). Thus, in Germany the average job stability is high, individuals perceive their jobs to be insecure (Erlinghagen 2007). Studies have shown that this perceived job insecurity is higher amongst employees holding fixed-term contracts compared to them holding permanent contracts (Balz 2017; Erlinghagen 2007).

Germany has had a very long tradition of following the pathway of a strong male-breadwinner model (Ostner and Lewis 1995), which implies "breadwinning for men and caring/homemaking for women" (Lewis 1992:161). However, over recent decades there are increasingly more women in employment (Brenke 2015) and Germany has a high proportion of part-time employed persons, even higher than the European average (OECD 2014). Presently, Germany can be described as a "modified male breadwinner"-country that is characterized by full-time employed men and part-time employed women (Trappe, Pollmann-Schult, and Schmitt 2015). Additionally, the family landscape has become more diverse in the last decades as divorce rates across Europe have been increasing for decades and continue to rise in most countries (cf. Euro 18 countries, Eurostat 2016) but seems to level off in Germany and few other northern European countries in the 2000s (BIB 2015; Eurostat 2016). Studies have shown an increase in divorce risk resulting from women's employment (Ruggles 1997; South 2001), but as a literature review has shown findings are inconclusive. This finding is leading to the conclusion that the marital dependence hypothesis, that was applied mainly in previous research, cannot explain the association of (women's) employment and divorce risk (Özcan and Breen 2012). Further, most couples are not only affected by one spouses' employment situation and the decision to divorce is made by both spouses or at least the actions of both spouses can lead to divorce. The dual-earner situation can put a strain on couples, because they have to organize the division of domestic tasks and eventually childcare. However, the chance that at least one spouse perceive his/ her job as insecure is high in the "modified male breadwinner"- country. Therefore, it seems to be important to analyze the information on couples' joint situation on their marital stability. Until today, few studies take both spouses' labor market situations into account (Blossfeld, Drobnič, and Rohwer 2001; Cooke 2004; Cooke and Gash 2010; Poortman 2005a; South 2001). Those that do, analyze aspects of the couple's employment situation (Cooke 2004; Jalovaara

2003; Raeymaeckers et al. 2006; South 2001) focus on spouse's transitions between full-time and part-time work (Blossfeld et al. 2001) or on marriages in their first years (Poortman 2005a). To my knowledge, there is only one study on Belgian couples that models spousal dependency (Raeymaeckers et al. 2006) and one study on spouses divorced between 1991 and 1993 in the dual-earner society of Finland respecting their socio-economic position (Jalovaara 2003).

The aim of this study is to apply a dyadic perspective on couple's risk of divorce by investigating the interplay of both partner's employment situations and possible effects on the risk of divorce in Germany. I extend existing research by analyzing various dimensions of employment from combined perspectives of husbands and wives and acknowledge the dependency between spouses by testing whether specific combinations of couples' employment situation that can strain in time and financial aspects may destabilize marriages. In applying stress theories to an association that was investigated mainly in the light of spouses' economic dependence, I can add to previous discussions. Finally, I answer the question if precarious job characteristics straining spouses in terms of time and financial insecurity are associated to marital instability.

In outlining the results of previous research on this topic especially from international studies concerning the dyadic perspective and some German research focusing mainly on the wife's employment situation and divorce risk, I highlight important indicators to measure a couple's employment situation. The theoretical framework I develop encompasses stress theories. From these theories, I derive hypotheses, which refer to dimensions of work load, employment instability and income. Using data from the Socio-Economic Panel on working age married couples, I employ event history models to test the hypotheses. Finally, I discuss the findings in light of previous research and theory, the case of Germany and in general.

2.2 Background

Stress theories play an important role in explaining marital stability in arguing that marital quality is a key dimension of marital stability. *Stress theories* postulate spill-over effects from external stress into the couple which lowers marital stability (Aneshensel 1992; Randall and Bodenmann 2000). But what is stress, how does it emerge and how does it affect relationships? Stress can be defined as an internal arousal or process, it emerges from external conditions that differ from individuals. External conditions leading to stress are so-called stressors (Aneshensel, 1992; Story and Bradbury, 2004). A potential stressor is the employment situation, economic hardship or financial strain (Conger, Conger, and Martin 2010; Randall and Bodenmann 2017). However, an individuals' response to stressful events or external conditions

is distress. In other words, stress is the internal process that occurs due to stressors and leads to distress. Distress emerges in individuals that are not able to cope with the stress. That means: each individual reacts different on stressors. Distress is a subjective reaction on objective stressors. A strand of theoretical frameworks (e.g. the Vulnerability-Stress Adaption Model by Karney and Bradbury (1995), the Family-Stress-Model (Conger et al. 2010) and the Stress-Divorce Model by Bodenmann (1997, 2000)) take into account couples as a dyad that have to cope with stress. While the Stress-Divorce model distinguish stressors along the dimension of exposure to the stressor (chronic or acute), the locus of stressors (inside or outside the couple) and its intensity (major or minor) (Randall and Bodenmann 2017), the Vulnerability-Stress Adaption Model does not take into account the exposure of a couple to stress (Karney and Bradbury 1995). However, the Stress-Divorce Model postulates that especially long lasting everyday hassles are damaging relationships (e.g. external chronic minor stressors) as couples' communication or well-being worsens, or their time spent together is reduced. This lead to mutual alienation and lowers spouses marital satisfaction. If couples are not able to cope with the stress, it increases the risk of divorce according to the Stress-Divorce Model. As the employment situation is an acute and minor stressor in the understanding of this theoretical framework, spouses' employment can increase the risk of divorce.

Vulnerability and coping is also important in the Vulnerability-Stress Adaption Model. It is distinct from the Stress-Divorce Model as major stressors are the dominant source of stress. The model assume that stressful events are linked to marital interaction and coping behavior. Marital interaction and coping is part of the adaptive process in a couple and directly linked to martial quality, which is the key determinant of marital stability (Karney and Bradbury 1995). The Vulnerability-Stress Adaption Model and the Stress-Divorce Model argue both, that external stress, which can emerge due to the employment situation, spills over into a couples leading to lower marital quality.

Marital quality and stability is affected by stress in the Family-Stress-Model (Conger et al. 2010). Dissimilarly to the Vulnerability-Stress Adaption Model and the Stress-Divorce Model, according to the Family-Stress Model stress that affects indirectly marital stability and quality via a worsened marital communication and spouses' behavior emerges from financial aspects (Conger et al. 2010). In this framework, couples that are successful in coping are framed as resilient couples to stress. The resilience highly depends on resources (Conger and Conger 2002). Comparable to the models described above, the Family-Stress-Model argues that stressors producing distress in individuals affects the couple as a dyad via their behavior and

communication. In the understanding of this framework, economic hardship is an objective measure as families fail to make ends meet or are not able to pay their bills. Exposure time to stress is not directly addressed in the theoretical model. However, as low income and negative economic events are potential stressors, one can conclude, that chronic and acute stressors are important resources straining couples.

Stress from workday affects relationship behavior negatively (Buck and Neff 2012; Schulz et al. 2004) leading to marital conflicts and reducing marital quality and stability (Conger et al. 2010). In dual earner couples, work stress accumulates from both spouses as both of them are exposed to it. Additionally, the time spent together is reduced if both spouses are employed (Poortman 2005a), because the domestic tasks have to be done after work. This reduced joint leisure time can lead to mutual alienation and consequently to divorce (Randall and Bodenmann 2000). As coping plays a central role stress only leads to mutual alienation if the couple is not able to cope with this stress. But, if the couple has enough time and resources for coping, stress is not compulsorily leading to negative consequences. However, in dual earner couples, negative relationship behavior due to daily work stress should be more prone as in traditional earner couples

Coping resources are discussed to be varying across social strata. In other words, some research has shown that socially disadvantaged are more prone to suffer from stressors as their coping resources are lower compared to socially advantaged groups (Conger et al. 2010). Similarly, the Vulnerability-Stress-Adaption Model assumes individual's stable characteristics making them vulnerable to stressful events and inable to cope with these events in a relationship (Karney and Bradbury 1995). Economic hardship is identified as a chronic stressor (Aneshensel, 1992) increasing the couples' (perceived) economic pressure. The Family-Stress Model assumes that economic pressure leads to marital problems and ends in lower marital quality and stability (Conger et al. 2010). Poor working conditions are producing economic hardship through low income or through work instability (Conger et al. 2010), thus an uncertain employment situation leads to stress (Aneshensel, 1992). If both spouses are employed, a couple's potential strain from the working environment and therefore sources of stress are higher compared to traditional couples.

Comparable to Poortman (2005a), in the following, I distinguish stress produced by (1) a reduction of time spent together and an accumulation of daily hassles from work life in terms of work load (time stress) and (2) financial pressure due to insecure and low income (financial stress).

2.2.1 Work load and divorce

Women's employment situation is an indicator for reduced time a couple can spent together and can produce an accumulation of work stress in couples where both spouses are employed. In the US, there is evidence of a significant positive effect of women's employment on divorce risk (South 2001). However, women's employment only affects marriage stability negatively if spouses are unhappy in their relationship in the US (Schoen et al. 2002). From the Netherlands it is known that the higher divorce risk of full-time employed women is partly a behavior undertaken in anticipation of divorce. But even for employed women who do not expect a divorce, marital stability is lower (Poortman 2005b). Studying dyads shows a stabilizing effect on marriages when both spouses are employed (Jalovaara 2003; Raeymaeckers et al. 2006). Cooke et al. (2013) point out, that there is no significant effect of women's employment on divorce risk in Germany. Other findings show a positive effect on divorce risk for full-time employed women compared to part-time employed women in Germany (Böttcher 2006; Cooke and Gash 2010; van Damme and Kalmijn 2014). As part-time work is the most common employment situation of women with children in West Germany (Kreyenfeld and Geisler 2006), it seems to be a strategy to reconcile family and work (Cousins and Tang 2004). Therefore, it is important to consider parenthood status in analyzing the interrelation between employment situation and marital stability. Studies have shown that children stabilize marriages (Lyngstad and Jalovaara 2010; Wagner, Schmid, and Weiß 2015; Wagner and Weiß 2003), especially if the children are preschool aged (Steele et al. 2005). However, caring for children also takes time and should increase time stress.

Work load, considered as the number of working hours, seems to have negative effects on marital stability (Böhm, Diewald, and Körnert 2010; Teachman 2010). This is true for women (Poortman 2005a) and mothers (Cooke 2004), while a higher number of working hours of men reduces divorce risk (Poortman 2005a).

The evidence of a stabilizing effect of women's part-time work and mothers' with lower working hours can be interpreted in terms of time stress that is arising in couples due to labor and domestic tasks. In dual-earner couples, common leisure time is lower than in breadwinner families. More working hours, children and working overtime can increase time stress of couples. From the time stress argument, I derive two hypotheses: The higher the work load of couples the higher their divorce risk (H1). This association should be stronger in couples with children, because the level of time stress is assumed to be higher in marriages with children (H2) (see Figure 2-1).

2.2.2 Employment stability, income and divorce

As mentioned above, stress theories assume that an uncertain employment situation produces stress in couples. Temporarily employed persons are uncertain about their future income and suffer from financial worries about the time after their current working contract (Mau et al. 2012). Perceived financial stress can occur (Aneshensel 1992; Randall and Bodenmann 2009): Employees with unstable employment situations are under pressure to perform well in the job and, therefore, their work-related stress may spill over to their relationships. Also, Oppenheimer's (1997) amplified framework of the microeconomic theory argues for a financial stress mechanism that emerges due to unstable employment. An unstable employment situation can endanger a family's wealth, if the contract will not be renewed or the unstably employed spouse will not find a new job and the family loses its income. These cases reduce the gain from marriage and divorce becomes more probable due to greater post-marital alternatives and the expected gains from these alternatives (Becker, Landes, and Michael 1977). However, in collaborating partnerships, dropping out of the job of one spouse and the associated income loss seems less problematic compared to a drop out in specialized marriages that base their wealth on one jobs (Oppenheimer 1997). Congruently, recent research shows a negative effect of employment instability in terms of unemployment (Franzese and Rapp 2013) as well as feelings of job insecurity (Wagner and Weiß 2010) on marital stability. Other precarious employment characteristics like fixed-term contracts compared to permanent contracts (Böhm et al. 2010) and an unstable income over the past 12 months (Kaplan and Herbst 2015) also show negative effects on marital stability. Moreover, temporary workers report negative effects of their atypical working situations on their relationships in problem-centered interviews (Niehaus 2012).

Couples lasting their wealth on one income should suffer more from financial stress compared to couples with equal income (Oppenheimer 1997). Previous research concerning the provision of income in couples shows on the one hand that unequal income can strain couples if the wife provides more income (e.g. Cooke, 2006; Jalovaara, 2003; Kalmijn et al., 2007; Teachman, 2010) but also that higher male income stabilizes marriages (Böhm et al. 2010; Jalovaara 2003; Kaplan and Herbst 2015). On the other hand, findings on equal income provision are mixed. Whilst some studies show a negative or no effect of equal income on marital stability (Raeymaeckers et al. 2006; Schoen et al. 2002), others show a higher divorce risk for these couples (Kaplan and Herbst 2015; Rogers 2004).

However, economic hardship produces stress in couples. In couples with low household income financial stress is higher as the couple may worry to make ends meet (Conger et al. 2010).

Congruently to the assumptions of the Family-Stress Model, empirical evidence has shown a decrease in divorce risk with greater household financial resources (Kalmijn et al. 2007; Kaplan and Herbst 2015; Poortman 2005a).

In conclusion, marriages with unstable employment of at least one spouse, low household income as well as a dependence on one spouses' income can suffer from financial stress. The financial stress should strain couples and put their marriage at risk of dissolution.

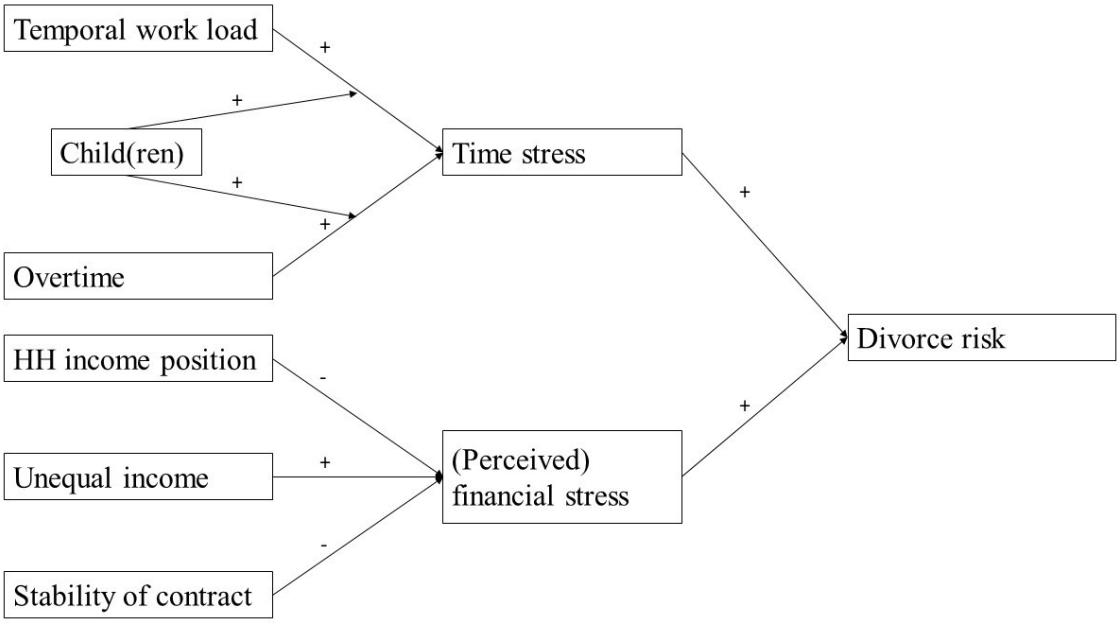

Figure 2-1: Underlying theoretical concept: How spouses' employment situation produces stress and its association to divorce.

Following the financial stress mechanism, I assume that decreasing stability in a couple's employment situation increases the risk of divorce (H3). Unstable employment situations of spouses can increase perceived financial stress, because people in fix-term contracts have only stable income for the time of the contract. The spouses need to provide savings in case of unemployment after the contract ends. The couples cannot plan with their full amount of income for future investments. Financial stress can also occur in couples with unequal income structure. I postulate a higher risk of divorce for couples with traditional income structures *or* with higher female incomes compared to those with equal income structures (H4). Further, I expect that the higher the couple's socioeconomic position, the lower the divorce risk (H5) because couples with a higher socioeconomic position should have less financial stress compared to lower marriages in lower socioeconomic positions.

To sum up, in this study, I assume that chronic external stress produced by the spouses' employment situation spills over into the couple and lowers marital stability. However, while my theoretical model is referring to stress, a subjective feeling or arousal, the indicators I employ to test the hypotheses are measuring potential stress sources objectively.

2.3 Materials and Methods

2.3.1 Data

The empirical analyses are conducted on data from the Socio-Economic Panel (SOEP hereafter) (v32); a survey conducted since 1984 in West Germany and since 1990 in East Germany (Schupp et al. 2017; Wagner et al. 2008). This panel includes employment history and biographical family background of the respondents. As a household panel, these data are available on a dyadic level as long as a couple shares one household. In this study, I consider couple dyads that are in their first marriage (both spouses) and only those couples married since 1985 or later in West Germany and 1990 or later in East Germany. Couples married in 1984 are not considered in the analysis because the information on the permanency of the working contract is conducted since 1985. Furthermore, I focus on couples where none of the spouses has retired. Therefore, the sample consists of 4,932 couples (24,739 couple-years).

2.3.2 Outcome variable

In this paper, the event "divorce" is defined as a legal divorce or a separation of married spouses. The date of divorce is defining the end of a relationship, if the separation date is not available in the data.[8] In total, 354 (6.8%) out of these 4,932 married couples end in a separation or divorce in the observation window. The mean duration of the marriages observed during the study interval is roughly 11 years ($\overline{x}$ =10.85).

2.3.3 Predictor variables

Predictor variables are operationalized for the couple as a unit (for an overview, see Table 2.A 1, Appendix). All of these predictors are time dependent. Thus, the main predictors of my analysis are five indicators which depend on the characteristics of both spouses.

To measure the dimension of *working hours*, I use the couple's *temporal work load* on the one hand. This variable is operationalized categorically and (mostly) gender sensitive as: either both spouses full-time (1), one spouse full-time and the other part-time employed (1.5 earner) (2), the male spouse full-time and the female spouse not employed (male breadwinner) (3), the male spouse not employed and the female spouse full-time employed (female breadwinner) (4) or

[8] In only 84 cases of the sample of analysis, I have a direct divorce without separation date. However, previous studies have shown that around 80% of the separated couples divorce within 2 years (Brüderl and Engelhardt 1997).

both spouses working part-time or less (5). The group of not employed includes unemployed and not employed people, as well as people in maternal leave, in vocational training or marginally or irregularly part-time employed[9]. On the other hand, I measure work load with a variable that indicates if the spouses are working *overtime.* For this analysis, working overtime is defined as working at least five hours per week more than fixed in the working contract. The self-reported information of the respondent concerning overtime work is used[10]. If at least one of the spouses works overtime in year *t,* the indicator is 1 and otherwise zero.

T*ype of contract* indicates the dimension *employment stability* with regards to holding a fixed-term, permanent or no contract. Holding no contract also includes people who are self-employed, on maternity leave or in vocational training. Combining the male and female spouses' contract types results in three categories: both holding permanent contracts (1), one spouse holding a permanent and the other no contract or a fixed-term contract (2) and couples in which both spouses do not hold a permanent contract (3). [11]

I use two indicators to measure *income*: The first is *gross income relative to spouse*. This indicator has three categories. If the husband earns more than 60 percent compared to the income of his wife, the marriage is considered traditional and categorized in the "husband more" group (1). Couples with about equal income where the husband earns 40 to 60 percent compared to his wife's gross income, the marriage is in the "about equal" income group (2). Non-traditional couples where the wife's income is more than 60 percent of her husband's gross income are placed in the "husband less" income category (3). The second income indicator is the *household's income position*. The household income position is operationalized as a categorical variable and indicates the income quartile (0-25% (1), 26-50% (2), 26-75% (3), 76-100% (4)) the marriage unit has in year *t* compared to the other marriages in year *t.* The household income position is based on the sum of income from all household members after taxes and government transfers (Grabka 2016).

Children can also affect the time stress in marriages. Especially, younger children are increasing the time stress of parents because of the higher caring obligations of younger children. Thus, I include the presence of preschool children which are children aged under 7 years. I generate a dummy variable that changes in year of childbirth from 0 to 1. I use childbirth-date data and

[9] This measure is based on SOEP Survey Question 32: "Are you currently employed? Which one of the following applies best to your status?" (TNS Infratest Sozialforschung 2015:49) with answers ranging from employed full-time to not employed.

[10] I used a SOEP-generated variable based on the Question 99: "And did you work overtime in the last month? If so, how many hours?" (TNS Infratest Sozialforschung 2015:58) with the option of reporting overtime in hours.

[11] Question 61: "Do you have a fixed-term or permanent employment contract?" (TNS Infratest Sozialforschung 2015:54) (Answers: Permanent contract, fixed-term contract, not applicable, do not have an employment contract".

only include valid cases (don't know and implausible values were deleted). This variable does not distinguish the number of children. I measure *homeownership* based on dwelling type. I use the information from the "generated household data set" (hgen) and have a dichotomous variable indicating whether the couple are joint-resident homeowners or renters including main tenant, subtenant, tenant or resident of a home or institutional living facility. In the analysis, the variable *region* indicates if the household is located in Western or Eastern Germany.

2.3.4 Method

In a first step, I describe couples' job characteristics based on the couple-year data of first marriages. In a second step, I run stepwise binomial discrete-time event history models on the couple-year data (Allison 1982, 2014; Singer and Willett 2003). These models estimate the conditional probability that a couple divorces at time *t*, given that this couple has not already divorced. Due to the sickle-distributed divorce risk of couples (Kulu, 2014), I include marriage duration and its logarithm into the multiple estimations. Altogether, five event history models are estimated. I report the Odds Ratios of the models 1 to 3 (Table 2-2) and b-coefficients of the models 4 and 5 (Table 2.A 2, Appendix) that are estimating the interaction of work load and children. I employ the discrete-time event history models on the time stress indicators (Model 1) or financial stress indicators (Model 2), including marriage duration, its logarithm and the control variables preschool children, region and homeownership. Model 3 indicates the full model including all predictors of time stress and financial stress, the marriage duration, its logarithm and controlling for presence of preschool children, homeownership and the region. Model 4 is again a reduced model estimating an interaction between the work load and the presence of children under 7 years and Model 5 is the full model including, besides all other predictors of spouses' job characteristics, the interaction term of work load and children.

2.4 Results

Table 2-1 shows that in marriages, the most common work load scheme is the traditional one where the husband works full-time and the wife is not employed (42.32%). In 18% of the couples one spouse is full-time employed and the spouse part-time employed (1.5 earner), while in 24% of marriages the spouses are dual full-time earners. Uncommon are female breadwinner marriages (3.81%), as well as marriages where both spouses are maximum part-time employed (11.64%). In around 28% of the couples, at least one partner is working overtime. The most common combination of contract types are couples where one spouse holds a permanent contract and the other has no contract or a fixed-term contract (47.18%). About 10%-points less common are couples where both spouses hold permanent contracts (37.04%). In about 16% of

marriages both spouses hold no permanent contract. The husband earns more than the wife in 67% of the couples, while 25% have earnings that are roughly equal. While 20% of the couples have at least one preschool child, every second married couple own their dwellings (51.87%).

The distribution of couples who get divorced at some point in the observational time show significant differences with those who do not get divorced on all of variables except the variable overtime. The final columns of Table 2-1 show a slightly significant difference between couples staying married and couples breaking up in the variables type of contract of the spouses ($\chi^2(2)=12.51$, $p<0.01$) and the regional context ($\chi^2(2)=11.39$, $p<0.01$). The distribution of work load of spouses differs significantly between the staying married and the becoming divorced spouses ($\chi^2(4)=60.09$, $p<0.001$). The relative income to their spouse and divorce ($\chi^2(2)=71.45$, $p<0.001$), as well as the income position of the spouses shows a significant difference between the staying married and the divorced in a difference test ($\chi^2(3)=122.50$, $p<0.001$), and between homeownership and the marital outcome groups ($\chi^2(1)=149.90$, $p<0.001$). Couples with preschool children differ significantly from those couples without preschool children in breaking up their marriage: those spouses with preschool children tend to end their marriage more often ($\chi^2(1)=20.14$, $p<0.001$).

The results of discrete-time event history models on the transition to divorce in Germany are shown in Table 2-2. Considering the year of marriage in the analysis does not change the results. Therefore, I decided to present models without this variable.

The model on time stress (see Model 1, Table 2-2) provides evidence for a significantly lower divorce risk of marriages where the husband is working full-time and the wife is not employed compared to dual full-time employed spouses. Although the odds ratios tend to the expected lower dissolution risk in couples with lower work loads, female breadwinner couples and couples both working maximum part-time tend to be less stable as dual earner couples. However, the results do not show significant changes in marital stability for couples with lower time stress. In other words, marital stability is comparable in couples where both spouses are working full-time, female breadwinner marriages, 1.5 earner marriages and underemployed spouses. Working overtime and living with preschool children is not associated with marital stability, but tendencies are as expected higher for couples working overtime and lower for couples having preschool children.

Table 2-1: Distribution of variables in the couple-year file (column percentages)

	total		not divorced		divorced		Pearson chi2	*p*	df
Variable	Percent	N(24,739)	Percent	N(22,508)	Percent	N(2,231)			
Work load of spouses									
dual earner	18.4	4552	18.06	4066	21.78	486	60.09	***	4
1.5 earner	26.35	6519	26.63	5995	23.49	524			
male breadwinner	44.56	11023	44.9	10107	41.06	916			
female breadwinner	2.82	697	2.65	596	4.53	101			
both (max.) part-time	7.87	1948	7.75	1744	9.14	204			
Overtime									
none overtime	71.44	17674	71.39	16068	71.99	1606	0.355		1
one or both overtime	28.56	7065	28.61	6440	28.01	625			
Type of contract									
both permanent	41.77	10333	41.92	9435	40.25	898	12.85	**	2
one permanent	47.74	11811	47.81	10761	47.06	1050			
none permanent	10.49	2595	10.27	2312	12.68	283			
Relative income to spouse									
husband more (>60%)	73.52	18187	74.26	16714	66.02	1473	71.45	***	2
about equal (60-40%)	20.36	5036	19.82	4462	25.73	574			
husband less(<40%)	6.13	1516	5.92	1332	8.25	184			
Household income position (quartiles)									
0-25%	28.63	7083	27.75	6246	37.52	837	122.5	***	3
26-50%	27.29	6751	27.29	6143	27.25	608			
51-75%	24	5938	24.26	5460	21.43	478			
76-100%	20.08	4967	20.7	4659	13.81	308			
Region									
West	89.7	22191	89.91	13934	87.63	1273	11.39	**	1
East	10.3	2548	10.09	8574	12.37	958			
Preschool children (under age 7)									
no	61.47	15207	61.91	13934	57.06	1273	20.14	***	1
one or more	38.53	9532	38.09	8574	42.94	958			
Homeowner									
no	45.2	11183	43.98	9900	57.51	1283	149.9	***	1
yes	54.8	13556	56.02	12608	42.49	948			

Legend: * $p<0.05$, ** $p<0.01$, *** $p<0.001$; Source: SOEP, own calculations

Table 2-2: Odds ratios for the transition to divorce in Germany.

	Model 1		Model 2		Model 3	
Variable	OR	SE	OR	SE	OR	SE
marriage duration (years)	0.88***	0.02	0.88***	0.02	0.89***	0.02
log(marriage duration)	2.30***	0.42	2.29***	0.42	2.30***	0.42
Work load of spouses						
dual earner	Ref.				Ref.	
1.5 earner	0.87	0.15			0.88	0.17
male breadwinner	0.69*	0.11			0.72	0.17
female breadwinner	1.06	0.35			0.85	0.37
both (max.) part-time	1.19	0.25			0.91	0.25
Overtime						
none overtime	Ref.				Ref.	
one or both overtime	1.12	0.14			1.19	0.15
Type of contract						
both permanent			Ref.		Ref.	
one permanent			0.79	0.11	0.90	0.15
none permanent			1.02	0.19	1.13	0.27
Relative income to spouse						
husband more (>60%)			0.81	0.12	0.92	0.18
about equal (60-40%)			Ref.		Ref.	
husband less(<40%)			1.16	0.27	1.17	0.35
Household income position (quartiles)						
0-25%			Ref.		Ref.	
26-50%			0.79	0.12	0.77	0.12
51-75%			0.86	0.14	0.82	0.14
76-100%			0.65*	0.12	0.60**	0.12
Region						
West	Ref.		Ref.		Ref.	
East	1.17	0.20	1.13	0.20	1.10	0.19
Preschool children (under age 7)						
no						
one or more	0.85	0.11	0.82	0.11	0.86	0.11
Homeowner						
no	Ref.		Ref.		Ref.	
yes	0.63***	0.07	0.68**	0.08	0.68**	0.08
N	24,739		24,739		24,739	
BIC	3445.90		3460.98		3507.69	

Legend: * $p<0.05$, ** $p<0.01$, *** $p<0.001$; Source: SOEP, own calculations

Figure 2-2 shows the average marginal effects of the interaction of temporal work load of the spouses and preschool children (for b-coefficients see Model 4, Table 2.A 2). In other words, it shows the probability to divorce for married couples with preschool children in a given work load group compared to the couples without preschool children with the same work load (x=0

in Figure 2-2). An average marginal effect larger than zero indicates a higher probability to divorce while an average marginal effect smaller than zero indicates a lower risk of dissolution. Further, Figure 2-2 presents the 95% confidence intervals of the average marginal effect. If the confidence interval does not include 0 (reference group), parents of preschool children and marriages without preschool children will differ significantly. The results indicate that the association of work load of spouses and divorce risk does not vary significantly for spouses with and without preschool children. However, dual-earner marriages with preschool children tend to a lower probability to divorce compared to dual-earner marriages without a preschool child. Figure 2-2 also presents a tendency for a lower probability to divorce of preschool child-parents in male breadwinner and female breadwinner families (not significantly different). These findings for spouses with and without preschool children remain stable estimating indicators of time stress and financial stress in a joint model (see Model 5, Table 2.A 2 or Figure 2.A 1).

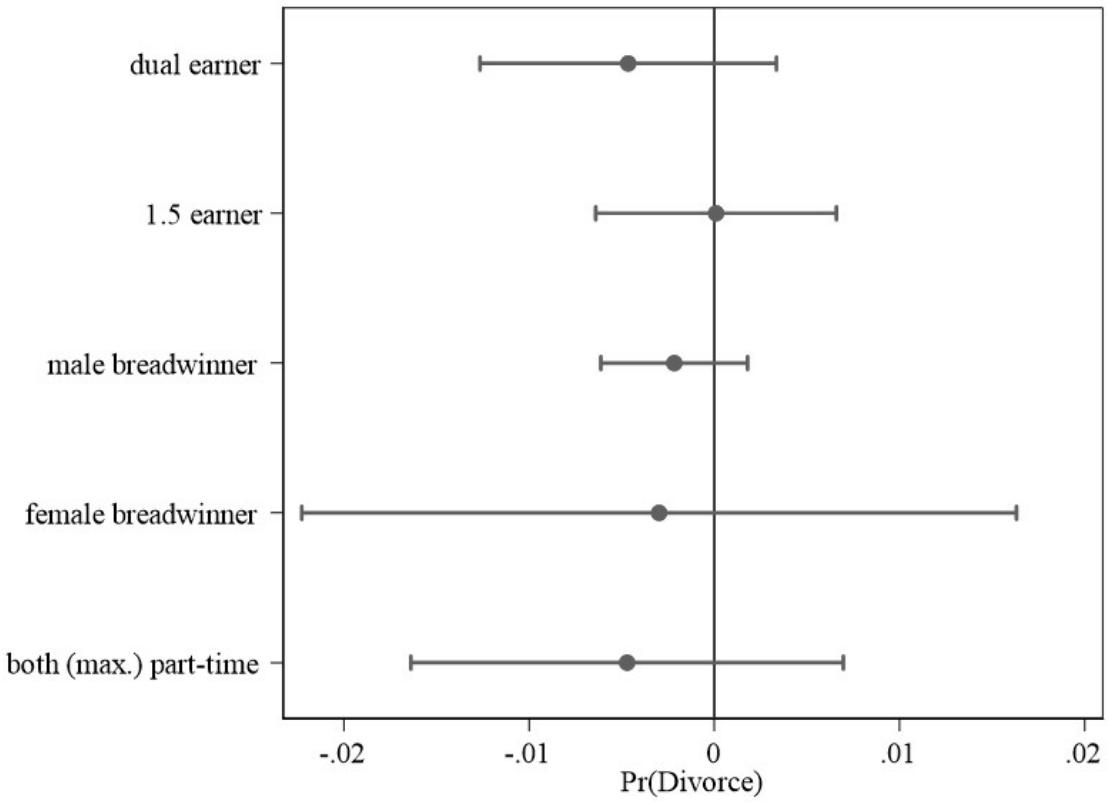

Figure 2-2: Average marginal effects of divorce and 95% confidence intervals by interaction of temporal work load of the spouses and preschool children (see Model 4, Table A2), Reference: no preschool child in the given work load group. Source: SOEP, own calculations.

The model testing the financial stress mechanism (see Model 2, Table 2-2) shows a lower risk of divorce for couples with only one spouse holding a permanent contract compared to those marriages both spouses holding permanent contracts (OR=0.79, $p>0.05$). Couples where none of the spouses hold a permanent contract do not differ from couples both holding a permanent contract. Traditional income structure marriages, indicated by a higher income of the husband compared to his wife, have a lower risk of divorce compared to marriages with equal income. Marriages where the female spouse earns more than the male spouse tend to have a lower marital stability compared to equal income couples. The results for type of contract and relative income to spouse in Model 2 do not significantly differ from zero.

However, the income position of the spouses compared to other married couples is associated with marital stability as expected. The divorce risk differ across social strata based on incomes. Despite the non-significant odds ratios, it is noteworthy that the second and third income quartiles show a slightly lower risk of divorce compared to the first quartile. Couples in the fourth income quartile show significantly lower divorce risk compared to the lowest income quartile marriages. Living in East or West Germany shows no significantly different odds ratios for marital dissolution, but tends to be positively associated for spouses living in East Germany (OR=1.13, $p>0.05$). Spouses owning a dwelling have significantly lower risk of divorce compared to non-homeowner couples (OR=0.68, $p<0.01$). This finding is in line with previous studies (Lersch and Vidal 2014; Wagner and Weiß 2006).

Estimating financial stress and time stress in a joint model, the association of work load on marital stability vanishes while it remains stabilizing for spouses belonging to the highest income quartile and owning a dwelling. The explanatory power of the full model is worse than that of Models 1 and 2 (BIC is highest in the full model, see Table 2-2). But why do the time stress associations disappear in the full model? Time stress and financial stress seem to be mutually dependent. Thus, the results ask for further information if marriages without financial stress are able to cope with time stress as they may perceive the time stress worthy their financial gains. A model interacting work load and income position[12] shows no significantly differences between high and low income marriages and the divorce risk in the different work load groups (see Figure 2.A 2). In other words, time stress is not only straining couples that have low financial resources. Estimating M3 without controlling for homeownership, results show that this variable vanishes the lower risk of divorce of married couples in each of the income

[12] Operationalization for the income position variable differs, as no divorces occur in the group highest income quartile x both spouses (max.) part-time. The variable distinguishes between marriages having less than 50% income compared to the income of all other marriages in year t.

quartiles compared to married couples in the lowest income quartile while all other results do not change (results not shown).

2.5 Discussion and Conclusion

In this study I set out to investigate whether spouses' precarious job characteristics have an impact on the stability of their marriage. To answer this question, I outlined the previous research on three dimensions of job characteristics: work load, employment stability and income. Based on stress theories, I highlight two underlying mechanisms for the association between employment situation and marital stability. Time stress induced by the couples' work load and financial stress emerged by precarious employment or low income can strain couples and I set out to derive five hypotheses. Using a discrete-time event history analysis on marriages not older than 1985 from the SOEP data, I shed light on the effects of working hours, working overtime, employment stability, couples' relative income to their spouse and their relative income position to other married couples on divorce risk. In modelling dependence on a spouse's employment situation, I expand previous research that mostly failed to use conjoint information on the employment situations of married couples. Neither in line with previous research detecting a higher marital stability for women working part-time in Germany (e.g., Cooke 2006) nor with my assumption (H1), I find a lower divorce risk for couples that do perform the male breadwinner model with a husband working full-time and a not employed wife. There is no negative association of working overtime on marital stability contrasting my assumption that working overtime reduces couples' leisure times (H1 not accepted). Additionally, I cannot detect a difference of time stress and divorce between parents of preschool children and spouses without preschool children who are assumed to suffer from a higher time stress due to caring obligations (H2 not accepted). Following these results with a dyadic perspective, spouses' employment situation is not inducing as much time stress as spouses' break up marriages.

Contradicting to my assumption, I cannot detect a significant association of the type of contract on divorce risk for couples with non-permanent contracts compared to couples both spouses' holding permanent contracts (H3). This is not in line with previous research that clearly detects a higher divorce risk for persons in instable employment situations (Böhm et al. 2010; Kaplan and Herbst 2015). Couples instead may attenuate for the precarious employment situation of a spouse. This contradicts the theoretical path of uncertain employment situation producing financial stress despite the evidence of a higher perceived job insecurity among fixed-term employed compared to employees holding a permanent contract (Balz 2017; Erlinghagen

2007). Oppenheimer's argument, that couples with equal income have a lower divorce risk than traditional income couples is not supported (H4 not accepted). This finding is not in line with previous research that detects a positive association of female income and divorce (Cooke 2006; Kalmijn et al. 2007; Kaplan and Herbst 2015). The couples' social position in the income hierarchy is a predictor for divorce risk as marriages from the highest income quartile have shown higher marital stability. This is in line with previous research and my derived assumptions (H5 not rejected).

Taking a dyadic perspective into account, the financial stress caused by precarious contracts and its spill over mechanism does not fit well in explaining the interplay of employment situation and marital instability. However, my results provide some evidence for the financial stress mechanism in marriages as high strata couples have lower divorce risk. In this case, selection could play a role, as homeownership also shows a significant reduction in divorce risk. In other words, couples that can afford investments or have high income are less prone of divorce. Or vice versa, married couples that are more stable make joint investments.

All in all, it seems to be important to take the dyadic perspective in divorce research into account. There are likely many causal pathways running through spouses' employment situation that cannot be captured in this paper and will require future research to probe. The test of stress mechanisms can be improved in future research in using information on perceived time stress of spouses. With the objective measurement of time stress, there is no explanatory power of couples' conjoint job characteristics in terms of work load on divorce risk, surprisingly. However, it seems to be beneficial to follow a traditional division of labor and to invest in the marriage by foregoing a full-time career of the female spouse by reducing labor participation to ensure a stable marriage. Otherwise it could be reverse causation, as couples decide for work load models to avoid, e.g. with preschool children, time stress. These couples do not suffer from their work load and perform given gender norms which are leading to stable marriages. Thus, financial stress is partly explaining marital instability. This is in line with the Family Stress Model and shows the vulnerability of low-income couples that seem to have lower coping resources. Nevertheless, low income does not moderate the association between work load and marital stability.

As long as the SOEP contains information on both partners being directly interviewed, it is possible to employ the analysis on data of good quality. My results do not suffer from recall bias in remembering employment characteristics of position held long ago, as I only use prospective information for the operationalization of the main predictors and no retrospective data. Also length bias, that emerges due to left truncated data is not affecting my results as I

only analyze couples married 1985 or later. However, the study has two limitations: (1) The estimations outlined above are a rather conservative test of the assumptions outlined above as I have applied listwise deletion in data processing. Thus, a problem with the data could be that I can only analyze episodes of couples in which both of the spouses responded, leaving a fair amount of missing data points. Missingness is emerging already if at least one spouse of a couple does not provide information on one of the predictor variables. Further, knowledge of previous research has shown that dissolution is related to panel attrition (Mitchell 2010; Müller and Castiglioni 2015) and that survey data tend to underestimate the transition to divorce (Boertien 2020). Therefore, I assume that the estimations are conservative.

(2) This study takes into account married couples and disrespects cohabiting couples. However, cohabiting couples are a heterogeneous family type (Hiekel, Liefbroer, and Poortman 2015) with a lower level of institutionalization than married couples. Studies provide evidence that cohabiting and married couples vary in transitions of the family life course (e.g. Perelli-Harris (2014) for the transition to second birth). From Finland we know, that the role of socio-economic resources in relationship stability varies between cohabiting and married unions (Jalovaara 2013). As cohabiting couples can differ in respect to union stability (Kiernan 2001), it is out of the scope of this paper. However, future research should investigate whether job characteristics are related to transitions (dissolution or marriage) in cohabiting couples. As couples who marry despite financial or time stress seem to be special in their stability, it seems to be likely to find evidence for these mechanisms in cohabiting unions.

The common critique on divorce research is that it lacks on couples' situations as a unit. But, concerning employment situation the couples' factors seems not to underline previous research on the risk of divorce. However, the dyadic perspective could be a beneficial approach for other fields of life that may affect marital stability, like norms and attitudes of marital partners. In Germany, stable marriages follow a main earner model and homeownership. Although the German social politics have a long tradition in providing 1.5 earner families, the traditional work load does not stabilize marriages neither with nor without children. This underlines the importance of changing family benefits and the youngest reforms should be only the first step in a more flexible system that supports families in their individual requirements.

2.6 References

Allison, Paul D. 1982. 'Discrete-Time Methods for the Analysis of Event Histories'. *Sociological Methodology,*13: 61–98.

Allison, Paul D. 2014. *Event History and Survival Analysis*. Second edition. Los Angeles: SAGE.

Aneshensel, Carol S. 1992. 'Social Stress: Theory and Research'. *Annual Review of Sociology* 18:15–38. doi: 10.1146/annurev.so.18.080192.000311

Balz, Anne. 2017. 'Cross-National Variations in the Security Gap: Perceived Job Insecurity among Temporary and Permanent Employees and Employment Protection Legislation'. *European Sociological Review* 33(5):675–92. doi: 10.1093/esr/jcx067.

Becker, Gary S., Elisabeth M. Landes, and Robert T. Michael. 1977. 'An Economic Analysis of Marital Instability'. *Journal of Political Economy* 85(6):1141–87.

BIB, Bundesinstitut für Bevölkerungsforschung. 2015. 'Shares of Marriages Dissolved of the Marriage Years 1965, 1975, 1985, 1995 and 2005 by Duration of Marriage in Germany (as per: 2013)'. (http://www.bib-demografie.de/EN/Facts_Figures/Divorces/Figures/a_05_10_anteil_gesch_ehen_ehesch hl_jahrgaenge_ehedauer_d_1965_1975_1985_1995_2005.html?nn=3214408.)

Blossfeld, Hans-Peter, Sonja Drobnič, and Götz Rohwer. 2001. 'Spouse' Employment Career in (West) Germany'. Pp. 53–76 in *Careers of Couples in Contemporary Societies. From Male Breadwinner to Dual Earner Families*, edited by H.-P. Blossfeld and S. Drobnič. Oxford: University Press.

Bodenmann, Guy. 1997. 'Dyadisches Coping: Theoretischer Und Empirischer Stand'. *Zeitschrift für Familienforschung* 9(2):7–25.

Bodenmann, Guy. 2000. *Stress und Coping Bei Paaren*. Göttingen: Hofgrefe-Verlag.

Boertien, Diederik. 2020. 'The Conceptual and Empirical Challenges of Estimating Trends in Union Stability: Have Unions Become More Stable in Britain?' Pp. 17–36 in *Divorce in Europe*. Vol. 21, *European Studies of Population*, edited by D. Mortelmans. Cham: Springer International Publishing.

Böhm, Sebastian, Martin Diewald, and Juliana Körnert. 2010. 'Instabile Partnerschaften Durch Neue Beschäftigungsformen? Risiken von Männern Und Frauen'. Pp. 211–24 in *Individualisierungen. Ein Vierteljahrhundert 'jenseits von Stand und Klasse'?*, edited by P. A. Berger and R. Hitzler. Wiesbaden: VS Verlag für Sozialwissenschaften.

Böttcher, Karin. 2006. 'Scheidung in Ost- und Westdeutschland: Der Einfluss der Frauenerwerbstätigkeit auf die Ehestabilität'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 58(4):592–616. doi: 10.1007/s11577-006-0258-1.

Brenke, Karl. 2015. 'Growing Importance of Women in the German Labor Market'. *DIW Economic Bulletin* 5(5):51–61.

Brüderl, Josef, and Henriette Engelhardt. 1997. 'Trennung oder Scheidung? Einige methodologische Überlegungen zur Definition von Eheauflösungen'. *Soziale Welt* 48(3):277–89.

Buck, April A., and Lisa A. Neff. 2012. 'Stress Spillover in Early Marriage: The Role of Self-Regulatory Depletion.' *Journal of Family Psychology* 26(5):698–708. doi: 10.1037/a0029260.

Conger, Rand D., and Katherine J. Conger. 2002. 'Resilience in Midwestern Families: Selected Findings from the First Decade of a Prospective, Longitudinal Study'. *Journal of Marriage and Family* 64(2):361–73. doi: 10.1111/j.1741-3737.2002.00361.x.

Conger, Rand D., Katherine J. Conger, and Monica J. Martin. 2010. 'Socioeconomic Status, Family Processes,and Individual Development'. *Journal of Marriage and Family* 72(3):685–704. doi: 10.1111/j.1741-3737.2010.00725.x.

Cooke, Lynn Prince. 2004. 'The Gendered Division of Labor and Family Outcomes in Germany'. *Journal of Marriage and Family* 66(5):1246–56.

Cooke, Lynn Prince. 2006. '"Doing" Gender in Context: Household Bargaining and the Risk of Divorce in Germany and the United States'. *American Journal of Sociology* 112(2):442–72. doi: 10.1086/506417.

Cooke, Lynn Prince, and V. Gash. 2010. 'Wives' Part-Time Employment and Marital Stability in Great Britain, West Germany and the United States'. *Sociology* 44(6):1091–1108. doi: 10.1177/0038038510381605.

Cousins, Christine R., and Ning Tang. 2004. 'Working Time and Work and Family Conflict in the Netherlands, Sweden and the Uk'. *Work, Employment and Society* 18(3):531–49. doi: 10.1177/0950017004045549.

van Damme, Maike, and Matthijs Kalmijn. 2014. 'The Dynamic Relationships between Union Dissolution and Women's Employment: A Life-History Analysis of 16 Countries'. *Social Science Research* 48:261–78. doi: 10.1016/j.ssresearch.2014.06.009.

Dietz, Martin, Carina Himsel, and Ulrich Walwei. 2013. 'Wandel der Erwerbsformen: Welche Rolle spielen strukturelle Änderungen am Arbeitsmarkt?' *Arbeit* 22(2):85–104.

Erlinghagen, M. 2007. 'Self-Perceived Job Insecurity and Social Context: A Multi-Level Analysis of 17 European Countries'. *European Sociological Review* 24(2):183–97. doi: 10.1093/esr/jcm042.

Eurostat. 2016. 'Divorces in 100 Marriages, in: Divorce Indicators'. Retrieved 24 July 2016 (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_ndivind&lang=en).

Franzese, Fabio, and Ingmar Rapp. 2013. 'Der Einfluss von Arbeitslosigkeit Auf Das Trennungsrisiko von Ehen'. *Zeitschrift für Familienforschung* 25(3):331–45.

Grabka, Markus M. 2016. *SOEP 2015 - Codebook for the $PEQUIV File 1984-2015: CNEF Variables with Extended Income Information for the SOEP. Series D - Variable Description and Coding*. 343. Berlin: DIW/SOEP.

Hiekel, Nicole, Aart C. Liefbroer, and Anne-Rigt Poortman. 2015. 'Marriage and Separation Risks among German Cohabiters: Differences between Types of Cohabiter'. *Population Studies* 69(2):237–51. doi: 10.1080/00324728.2015.1037334.

Jalovaara, Marika. 2003. 'The Joint Effects of Marriage Partners' Socioeconomic Positions on the Risk of Divorce'. *Demography* 40(1):67–81. doi*:* 10.1353/dem.2003.0004.

Jalovaara, Marika. 2013. 'Socioeconomic Resources and the Dissolution of Cohabitations and Marriages'. *European Journal of Population / Revue Européenne de Démographie* 29(2):167–93. doi: 10.1007/s10680-012-9280-3.

Kalmijn, Matthijs, Anneke Loeve, and Dorien Manting. 2007. 'Income Dynamics in Couples and the Dissolution of Marriage and Cohabitation'. *Demography* 44(1):159–79. doi: 10.1353/dem.2007.0005.

Kaplan, Amit, and Anat Herbst. 2015. 'Stratified Patterns of Divorce: Earnings, Education, and Gender'. *Demographic Research* 32:949–82. doi: 10.4054/DemRes.2015.32.34.

Karabchuk, Tatiana. 2016. 'The Subjective Well-Being of Women in Europe: Children, Work and Employment Protection Legislation'. *Mind & Society* 15(2):219–45. doi: 10.1007/s11299-016-0194-3.

Karney, Benjamin R., and Thomas N. Bradbury. 1995. 'The Longitudinal Course of Marital Quality and Stability: A Review of Theory, Method, and Research'. *Psychological Bulletin* 118(1):3–34. doi: https://doi.org/10.1037/0033-2909.118.1.3.

Kiernan, K. 2001. 'The Rise of Cohabitation and Childbearing Outside Marriage in Western Europe'. *International Journal of Law, Policy and the Family* 15(1):1–21. doi: 10.1093/lawfam/15.1.1.

Kreyenfeld, Michaela, and Esther Geisler. 2006. 'Müttererwerbstätigkeit in Ost- Und Westdeutschland'. *Zeitschrift für Familienforschung* 18(3):333–60.

Lersch, P. M., and S. Vidal. 2014. 'Falling Out of Love and Down the Housing Ladder: A Longitudinal Analysis of Marital Separation and Home Ownership'. *European Sociological Review* 30(4):512–24. doi: 10.1093/esr/jcu055.

Lewis, Jane. 1992. 'Gender and the Development of Welfare Regimes'. *Journal of European Social Policy* 2(3):159–73. doi: 10.1177/095892879200200301.

Lyngstad, Torkild, and Marika Jalovaara. 2010. 'A Review of the Antecedents of Union Dissolution'. *Demographic Research* 23(10):257–92. doi: 10.4054/DemRes.2010.23.10.

Mau, Steffen, Jan Mewes, and Nadine M. Schöneck. 2012. 'What Determines Subjective Socio-Economic Insecurity? Context and Class in Comparative Perspective'. *Socio-Economic Review* 10(4):655–82. doi: 10.1093/ser/mws001.

Mitchell, Colter. 2010. 'Are Divorce Studies Trustworthy? The Effects of Survey Nonresponse and Response Errors'. *Journal of Marriage and Family* 72(4):893–905. doi: 10.1111/j.1741-3737.2010.00737.x.

Müller, Bettina, and Laura Castiglioni. 2015. 'Attrition im Beziehungs- und Familienpanel pairfam'. Pp. 383–408 in *Nonresponse Bias*, edited by J. Schupp and C. Wolf. Wiesbaden: Springer Fachmedien Wiesbaden.

Niehaus, Moritz. 2012. 'Leiharbeit und Privatleben: Auswirkungen einer flexiblen Beschäftigungsform auf Partnerschaft und Familie'. *Berliner Journal für Soziologie* 22(4):569–94. doi: 10.1007/s11609-012-0199-7.

OECD. 2014. 'Part-Time Employment Rate'. Retrieved 28.6.2017. (http://www.oecd-ilibrary.org/employment/part-time-employment-rate/indicator/english_f2ad596c-en)

Oppenheimer, Valerie K. 1997. 'Women's Employment and the Gain to Marriage: The Specialization and Trading Model'. *Annual Review of Sociology* 23:431–53.

Ostner, Ilona, and Jane Lewis. 1995. 'Gender and the Evolution of European Social Policies'. Pp. 159–93 in *European Social Policy. Between Fragmentation and Integration*, edited by S. Leibfried and P. Pierson. Washington D.C.: Brookings Institution.

Özcan, Berkay, and Richard Breen. 2012. 'Marital Instability and Female Labor Supply'. *Annual Review of Sociology* 38(1):463–81. doi: 10.1146/annurev-soc-071811-145457.

Perelli-Harris, Brienna. 2014. 'How Similar Are Cohabiting and Married Parents? Second Conception Risks by Union Type in the United States and Across Europe'. *European Journal of Population* 30(4):437–64. doi: 10.1007/s10680-014-9320-2.

Poortman, Anne-Rigit. 2005a. 'How Work Affects Divorce: The Mediating Role of Financial and Time Pressures'. *Journal of Family Issues* 26(2):168–95. doi: 10.1177/0192513X04270228.

Poortman, Anne-Rigit. 2005b. 'Women's Work and Divorce: A Matter of Anticipation? A Research Note'. *European Sociological Review* 21(3):301–9. doi: 10.1093/esr/jci019.

Raeymaeckers, Peter, Laurent Snoeckx, Dimitri Mortelmans, and Sarah Van Ourti. 2006. 'Marriage and Divorce in Belgium: The Influence of Professional, Financial and Educational Resources on the Risk for Marriage Dissolution'. *Journal of Divorce & Remarriage* 46(1–2):151–74. doi: 10.1300/J087v46n01_09.

Randall, Ashley K., and Guy Bodenmann. 2009. 'The Role of Stress on Close Relationships and Marital Satisfaction'. *Clinical Psychology Review* 29(2):105–15. doi: 10.1016/j.cpr.2008.10.004.

Randall, Ashley K., and Guy Bodenmann. 2017. 'Stress and Its Associations with Relationship Satisfaction'. *Current Opinion in Psychology* 13:96–106. doi: 10.1016/j.copsyc.2016.05.010.

Rogers, Stacy J. 2004. 'Dollars, Dependency, and Divorce: Four Perspectives on the Role of Wives' Income'. *Journal of Marriage and Family* 66(1):59–74. doi: 10.1111/j.1741-3737.2004.00005.x.

Ruggles, Steven. 1997. 'The Rise of Divorce and Separation in the Unitd States, 1880-1990'. *Demography* 34(4):455. doi: 10.2307/3038300.

Schoen, Robert, Nan Marie Astone, Kendra Rothert, Nicola Standish, and Young J. Kim. 2002. 'Women's Employment, Marital Happiness, and Divorce'. *Social Forces* 2(81):643–62.

Schulz, Marc S., Philip A. Cowan, Carolyn Pape Cowan, and Richard T. Brennan. 2004. 'Coming Home Upset: Gender, Marital Satisfaction, and the Daily Spillover of Workday Experience Into Couple Interactions.' *Journal of Family Psychology* 18(1):250–63. doi: 10.1037/0893-3200.18.1.250.

Schupp, Jürgen, Jan Goebel, Martin Kroh, Carsten Schröder, Charlotte Bartels, Klaudia Erhardt, Alexandra Fedorets, Markus Grabka, Marco Giesselmann, Peter Krause, Simon Kuehne, David Richter, Rainer Siegers, Paul Schmelzer, Christian Schmitt, Daniel Schnitzlein, Knut Wenzig, and German Institute For Economic Research. 2017. 'Socio-Economic Panel (SOEP), Data from 1984-2015'.

Singer, Judith D., and John B. Willett. 2003. *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford ; New York: Oxford University Press.

South, Scott J. 2001. 'Time-Dependent Effects of Wives' Employment on Marital Dissolution'. *American Sociological Review* 66(2):226–45. doi: 10.2307/2657416.

Steele, Fiona, Constantinos Kallis, Harvey Goldstein, and Heather Joshi. 2005. 'The Relationship Between Childbearing and Transitions From Marriage and Cohabitation in Britain'. *Demography* 42(4):647–73. doi: 10.1353/dem.2005.0038.

Story, Lisa B., and Thomas N. Bradbury. 2004. 'Understanding Marriage and Stress: Essential Questions and Challenges'. *Clinical Psychology Review* 23(8):1139–62. doi: 10.1016/j.cpr.2003.10.002.

Teachman, Jay. 2010. 'Wives' Economic Resources and Risk of Divorce'. *Journal of Family Issues* 31(10):1305–23. doi: 10.1177/0192513X10370108.

TNS Infratest Sozialforschung. 2015. *SOEP 2015- Erhebungsinstrumente 2015 (Welle 32) des Sozio-Ökonomischen Panels: Haushaltsfragebogen Altstichproben*. 274-Series A. Berlin: DIW/SOEP.

Trappe, H., M. Pollmann-Schult, and C. Schmitt. 2015. 'The Rise and Decline of the Male Breadwinner Model: Institutional Underpinnings and Future Expectations'. *European Sociological Review* 31(2):230–42. doi: 10.1093/esr/jcv015.

Wagner, Gert G., Jan Göbel, Peter Krause, Rainer Pischner, and Ingo Sieber. 2008. 'Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)'. *AStA Wirtschafts- und Sozialstatistisches Archiv* 2(4):301–28. doi: 10.1007/s11943-008-0050-y.

Wagner, Michael, Lisa Schmid, and Bernd Weiß. 2015. 'Exploring Increasing Divorce Rates in West Germany: Can We Explain the Iron Law of Increasing Marriage Instability?' *European Sociological Review* 31(2):211–29. doi: 10.1093/esr/jcv014.

Wagner, Michael, and Bernd Weiß. 2003. 'Bilanz der deutschen Scheidungsforschung. Versuch einer Meta-Analyse'. *Zeitschrift für Soziologie* 32(1):29–49.

Wagner, Michael, and Bernd Weiß. 2006. 'On the Variation of Divorce Risks in Europe: Findings from a Meta-Analysis of European Longitudinal Studies'. *European Sociological Review* 22(5):483–500. doi: 10.1093/esr/jcl014.

Wagner, Michael, and Bernd Weiß. 2010. 'Erwerbssituation und Partnerschaft: deutsche und türkische Paare im Vergleich'. Pp. 169–98 in *Komparative empirische Sozialforschung*, edited by T. Beckers, K. Birkelbach, J. Hagenah, and U. Rosar. Wiesbaden: VS Verlag für Sozialwissenschaften.

2.7 Appendix

Table 2.A 1: Operationalization of predictor variables

mechanism	dimension	indicator	typology
(perceived) financial stress	employment stability	type of contract	(1) both permanent (2) one Permanent (3) none permanent
	income	relative income to spouse	(1) husband more (more than 60 %) (2) about equal (husband 40-60 %) (3) husband less (husband less than 40%)
		household income position (quartiles)	(1) 0-25% (2) 26-50% (3) 51-75% (4) 76-100%
time stress	working hours	work load of spouses	(1) both full time (2) 1.5 earner (3) male breadwinner (4) female breadwinner (5) both maximum part-time
		overtime	(1) none overtime (2) one or both overtime

Table 2.A 2: Transition to divorce in Germany, interaction of temporal work load and children

		Model 4		Model 5	
Variable		b	SE	b	SE
	marriage duration (years)	-0.12***	0.03	-0.12***	0.03
	log(marriage duration)	0.83***	0.18	0.83***	0.18
Work load of spouses					
	dual earner	Ref.		Ref.	
	1.5 earner, male	-0.23	0.20	-0.22	0.22
	male breadwinner	-0.39*	0.20	-0.37	0.27
	female breadwinner	0.04	0.37	-0.18	0.48
	both (max.) part-time	0.18	0.26	-0.09	0.31
Interaction Work load of spouses* Preschool children					
	dual earner*children(1)	Ref.		Ref.	
	1.5 earner, male*children(1)	0.34	0.40	0.34	0.40
	male breadwinner*children(1)	0.14	0.37	0.17	0.37
	female breadwinner*children(1)	0.13	0.75	0.18	0.75
	both (max.) part-time*children(1)	0.06	0.46	0.07	0.46
Overtime					
	none overtime	Ref.		Ref.	
	one or both overtime	0.12	0.13	0.17	0.13
Type of contract					
	both permanent			Ref.	
	one permanent			-0.10	0.17
	none permanent			0.13	0.24
Relative income to spouse					
	husband more (>60%)			-0.08	0.19
	about equal (60-40%)			Ref.	
	husband less(<40%)			0.14	0.29
Household income position (quartiles)					
	0-25%			Ref.	
	26-50%			-0.26	0.15
	51-75%			-0.20	0.16
	76-100%			-0.50*	0.19
Region					
	West	Ref.		Ref.	
	East	0.16	0.17	0.09	0.18
Preschool children (under age 7)					
	no	Ref.		Ref.	
	one or more	-0.32	0.32	-0.33	0.32
Homeowner					
	no	Ref.		Ref.	
	yes	-0.46***	0.12	-0.38**	0.12
Constant		-4.38***	0.20	-4.16***	0.23
N		24,739		24,739	
BIC		3485.47		3547.28	

legend: * p<0.05, ** p<0.01, *** p<0.001; Source: SOEP, own calculations

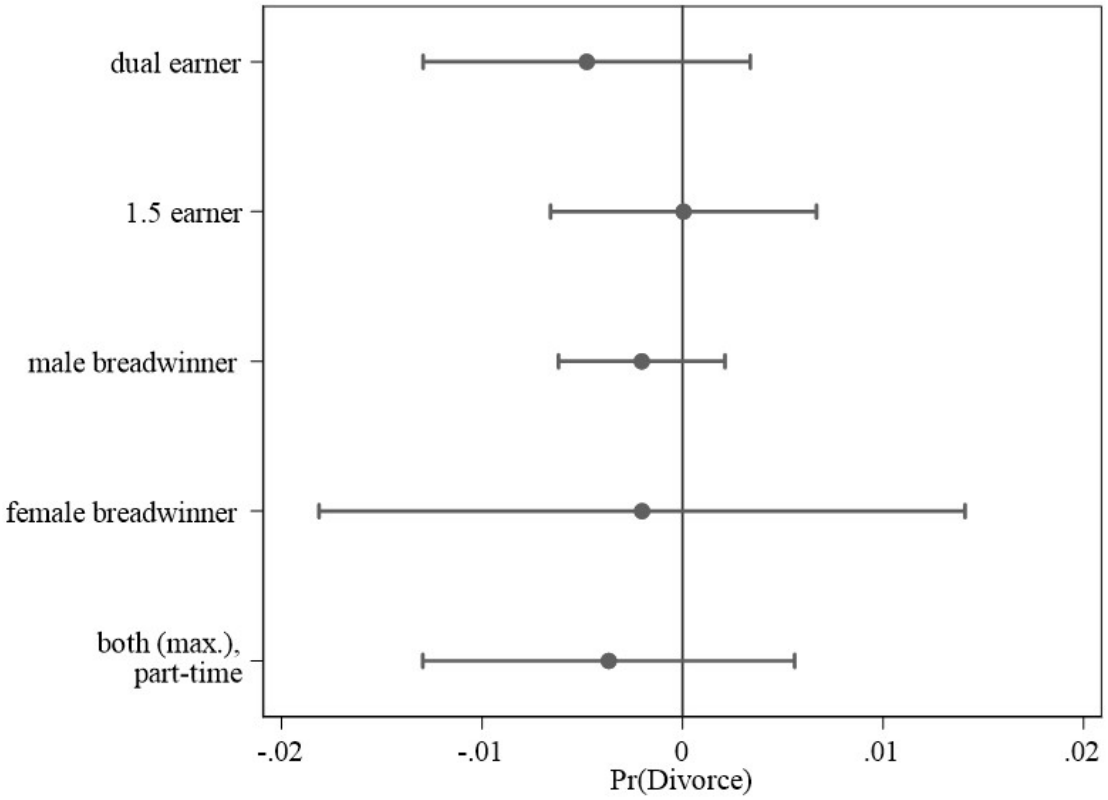

Figure 2.A 1: Average marginal effects of divorce and 95% confidence intervals by interaction of temporal work load of the spouses and children (see Model 5, Table A2), Ref.: no preschool child in the given work load group. Source: SOEP, own calculations

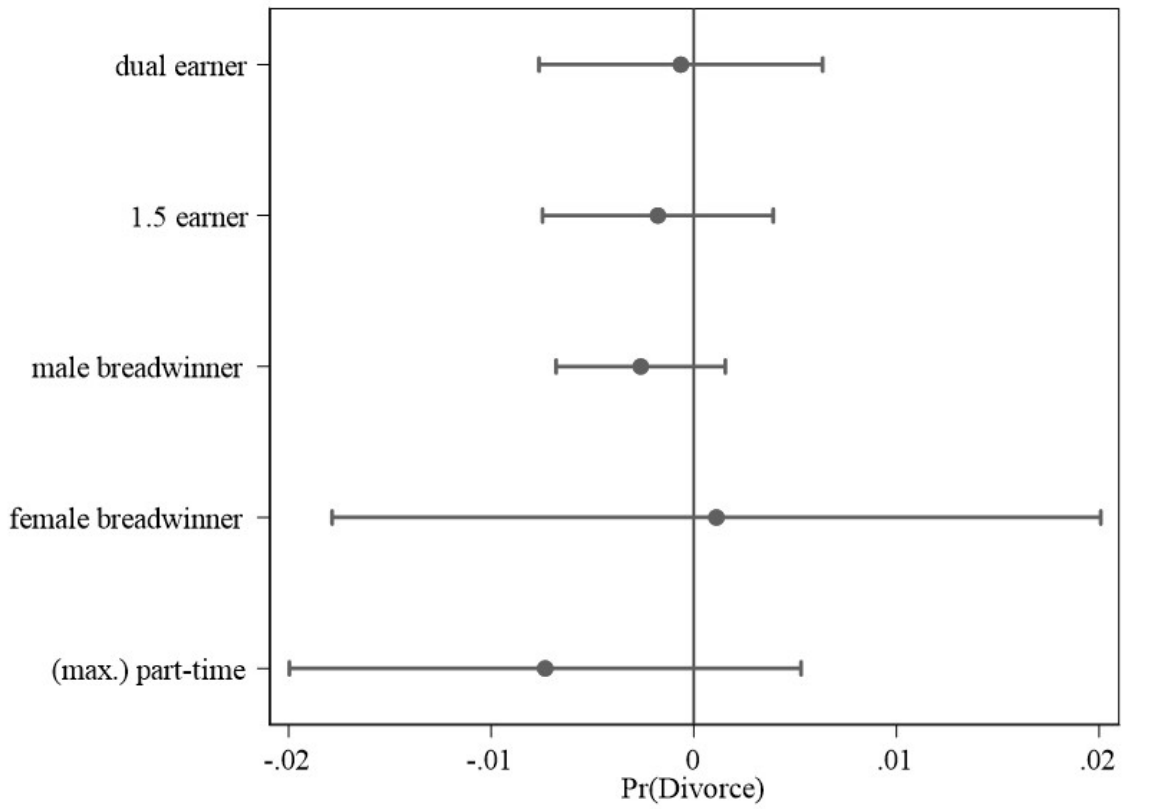

Figure 2.A 2: Average marginal effects of divorce and 95% confidence intervals by interaction of work load of the spouses and couples' income position (all other variables controlled), Ref.: less than 50% income in the given work load group. Source: SOEP, own calculations

Chapter 3 Spouses' division of labor and marital stability: applying newer theoretical perspectives to cohort trends of divorce in East and West Germany

Co-authored by Michael Wagner

Abstract

While older theories posited that women's employment destabilized marriages, newer theories suggest that men can re-stabilize marriages by changing their behavior and engaging in housework. In comparing East and West Germany, we investigate task specialization twofold: (1) Has the impact of women's employment on divorce risk changed across marriage cohorts? (2) Are men's levels of engagement in domestic task associated with divorce risk?

We analyze data from the SOEP using discrete-time event history models in a historical and a dyadic perspective. Our results show that the associations between women's employment and the risk of divorce have been changing across marriage cohorts, and that this trend began earlier in East Germany. Spouses' division of housework is found to be irrelevant for marital instability in East and West Germany. We can detect a suppression effect of age at marriage, which indicates that an increasing age at marriage has led to decreasing risks of divorce across cohorts. Our findings confirm that in Germany, the traditional male breadwinner model is no longer a source of a stable equilibrium in marriage. It appears, that either the German society is still in the transitional stage, as men's contributions to housework are shown to be irrelevant for marital stability; or that gender equality is not the new source of stable equilibrium in marriages.

We add to previous research by comparing marital stability between East and West Germany over an exceptionally long historical period, and by applying newer theories on divorce trends.

3.1 Introduction

In Germany, divorce rates have been increasing for decades, a trend that is still not completely explained (Wagner 2020). Previous research on marital stability has mostly assumed that it is steadily declining, and thus that divorce rates will remain at a very high level. For decades, this research was based on the new home economics (Becker, Landes, and Michael 1977). This approach assumes that marital stability is decreasing due to a non-efficient division of labor caused by an increase in women's labor force participation. It argues that women's greater participation in education and employment has increased their independence from their partners and from marriage, which has resulted in increasing divorce rates (Cooke and Gash 2010; Özcan and Breen 2012; Teachman 2010). Although this economic perspective was dominant in explanations for divorce for decades, the empirical evidence supporting this model was mixed. For instance, it has been noted that since the beginning of 21st century, divorce rates have no longer been increasing not just in Germany (BIB 2019), but in other countries in Northern Europe as well (Eurostat 2016), even though the participation of women in the labor market has not been declining (Brenke 2015; Grunow 2019). Moreover, it has been shown that in some countries, the effect of women's education on divorce has changed over time (Härkönen and Dronkers 2006). By contrast, in West Germany, there has been no clear pattern of change across marriage cohorts in the association between women's educational levels and the risk of divorce. Furthermore, women's educational levels cannot explain the increasing divorce rates across marriage cohorts (Wagner, Schmid, and Weiß 2015).

Whereas the new home economics model focused on task specialization, newer theoretical perspectives have emphasized the relevance of gender equality in the family domain in seeking to explain the development of divorce rates (Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegård 2015). Although both older and newer perspectives clearly argued that marital stability depends on couples' arrangements, research on divorce often explored how women's characteristics affect marital stability, while ignoring the role of men. In this paper, we outline these newer theoretical approaches, which have argued that a gender imbalance has led to a temporary decline in family stability that could come to an end if men and women were to rearrange their family roles. The aim of this paper is twofold. First, we investigate whether the impact of women's employment on the risk of divorce has changed across marriage cohorts. Second, we investigate whether men's engagement in domestic tasks negatively affect the divorce risk. Our study adds to previous research by testing newer theoretical approaches regarding marital stability for the German context, while taking into account the findings of a recent study that compared marital stability in West Germany and the US (Bellani and Esping-

Andersen 2020). As Germany has a divided political history that is still reflected in differences in family norms in East and West (e.g., in East Germany, the share of non-marital births is much higher (Klärner 2015), while the mean age at first birth is lower than in West Germany (Goldstein and Kreyenfeld 2011)), the German context is of special interest. In West German families, the male breadwinner model has a long-standing dominance. In East Germany, by contrast, the dual earner family was common until reunification (Trappe, Pollmann-Schult, and Schmitt 2015), and social stratification was less pronounced than it was in West Germany. Thus, we assume that the diffusion of new gender norms and the reversion in divorce trends have taken place earlier in East Germany than in West Germany. The newer theoretical perspectives are assumed to be suitable to explain divorce trends in West Germany. Besides providing a comparison of these trends within Germany, we add to previous studies by exploiting newer data to analyze marriages formed between 1940 and 2017.

In this study, we first outline the theoretical arguments of Esping-Andersen & Billari (2015) and Goldscheider et al. (2015). After discussing the previous research on the effects of women's employment and the division of housework on divorce risk, as well as empirical findings on divorce risk from a historical perspective, we describe some key characteristics of the German context. In the next section, we derive hypotheses about the association between women's employment, men's engagement in housework and the risk of divorce in West and East Germany. After estimating event-history models using the SOEP data, we address our research questions and draw conclusions regarding the trends in marital stability in East and West Germany.

3.2 Background

Within the new home economics framework, marriages are considered trading unions that seek to accumulate wealth, both materially and emotionally. According to this perspective, spouses benefit most from task specialization. Thus, it is assumed that spouses will perform either paid or unpaid work, depending on their income potential (Becker et al. 1977). Historically, this specialization of the spouses usually led to an arrangement in which the man is working in the labor market to earn the financial resources needed to support the family, while the woman is responsible for the private sphere, which includes doing unpaid housework. In these traditional marital arrangements, each spouse is dependent on the other. It was posited that a marriage is less likely to be stable if the rewards from the union are smaller than expected, or if the alternatives seem to be more attractive than the current union.

In their multiple equilibrium framework, Esping-Andersen and Billari (2015) argue that the increase in divorce rates is a temporary trend that is attributable to changes in women's behavior, and that will reverse in gender-egalitarian societies in which men's behavior has also changed. In line with the new household economics approach, the authors' core assumption is that family arrangements have a stable equilibrium that leads to Pareto-optimal outcomes, and that reproduces itself. The traditional male breadwinner model of a homemaking wife and an employed husband represented a stable equilibrium in which both spouses benefited the most (traditional stage). External shocks, like increases in women's employment, or, in the case of East Germany, reunification, can destabilize the equilibrium, leading to instability until a new equilibrium is established. Applying this external shock assumption to marital stability implies that high divorce rates are part of a transitional stage. In this transitional stage, traditional family arrangements with a male earner and a female homemaker are no longer desirable for women of the younger marriage cohorts, who generally prefer to have more equal family arrangements and better career prospects. As the increase in women's labor force participation has made following the formerly dominant norms of the male breadwinner model less attractive, the traditional gender equilibrium has become unbalanced (Esping-Andersen and Billari 2015). However, as many women and men still want to have a family and children during this transitional stage, they often form suboptimal matches, which has led to unstable marriages. A new gender equilibrium will not be established until men change their role in the family by participating in housework. As the share of people in a society who hold gender-egalitarian attitudes increases, the divorce rate should decline, with potential partners having similar values, and enjoying substantial benefits from their relationships (modern stage). In other words, Esping-Andersen and Billari (2015) argue that changes in family trends are cohort-driven, as they assume that during the transition from a traditional to a new gender equilibrium, men and women have more difficulties finding an optimal partner, which leads to imperfect partner matches in these marriage cohorts.

According to Esping-Andersen and Billari (2015), the transition to a gender-egalitarian society is explained via diffusion processes. On the one hand, the utility for individuals of switching from traditional to gender-egalitarian family behavior determines the degree of diffusion. On the other hand, a critical mass of the new values that can produce a change in family behavior is an important driver of diffusion. The degree of diffusion of egalitarian arrangements in couples depends on the norms and the level of social stratification in the society. As the composition of the society's norms changes, the speed of diffusion accelerates. The tendency to postpone marriage to higher ages may indicate that women believe that they will be able to

find an optimal, egalitarian partner, and that they have adopted egalitarian values. In other words, a compositional change in the mean age at marriage between marriage cohorts may indicate that the diffusion of gender egalitarian values has increased, which could, in turn, result in higher marital stability.

According to the authors, the diffusion of new gender norms is occurring more quickly in societies that have a low level of social stratification. From this perspective, we can assume that diffusion processes for new gender norms are occurring more rapidly in East than in West Germany, as the level of social stratification was lower in the GDR.

In addition, Goldscheider et al. (2015) argue that because of the so-called gender revolution, family trends are reversing instead of steadily declining. The mechanisms that underlie changes in gender behavior remain rather unclear in this framework, as it merely describes the trends in family arrangements (Zaidi and Morgan 2017). Both theoretical papers – i.e., Goldscheider et al.'s two-parts of the Gender revolution and Esping-Andersen and Billari's paper on the multiple equilibrium approach – come to the same conclusion: namely, both assume that from a historical perspective, there are different stages in levels of marital stability. Both approaches argue that female labor force participation negatively affects marriage, as women tend to invest more in relationships than their male counterparts, which means that women have the "double burden" of performing paid and unpaid work. Thus, if men start to invest more in the private sphere, the gender balance in the division of labor will be restored, and marriage will once again be a stable institution.

3.3 Previous Research

For this study, previous research findings on the associations between women's employment and divorce and between housework and divorce, as well as on the time trends in divorce risks, are relevant, and will therefore reviewed in the following. A recent literature review on the association between women's *employment and divorce* reported that the results from previous research have been inconclusive (Özcan and Breen 2012). A number of studies have found that the relationship between women's employment and the risk of divorce depends on the country context (Cooke et al. 2013; Kaplan and Stier 2016; Vignoli et al. 2018). Therefore, in the following, we will discuss findings on the association between women's employment and marital instability for the German context only.

In an analysis of Generations and Gender Survey (GGS) data, Vignoli et al. (2018) found that women's employment had no effect on the risk of divorce in Germany. Without differentiating

between East and West Germany, the authors attributed this finding to the selection of women with weak family orientation into employment. This non-finding on the link between women's employment and marital stability is in line with results from Cooke et al. (2013) for Germany. Based on two empirical studies on the German context, a meta-analysis concludes that women's employment increased the risk of divorce (Wagner and Weiß 2003). In an analysis of married couples in West Germany based on SOEP data, Cooke and Gash (2010) showed that among women of the 1985-1995 marriage cohorts, working part-time was associated with marriage stability, while working full-time was not related to divorce. In contrast, in a comparison of married couples in East and West Germany based on data from the Family and Fertility Survey from 1992, Böttcher (2006) found that women being in full-time employment was linked to marital instability, but that this association was weaker in East Germany.

Results from the US have that have explored a potential *time trend in marital stability* indicated that female employment has not been the driving force in increasing divorce rates (Killewald 2016). Similar findings have also been reported for West Germany. A study using data from the German Life History Study data (GLHS) has shown that women's employment did not account for the increasing divorce risk across marriage cohorts (Wagner et al. 2015). Surprisingly, the authors found that employed women in the youngest marriage cohorts (marriages formed between 1986 and 2005) had a higher risk of divorce than their older counterparts (Wagner et al. 2015). A comparative study that used a couple perspective found that inequality in the number of hours spent on paid work was irrelevant for marital stability in US and West Germany (Bellani and Esping-Andersen 2020), but that these unequal arrangements in paid work became positively associated with divorce risk across time between 1986 and 2009 (Bellani and Esping-Andersen 2020).

When examining time trends in divorce, researchers have to decide whether to analyze trends induced by period or by cohort. Various studies have investigated time trends by, for example, evaluating data quality (Boertien 2020; Kennedy and Ruggles 2014), disentangling period or cohort trends (Heaton 2002; Ono 1999; Thornton and Rodgers 1987), or investigating divorce trends in general (Teachman 2002; Wagner et al. 2015). A number of studies have provided evidence that divorce rates are decreasing due to a rise in the mean age at marriage in the US (Heaton 2002), and in England and Wales (Lampard 2013). Nevertheless, these studies on time trends provide inconclusive answers to the question of whether these trends are period or cohort phenomena. In most cases, it is a decision based on theoretical assumptions. In this study, we are solely interested in exploring time trends, and do not attempt to disentangle period and

cohort effects. We decided to measure time trends as cohort effects, as the theoretical arguments regarding imperfect partner matches formed within the transition towards a new gender equilibrium seem to support this approach. Moreover, as Wagner (2020) has pointed out, analyzing time trends in divorce as period effects is misleading if the timing of divorce has changed. As vital statistics have shown that divorce has become more common among marriages of longer duration in East and West Germany (Grünheid 2013), we prefer to use marriage cohorts.

According to research for the US, changes in the division of *domestic tasks* and in the emphasis placed on egalitarian marriage have contributed substantially to increasing divorce rates (Killewald 2016). The expectations for women have changed, from being a homemaker to being an earner; while the expectations for men have remained stable, as a man is still expected to a breadwinner. A study of Italian married couples has demonstrated the importance of taking into account both paid and unpaid work. The findings indicated that women's employment was associated with an increased divorce risk only if men were doing a very small share of the domestic work (30% or less) (Mencarini and Vignoli 2018).

In an analysis of SOEP data until 2000, Cooke (2006a) showed that among West German couples married between 1985 and 1995, the husband doing a greater share of the domestic tasks was associated with an increased risk of divorce. Furthermore, Bellani and Esping-Andersen (2020) concluded that among West German couples married between 1986 and 2009, the risk of divorce was negatively associated with differences in the unpaid work performed by the spouses. Thus, in contrast to the assumptions of the multiple equilibrium model and to the findings for the US, it appears that in West Germany, the unequal division of unpaid work has been linked to greater marriage stability. It has also been shown, that this association decreased across historical time; i.e., that the unequal division of unpaid work became irrelevant for marital stability in West Germany. Based on these findings, we can conclude that equality in the time spouses spend on domestic tasks is not a decisive factor in marital stability in West Germany. It could, however, play a role in East Germany, as East German women seem to perceive within-couple arrangements in domestic tasks as relevant in assessments of fairness (Trappe and Köppen 2014).

3.4 The German context

Because Germany had a divided political history after the Second World War and was reunified in 1990, an inner-German comparison is of special interest. In the following, we outline some of the characteristics of East and West German family arrangements. At least until the end of

the 1970s, family policies in the Federal Republic of Germany (FRG) promoted a male breadwinner model that discouraged women from participating in the labor market. By contrast, starting in the early 1960s, family policies in the German Democratic Republic (GDR) promoted a dual earner model that encouraged women and mothers to participate in paid work (Trappe et al. 2015). In the GDR, full-time employment among mothers was normatively accepted starting in the 1970s. After reunification, the family models in East and West Germany converged. In West Germany, the male breadwinner / female homemaker model has been replaced with the more gender-egalitarian modified breadwinner model, in which the husband is still the breadwinner, but the wife is employed part-time. Meanwhile, in East Germany, the once-dominant dual earner arrangement has largely been superseded by the modified breadwinner model (Trappe et al. 2015). The differences in the arrangements of couples in East and West Germany result from differences in the employment levels of mothers, as the employment levels of childless women do not differ between East and West (Trappe et al. 2015). Nevertheless, the labor force participation of mothers has been increasing since reunification. This trend has been based on increases in part-time and marginal employment, as the share of mothers in full-time employment decreased between 1991 and 2002 in both East and West Germany. The level of full-time employment among mothers is still higher in East than in West Germany (Kreyenfeld and Geisler 2006).

The division of labor among married couples is more traditional in West than in East Germany, as spouses in the East seem to divide household tasks nearly equally (Cooke 2006b). Moreover, a study using data from the ISSP 1994 has shown that the division of household tasks is more equal if the wife has a higher income (Cooke 2006b). An analysis of couples married between 1990 and 1995 and observed until 2000 also found that East German husbands do more of the household tasks than their West German counterparts (Cooke 2007). It has also been shown that in addition to parental status (Kühhirt 2012), the mother having longer labor market interruptions is associated with a traditional division of housework in Germany, as the mother then increases the time she spends on housework (Schober 2013). In line with this finding, Fahlén (2016) has reported that whether couples share household tasks equally depend primarily on whether women have reduced the time spend on housework.

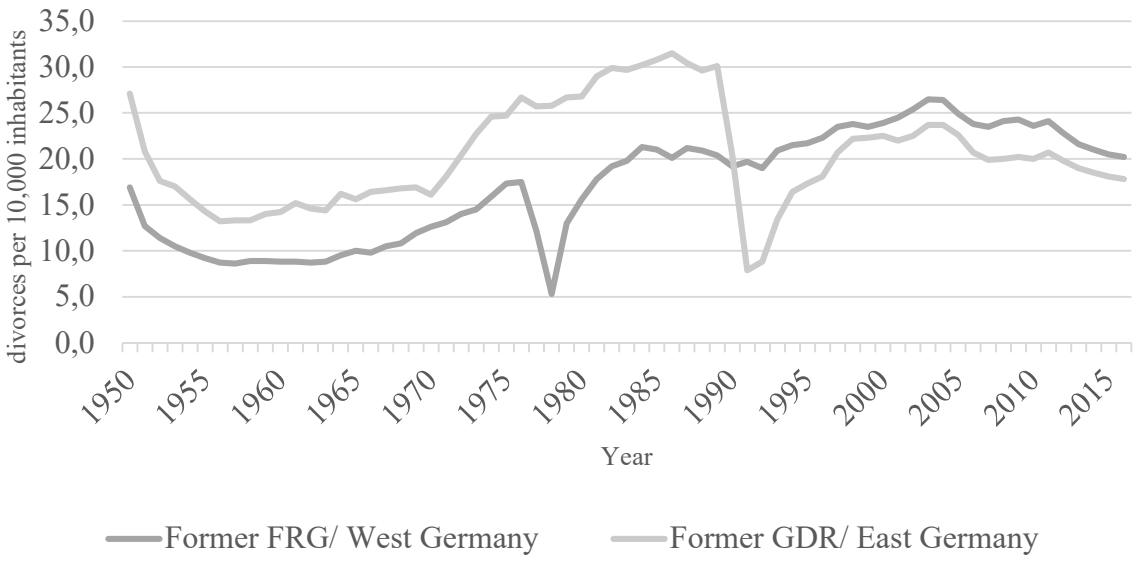

Figure 3-1: Crude divorce rate in East and West Germany: 1950 to 2016. Source: (BIB 2019).

In Germany, the divorce rates were increasing in the latter decades of the 20th century. But since the middle of the 2000s, this trend has stalled, or may have even ended. Prior to reunification, the crude divorce rates in East Germany were higher than in West Germany, and started increasing in the 1970s (see Figure 3-1). A change in the divorce law caused a dip in the crude divorce rate in West Germany in the late 1970s (Grünheid 2013). After reunification, West German divorce laws became valid in East Germany, and this transition led to a sharp decrease in divorce rates in East Germany after 1990 (Grünheid 2013). Previous research has attributed the East-West differences in divorce rates to East Germany having lower levels of religious commitment, a higher proportion of women with divorced parents, and higher levels of female employment than West Germany (Böttcher 2006). As well as displaying a decades-long increasing trend in the crude divorce rate, vital statistics show that the proportions of divorced marriages have been rising across marriage cohorts (Grünheid 2013). Among couples who have been married for at least 10 years, around 14% of those who married in 1970, around 20% of those who married in 1980, and around 21% of those who married in 2000 have divorced.

The pathways that led to the widespread adoption of the modified breadwinner model differ between East and West Germany. This implies that women's employment patterns and men's contributions to the household tasks differ between the two parts of Germany. These differences, together with the observation that the increases in divorce rates seem to have leveled off in Germany, makes a comparison of the two contexts highly relevant.

3.5 Hypotheses

As an initial assumption regarding divorce trends, we assume that the divorce rates have been increasing across marriage cohorts, but have been declining among younger marriage cohorts (H1). Drawing on the multiple equilibrium approach of Esping-Andersen and Billari (2015), we distinguish three historical stages in the divorce trends. For the older marriages cohorts, who married at a time when the traditional male breadwinner model was dominant (traditional stage), marriages that fulfilled these norms have been stable. For couples who married in the transitional stage, when the traditional male breadwinner model was being replaced by more gender-equal family arrangements, marriages have been unstable. For the younger marriage cohorts (modern stage), who married at a time when a new gender equilibrium had been established, marriages have been more stable than they were for the cohorts who married during the transitional stage.

Among the cohorts who married during the traditional or the transitional stage, women's employment is associated with an increased risk of divorce. However, we assume that changes occurred across marriage cohorts. For the younger marriage cohorts, who married at a time when new gender arrangements had become the norm, women's employment is assumed to be unrelated to marital stability. In other words, we assume that the marriage cohort moderates the association between women's employment and the risk of divorce (H2). In the modern stage, when new gender arrangements have been established, men's domestic work is linked to a decreased risk of divorce. As it is unclear how the new stabilizing equilibrium in marriages is arranged, we can assume that couples' having an unequal division of household labor have a higher the risk of divorce (H3a), but also that the husbands' higher contribution to domestic tasks decrease the risk of divorce (H3b).

As family arrangements in West Germany long followed a traditional path, and did not become more gender-equal until the transition to the modified breadwinner model, we expect to find for West Germany the associations derived from the theories. In contrast, the dominant family model in East Germany has become less gender-equal since it transitioned to the modified breadwinner model after reunification. As the full-time employment of women, and especially of mothers, was encouraged by the state and was normatively accepted in the GDR, it is likely that the transition to a new stable family equilibrium took place earlier in East than in West Germany. Therefore, we expect to find that the change in the association between women's employment and marital stability occurred earlier in East than in West Germany (H4).

3.6 Data and Methods

Our empirical analysis is based on German Socio-Economic Panel (SOEP) data (1984-2017) that include retrospective information on the respondents' marital and employment life courses, and on the hours the respondents have spent on housework since 1984 (Liebig et al. 2019; Wagner et al. 2008). To investigate whether marital stability is still a function of the spouses' division of labor, we employ logistic discrete-time event-history models based on marriage-years from the SOEP data. In other words, we estimate the conditional probability of transitions into divorce in a marriage year for individuals whose first marriage was not yet divorced (Allison 2014). As comparing odds ratios from logistic regression across models is not recommended (Auspurg and Hinz 2011; Mood 2010), we present our results as average marginal effects (AME). The average marginal effects represent the average change in the probability of separating when changing the given explanatory variables from the reference category to another category. Our decision to analyze first marriages only is in line with previous research that analyzed divorce trends over time in Germany (Wagner et al. 2015), and with evidence showing that higher order unions have a greater divorce risk than first marriages (Lyngstad and Jalovaara 2010; Poortman and Lyngstad 2007). Therefore, our results are rather conservative, as we have excluded the subgroup of higher order unions with a higher risk of divorce, who also contribute to the increasing trend in divorce rates.

In a first step, we estimate models to check whether we can find evidence for the three stages in marital stability related to changes in the role of women. To test whether the effect of women's employment on divorce has been changing across marriage cohorts, we present models that interact marriage cohorts and women's employment. If compositional changes in age at marriage, religious denomination, or educational level account for the historical trend, the size of the cohort effects from the basic models should vary after controlling for these characteristics. We employ separate models for first-time married women in East and in West Germany. In this first part of the analysis, we decided to analyze the data on the individual level rather than the couple level for the following reason. As the information on the respondent's partner was surveyed only prospectively, it was available since 1984 in West Germany and since 1990 in East Germany. This means that if a respondent's marriage ended before these dates, we do not have data on the spouse. If we analyzed dyads who were coupled at the first interview, we would have a biased sample of marriages that "selectively" survived until the entry into the SOEP. For our historical sample, we deleted higher order unions from the sample (n=7,505) and first marriages from private households with a reported marriage year before 1940 (n= 898 started between 1916 and 1939) as the numbers of these marriages are

comparatively small.[13] In our final historical sample, we have 11,501 women in first marriages in 270,794 person-years in West Germany, and 3,329 women in first marriages in 83,802 person-years in East Germany (see Table 3-1).

In a second step, we investigate whether men's contributions to housework have been associated with marital stability since 1990. If we can find evidence for such an association, then we can assume that marriages in Germany have already transitioned to the modern stage with a new gender equilibrium. First, we estimate models indicating whether couples spent an equal number of hours on domestic tasks. If equality in the time spend on domestic tasks stabilizes marriages, then couples with household arrangements that are inequal should have a higher risk of divorce. Second, we estimate models with separate indicators of the hours spent on domestic tasks for each spouse.[14] If it is the husband's contribution to housework that stabilizes marriages, then couples in which the husband spent more hours on housework should be more stable, while couples in which the wife spent more hours on housework should be less stable. We built a new sample containing information on both spouses. This means that we had to exclude marriages formed before 1990,[15] and to attach the husband's information to the remaining women in a first marriage from the abovementioned historical sample. By excluding marriages formed before 1990, we avoid analyzing selectively stable long-lasting marriages that had survived until the observational window, and thus systematically differed from the unstable marriages that had already dropped out of the sample due to divorce. In this second part of analysis, our sample is based on 2,771 marriages in 19,523 couple-years in West Germany and 688 marriages in 4,506 couple-years in East Germany (see Table 3-3).

The *outcome variable* is a dummy indicating whether a marriage is still ongoing or has been dissolved. The dissolved marriages are the marriages with a reported divorce date. Cases in which the woman reported that she is separated from her husband but is not (yet) divorced are also considered dissolved marriages. Separations are not available for marriages that ended before 1984 due to the survey mode of the SOEP.

The historical trend is operationalized in the variable *marriage cohort,* which distinguishes between women married in 1940-1954, 1955-1964, 1965-1974, 1975-1984, 1985-1994, 1995-

[13] Further, we exclude SOEP samples that overrepresent high income (sample G), special family structures (samples L1-L3), migrants (samples M1-M2), and refugees (samples M3-M5).
[14] For a sensitivity check, we also estimated the models with the share of men's work on the couples' total hours of domestic work. This measurement does not show any relevance for union stability in East or in West Germany.
[15] Domestic work is surveyed prospectively in the SOEP, and is available since 1984 in West and 1990 in East Germany. As we want to compare an identical time period in both country contexts, we exclude all unions of women married before 1990.

2004, and 2005-2017. To control for the marriage cohort in the second sample, we distinguished between couples married in 1990-2004 and 2005-2017. The key independent variables are employment status (full-time, part-time, not employed) and domestic tasks. *Employment status* indicates the volume of the respondents' employment. In accordance with Schnor (2014), the variable differentiates between full-time employed, part-time employed, and non-employed (e.g., unemployed, housewife, or retired). The original data do not account for a main activity resulting in possible combinations of employment states. Additionally, transitions within a year can lead to two possible employment states. We have decided to take the employment status with the highest number of working hours in the labor market.

The SOEP provides information on daily activities on weekdays, Saturdays, and Sundays.[16] The survey asks respondents about the housework (washing, cooking, cleaning) they do, and about the number of hours they regularly spend doing it. In line with other research, we use hours spent regularly on weekdays on *domestic tasks* (Bellani and Esping-Andersen 2020), and decided against using hours spent on childcare or on repairs. Childcare is only relevant for a subgroup of our sample (parents), while hours spent on repairs does not seem to fit to the theoretical framework, which clearly asks whether men are becoming more engaged in domestic tasks that are traditionally considered female tasks. Domestic tasks are measured by the crude number of hours women and men spent on domestic tasks on a regular weekday (*domestic hours female* and *domestic hours male*), with the information limited to a maximum of 10 hours spent per regular weekday.[17] However, domestic tasks are also measured by the *dissimilarity index* between spouses, following Bellani and Esping-Andersen (2020). The dissimilarity index is operationalized as the husband's housework hours minus his wife's housework hours, categorized into three groups: (1) the wife spent more hours on domestic tasks (all negative values from the dissimilarity index), (2) the spouses spent equal numbers of hours on domestic tasks (dissimilarity index=0), and (3) the husband spent more hours on domestic tasks (all positive values from the dissimilarity index).

We control for highest educational level, Christian denomination, and age at marriage. *Highest educational level* is a time-constant indicator, and is based on the ISCED97 classification indicating the highest degree the respondent obtained. Following Härkönen and Dronkers (2006), we define high educational level for women as ISCED97 level 4 or higher. We

[16] Question 183 from the SOEP Questionnaire: "What is a typical weekday like for you? How many hours per normal workday do you spend on the following activities?"

[17] For sensitivity checks, we estimated models excluding respondents indicating that they spent >10 hours on a daily basis, and got the same results.

distinguish between high educational level (at least vocational training and *Abitur*) and other educational level (middle vocational and lower), as the theories imply that highly educated women are more likely to contribute to the diffusion of new gender arrangements. *Christian denomination* indicates whether women are Catholic or Protestant (yes), or belong to another religious group or have no religious denomination (no). Christian denomination is a time-constant variable representing the most recent non-missing information. In our multiple models, we account for the *z-standardized women's age at marriage*. We standardize separately for the East and West German samples to ensure that age at marriage is comparable across time ($\overline{x}_{\text{age at marriage}}=0$ and SD=1). For the second sample, the variables high educational level, employment status, and domestic hours are operationalized for the women's husbands, and are coded according to the women's variables.

Furthermore, we control for *marriage duration* in years and the *logarithm of marriage duration* to account for the sickle distribution of marriage stability (Kulu 2014). The investment level of the respondents in their first marriage is controlled for with the *number of children,* a time-varying variable that changes according to the number of a respondent's children in the child's year of birth, up to three or more children. Our time-varying independent variables are time-lagged, meaning that they indicate the status of the year before a possible event in the outcome is observed.

3.7 Results

3.7.1 Women's employment and divorce risk

Table 3-1 presents the descriptive statistics for West and East Germany separately. In the West and East German samples, 11% of the observed person-years ever end in divorce. Of the married women in West Germany, 45% are non-employed, 31% are full-time employed, and 24% are part-time employed. Across marriage cohorts, the prevalence of part-time employment in a first marriage increases from 10% of the marriage-years for the oldest marriage cohort to 36% of the marriage-years for the youngest marriage cohort (see Appendix, Table 3.A 2: Distribution of employment status, high educational level, and Christian denomination by marriage cohorts of women in first marriages (column percentages), West German sample (couple years) (N=270,794).Table 3.A 2). Among married women in West Germany, the prevalence of full-time employment increases from 25% in the oldest cohort to 42% in the youngest cohort. In contrast, the dominant employment status of women living in East Germany is full-time employment (62%), while only 22% are non-employed. In the East German sample, the share of years married women spent in full-time employment increases across cohorts, and

reaches its peak of 68% in the 1975-1984 marriage cohort, before declining to 45% in the youngest marriage cohort (see Appendix Table 3.A 3). The share of years married women spent in part-time employment more than doubles across marriage cohorts, reaching 31% among women married between 2005 and 2017. These patterns are in line with those found in previous studies (Trappe et al. 2015).

Table 3-1: Descriptive statistics for the sample of women in first marriages in West and East Germany (couple years).

	West				East			
	% / Mean	SD	Min	Max	% / Mean	SD	Min	Max
Ever divorced	10.86		0	1	11.16		0	1
Marriage duration (years)	16.77	11.60	1	50	17.84	11.99	1	49
Marriage cohort								
1940-1954	13.86		0	1	15.88		0	1
1955-1964	24.24		0	1	26.72		0	1
1965-1974	23.49		0	1	22.61		0	1
1975-1984	16.27		0	1	19.32		0	1
1985-1994	13.70		0	1	10.75		0	1
1995-2004	6.60		0	1	3.18		0	1
2005-2017	1.83		0	1	1.53		0	1
Employment status								
Full-time	30.98		0	1	62.37		0	1
Part-time	24.16		0	1	15.96		0	1
Non-employment	44.86		0	1	21.67		0	1
High educational level (yes)	20.89		0	1	31.83		0	1
Age at marriage (unstandardized)	23.56	4.74	16	65	22.71	4.52	16	63
Standardized values of age at marriage	0	1	-1.60	8.75	0	1	-1.48	8.91
Christian denomination (yes)	80.07		0	1	38.96		0	1
Children								
Childless	15.21		0	1	9.17		0	1
One child	25.76		0	1	31.49		0	1
Two children	37.70		0	1	41.78		0	1
Three or more children	21.33		0	1	17.56		0	1
N	270,794				83,802			
n	11,501				3,329			

Source: SOEP v34, own calculations

The distribution of the characteristics separated by the outcome divorce is shown in Appendix Table 3.A 1. In both East and West Germany, the prevalence of full-time employed women is higher among the partnership years that end in divorce than among the partnership years that are still ongoing. This finding suggests that women's employment plays a role in marital stability in Germany. The mean age at marriage for women is comparable in the two contexts; and is, at 22.7 years, marginally lower in East Germany (Age at marriage: $\bar{x}_{West}$=23.6). As

expected, the mean age at marriage is increasing across cohorts in West and East Germany (see Appendix Table 3.A 4).

In line with H1, the results from our discrete-time event history models show that divorce risk increases across marriage cohorts, but that marriages are becoming more stable for the younger marriage cohorts in West and East Germany (see Table 3-2, Model 1 West and Model 1 East, and Appendix, Figure 3.A 1). The average marginal effects indicate that in West Germany, on average, the probability of divorce is 0.015 percentage points lower for women who married between 1940 and 1954 than for women who married between 1995 and 2004. The youngest marriage cohort (2005-2017) has a lower risk of divorce than the reference group (1995-2004). In West Germany, this trend reversal is statistically significant, while in East Germany, no significant differences are found between the 1985-1994 and 2005-2017 marriage cohorts and the reference group (1995-2004) ($p>0.05$ and CIs overlap zero; see Appendix , Figure 3.A 1).

Model 2 (West and East) additionally accounts for women's employment, educational level, children, Christian denomination, and standardized age at marriage. In West and East Germany, full-time employed women have a higher risk of divorce than part-time employed women. While there is a statistically significant difference in the divorce risk of women who are non-employed and part-time employed in West Germany, the divorce risk of non-employed and part-time employed women in East Germany differs only marginally. In West Germany, having a high educational level, having two children, and belonging to a Christian denomination are strongly associated with marriage stability, whereas only belonging to a Christian denomination is associated with marriage stability in East Germany.

Among both East and West German women in first marriages, we find a lower risk of divorce with an increasing age at marriage, as the standardized age at marriage measure indicates. Moreover, the AMEs of the marriage cohorts in Models 2 are stronger than the AMEs of the marriage cohorts in Models 1. In stepwise regressions (models not shown), we found that the inclusion of the age at marriage mainly increases the AMEs of the marriage cohorts across the models. This suppression effect operates as follows. If the age at marriage of the marriage cohorts did not differ, the younger cohorts would have had a higher divorce risk than the older marriage cohorts. In other words, the reversal of the marital stability trend is likely driven by an increase in the age at marriage across marriage cohorts.

Table 3-2: Discrete-time event history models of divorce in West and East Germany (AME).

	Model 1 West		Model 2 West		Model 1 East		Model 2 East	
	AME	SE	AME	SE	AME	SE	AME	SE
Marriage duration (years)	-0.001***	<0.001	-0.001***	<0.001	-0.001***	<0.001	-0.001***	<0.001
Log (Marriage duration)	0.004***	<0.001	0.005***	0.001	0.002**	0.001	0.003**	0.001
Marriage cohort								
1940-1954	-0.015***	0.001	-0.019***	0.001	-0.012***	0.002	-0.017***	0.003
1955-1964	-0.013***	0.001	-0.017***	0.001	-0.012***	0.002	-0.017***	0.003
1965-1974	-0.010***	0.001	-0.015***	0.001	-0.008***	0.002	-0.013***	0.003
1975-1984	-0.006***	0.001	-0.011***	0.001	-0.005*	0.002	-0.010**	0.003
1985-1994	-0.002*	0.001	-0.005***	0.001	-0.001	0.002	-0.004	0.003
1995-2004	Ref.		Ref.		Ref.		Ref.	
2005-2017	-0.005**	0.002	-0.005*	0.002	-0.005	0.003	-0.005	0.004
Employment status								
Full-time			0.005***	0.001			0.004***	0.001
Part-time			Ref.				Ref.	
Non-employment			-0.003***	<0.001			0.001	0.001
High educational level								
No			Ref.				Ref.	
Yes			-0.001*	<0.001			-0.000	0.001
Number of children								
Childless			Ref.				Ref.	
One child			<0.001	0.001			-0.001	0.001
Two children			-0.001*	0.001			-0.002	0.001
Three or more children			-0.001	0.001			0.002	0.002
Christian denomination								
No			Ref.				Ref.	
Yes			-0.003***	<0.001			-0.004***	0.001
Standardized values of age at marriage			-0.002***	<0.001			-0.002***	<0.001
N	270,794		270,794		83,802		83,802	
BIC	27,084.04		26,668.25		8,646.69		8,642.53	

Source: SOEP v34, own calculations. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

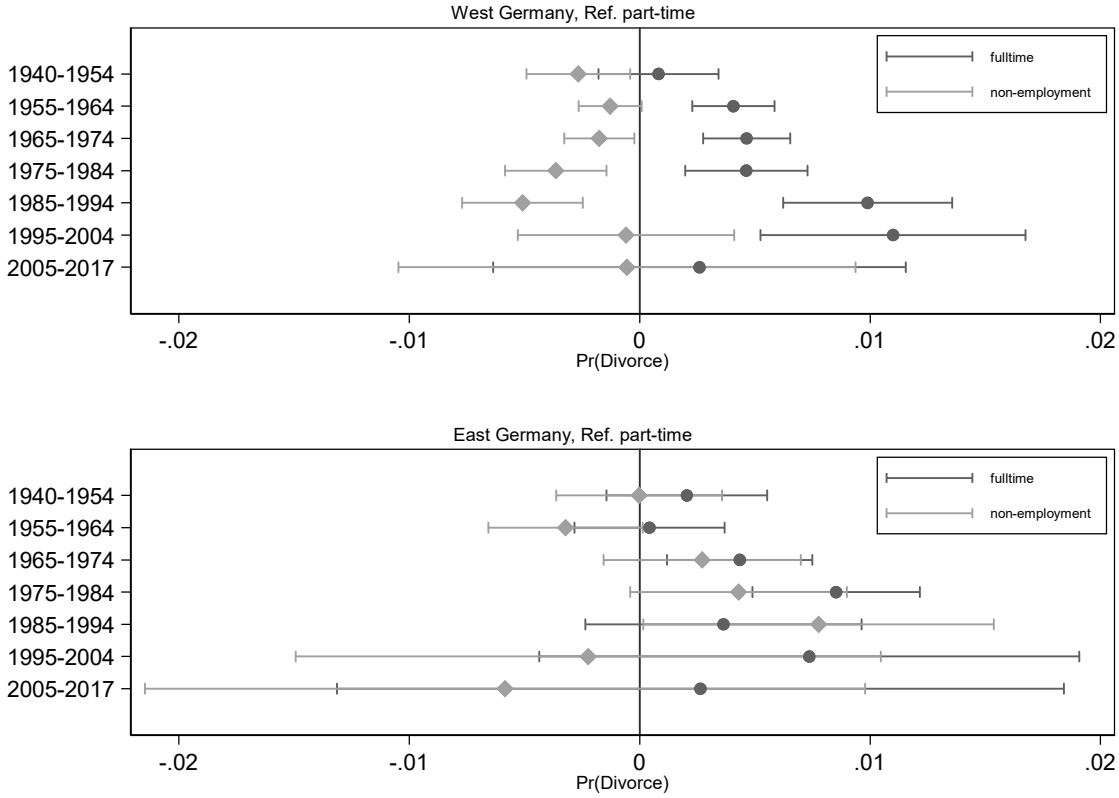

Figure 3-2: Interaction effects. Average marginal effects of marriage cohort on divorce for different levels of employment in West (upper panel) and East (lower panel) Germany. Source: SOEP v34, own calculations.

Note: Models control for marriage duration, log (marriage duration), employment status, educational level, Christian denomination, standardized values of age at marriage, number of children).

Figure 3-2 shows the results from the full models with an interaction between women's employment and marriage cohort, which test the assumption of H2 (not shown in Tables). Figure 3-2 displays the AMEs and their confidence intervals on the transition to divorce by employment status across marriage cohorts. Part-time employed women in the respective marriage cohort are the reference group. If the confidence intervals do not overlap the reference group (x=0), we can assume that the association is substantially different from zero. In West Germany (upper panel), our results show that full-time and non-employed women diverge across marriage cohorts, and converge in the youngest cohort. While full-time employed women have a higher risk of divorce that increases until the 1995-2004 marriage cohort, non-employed women are significantly less likely to divorce than part-time employed women in the respective marriage cohorts until the 1985-1994 marriage cohort. In the youngest marriage cohort (2005-2017), the divorce risk does not significantly vary depending on women's

employment status. These results are in line with hypothesis H2, as we find evidence that tends towards a change in the association between women's employment and divorce risk across marriage cohorts in West Germany.

The trend in employment status across marriage cohorts and its association with divorce differ between East and West Germany, as the lower panel in Figure 3-2 shows. In the oldest marriage cohorts (1940-1954 and 1955-64), the divorce risk is not significantly associated with employment status in East Germany. In addition, in the 1965-1974 and 1975-1984 marriage cohorts, full-time employed women have a significantly higher divorce risk than part-time employed women, while non-employed women do not significantly differ in their risk of divorce from part-time employed women. Among the younger East German marriage cohorts, women's employment status does not seem to matter at all, as the confidence intervals are very large, and include the zero value.[18] In other words, in line with H2, we find evidence that the association between women's employment and the risk of divorce has changed across marriage cohorts in both the West and the East German samples. Furthermore, this finding is in line with our H4, in which we assumed that the association between employment status and marital stability changed earlier in East than in West Germany.

3.7.2 Domestic work and divorce risk

In this section, our aim is to figure out whether men's engagement in domestic tasks can rebalance marriages. For this analysis, we use a reduced sample of married dyads from 1990 or later (see Table 3-3 for descriptive statistics). The dissimilarity measure shows that women do the bulk of domestic tasks in both East and West German marriages. In West Germany, the wife spends more hours on housework in 80% of the couple-years, whereas the husband works more hours in the household than his wife in just 4% of marriages. In the remaining 15% of marriages, the number of hours spent on domestic tasks on a typical weekday is completely equal. Across marriage cohorts in West Germany, the share of couples with equal hours increases from 13% to 29%, while the share of marriages in which the husband spends more time on household tasks remains stable (see Appendix Table 3.A 5).

In East Germany, the share of couples who spend an equal number of hours on domestic tasks (22%) is larger, and the share of couples in which the wife does more housework is smaller (72%) than in West Germany. In East Germany, the prevalence of marriages with equal

[18] As shown in Appendix Table 3.A 7, the underlying couples and events are rather small. From our point of view, at least the events in the 1985-1994 (176 events) and 1995-2004 (66 events) cohorts provide a sufficient sample size.

housework hours, and of marriages in which the husband spends more time on household tasks than his wife, increases across cohorts (see Appendix Table 3.A 5). In crude hours, the average West German wife spends four times as much time on housework as her husband. In East Germany, the differences are a bit smaller: while the average woman spends 2.4 hours on household tasks each day, her husband spends less than an hour (for the time trend, see Appendix Table 3.A 6).

Table 3-3: Descriptive statistics for the sample of women in first marriages and their husbands since 1990 or later in West and East Germany (couple years).

	West				East			
	% / Mean	SD	Min	Max	% / Mean	SD	Min	Max
Ever divorced	8.11		0	1	11.34		0	1
Marriage duration (years)	9.50	6.15	1	27	8.24	5.91	1	27
Marriage cohort								
1990-2004	85.49		0	1	81.71		0	1
2005-2017	14.51		0	1	18.29		0	1
Dissimilarity in domestic work								
Wife more hours	80.49		0	1	71.97		0	1
Equal hours	15.31		0	1	21.64		0	1
Husband more hours	4.20		0	1	6.39		0	1
Domestic work (hours/day) of wife	2.85	1.73	0	10	2.41	1.57	0	10
Domestic work (hours/day) of husband	0.71	0.81	0	10	0.84	0.91	0	10
Employment status of wife								
Full-time	28.22		0	1	49.31		0	1
Part-time	43.10		0	1	28.25		0	1
Non-employment	28.68		0	1	22.44		0	1
Employment status of husband								
Full-time	93.14		0	1	88.75		0	1
Part-time	3.06		0	1	2.26		0	1
Non-employment	3.80		0	1	8.99		0	1
High educational level, wife	43.72		0	1	43.92		0	1
High educational level, husband	50.98		0	1	40.83		0	1
Childless	21.08		0	1	25.77		0	1
One child	27.61		0	1	34.44		0	1
Two children	39.63		0	1	32.13		0	1
Three children	11.68		0	1	7.66		0	1
Standardized values of age at marriage	0	1	-2	6.16	0	1	-1.36	4.04
N	19,523				4,506			
n	2,771				688			

Source: SOEP v34, own calculations.

Our models show that in West Germany, the couples in which the husband spends more hours on domestic tasks than his wife have a 0.009 percentage point lower risk of divorce (see Table 3-4, Model 3.1 West). This result contradicts our assumption that spending equal amounts of time on domestic tasks is associated with marriage stability (H3a rejected). When we look at the crude number of hours men and women spend on domestic tasks, we find a tendency toward a negative association with divorce risk in both East and West Germany (see Table 3-4, Models

3.2 West and 3.2 East). The AMEs are not significantly different from zero, but for the hours men spend on domestic tasks in West Germany, the association is nearly significant (AME=-0.002; p=0.059). This means that the husband being more engaged in domestic tasks can be stabilizing for a marriage. Nevertheless, we have to reject H3b. Thus far, our estimates provide no evidence that a couple's divorce risk is affected by the husband's level engagement in domestic tasks, as measured by the equality in couple's division of labor or the crude number of hours they spend on domestic tasks.

How stable are these non-findings regarding the division of domestic tasks and marital stability? We estimate some models by including marriages from before 1990; meaning that these couples have a longer marital duration when they enter the observational window starting in 1990 for additional checks (see Appendix Table 3.A 8 and

Table 3.A 9). Our results show that the hours women spend on domestic tasks lower the risk of divorce significantly (by 0.001 percentage points) in West Germany, while the hours husbands spend on housework are irrelevant for union stability (see Appendix

Table 3.A 9). This finding is very interesting, as in Model 3.2 West, the hours men spend on domestic tasks is nearly significant for marital stability. In other words, if we take into account marriages with longer durations, the risk of divorce is lower for women who remain in their traditional role of focusing on the housework; while in younger marriages, the husband's role becomes more important, and the hours the wife spends on domestic tasks lose their significance for marital stability. This means that gender arrangements in marriages seem to change, but only in the West German sample. In East Germany, we find no association in couple's domestic task arrangements and their risk of divorce in any of our models, regardless of whether the models include marriages formed before 1990, or use different measurements of domestic tasks in couples.[19]

For an additional check, we included the crude dissimilarity index in our estimations (models not shown). In line with the previous models, this crude index, in which negative values indicate that the wife spends more hours on domestic tasks than her husband, has no association with divorce risk in East or in West Germany.

[19] We have to keep in mind that the sample size in East Germany is rather small.

Table 3-4: Discrete-time event history models of divorce of women in first marriages and their husbands, married since 1990 or later in West and East Germany (AME).

	Model 3.1 West		Model 3.2 West		Model 3.1 East		Model 3.2 East	
	AME	SE	AME	SE	AME	SE	AME	SE
Marriage duration (years)	-0.002***	0.0004	-0.002***	0.0004	-0.002	0.001	-0.002	0.001
Log (marriage duration)	0.010***	0.003	0.010***	0.003	0.007	0.006	0.007	0.005
Marriage cohort								
1990-2004	Ref.		Ref.		Ref.		Ref.	
2005-2017	-0.005**	0.002	-0.005*	0.002	-0.003	0.005	-0.003	0.005
Dissimilarity in domestic work								
Wife more hours	-0.003	0.003			0.002	0.004		
Equal hours	Ref.				Ref.			
Husband more hours	-0.009*	0.004			-0.001	0.007		
Domestic work (hours/day) of wife			-0.0004	0.001			-0.0003	0.002
Domestic work (hours/day) of husband			-0.002	0.001			-0.003	0.002
Employment Status wife								
Full-time	Ref.		Ref.		Ref.		Ref.	
Part-time	-0.002	0.003	-0.002	0.003	-0.006	0.005	-0.006	0.005
non-employment	-0.005*	0.003	-0.005	0.003	-0.007	0.005	-0.006	0.005
Employment status husband								
Full-time	Ref.		Ref.		Ref.		Ref.	
Part-time	0.004	0.006	0.004	0.006	0.018	0.023	0.019	0.023
Non-employment	-0.0004	0.004	<-0.0001	0.004	0.013	0.012	0.018	0.014
High educational level wife (yes)	-0.002	0.002	-0.002	0.002	-0.003	0.004	-0.003	0.004
High educational level husband (yes)	-0.006***	0.002	-0.006***	0.002	-0.010**	0.004	-0.010**	0.004
Standardized values of age at marriage	-0.002	0.001	-0.002	0.001	-0.012***	0.003	-0.012***	0.003
Childless	-0.001	0.002	-0.001	0.002	0.004	0.006	0.004	0.006
One child	Ref.		Ref.		Ref.		Ref.	
Two children	-0.003	0.002	-0.003	0.002	0.0004	0.004	0.001	0.004
Three or more children	-0.003	0.003	-0.002	0.003	0.007	0.009	0.008	0.009
N	19,523		19,523		4,506		4,506	
BIC	2,617.79		2,618.90		778.95		776.91	

Source: SOEP v34, own calculations. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

3.8 Conclusion

Our aim in this study was to shed light on the question of whether marital stability across cohorts is still a function of the spouses' division of labor by applying discrete-time event history models to SOEP data, and comparing East and West Germany. In order to test our assumptions derived from the multiple equilibrium approach, we drew samples of married women between 1940 and 2017. We used these samples to test whether the association between women's employment and marital disruption has changed across marriage cohorts. In a second step, we employed models on married women and their partners who were married between 1990 and 2017 to investigate the association between the spouses' division of domestic tasks and divorce risk. We were able to add to previous research by analyzing marriages over an exceptionally long historical period, and by comparing marriages in East and West Germany while testing new theoretical concepts.

In line with vital statistics (Grünheid 2013) and our first hypothesis, we observed increasing divorce risks across marriage cohorts that reversed in the youngest marriage cohorts in East and West Germany. The increasing trend in divorce rates ended earlier in East than in West Germany. Our results further showed that the associations between women's employment and the risk of divorce have been decreasing for full-time employed women in the youngest marriage cohort in West Germany. This pattern is in line with our second hypothesis and with previous empirical findings on women's employment and its changing association with divorce risk in Germany (Wagner et al. 2015). We can add to previous findings with our observation that women's employment has become irrelevant for divorce risk in marriages since 2005 in West Germany. This result may indicate that West Germany has already reached the modern stage, which is characterized by a new gender equilibrium, as expected by the multiple equilibrium approach. While this association has also changed in East Germany, women's full-time employment in East Germany was only relevant for marital disruption in the 1965-1974 and 1975-1984 marriage cohorts. This pattern is in line with H4, which states that the gender equality supported by the family model in East Germany led to an earlier adoption of new family roles. As the family model in East Germany has changed from the dual earner model to the modified breadwinner model, it seems that the new stabilizing marriage equilibrium (modern stage) in (East) Germany either is not gender-equal, or is still in a transition stage, and a new gender equilibrium has not yet consolidated. Our results on domestic task arrangements in marriages also point in that direction, as they show that the division of housework hardly affects marital stability in East and West Germany. Therefore, we cannot provide clear evidence

for a new gender equilibrium in a modern stage in West Germany. We reject our assumptions, which we derived from the theoretical argument that gender equality has a stabilizing effect on marriages formed in the modern stage, that equal arrangements in domestic tasks and arrangements in which the husband contributes more to domestic tasks decrease the risk of divorce. Our results suggest that the associations between domestic tasks and divorce risk have changed in West Germany, and that husbands in the younger marriage cohorts spend more hours on household tasks than husbands in marriages formed between 1990-2004. While these observations are in line with the results from Bellani and Esping-Andersen (2020), we were unable to reproduce the finding that the risk of divorce increases when husbands are engaged in household tasks (Cooke 2006). Nevertheless, our findings regarding the changing role of men and its relevance for marital stability has to be interpreted with caution. First, we could not estimate the interactions of dissimilarity in domestic tasks and marriage cohorts, as the prevalence of men who spend more hours on domestic tasks than their wives is too small. Second, the sample for East Germany was rather small. However, the SOEP data cover a very long time period in Germany, and allow for long-term inner-German comparisons. Additionally, our estimates were rather conservative, as we excluded higher order marriages. Nonetheless, we were still able to provide evidence for the expected reversal in the time trend based on newer theories. This paper adds to the discussion of changing families with our inner-German comparison, as we were able to show that even three decades after German reunification, East-West differences still persist. Future research should take into account that the new stable gender equilibrium may not reflect gender equality, and should include higher order unions in the analysis.

In line with previous research, we were able to provide evidence on the effect of the age at marriage on divorce risk in a historical perspective (Heaton 2002; Lampard 2013). Our empirical models have shown that the reversal of the increasing trend in divorce rates has been driven not by changing gender arrangements in marriages, but by the increase in women's ages at marriage. The increasing mean age at marriage could reflect a diffusion of new family norms. From a historical perspective, premarital decisions that lead to the postponement of marriage seem to bring back marital stability. As this study has shown that the age at marriage is important for understanding the trends in divorce in Germany, it could be fruitful for future research to investigate in more detail how premarital decisions are associated with marital outcomes.

The use of the multiple equilibrium theory helps us in understanding divorce trends, as it is more flexible regarding the development of marital outcomes across time than the new home economics theory. However, the two approaches propose similar determinants of marital stability. Currently, we cannot fully explain divorce trends or provide evidence that men contribute to a return to previous levels of marital stability – at least not through the division of housework.

3.9 References

Allison, Paul. 2014. *Event History and Survival Analysis*. Second edition. Los Angeles: SAGE.

Auspurg, Katrin, and Thomas Hinz. 2011. 'Gruppenvergleiche bei Regressionen mit binären abhängigen Variablen – Probleme und Fehleinschätzungen am Beispiel von Bildungschancen im Kohortenverlauf'. *Zeitschrift für Soziologie* 40(1):62–73.

Becker, Gary S., Elisabeth M. Landes, and Robert T. Michael. 1977. 'An Economic Analysis of Marital Instability'. *Journal of Political Economy* 85(6):1141–87.

Bellani, Daniela, and Gøsta Esping-Andersen. 2020. 'Gendered Time Allocation and Divorce: A Longitudinal Analysis of German and American Couples'. *Family Relations* 69(1):207–26. doi: 10.1111/fare.12405.

BIB, Bundesinstitut für Bevölkerungsforschung. 2019. 'Rohe Ehescheidungsziffer Für West- Und Ostdeutschland, 1950 Bis 2016'. Retrieved 14 July 2019 (https://www.bib.bund.de/Permalink.html?id=10237644)

Boertien, Diederik. 2020. 'The Conceptual and Empirical Challenges of Estimating Trends in Union Stability: Have Unions Become More Stable in Britain?' Pp. 17–36 in *Divorce in Europe*. Vol. 21, *European Studies of Population*, edited by D. Mortelmans. Cham: Springer International Publishing.

Böttcher, Karin. 2006. 'Scheidung in Ost- und Westdeutschland: Der Einfluss der Frauenerwerbstätigkeit auf die Ehestabilität'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 58(4):592–616. doi: 10.1007/s11577-006-0258-1.

Brenke, Karl. 2015. 'Growing Importance of Women in the German Labor Market'. *DIW Economic Bulletin* 5(5):51–61.

Cooke, Lynn Prince. 2006a. '"Doing" Gender in Context: Household Bargaining and the Risk of Divorce in Germany and the United States'. *American Journal of Sociology* 112(2):442–72. doi: 10.1086/506417.

Cooke, Lynn Prince. 2006b. 'Policy, Preferences, and Patriarchy: The Division of Domestic Labor in East Germany, West Germany, and the United States'. *Social Politics: International Studies in Gender, State & Society* 13(1):117–43. doi: 10.1093/sp/jxj005.

Cooke, Lynn Prince. 2007. 'Persistent Policy Effects on the Division of Domestic Tasks in Reunified Germany'. *Journal of Marriage and Family* 69(4):930–50. doi: 10.1111/j.1741-3737.2007.00422.x.

Cooke, Lynn Prince, J. Erola, M. Evertsson, M. Gähler, J. Härkönen, B. Hewitt, M. Jalovaara, M. Y. Kan, T. H. Lyngstad, L. Mencarini, J. F. Mignot, D. Mortelmans, A. R. Poortman, C. Schmitt, and H. Trappe. 2013. 'Labor and Love: Wives' Employment and Divorce Risk in Its Socio-Political Context'. *Social Politics: International Studies in Gender, State & Society* 20(4):482–509. doi: 10.1093/sp/jxt016.

Cooke, Lynn Prince, and V. Gash. 2010. 'Wives' Part-Time Employment and Marital Stability in Great Britain, West Germany and the United States'. *Sociology* 44(6):1091–1108. doi: 10.1177/0038038510381605.

Esping-Andersen, Gøsta, and Francesco C. Billari. 2015. 'Re-Theorizing Family Demographics'. *Population and Development Review* 41(1):1–31. doi: 10.1111/j.1728-4457.2015.00024.x.

Eurostat. 2016. 'Divorces in 100 Marriages, in: Divorce Indicators'. Retrieved 24 July 2016 (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_ndivind&lang=en).

Fahlén, Susanne. 2016. 'Equality at Home - A Question of Career? Housework, Norms, and Policies in a European Comparative Perspective'. *Demographic Research* 35(48):1411–40. doi: 10.4054/DemRes.2016.35.48.

Goldscheider, Frances, Eva Bernhardt, and Trude Lappegård. 2015. 'The Gender Revolution: A Framework for Understanding Changing Family and Demographic Behavior'. *Population and Development Review* 41(2):207–39. doi: 10.1111/j.1728-4457.2015.00045.x.

Goldstein, Joshua R., and Michaela Kreyenfeld. 2011. 'Has East Germany Overtaken West Germany? Recent Trends in Order-Specific Fertility'. *Population and Development Review* 37(3):453–72. doi: 10.1111/j.1728-4457.2011.00430.x.

Grünheid, Evelyn. 2013. 'Ehescheidungen in Deutschland: Entwicklungen Und Hintergründe'. in *BiB Working Paper*. Vol. 1. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.

Grunow, Daniela. 2019. 'Comparative Analyses of Housework and Its Relation to Paid Work: Institutional Contexts and Individual Agency'. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie* 71(1):247–84. doi: 10.1007/s11577-019-00601-1.

Härkönen, Juho, and Jaap Dronkers. 2006. 'Stability and Change in the Educational Gradient of Divorce. A Comparison of Seventeen Countries'. *European Sociological Review* 22(5):501–17. doi: 10.1093/esr/jcl011.

Heaton, Tim B. 2002. 'Factors Contributing to Increasing Marital Stability in the United States'. *Journal of Family Issues* 23(3):392–409. doi: 10.1177/0192513X02023003004.

Kaplan, Amit, and Haya Stier. 2016. 'Political Economy of Family Life: Couple's Earnings, Welfare Regime and Union Dissolution'. *Social Science Research 61*:43–56. doi: 10.1016/j.ssresearch.2016.06.014.

Kennedy, Sheela, and Steven Ruggles. 2014. 'Breaking Up Is Hard to Count: The Rise of Divorce in the United States, 1980–2010'. *Demography* 51(2):587–98. doi: 10.1007/s13524-013-0270-9.

Killewald, Alexandra. 2016. 'Money, Work, and Marital Stability: Assessing Change in the Gendered Determinants of Divorce'. *American Sociological Review* 81(4):696–719. doi: 10.1177/0003122416655340.

Klärner, Andreas. 2015. 'The Low Importance of Marriage in Eastern Germany - Social Norms and the Role of Peoples' Perceptions of the Past'. *Demographic Research* 33(9):239–72. doi: 10.4054/DemRes.2015.33.9.

Kreyenfeld, Michaela, and Esther Geisler. 2006. 'Müttererwerbstätigkeit in Ost- und Westdeutschland'. *Zeitschrift für Familienforschung* 18(3):333–60.

Kühhirt, M. 2012. 'Childbirth and the Long-Term Division of Labour within Couples: How Do Substitution, Bargaining Power, and Norms Affect Parents' Time Allocation in West Germany?' *European Sociological Review* 28(5):565–82. doi: 10.1093/esr/jcr026.

Kulu, Hill. 2014. 'Marriage Duration and Divorce: The Seven-Year Itch or a Lifelong Itch?' *Demography* 51(3):881–93. doi: 10.1007/s13524-013-0278-1.

Lampard, Richard. 2013. 'Age at Marriage and the Risk of Divorce in England and Wales'. *Demographic Research* 29(7):167–202. doi: 10.4054/DemRes.2013.29.7.

Liebig, Stefan, Jürgen Schupp, Jan Goebel, David Richter, Carsten Schröder, Charlotte Bartels, Alexandra Fedorets, Andreas Franken, Marco Giesselmann, Markus Grabka, Jannes Jacobsen, Selin Kara, Peter Krause, Hannes Kröger, Martin Kroh, Maria Metzing, Jana Nebelin, Diana Schacht, Paul Schmelzer, Christian Schmitt, Daniel Schnitzlein, Rainer Siegers, Knut Wenzig, Stefan Zimmermann, and Deutsches Institut Für Wirtschaftsforschung (DIW Berlin). 2019. 'Socio-Economic Panel (SOEP), Data from 1984-2017 Sozio-Oekonomisches Panel (SOEP), Daten Der Jahre 1984-2017'.

Lyngstad, Torkild, and Marika Jalovaara. 2010. 'A Review of the Antecedents of Union Dissolution'. *Demographic Research* 23(10):257–92. doi: 10.4054/DemRes.2010.23.10.

Mencarini, Letizia, and Daniele Vignoli. 2018. 'Employed Women and Marital Union Stability: It Helps When Men Help'. *Journal of Family Issues* 39(5):1348–73. doi: 10.1177/0192513X17710283.

Mood, C. 2010. 'Logistic Regression: Why We Cannot Do What We Think We Can Do, and What We Can Do About It'. *European Sociological Review* 26(1):67–82. doi: 10.1093/esr/jcp006.

Ono, Hiromi. 1999. 'Historical Time and U.S. Marital Dissolution'. *Social Forces* 77(3):969–97.

Özcan, Berkay, and Richard Breen. 2012. 'Marital Instability and Female Labor Supply'. *Annual Review of Sociology* 38(1):463–81. doi: 10.1146/annurev-soc-071811-145457.

Poortman, Anne-Rigt, and Torkild Hovde Lyngstad. 2007. 'Dissolution Risks in First and Higher Order Marital and Cohabiting Unions'. *Social Science Research* 36(4):1431–46. doi: 10.1016/j.ssresearch.2007.02.005.

Schnor, Christine. 2014. 'The Effect of Union Status at First Childbirth on Union Stability: Evidence from Eastern and Western Germany'. *European Journal of Population* 30(2):129–60. doi: 10.1007/s10680-013-9304-7.

Schober, Pia Sophia. 2013. 'Maternal Labor Market Return and Domestic Work after Childbirth in Britain and Germany'. *Community, Work & Family* 16(3):307–26. doi: 10.1080/13668803.2013.820096.

Teachman, Jay. 2010. 'Wives' Economic Resources and Risk of Divorce'. *Journal of Family Issues* 31(10):1305–23. doi: 10.1177/0192513X10370108.

Teachman, Jay D. 2002. 'Stability across Cohorts in Divorce Risk Factors'. *Demography* 39(2):331–51. doi:10.1353/dem.2002.0019

Thornton, Arland, and Willard L. Rodgers. 1987. 'The Influence of Individual and Historical Time on Marital Dissolution'. *Demography* 24(1):1–22. doi: 10.2307/2061505

Trappe, H., M. Pollmann-Schult, and C. Schmitt. 2015. 'The Rise and Decline of the Male Breadwinner Model: Institutional Underpinnings and Future Expectations'. *European Sociological Review* 31(2):230–42. doi: 10.1093/esr/jcv015.

Trappe, Heike, and Katja Köppen. 2014. 'Familienkulturen in Ost- Und Westdeutschland: Zum Gerechtigkeitsempfinden Der Arbeitsteilung Innerhalb Der Partnerschaft'. Pp. 257–97 in *Familie im Fokus der Wissenschaft*, edited by A. Steinbach, M. Henning, and O. Arránz Becker. Wiesbaden: Springer VS.

Vignoli, Daniele, Anna Matysiak, Marta Styrc, and Valentina Tocchioni. 2018. 'The Positive Impact of Women's Employment on Divorce: Context, Selection, or Anticipation?' *Demographic Research* 38:1059–1110. doi: 10.4054/DemRes.2018.38.37.

Wagner, Gert G., Jan Göbel, Peter Krause, Rainer Pischner, and Ingo Sieber. 2008. 'Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)'. *AStA Wirtschafts- und Sozialstatistisches Archiv* 2(4):301–28. doi: 10.1007/s11943-008-0050-y.

Wagner, Michael. 2020. 'On Increasing Divorce Risks'. Pp. 37–61 in *Divorce in Europe*. Vol. 21, *European Studies of Population*, edited by D. Mortelmans. Cham: Springer International Publishing.

Wagner, Michael, Lisa Schmid, and Bernd Weiß. 2015. 'Exploring Increasing Divorce Rates in West Germany: Can We Explain the Iron Law of Increasing Marriage Instability?' *European Sociological Review* 31(2):211–29. doi: 10.1093/esr/jcv014.

Wagner, Michael, and Bernd Weiß. 2003. 'Bilanz der deutschen Scheidungsforschung. Versuch einer Meta-Analyse'. *Zeitschrift für Soziologie* 32(1):29–49.

Zaidi, Batool, and S. Philip Morgan. 2017. 'The Second Demographic Transition Theory: A Review and Appraisal'. *Annual Review of Sociology* 43(1):473–92. doi: 10.1146/annurev-soc-060116-053442.

3.10 Appendix

Table 3.A 1: Distribution of samples by the outcome divorce in the couple-year files (column percentages), West and East Germany.

		West Germany			East Germany		
Variable		**Not divorced**	**Divorced**	**Total**	**Not divorced**	**Divorced**	**Total**
Marriage cohort	1940-1954	14.95	5.19	13.89	16.64	9.12	15.81
	1955-1964	25.17	16.65	24.24	27.72	18.76	26.73
	1965-1974	23.63	22.34	23.49	23.04	19.15	22.61
	1975-1984	15.40	23.56	16.28	18.09	28.85	19.28
	1985-1994	12.65	21.98	13.67	10.01	17.78	10.87
	1995-2004	6.28	9.13	6.59	2.91	5.58	3.21
	2005-2017	1.93	1.14	1.84	1.58	0.77	1.49
Employment	full-time	29.54	43.18	31.03	61.48	68.96	62.30
	part-time	24.53	20.96	24.14	16.54	11.75	16.01
	non-employment	45.93	35.86	44.83	21.99	19.30	21.69
High education	no	79.72	74.48	79.15	68.76	61.82	68.00
	yes	20.28	25.52	20.85	31.24	38.18	32.00
Children	childless	14.47	21.42	15.23	8.59	13.10	9.09
	one	25.13	31.24	25.79	30.60	37.74	31.39
	two	38.23	33.06	37.67	42.89	33.89	41.90
	three or more	22.17	14.27	21.31	17.91	15.27	17.62
Christian denomination	no	18.78	29.84	19.99	59.37	74.03	60.99
	yes	81.22	70.16	80.01	40.63	25.97	39.01
	Total	241,543	29,521	271,064	74,287	9,245	83,532

Source: SOEP (v34), own calculations.

Table 3.A 2: Distribution of employment status, high educational level, and Christian denomination by marriage cohorts of women in first marriages (column percentages), West German sample (couple years) (N=270,794).

West/ Marriage Cohort	1940-1954	1955-1964	1965-1974	1975-1984	1985-1994	1995-2004	2005-2017	Total	Chi2	p
Employment Status										
full-time	25.58	28.72	33.10	33.96	31.52	31.47	42.19	30.98	17,376.73	***
part-time	10.10	17.21	23.95	30.87	34.97	37.75	36.08	24.16		
non-employment	64.32	54.07	42.95	35.17	33.52	30.78	21.73	44.86		
High educ. level										
No	90.90	90.05	82.22	72.43	64.66	57.87	49.11	79.11	21,746.58	***
Yes	9.10	9.95	17.78	27.57	35.34	42.13	50.89	20.89		
Christian denomination										
No	9.23	13.61	21.90	24.18	27.60	28.76	32.41	19.93	7,711.17	***
Yes	90.77	86.39	78.10	75.82	72.40	71.24	67.59	80.07		

Source: SOEP v34, own calculations; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.A 3: Distribution of employment status, high educational level, and Christian denomination by marriage cohorts of women in first marriages (column percentages), East German sample (couple years) (N=83,802).

East/ Marriage Cohort	1940-1954	1955-1964	1965-1974	1975-1984	1985-1994	1995-2004	2005-2017	Total	Chi2	p
Employment Status										
Full-time	57.87	63.67	65.36	68.13	55.68	48.50	45.36	62.37	2,229.51	***
Part-time	12.88	11.96	16.48	16.51	22.18	29.72	30.91	15.96		
Non-employment	29.25	24.38	18.16	15.36	22.14	21.78	23.73	21.67		
High educ. level										
No	90.30	74.65	62.22	56.94	58.51	56.56	47.31	68.17	5,498.28	***
Yes	9.70	25.35	37.78	43.06	41.49	43.44	52.69	31.83		
Christian denomination										
No	42.16	56.83	64.71	69.86	71.05	71.93	71.90	61.04	3,375.56	***
Yes	57.84	43.17	35.29	30.14	28.95	28.07	28.10	38.96		

Source: SOEP v34, own calculations; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.A 4: Mean age at marriage by marriage cohorts of women in first marriages in West and East German samples.

	Age at Marriage, West	Age at Marriage, East
	mean	mean
1940-1954	23.15	22.20
1955-1964	22.59	22.03
1965-1974	22.35	21.80
1975-1984	23.15	22.07
1985-1994	25.14	25.70
1995-2004	28.19	27.52
2005-2017	30.33	30.69
Total	23.56	22.71
N	270,794	83,802

Source: SOEP v34, own calculations

Table 3.A 5: Distribution of dissimilarity in domestic work by marriage cohorts of women in first marriages in West and East German samples (column percentages).

	1990-2004	2005-2017	Total	Chi2	p
West					
Wife more hours	83.03	65.51	80.49	517.39	***
Equal hours	12.96	29.16	15.31		
Husband more hours	4.01	5.33	4.20		
N	16,690	2,833	19,523		
East					
Wife more hours	74.63	60.07	71.97	72.25	***
Equal hours	19.39	31.67	21.64		
Husband more hours	5.98	8.25	6.39		
N	3,682	824	4,506		

Source: SOEP v34, own calculations; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.A 6: Mean of domestic work (hours/day) of wife and husband by marriage cohorts of women in first marriages and their husbands in East and West German samples.

	Domestic work (hours/day) of wife, West	Domestic work (hours/day) of husband, West	Domestic work (hours/day) of wife, East	Domestic work (hours/day) of husband, East
	Mean	Mean	Mean	Mean
1990-2004	2.97	0.69	2.51	0.82
2005-2017	2.16	0.83	1.97	0.96
Total	2.85	0.71	2.41	0.84
N	19,523	19,523	4,506	4,506

Source: SOEP v34, own calculations.

Table 3.A 7: Distribution of women in first marriages by the outcome divorce in person-format (row percentages), West and East Germany.

	West					East				
Marriage Cohort	Not divorced		Divorced		Total	Not divorced		Divorced		Total
	n	%	n	%	n	n	%	n	%	n
1940-1954	962	91.27	92	8.73	1,054	334	85.2	58	14.8	392
1955-1964	1,560	84.74	281	15.26	1,841	517	82.59	109	17.41	626
1965-1974	1,568	77.93	444	22.07	2,012	453	74.51	155	25.49	608
1975-1984	1,300	70.61	541	29.39	1,841	430	66.67	215	33.33	645
1985-1994	1,534	69.6	670	30.4	2,204	393	69.07	176	30.93	569
1995-2004	1,234	75.52	400	24.48	1,634	174	72.5	66	27.5	240
2005-2017	834	91.15	81	8.85	915	226	90.76	23	9.24	249
Total	8,992	78.18	2,509	21.82	11,501	2,527	75.91	802	24.09	3,329

Source: SOEP v34, own calculations.

Table 3.A 8: Discrete-time event history models of divorce of women in first marriages and their husbands in West and East Germany since 1990, also including marriages formed before 1990.

	Model A3.1 West,		Model A3.1 East	
	AME	SE	AME	SE
Marriage duration (years)	-0.001***	0.000	-0.001**	0.000
Log (marriage duration)	0.004**	0.001	0.002	0.002
Marriage cohort				
1940-1974	-0.002	0.002	-0.009**	0.003
1975-1989	0.000	0.001	-0.005	0.002
1990-2004	Ref.		Ref.	
2005-2017	-0.003**	0.001	-0.003	0.003
Dissimilarity in domestic work				
Wife more hours	-0.001	0.001	0.000	0.002
Equal hours	Ref.		Ref.	
Husband more hours	-0.001	0.002	0.003	0.003
Employment status wife				
Full-time	Ref.		Ref.	
Part-time	-0.000	0.001	-0.004**	0.001
Non-employment	-0.004***	0.001	-0.002	0.002
Employment status wife				
Full-time	Ref.		Ref.	
Part-time	0.002	0.003	0.013	0.008
Non-employment	0.002	0.002	0.005	0.003
High educational level wife (yes)	0.000	0.001	0.000	0.001
High educational level husband (yes)	-0.002*	0.001	-0.002	0.001
Standardized values of age at marriage	-0.001**	0.000	-0.003***	0.001
Childless	-0.001	0.001	-0.001	0.002
One child	Ref.		Ref.	
Two children	-0.001	0.001	-0.002	0.002
Three or more children	-0.001	0.001	0.001	0.002
N	54,562		19,582	
BIC	4,882.31		1,735.50	

Source: SOEP v34, own calculations; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.A 9: Discrete-time event history models of divorce (AME) of women in first marriages and their husbands in West and East Germany since 1990, also including marriages formed before 1990.

	Model A3.2 West		Model A3.2 East	
	AME	SE	AME	SE
Marriage duration (years)	-0.001***	0.000	-0.001**	0.000
Log (marriage duration)	0.004**	0.001	0.002	0.002
Marriage cohort				
1940-1974	-0.002	0.002	-0.009**	0.003
1975-1989	0.001	0.001	-0.005	0.002
1990-2004	Ref.		Ref.	
2005-2017	-0.003**	0.001	-0.003	0.003
Domestic hours wife	-0.001*	0.000	0.000	0.000
Domestic hours husband	0.000	0.000	0.000	0.001
Employment Status wife				
Full-time	Ref.		Ref.	
Part-time	0.000	0.001	-0.004**	0.001
non-employment	-0.003**	0.001	-0.002	0.002
Employment status husband				
Full-time	Ref.		Ref.	
Part-time	0.002	0.003	0.013	0.008
Non-employment	0.002	0.002	0.005	0.004
High educational level wife (yes)	0.000	0.001	0.000	0.001
High educational level husband (yes)	-0.002*	0.001	-0.002	0.001
Standardized values of age at marriage	-0.002**	0.000	-0.003***	0.001
Childless	-0.001	0.001	-0.001	0.002
One child	Ref.		Ref.	
Two children	-0.001	0.001	-0.002	0.002
Three or more children	-0.000	0.001	0.001	0.002
N	54,562		19,582	
BIC	4,877.59		1,736.43	

Source: SOEP v34, own calculations. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

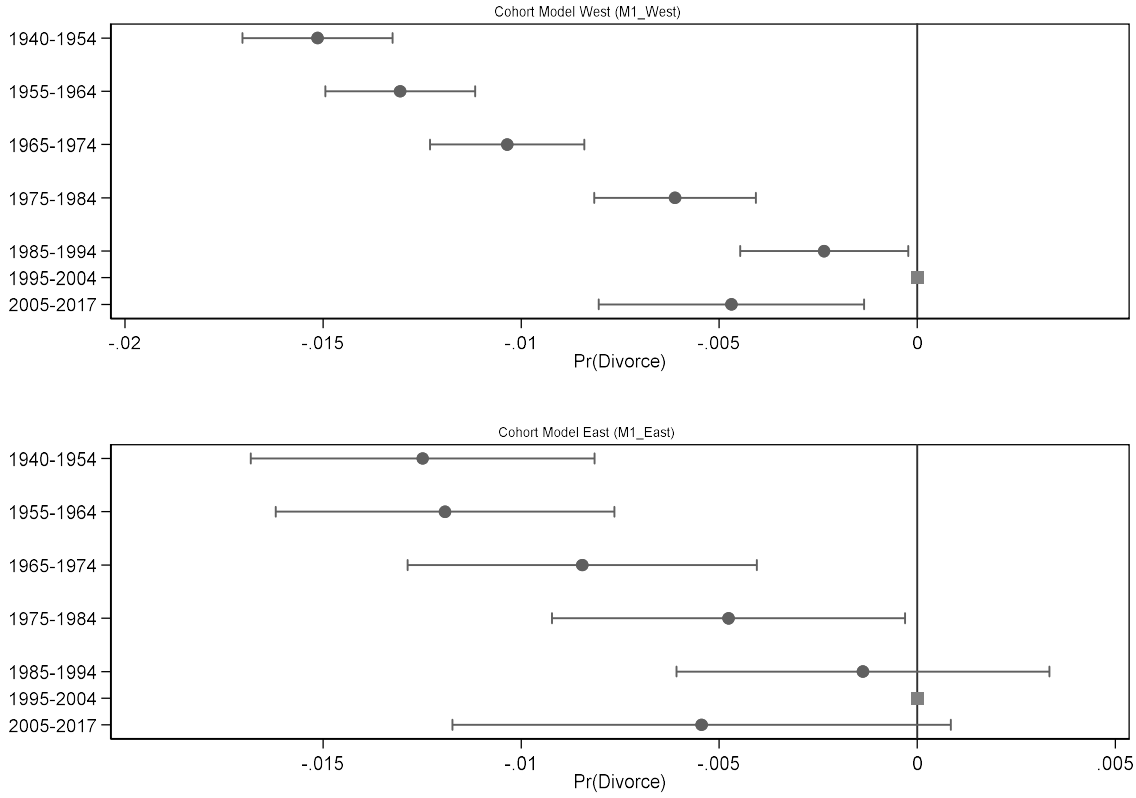

Figure 3.A 1:Average marginal effects of divorce by marriage cohorts in West and East Germany, graphical illustration of Model M1_West and M1_East, Table 3-2. Source: SOEP v34, own calculations.

Chapter 4 Family trajectories after marital separation in Germany: Patterns and antecedents

Co-authored by Sergi Vidal

Abstract

Marital separation has been an important driver of the diversification of contemporary family arrangements; yet the diversity and the nature of family patterns after marital separation in Germany remain understudied. Adopting a trajectory-based approach, we seek to answer two questions: First, what are the typical family trajectories after marital separation? Second, what are the separation-related circumstances that lead to specific family trajectories after marital separation?

We drew a sample of 1,144 individuals who were separated from their first marriage partner, and who participated in the German Socio-Economic Panel between 1991 and 2010. We then followed the trajectories of combined partnership and parenthood episodes for these respondents over a period of 60 months after their marital separation. To gather evidence of diversity in post-marital trajectories, we employed sequence and cluster analysis. To examine the antecedents of post-marital trajectories, we employed discrete-time event history analysis for multinomial outcomes, using all first-time married respondents as the at-risk population and typical predictors of marital separation.

Our results reveal that the majority of separated individuals spent this period in single living arrangements combined with some episodes of non-cohabiting relationships, and either with (particularly women) or without (particularly men) children from their first marital union. During this early post-marital period, relatively small shares of these respondents remarried or had a post-marital childbirth. We also find that certain post-marital trajectories had specific demographic or socioeconomic profiles. For example, we show that economic resources were more likely to determine the family roles ex-spouses assumed after separation among women than among men. Our study sheds more light on the development of the post-marital life course, and thus on the consequences of marital separation.

4.1 Introduction

In virtually all post-industrial societies, divorce rates have increased over the last four decades. In most OECD countries, the crude divorce rate doubled between the 1970s and the early 2010s (OECD, 2016).[20] As a result, a diverse family landscape emerged in contemporary societies that includes rising shares of post-marital single and lone parent households, as well as step-families and blended families. Because the increasing prevalence of post-marital families has demographic and socioeconomic implications, the study of how the lives of these families evolve is gaining in popularity. First, marital separation *per se* marks the start of a new chapter in an individual's family life. The associated dynamics of repartnering, remarriage, or childbearing in higher-order unions indicate that today, many family transitions are occurring in the post-marital stage. As separation and subsequent family processes do not follow normatively grounded scripts, the increasing prevalence of post-marital families in turn contributes to an increase in the diversity of (non-*standard*) family life courses. When studying family demography, it is important to understand the extent to which levels of union stability and fertility vary between first marriages and subsequent unions. Second, marital separation has traditionally had important implications for the accumulation of disadvantage over the life course, and the reproduction of disadvantage across generations. However, there is evidence that post-marital family life courses are also relevant for life outcomes, particularly in contexts in which marital separation is no longer residual. Research has shown that while adults and children in a traditional intact family continue to be the most advantaged, repartnering and remarriage can buffer some of the negative consequences of marital separation (Dewilde & Uunk, 2008; Jansen, Mortelmans, & Snoeckx, 2009).

While the relevance of research on post-marital family outcomes is clear, the depth and the diversity of family paths after marital separation are not yet well understood. The existing evidence on post-marital family outcomes is scattered, as studies have often separately examined seemingly interdependent transitions such as repartnering and remarriage, or processes like childbearing with multiple partners or within a step-family context. Additionally, the bulk of the existing research has been limited to the study of single family outcomes, and has seldom addressed the combination of outcomes from these other post-

[20] While one in five marriages in East Germany and one in seven marriages in West Germany ended in divorce in 1970 (Grünheid, 2013), by 2015 one in three marriages were ending in divorce in both parts of Germany (BIB, 2016).

marital family arrangements – even though doing so could shed more light on patterns of stability and change in post-marital family lives.

To close some gaps in knowledge, we have decided to study a comprehensive sequence of family transitions that follow marital separation. We have two research questions: *First, what are the typical family trajectories after marital separation? Second, what are the marital circumstances that lead to specific family trajectories after marital separation?* We derive two research objectives from this research questions. First, we examine the specific patterns of post-marital family trajectories during the early separation period, combining partnership and parenthood episodes. The use of this approach contributes new knowledge about patterns of continuity and change in family lives after separation. We conduct a thorough analysis of post-marital partnership life by considering partnership types with varying levels of institutionalization: non-cohabitation relationships, unmarried cohabitation, and remarriage. We also consider the presence of children from the previous marriage as well as the timing of post-marital childbearing. Second, we examine how traditional determinants of marital separation are associated with typical post-marital family trajectories to shed more light on the nature of each specific post-marital pattern. Investigating the continuity of separation antecedents over individuals' post-separation life courses can provide us with new knowledge about the development of post-marital family life.

The empirical analysis uses rich longitudinal data of a sample of individuals who were newly separated from their first marriage, and who participated in the German Socio-Economic Panel between 1991 and 2010. To gather evidence of the diversity in post-marital trajectories, we employ sequence analysis methods and cluster analysis. To examine the nature of post-marital trajectories, we employ for the first time discrete-time event history analysis of the time to marital separation with the clusters of sequences as multinomial outcomes and typical predictors of marital separation. As event history models also consider censoring (i.e., individuals who did not separate by the end of the observation period), we are able to use all first-time married respondents in the study period as the at-risk population. This approach enables us to obtain better estimates of separation-related determinants of the likelihood of following a specific post-divorce trajectory. Our findings reveal that there was diversity in the pathways and the nature of the combined partnership and parenthood life courses observed during the 60 months after marital separation. In our discussion of the results, we explore the recent changes in family dynamics and the context of divorce in Germany.

4.2 Background

4.2.1 Previous literature

The recent literatures that link marital separation to the increasing complexity of family relationships and living arrangements inform our research. These lines of enquiry can be divided into research that focuses on repartnering, and research that broadly investigates post-marital fertility and step-families.

Research on *repartnering behavior* after marital separation has examined the prevalence, stability, and level of institutionalization of post-marital unions, as well as the determinants of repartnering. A dominant theoretical framework in the literature explains repartnering as stemming from the combination of a range of factors, including whether an individual has a further need for a partner, is attractiveness as a partner, and opportunities to mate (Becker, Landes, & Michael, 1977; de Graaf & Kalmijn, 2003; Goldscheider, Kaufman, & Sassler, 2009). In general, the need for a partner is related to the benefits associated with being in a couple as opposed to being single, such as having an emotional relationship and a gratifying family life, as well as having access to the additional contributions needed to ensure financial wellbeing or to attain parenthood. An individual's attractiveness as a potential partner is often based on the personal qualities and resources s/he can offer. Finally, an individual's opportunities to mate are contingent on his/her exposure to and the overall effectiveness of the partner market. A general empirical finding is that repartnering is becoming a widespread pattern in contexts where divorce is common, as in such societies there is broader societal approval of repartnering and a larger pool of *singles* for divorced people to match with (Beaujouan, 2012). There is also general agreement in the literature about the socio-demographic profiles of individuals who are most or least likely to repartner soon after separation. Increasing age at marital separation, being a parent with physical custody, and having young children are negatively associated with rapid repartnering after marital separation, particularly among women (de Jong Gierveld, 2004; Gałęzewska, Perelli-Harris, & Berrington, 2017; Jaschinski, 2011; Schimmele & Wu, 2016). As marital separations after a short marital duration tend to occur at younger ages than separations after a longer duration, the *opportunity* to repartner is simply greater among people who were married for a shorter period of time. Additionally, many people who divorce at higher ages have children from their first marital union, which also depresses their chances of early repartnering. This is more likely to be the case for women, who frequently have physical custody of their children after separation. Because of their childcare responsibilities, or because they are reluctant to introduce

a new paternal figure into the household, at least while their children are young, divorced mothers are less likely to repartner than divorced fathers. In addition, women with care obligations are often deemed unattractive in partner markets (de Graaf & Kalmijn, 2003; Ivanova, Kalmijn, & Uunk, 2013; Pasteels & Mortelmans, 2015). However, having care obligations does not block a single mother's access to every partner market. For example, engaging in activities with children can provide opportunities to mate with other single parents (de Graaf & Kalmijn, 2003; Vanassche, Corijn, Matthijs, & Swicegood, 2015). In contrast, separated fathers are likely to repartner earlier, not only because they are less likely to have custody of their children, but because being a father tends to signal that a man has the potential to be a good father (Wu and Schimmele 2005). Compared to women, men repartner more frequently (e.g., de Jong Gierveld, 2004; Ivanova et al., 2013; Jansen et al., 2009) and earlier after separation (Ivanova et al., 2013).

When we look at recent historical patterns of family formation, we see that the age at first marriage is rising, and that the prevalence of never-married and divorced individuals at higher ages is increasing among the younger cohorts. Change in post-marital behavior is affecting women in particular, who are increasingly likely to repartner (de Jong Gierveld, 2004; Ivanova et al., 2013). However, across recent cohorts new relationships after separation are becoming less institutionalized, as rates of remarriage are now lower than rates of cohabitation (de Jong Gierveld, 2004).

According to specialization theory (Becker et al., 1977), the education and employment of men has traditionally favored repartnering, while the education and employment of women has traditionally been at odds with repartnering. As women's resources are increasingly equal to those of men, the model in which each partner specializes in either paid or unpaid work is becoming inefficient. It also appears that when women have their own resources they are not only less dependent on men; they are less likely to want to have children (Hakim, 2002). Yet this association seems to weaken as societies become more egalitarian; i.e., as societies undergo structural and normative transitions that promote the formation and stability of couples in which the partners have relatively similar socioeconomic characteristics (Kalmijn, 1998). The results of recent research on the role of socioeconomic determinants of repartnering among men and women across countries have, however, been mixed. While positive correlations between education and repartnering have been found for women and men in Germany (Jaschinski, 2011), this association has been shown to be negative for women in other contexts (de Jong Gierveld, 2004; Schnor, Pasteels, & Van Bavel, 2017; Sweeney, 2010). A study that

looked at the association between current personal income and repartnering found a positive correlation for men, but not for women (Pasteels & Mortelmans, 2017). In other words, a male divorcee is likely to be seen as an attractive partner because of his socioeconomic achievements; whereas a female divorcee is less likely to be seen as an attractive partner because of her greater economic needs.

Our aim is to examine the trajectories after marital separation and the turbulence of post-marital life, rather than to simply track transitions to new relationships and further childbearing. Thus, it is essential for our analysis that we understand the stability of states after separation. Research on the *stability of post-marital unions* has highlighted that, on average, higher-order marriages are shorter than first-order marriages. It has been shown that the stability of post-marital unions increases with age at union formation, decreases with childbearing in previous unions, and is unrelated to the time since marital separation (Teachman, 2008; Vanassche, Corijn, Matthijs, et al., 2015; Wolfinger, 2007). While some studies have indicated that these differences between first- and higher-order marriages remain after controlling for selection into marital separation (Kulu, 2014), others have suggested that selection processes are the main drivers of the lower levels of stability in higher-order unions. The evidence on selection is based on the finding that the stability of first- and higher-order unions does not differ when both cohabitation and marriage are considered as post-marital relationship types (Beaujouan, 2016), or after controlling for premarital characteristics (Jensen, Shafer, Guo, & Larson, 2017). Only a few studies have looked at the wider spectrum of post-marital relationship types, including unmarried cohabitation and relationships not based on cohabitation. These studies found that the institutionalization of post-marital unions follows a clear-cut socio-demographic gradient. It has, for example, been shown that age at marital separation is negatively related with the institutionalization of post-marital relationships (de Jong Gierveld, 2004); and that younger divorcees are more likely to opt for more institutionalized relationship forms such as cohabitation and remarriage, while older divorcees are more likely to opt for less institutionalized non-cohabiting relationships. Substantive gender differences have also been also reported. For example, men have been found to be more likely than women to be in living apart together and unmarried relationships (Pasteels & Mortelmans, 2015).

Two sets of separate but related literatures have looked at *childbearing* in couples in which one or both of the partners had prior experience of relationship breakdown. These research strands have recently gained relevance given that in the current context of increased marital disruption, a question that frequently arises is whether childbearing in post-marital unions compensates

for lost births from disrupted first marital unions (Thomson, Winkler-Dworak, Spielauer, & Prskawetz, 2012). The first strand of this literature has examined the trend toward individuals having childbearing episodes in several of the multiple unions they form over the life course (Carlson & Furstenberg, 2006; Guzzo & Furstenberg, 2007; Thomson, Lappegård, Carlson, Evans, & Gray, 2014). In many but not in all countries, fertility with multiple partners has been found to be associated for both men and women with having an early first birth, often outside of marriage; and a lower level of education (Kreyenfeld et al., 2017; Thomson et al., 2014). The second strand of literature has focused on fertility among couples who are also step- or blended families in which one or both of the partners have children from prior relationships (Heintz-Martin, Le Bourdais, & Hamplová, 2014; Holland & Thomson, 2011; Li, 2006).

While focused on slightly different subpopulations, both strands of literature have emphasized the importance of having a new partner, and of the existence or presence of *children from prior relationships*. Repartnering has an important mediating role for post-marital childbearing since a (relatively) stable partnership is still the preferred site for childbearing (Van Bavel, Jansen, & Wijckmans, 2012). Although lone parenthood is now common, it is less likely to be driven by childbearing among unpartnered individuals than by the decision of individuals to remain unpartnered after a marital dissolution. The literature offers several explanations for post-marital childbearing (Prskawetz, Vikat, Philipov, & Engelhardt, 2003; Thomson et al., 2002; Vanassche, Corijn, Matthijs, et al., 2015; Vikat, Thomson, & Prskawetz, 2004). First, among childless individuals, the birth of a child confers the status of parenthood in a new union formed after a marital separation. Second, having a child in the context of a new relationship – and particularly when the partners have children from prior relationships – may help to ensure the social confirmation of the union. Third, post-marital childbearing can enable individuals with a single child from a previous union to provide the child with a sibling. Fourth, compared to parents who do not live with their children, parents with physical custody of their children from a previous union have greater childbearing responsibilities, and are thus less likely to have additional children. Several studies have found that despite their heterogeneity, step- and blended families display higher-than-average fertility rates (Guzzo, 2017; Henz & Thomson, 2005; Holland & Thomson, 2011; Meggiolaro & Ongaro, 2010). In many of these families, childbearing episodes tend to occur independently of whether the partners have children from previous unions. This pattern can be seen as evidence of the value common children have for (new) unions. However, research has also suggested that under certain conditions, having children from a previous union could depress childbearing. In particular, it has been shown that

childbearing episodes become less frequent as the number of pre-union children present in the household increases – likely because the partners already have heavy expenses and responsibilities associated with childrearing (Prskawetz et al., 2003; Vikat et al., 2004). This association tends to be stronger for women than for men, and it is not conditional on the tendency among women to take on most of the childrearing responsibilities for their children born from a previous union. Indeed, some studies have found that the presence in the household of a man's children from a previous union not only does not negatively affect the likelihood of childbearing in the man's post-marital union; it can increase the chances (Buber & Prskawetz, 2000; Thomson, 1997). Again, this effect is often explained as resulting from a man signaling that he is a good father by caring for his pre-union children.

4.2.2 The present study

To frame our study, we draw from the conceptual toolbox of the life course perspective. We assume that individuals follow sequences of purposive transitions in interdependent life domains, which are expected to enhance subjective well-being over the course of life (Huinink & Kohli, 2014). Having a fulfilling partnership and having children are deemed primary and inter-related life goals that contribute to the generation of subjective well-being (Buhr & Huinink, 2014). Parenthood and family formation are often characterized as primary life goals. In addition, raising children contributes to the production of subjective well-being, as parenthood confers social status on adults (Astone, Nathanson, Schoen, & Kim, 1999), and the parent-child relationship can be a source of affection, stimulation, and social gratification (Tomasello 2009). Having a satisfactory life with a partner can also be considered a primary life goal, as well as an intermediate goal for childbearing due to prevailing norms about the appropriateness of childbearing in the context of a stable union (Van Bavel et al., 2012). When an individual does not achieve subjective well-being in the context of a given union, s/he may consider dissolving the union, which would provide him/her with the opportunity to form a new union and start a new family.

In this study, we use a *holistic* approach to life course research. This approach is becoming increasingly popular in quantitative family research (Brückner & Mayer, 2005; Van Winkle, 2018; Widmer & Ritschard, 2009). The object of this study is to determine the *trajectory*, or the sequence and duration of the family roles and statuses an individual has over the course of life. In family research, the analysis of role trajectories is more comprehensive than the analysis of single role transitions, as the timing and order of the normative family events over childbearing life spans is considered in the former, but not the latter, case. In previous studies,

the *holistic* life course approach was used to empirically assess the prevalence of "standard" patterns of family formation and development within a cultural and institutional context. It has also been used to identify the alternative patterns increasingly adopted by younger generations that depart from a *standard* pattern. We consider the analysis of trajectories helpful in our research, as it enables us to draw conclusions about the patterns in the prevalence and stability of post-marital family arrangements. Unlike the general family studies, our study focuses on a subpopulation who have already experienced a *turning point* in the family trajectory. From a normative viewpoint, marital separation is not supported, and the family trajectories that follow are expected to be more flexible. Against this backdrop, our aim is to identify a set of empirically consistent patterns in post-marital family trajectories, and the antecedents of these patterns. We consider two research objectives, each of which is related to a specific research question.

RQ1: *What are the typical family trajectories after marital separation?*

In the first stage of the research, as Vanassche et al. (2015) and Pasteels and Mortelmans (2015) did for the Flanders context, we examine sequences – i.e., an operational construct for trajectories – of family states that follow a marital separation. By restricting our analysis to those individuals who experienced marital separation in the identification of patterns, our study examines the diversity of the succession of post-marital life arrangements in more depth. We assess the existence of patterns in the succession and the duration of the family roles of men and women during the years immediately following a definitive separation that may precede the divorce of the first marital union. Like Vanassche et al. (2015), we address the relevant interdependencies between the partnership and the childbearing processes in post-marital life courses by combining partnership and family living arrangements in a single trajectory. Regarding partnership episodes, we examine unpartnered and repartnered stages as well as the level of institutionalization of the new partnerships. The level of institutionalization of the post-marital relationship has been shown to affect the role of pre-union children in the household and the likelihood of subsequent childbearing episodes. We consider stages of remarriage, cohabitation, and, as a novelty in this literature, living apart together (LAT) partnerships. LATs are the least institutionalized of all of the relationship forms considered, and appear to have become increasingly relevant in recent temporal contexts in which numbers of lone parent households are rising. When examining the living arrangements of each family and their post-marital childbearing episodes, we consider whether the children in the family belonged to the

household prior to the marital separation. This information is theoretically relevant, since the presence of children in the household affects the formation and stability of new unions.

RQ2: *What are the marital circumstances that lead to specific family trajectories after marital separation?*

In the second stage of the research, we address a sophisticated description of the nature of post-marital family life courses. Our empirical analysis builds on the idea that the circumstances and the contexts in which marital separations occur are related to particular types of post-marital trajectories. By making this assumption, we acknowledge the ample research-based evidence on the relevance of observed and unobserved variation in marital separation for repartnering and childbearing episodes (e.g., Lillard & Waite, 1993; Steele, Kallis, Goldstein, & Joshi, 2005). Contributing evidence on the separation-related factors of post-marital trajectories is indeed a relevant preliminary step to addressing endemic selection processes in the associations between childbearing and partnership dynamics.

In our analysis, we draw upon data on the conditions of marital separation the (abovementioned) literature has highlighted as being relevant antecedents of post-marital family transitions. These conditions include socio-demographic factors (i.e., duration of marriage, age at marriage, marriage cohort, parenthood status, and age of children) as well as spousal resources (i.e., educational level and employment status).[21] We assess differential correlations between these factors and the likelihood of following each of the patterns identified in the previous research stage (RQ1). We use the never (or not yet) separated as a comparison group in the analysis. This approach enables us to obtain better estimates as we adjust for

[21] We note that other micro- and higher-level predictors outside of the scope of this research are also relevant for explaining marital instability and post-marital transitions in other study contexts. Some particulars of the German regulatory framework affect the timing of post-marital family events, as remarriage is not possible before the lengthy process of divorce is finalized. As a consequence, the timing of subsequent childbearing may also be delayed. In addition, we expect to find a greater emphasis on gender differences in post-marital family trajectories. In particular, residential custody and alimony arrangements may constrain subsequent repartnering and childbearing among separated mothers. Compared with separated fathers, separated mothers are expected to have a lower propensity to start a cohabitation-based relationship, and thus to begin post-marital childbearing, because they have most of the care responsibilities for the children from their first marriage, and are the main recipients of alimony payments. Separated mothers with young children who were less attached to the labor market while married are especially likely to be deterred from having additional children.

differential factor compositions among those respondents who did not select into (earlier) separations. From previous research and theoretical arguments, we derive a set of hypotheses concerning the post-marital partnership and parenthood patterns. We expect to find that the divorcees in the younger marriage cohorts tended to enter new, but less institutionalized partnerships, as the current post-divorce partner market is offering men and women more opportunities to repartner, while the economic deprivation and stigma associated with remaining unpartnered has diminished (H1). In contrast, we expect to find that those divorcees with a lower age at marriage were following more institutionalized partnership trajectories, as their unions ended earlier; i.e., at the relatively young ages when marrying is considered socially acceptable (H2). As resources are closely related to the need for and the attractiveness of a partner, we expect to find that having greater spousal resources led to higher rates of repartnering, but in less institutionalized partnership trajectories (H3). The presence of children may have gendered effects on a divorcee's attractiveness as a partner and interest in or need for a partner: We expect to find that mothers, who usually have the physical custody of children, were following lone parent trajectories (coresiding with children from prior union); while fathers were following family trajectories with new partners, and were not coresiding with children from a prior union (H4). The resulting empirical associations between these antecedents and the specific post-marital trajectories will be discussed and compared with our expectations and the findings from the previously presented literature.

Marital separation and marital divorce

We note that the literature displays some duality – and inconsistency – in its framing of the start of the post-marital trajectory after either marital separation or marital divorce. In this study, we assume that the post-marital trajectory starts after separation – i.e., when one or both spouses leave the marital home – independently of whether or when the divorce is finalized. We justify our decision in part on the wide variation in divorce laws across and within countries, which suggests that separation might be more comparable than divorce across studies. In addition, because not all separations end in divorce (at least not immediately), focusing on divorce only could lead to an under-reporting of post-marital unpartnered stages in the short run. The study of post-marital trajectories starting after divorce could, however, also be advantageous given that family behavior is more clearly regulated from this point onward. After they divorce, the ex-spouses can legally start a new traditional family project, and they are less likely to reconcile. Furthermore, the legal issues surrounding child custody and financial obligations are not clearly regulated during the pre-divorce separation period.

However, cross-national research on repartnering outcomes after marital break-ups has suggested that there are no substantive differences between marital separation and marital divorce (Gałęzewska et al., 2017). As we are interested in understanding the longitudinal, sequential process of marriage dissolution, we have chosen to start our investigation at the point of separation rather than divorce, which allows us to monitor post-marital relationships and childbearing episodes that started before the divorce. Finally, we note that separated spouses may reconcile, and this is more likely to occur before they have filed for divorce. To avoid further study complexity, we only assume that the period of separation begins at the last point in time the couple were observed cohabiting.

4.3 Data and Method

4.3.1 Dataset

For the empirical analysis, we use longitudinal data from the German Socio-Economic Panel (SOEP; (Schupp et al., 2017), which is a large, ongoing, representative household panel study that has been conducted since 1984 in West Germany and since 1990 in East Germany (Wagner, Göbel, Krause, Pischner, & Sieber, 2008). The dataset fits our study design because (i) it follows individuals after separation and divorce, even for non-original sample respondents; (ii) it contains detailed partnership and (biological and adoptive) fertility histories, including information pre-dating the study, for all survey respondents; and (iii) it contains information on relevant predictors of marital separation, including the responses of both (ex-) spouses if they were married at the time of at least one interview.

4.3.2 Sample

For the analysis of typical patterns in post-marital family trajectories (RQ1), we use post-marital observations from a sample of adult-age, first-time married respondents who separated during the study observation window (N=2,517). Additionally, we only consider individuals who provided information on key variables for the construction of sequences, and without gaps during the initial 60 months following marital separation.[22]

[22] As our focus is on definitive separations, we exclude spells of separation that ended in reconciliation. Moreover, we only examine sequence information for the period after the spouses ended marital cohabitation for the last time.

After exclusions, our analytical sample consists of 1,144 individuals.[23] The socio-demographic profile of the divorcees in our sample is as follows: 54% were female, their median age at marital separation was 39 years, 25% were living in Eastern Germany, and 18% had a direct or indirect migration background.

For the analysis of the separation-related determinants of post-marital living arrangement trajectories (RQ2), we use observations of the aforementioned sample of separated individuals. To obtain better estimates of the antecedents, we also include a comparison group composed of individuals with censored information; i.e., respondents with shorter post-marital trajectories or whose marital separations are not observed in the study window. For the comparison group, we draw married observations of all of the adult-age, first-time married respondents (i) who did not definitively separate from their first marriage until the last observation within the observation period; (ii) whose spouse died; or (iii) who separated, but the observation of the post-marital trajectory is censored before 60 months following the marital separation. After excluding individual observations with missing information in key model variables, the sample for the regression analysis consists of 236,562 observations from 24,292 individuals.

4.3.3 Empirical strategy

Diversity of post-marital life courses (RQ 1)

We define post-marital trajectories as sequences of monthly states starting at the month when the marital separation occurred and over the subsequent 60 months. Our state sequences combine the partnership states (i.e., unpartnered, living apart together (LAT), cohabitation, remarriage) with the presence states of the respondent's own (biological and adoptive) children (i.e., no children, children born or adopted before marital separation, children born or adopted after marital separation). Combining the states across these family dimensions recognizes the local interdependence of the two family dimensions; i.e., that the states develop jointly and affect each other at any given point in time. Our decision to analyze the partnership states and the presence states of the respondent's own children is based not only on the aforementioned theoretical insights, but on our desire to include in the analysis empirical group permutations of sufficient size to allow for the meaningful interpretation of patterns (i.e., all sequence states

[23] As around one in seven respondents did not provide the date of marital separation, the divorce date is used instead. We excluded 720 respondents because they had gaps in or none of the information needed to build post-marital sequences; and 1,468 respondents because their post-marital trajectories were observed for less than 60 months. An analysis that used shorter post-marital trajectories did not lead to substantively different results in terms of the identification of patterns, but it did limit the number of cases assigned to patterns that include repartnering and post-marital childbearing.

at least account for 3% of the state space). Furthermore, we decided to focus on children's presence instead of parenthood, as previous research has shown that the former is more relevant than the latter to repartnering. Among other insights, we find that childbearing in post-marital relationships often occurs in the context of a cohabitation-based (married or not) relationship, and in which the partners' children from the previous union are also present. This result limits the number of categories we are able generate. First, in cases in which the respondents were unpartnered or in relationships not based in coresidence, we do not distinguish between pre- and post-marital children. Second, in cases in which the respondents were in post-marital unions based on cohabitation or marriage, we merge into a single category the observations of the respondents' own children who were present in the household before and after the marriage dissolved. After these considerations are taken into account, our sequence alphabet consists of ten differentiated states: "Unpartnered, no children;" "Unpartnered, with children;" "LAT, no children;" "LAT, with children;" "Cohabiting, no children," "Cohabiting, with previous children," "Cohabiting, with further children;" "Married, no children;" "Married, with previous children;" and "Married, with further children."

To assess the level of heterogeneity in post-marital family trajectories, we apply sequence analysis methods in the following two steps. First, we assess the average time spent in each state using sequence distribution visualizations by gender. Then, we establish patterns based on the similarities across the respondents' sequences. To this end, we compare each respondent's sequence to the sequences of all of the other sample respondents using a Dynamic Hamming Distance algorithm. The algorithm deploys empirical transition rates calculated from the sample to compare the sequences. In the analysis, two sequences with the same changes in family roles occurring at about the same time are considered more similar. An analysis using alternative algorithms that prioritize sequence order over the timing of transitions yielded similar results.[24]

We then apply cluster analysis to the resulting matrix of distances to generate sequence clusters that represent typical post-marital trajectories. We use the Ward method for the clustering because it generates homogeneous clusters of relatively equal sizes. The cluster solution was chosen based on empirical fit as well as theoretical criteria. As the clustering of sequences across genders or gender-specific sequences has been shown to be equivalent (with minor

[24] We obtained the same cluster solutions (but slightly different cluster sizes) using distances calculated with alternative algorithms such as Optimal Matching (substitution costs of two and indel costs of one) or Longest Common Subsequence.

differences explained in the results section), we have chosen to pool men and women in the analysis. The description of patterns in post-marital trajectories is supported with cluster sequence visualizations and tabular information. Diversity in post-marital trajectories will be discussed based on the number and the compositional features of the clusters. These clusters reflect socio-demographic profiles based on the cluster average of gender, region, migration background, marriage duration, divorce year, and age at divorce.

We also use two composite measures of within-sequence heterogeneity to assess how clusters vary in terms of average occurrence, duration, and timing of family states in post-marital sequences. The first of these measures is a *complexity* index (Gabadinho, Ritschard, Studer, & Müller, 2011), in which higher values indicate an increasing number of episodes and family states within the sequences. The second measure is a turbulence index (Elzinga & Liefbroer, 2007), in which higher values indicate an increasing number of episodes and family states within sequences, as well as increases in the length of time spent in each state.

In addition, we assess the statistical fit of the cluster using average silhouette widths, which is an internal cluster consistency measure in which higher values indicate that, on average, sequences fit better within the assigned cluster than in other clusters.

Nature of post-marital life courses (RQ 2)

To assess the separation-related correlates of post-marital living arrangement trajectories, we employ event history analysis. We adjust the discrete-time hazard rates of marital separation to the time since first-time marriage, and calculate the specific hazard rates for each post-marital trajectory outcome as competing risks. The method is well-suited to our analysis because it allows us to (i) assess the contribution of censored cases (i.e., respondents with no observed marital separation[25]) to the estimated associations, and (ii) to include time-varying covariates. Censored cases are not trivial in our analysis, as their omission will lead to biased estimates of correlates of post-marital trajectories. In addition, by modelling some antecedents as time-varying covariates, the analysis can offer more insight into how changing circumstances lead to specific family trajectories following separation.

A general finding is that the hazard rate of divorce increases marginally at the early stages of the marriage, and then decreases steadily. Thus, we model marriage duration as a continuous

[25] In our longitudinal dataset, the censored cases are either individuals who were continuously married during the study but who eventually separated, or they were individuals whose union was dissolved for other reasons (i.e., the death of a partner).

and logistic term in our models. Additional predictors include the marriage cohort broken down into three categories (before 1981 (reference), 1981-1990, and after 1990); the individual's age at marriage; educational attainment as a time-varying indicator of higher education attainment (level 3 of CASMIN classification); employment status as a time-varying indicator that turns one if the individual was full- or part-time employed, and turns zero otherwise; work experience in years in either full-time or part-time jobs as a time-varying interval variable; and the presence of preschool children (under age eight) in the couple's household as a time-varying indicator. All of these covariates have been interacted with gender to address any relevant gendered associations. Additionally, we acknowledge that observations of ex-spouses in the sample are not independent from each other by modelling their common variation through the inclusion of a random term at the couple level.

Any substantive and statistical significant differences we find in the predictors' coefficients across post-marital trajectory outcomes will be used as initial evidence of the continuity of the circumstances of marital separation over the post-marital life course.

4.4 Results

4.4.1 Description of post-marital family state distributions

Figure 4-1 shows the monthly sample distributions (as proportions) of the 10 post-marital family states over the first 60 months after separation for men and women who separated in the 1991-2010 period. In a visual inspection of Figure 4-1, we can see some heterogeneity in the distribution of family states between men and women. In line with prior evidence on child custody prevalence among women, we find that children from a previous union were more likely to be staying with their mother than with their father. The most frequent post-marital state observed for women was lone motherhood ("unpartnered, with children"), with women spending an average of 23 months in this state over the 60-month study period. In contrast, the most frequent post-marital state found for men was "unpartnered, no children," with men spending an average of 24 months in this state.

When we look at patterns of repartnering, we see that around one in five male respondents and one in seven female respondents were already repartnered within the first month after separation, and that the proportion grew rapidly with time. An interesting finding is that a non-trivial percentage (circa 20%) of men (particularly those with no pre-divorce children) and women (particularly those with pre-divorce children) were in a LAT relationship within five years after the separation.

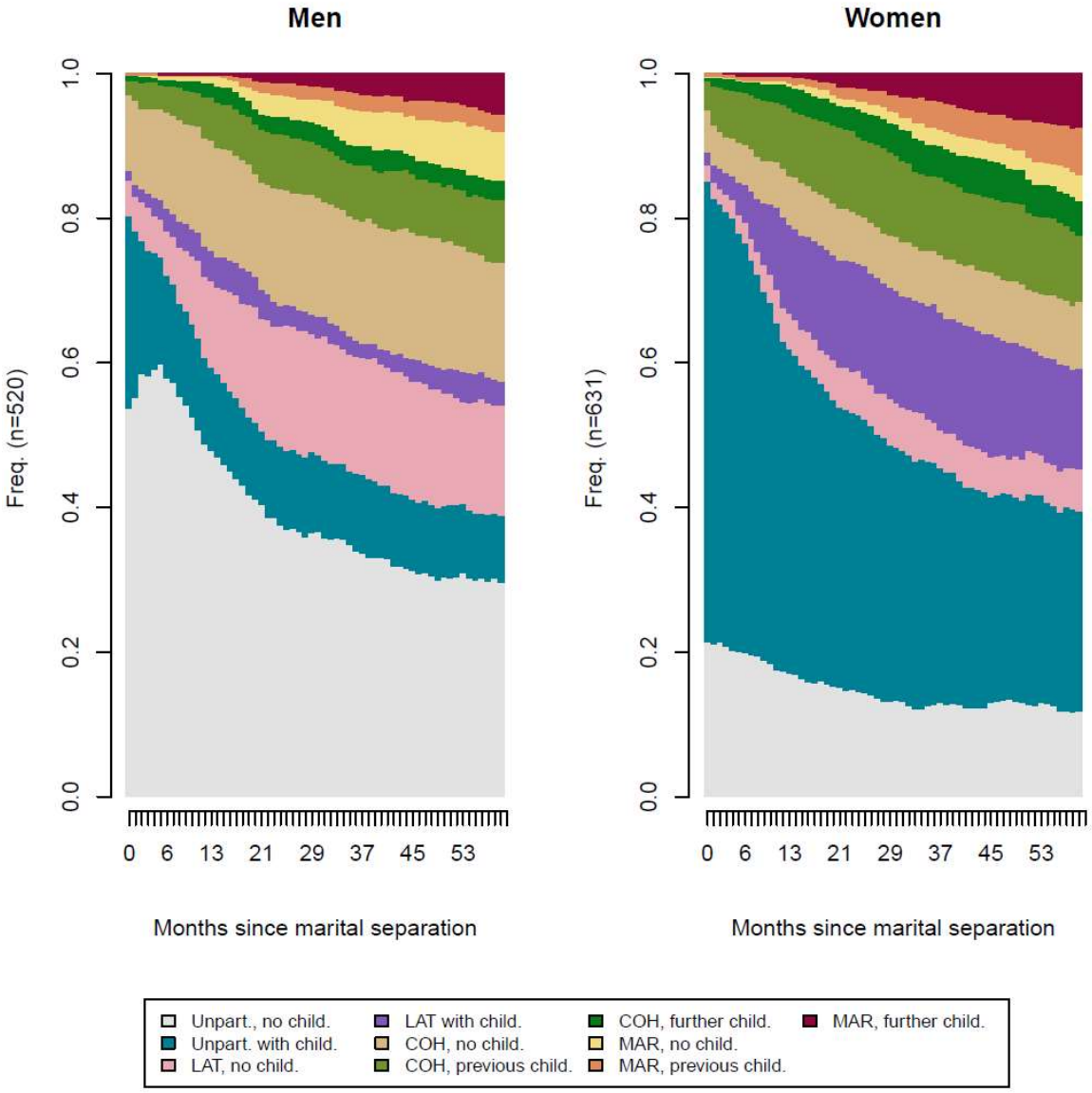

Figure 4-1: State distribution plots of post-marital family trajectories by gender. Source: SOEP (v32) (1991-2010).

Note: Combined partnership and children's household presence states during the first 60 months after the end of marital cohabitation. The separations occurred between 1991 and 2010. Unpart.: unpartnered; LAT: in a non-cohabiting relationship; COH: in unmarried cohabitation; MAR: married; no child.: no own children present; with child.: own children present; previous child: presence of own children born or adopted prior to marital separation; further child.: presence of own children born or adopted after marital separation.

Figure 4-1 also shows that most of the repartnered men and women who were cohabiting with a new partner immediately after separating eventually remarried, but that less than 20% were remarried within five years. A relatively small share of the men (30%) and a large share of the women (70%) were coresiding with their own children upon marital separation. More striking is our finding that living with post-marital children was uncommon in our study sample, even

five years after the divorce. This result is in line with the findings of recent research showing that in a number of Western countries, rates of second-order childbearing are low, and the spacing between first- and second-order births is large after a divorce (Kreyenfeld et al., 2017).

4.4.2 Diversity of post-marital life courses

We address our first research question (RQ1: *What are the typical family trajectories after marital separation in Germany?*) using cluster analysis to generate a typology of post-marital family life courses. We have chosen to use a five-cluster solution of post-marital trajectory types because this approach has empirical support from the cluster cut-off criteria (see Appendix Figure 4.A 1), and the resulting sequence patterns of each cluster are clearly interpretable in line with the theoretical arguments presented above. Choosing larger cluster solutions would break down empirically sizeable but theoretically consistent patterns of non-formal repartnering into smaller clusters. The five-cluster solution is also consistent with an analogous analysis done separately by gender. Similarly, larger cluster solutions from gender-specific analyses only broke down theoretically consistent clusters into smaller ones.

The sequences of the five-cluster solution are graphically presented in Figure 4-2 as sequence index plots. The plot displays cluster-specific individual state sequences as stacked bars, ordered from top to bottom by the degree of consistency of each sequence within the cluster. The visual representation is interpreted with the support of additional information displayed in Table 4-1, which includes the cluster's socio-demographic profile, the internal consistency of the cluster (average silhouette widths), and the average within-sequence heterogeneity of the cluster (complexity and turbulence) (Elzinga & Liefbroer, 2007). A significance test for the difference between the sample average and cluster-specific averages is presented for all measures in Table 4-1.

In Figure 4-2, we identify two large groups ("Lone parents" and "No family households") that together cover more than half of all sequences. The sequences for both of these groups consist primarily of unpartnered states, though some non-cohabitating relationships and a few cohabiting relationships later in the period are also observed. The "Lone parents" cluster accounts for 27% of the sample, and, as the label implies, children were present in the households of the respondents in this cluster throughout the sequence. Most of these children were born in the previous marriage. Unsurprisingly, most of the respondents in this cluster were women (80% of the cluster) who were awarded physical custody of their children upon

separation. The "No family households" cluster was similar in size to the "Lone parents" cluster, but no children or new partner was present in the households in this cluster. Most of the respondents in this cluster were men (69% of the cluster) and were slightly older. Indeed, some of these respondents may have been the ex-spouses of respondents in the "Lone parents" cluster.

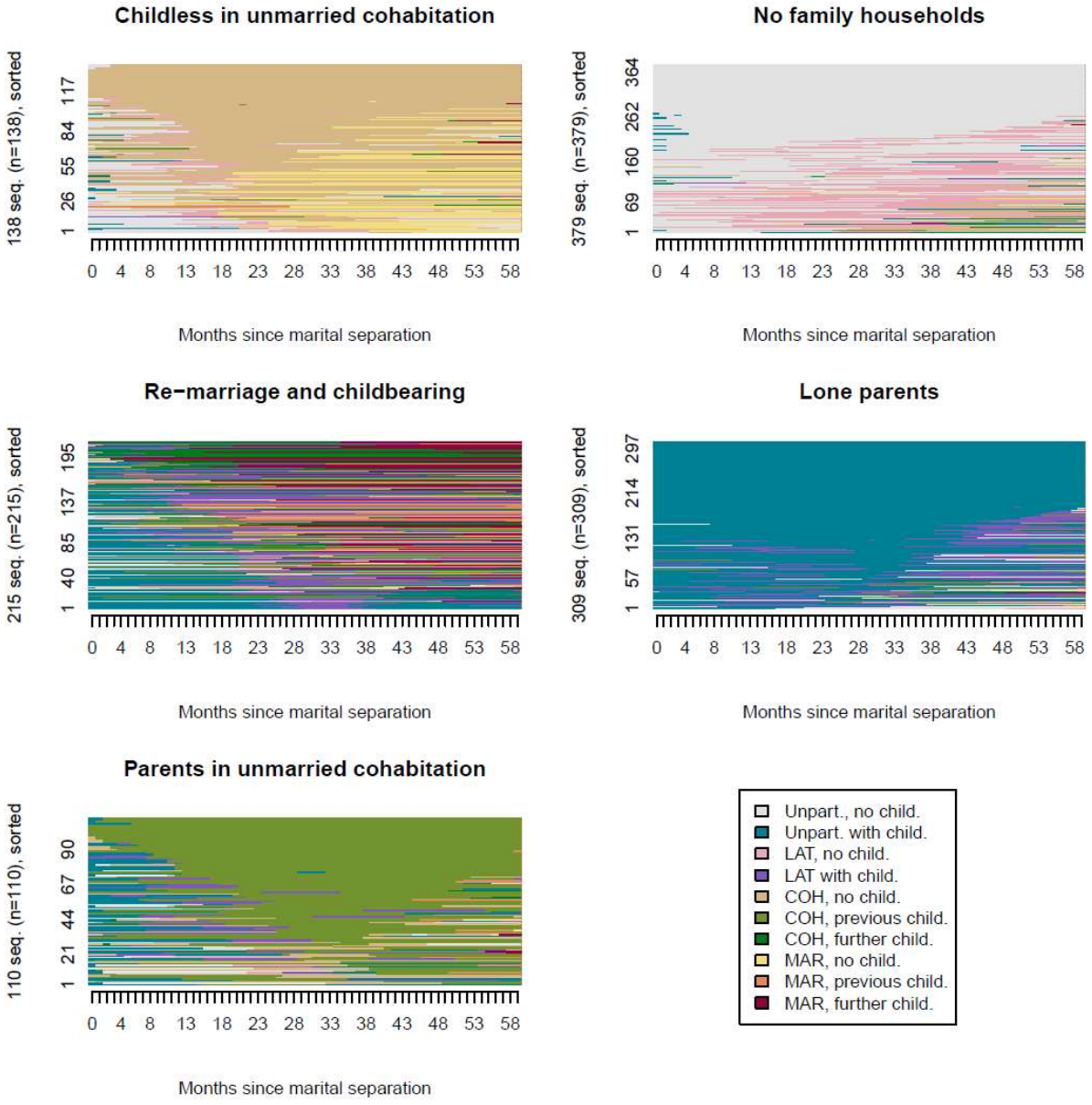

Figure 4-2: Sequence index plots by typical post-marital family trajectory patterns (cluster type). Source: SOEP(v32) (1991-2010), own calculations.

Notes: Full sequences of monthly family states over the initial 60 months after marital separation. Sequences are ordered from top to bottom by the degree of internal consistency within the cluster (i.e., high-to-low silhouette width). Unpart.: unpartnered; LAT: in a non-cohabiting relationship; COH: in unmarried cohabitation; MAR: married; no child.: no own children present; with child.: own children present; previous child: presence of own children born or adopted prior to marital separation; further child.: presence of own children born or adopted after marital separation.

Table 4-1: Cluster type's socio-demographic composition, internal consistency, and within-sequence heterogeneity.

	Childless in unmarried cohabitation	No family households	Remarriage and childbearing	Lone parents	Parents in unmarried cohabitation	*Average*
Socio-demographic profile						
Women	0.34*	0.31*	0.74*	0.80*	0.57	*0.54*
East Germany	0.22	0.22	0.25	0.27	0.34*	*0.25*
Migration background	0.15	0.20	0.15	0.22*	0.14	*0.18*
Marriage duration	15.26*	13.6	10.2*	13.24	13.63	*13.11*
Separation year	2000	2001*	2000	2000	2000	*2001*
Age at separation	40.79*	41.27*	34.82*	38.43	38.13	*38.95*
Cluster internal consistency						
Average silhouette width	0.47*	0.45*	0.20*	0.46*	0.30*	*0.39*
Within-sequence heterogeneity						
Complexity index	0.09	0.07*	0.12*	0.06*	0.10*	*0.08*
Turbulence index	4.63	4.26*	5.98*	3.97*	5.04	*4.62*
N	136	378	213	309	108	*1,144*
%	11.89	33.04	18.62	27.01	9.44	*100*

Source: SOEP(v32) (1991-2010), own calculations.
* value significantly different to the average value at the 5% two-tailed.

The sequences in the "Lone parents" and "No family households" were fairly consistent (and thus had above-average silhouette widths) and included fewer family transitions (and thus had less complexity and lower turbulence values), at least in the earlier post-martial life course.

One in five respondents belonged to one of the two smaller clusters ("Childless in unmarried cohabitation" and "Parents in unmarried cohabitation"). Unlike in the abovementioned clusters, the respondents in these clusters started cohabiting relationships relatively soon after their marital separation. Again, the distinctive feature across the clusters was the presence in the household of the respondent's own children from the previous union. While new relationships are based on cohabitation and may end in marriage, further childbearing did not feature in the sequences of these clusters. The "Childless in unmarried cohabitation" (12% of the sample) displayed relatively consistent sequences (and thus had above-average silhouette widths) in which the respondents started stable cohabiting unions within 24 months after marital separation. These respondents were mostly men (66%), were slightly older than the average (40.79 years), and had been married longer than the average (15.26 years). The "Parents in unmarried cohabitation" cluster (9% of the sample) had less consistent sequences (and thus had below-average silhouette widths) in which the timing of entry into cohabitation varied, and was often preceded or followed by periods in living apart together states. Because of these additional transitions, the cluster had a higher-than-average sequence complexity value, which

reflected the conflict between the presence of children from the prior union and the formation and stability of new unions. The cluster had a roughly equal gender distribution, and a bias toward respondents living in East Germany.

The respondents in the last cluster ("Remarriage and childbearing") experienced rapid and highly institutionalizing family transitions. This cluster accounted for 19% of the sequences of the sample and, in line with the arguments and the evidence presented in the literature, it consisted of younger respondents (with an average age of 35 at separation) who were in shorter-than-average first marriages (with an average of 10.2 years of marriage duration). The level of consistency across the sequences in the cluster was low because the trajectories varied depending on the destination states (i.e., married with or without new children, or cohabiting with new children) as well as on the preceding states. The complexity of the sequences was high because the respondents underwent a number of transitions in a short period of time before ending up in highly institutionalized family states.

4.4.3 Divorce-related predictors of post-marital life courses

We address our second research question (RQ2: *What are the marital circumstances that lead to specific family trajectories after marital separation?*) by using event history models that calculate divorce hazard rates specific to each post-marital trajectory outcome. Table 2 displays selected coefficients of the discrete-time event history model of divorce with five post-marital outcomes and the reference category of still married or censored spouses. The results are presented as average marginal effects, and thus describe an average change in the outcomes' probability due to the change in the independent variable compared to the sample's reference group.

We find a statistically and substantively significant association of socio-demographic profiles with the risk of separation leading to specific post-marital trajectories.

First, the coefficients of the marriage cohort in Table 4-2 show statistically significant, positive and increasing gradients for women in the "Childless in unmarried cohabitation" cluster, the "Remarriage and childbearing" cluster, and the "Lone parents" cluster. Among the women in the "No family household" cluster, significantly higher associations are found for the divorcees who married after 1990. Across the cohorts, men were significantly more likely than women to be in the "No family households" cluster, but also in arrangements with children like those of the "Parents in unmarried cohabitation" cluster and the "Remarriage and childbearing" cluster. These findings indicate that recent divorcees generally opt to either enter into less

formalized new relationships without children or have further children in formalized partnerships. These results are only partly in line with our expectation that across marriage cohorts, repartnering is becoming less institutionalized.

Second, our results for age at marriage confirm previous findings that people tend to separate at younger rather than older ages, because the opportunity costs of changing one's life are lower for younger than for older people. While the direction of all of the coefficients was consistent, the level was lower and not statistically significant for men in the "Lone parent" cluster and for women in the "Parents in unmarried cohabitation" cluster. A potential explanation for these results is that the older separated men and women perceived that they had few opportunities or were too old to form a new traditional family. Our results seem to partly confirm our second hypothesis, as early first marriage is found to be significantly, but not exclusively related to the formation of new families.

The coefficients from variables that capture the respondents' socioeconomic status and their economic independence from their partner displayed varied associations of these factors with post-marital typologies and genders.

First, in line with increasing evidence that the educational gradient of union dissolution is turning negative, we find that most of the coefficients for education displayed negative associations with separation, but were non-statistically significant for the post-divorce clusters.

Second, the patterns in the direction of the coefficients are shown to be similar for employment status and educational level. The findings indicate that the employment status of men and women mostly deterred separation, although the risks were statistically significant only for the women who followed the "No family households" trajectory after separation. In addition, the employed men are found to be more likely to be in the "No family households" and "Remarriage and childbearing" clusters (not statistically significant). In general, we find that employment reduced dependence on and the need for a partner; whereas for women who had difficulties supporting themselves, receiving alimony arrangements might have deterred them from early repartnering.

Third, whether the women entered into employment since the last survey did not statistically correlate with changes in their relationship status leading to specific post-martial paths. In contrast, the men who entered employment were less likely than the women to follow the "No family households" trajectory.

Table 4-2: Separation-related predictors of post-marital family life courses (discrete hazard rates).

	Still married		Childless in unmarried cohabitation		No family households		Remarriage and childbearing		Lone parents		Parents in unmarried cohabitation	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Marriage cohort (ref.: <1981)												
1981-1990	-0.0032***	-0.0032***	0.0003	0.0004*	0.0014***	0.0005	0.0009**	0.0008**	0.0001	0.0012***	0.0006***	0.0002
	(0.0007)	(0.0006)	(0.0002)	(0.0002)	(0.0003)	(0.0004)	(0.0003)	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0002)
>1990	-0.0039***	-0.0049***	0.0003	0.0007**	0.0017***	0.0017***	0.001**	0.0010***	0.0001	0.0014***	0.0008***	0.0002
	(0.0007)	(0.0006)	(0.0002)	(0.0003)	(0.0003)	(0.0004)	(0.0004)	(0.0003)	(0.0005)	(0.0003)	(0.0002)	(0.0002)
Age at marriage	0.0002***	0.0002***	<-0.0001 **	-0.0001***	<-0.0001*	-0.0001*	-0.0001***	-0.0001***	<-0.0001	<-0.0001*	<-0.0001**	<-0.0001
	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)
University degree	0.0007	0.0018**	-0.0001	-0.0005	-0.0001	-0.0006	-0.0001	-0.0004	-0.0004	-0.0004	<-0.0001	<0.0001
	(0.0007)	(0.0006)	(0.0002)	(0.0003)	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0005)	(0.0002)	(0.0002)	(0.0002)
Employed	0.0019	0.0119***	-0.0015	-0.0022	0.0005	-0.0073***	0.0001	-0.0014	-0.0008	-0.0004	-0.0002	-0.0005
	(0.0028)	(0.0027)	(0.0011)	(0.0012)	(0.0012)	(0.0016)	(0.0013)	(0.0013)	(0.0018)	(0.0008)	(0.0006)	(0.0009)
Entered employment	<-0.0001	-0.0005	0.0002	-0.0001	-0.0011*	0.0002	-0.0001	-0.0001	0.0009	0.0003	0.0001	<-0.0001
(since last year)	(0.0009)	(0.0008)	(0.0002)	(0.0003)	(0.0005)	(0.0006)	(0.0005)	(0.0002)	(0.0005)	(0.0003)	(0.0002)	(0.0002)
Labor market experience	<-0.0001	<-0.0001	<0.0001	<0.0001	<-0.0001	<0.0001	<-0.0001	<-0.0001	<0.0001	<-0.0001	<0.0001	<-0.0001
(in years)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)	(<0.0001)
Personal income (log)	-0.0003	-0.0020***	0.0002	0.0004*	-0.0001	0.0011***	<0.0001	0.0002	<0.0001	0.0001	<-0.0001	0.0001
	(0.0004)	(0.0004)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0001)	(0.0001)	(0.0001)
Contribution to household income (ref.: less than 2/3)	0.0008	-0.0011	-0.0003	-0.0001	-0.0003	0.0005	<-0.0001	0.0001	-0.0003	0.0010***	0.0002	-0.0003
More than 2/3	(0.0007)	(0.0007)	(0.0002)	(0.0003)	(0.0002)	(0.0004)	(0.0003)	(0.0003)	(0.0005)	(0.0002)	(0.0002)	(0.0003)
Children under age 8	0.0043***	0.0054***	-0.0005**	-0.0013**	-0.0017***	-0.0043***	-0.0011**	-0.0002	-0.0007	0.0003	-0.0002	<-0.0001
	(0.0007)	(0.0010)	(0.0002)	(0.0004)	(0.0003)	(0.0009)	(0.0004)	(0.0002)	(0.0004)	(0.0002)	(0.0002)	(0.0001)
Migration background	0.0027***	0.0014**	-0.0004*	-0.0002	-0.0008**	0.0003	-0.0004	-0.0009***	-0.0006	-0.0003	-0.0006*	-0.0004
	(0.0007)	(0.0005)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0002)	(0.0005)	(0.0002)	(0.0002)	(0.0002)
East Germany	<-0.0001	-0.0007	-0.0001	0.0001	-0.0002	-0.0002	-0.0001	0.0001	0.0002	0.0004*	0.0001	0.0002
	(0.0006)	(0.0005)	(0.0002)	(0.0002)	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0004)	(0.0002)	(0.0001)	(0.0001)

Source: SOEP (v32) 1991-2010 (unweighted), own calculations.

Model statistics: N=236,562; Log-likelihood=-7059.21; Chi-square=1252.65; AIC=14408.41; BIC=15912.64

Notes: Discrete-time event history model for competing outcomes (multinomial logistic regression) with clustered standard errors at the union level; clustered standard errors in parenthesis under the coefficients; censoring is due to no separation observed by the end of the observation window, death of the partner, or separation but with a post-marital trajectory of less than 60 months observed by the end of the observation window; control variables also included a logarithm of marriage duration.

*** significant at 0.1%, ** significant at 1%, * significant at 5%, (*) significant at 10%.

Fourth, having labor market experience indicates the economic potential of individuals to support themselves over the long run. However, we do not find associations between labor market experience and post-divorce living arrangements.

Fifth, our results show that personal income was positively related with separation in most cases, and particularly for women with no children of their own in the household during the years immediately after separation. These findings indicate that the career-orientated and independent women delayed childbearing.

Finally, a partner's higher income share is shown to be more frequently related to trajectories of "Lone parenthood" for women (statistically significant) than for men (statistically non-significant). This result is an indication that a woman's level of financial need is often related to her post-divorce living arrangements, as women with more financial resources tend to live in arrangements without newly formed relationships.

To sum up, our findings are partly in line with the expectation stated in the third hypothesis that having greater spousal resources leads to higher rates of repartnering, but in less institutionalized partnership trajectories, as having more resources is found to be associated with post-separation trajectories for women but not for men.

Finally, in line with previous research, we find that the presence of preschool children is a deterrent to separation. Statistically significant estimates are found for the risk of separation leading to any post-marital trajectory, except in the "Parents in unmarried cohabitation" and the "Lone parents" clusters, for whom the hazard rate is not shown to be statistically significant. It thus appears that, *ceteris paribus*, the parents with dependent children did not have fewer opportunities and were not less inclined than the childless people to start a cohabitation in the short run. This result is not in line with the expectations stated in the fourth hypothesis.

We find that the East German respondents were more likely than their West German counterparts to have followed the "Lone parent" pattern after a divorce. This result was statistically significant for women, and could be related to the greater social approval of lone mother than lone father households.

The results for the men and women with a migration background indicate that these respondents had lower separation rates in general. The men with a migration background were significantly less likely than their non-migrant counterparts to have followed post-divorce trajectories without children, or with children and remaining in unmarried cohabitation. In contrast, the women with a migration background were less likely to have followed the trajectory of the "Remarriage and childbearing" cluster.

4.5 Conclusion

Our study used rich pre- and post-marital information from a German longitudinal dataset to address questions about post-marital family dynamics. Our analyses covered an under-examined area at the intersection of interrelated but fragmented literatures on repartnering and childbearing of the demographically-relevant separated population. The particular aims of our research were to demonstrate the diversity of post-marital family life course patterns in Germany, and to assess the antecedents of these patterns.

Following two previous studies of the Belgian region of Flanders (Pasteels & Mortelmans, 2015; Vanassche, Corijn, & Matthijs, 2015), we utilized a descriptive trajectory approach to address the first research question on the identification of typical family trajectories after marital separation. We found that in our sample, the most common non-cohabiting family trajectories after marital separation were being a lone parent or having no family in the household; and that the remarriage and childbearing trajectories after marital separation with the highest levels of formalization were being childless or being a parent in unmarried cohabitation. We then addressed our second research question on the antecedents of these patterns, as recent research has suggested that the context and the conditions of marital separation have implications for the family arrangements of the ex-spouses in the period immediately after separation.

Our study has generated some important findings that, when taken together, contribute to the literatures on family development following marital separation. Our research suggests that in Germany, family development generally does not occur in the early post-marital stages. Even relatively small delays in forming a new stable partnership can have consequences for post-marital fertility. The chances that divorcees are foregoing fertility increase with the length of time they spend in single-household arrangements, as a divorcee without a partner may have fewer opportunities to conceive a child, or come to believe s/he is too old to have children. In addition, a post-marital union tends to differ from a first marital union in a number of ways that may affect the levels of commitment and stability in the union, and thus the likelihood of childbearing.

A stable marital union continues to be the main site for childbearing in Germany, particularly in West Germany. Thus, one explanation for why levels of childbearing tend to be low in post-marital trajectories is that most post-marital relationships are non-cohabiting or are unmarried cohabitations. Another potential reason why levels of post-marital childbearing are low is that many divorcees have children from their first marital union, and may want to avoid the financial

and care responsibilities associated with having more children. This second explanation appears relevant given that in our sample, around 75% of the women were living with their own children at the time of separation, and it is likely that many of these children were the offspring of the men in our sample who were not living with children.

In addition, our finding that marital separation had been spreading to older people and lower socioeconomic groups may explain the decreasing opportunities for (rapid) repartnering into stable relationships. We also found that a non-trivial share of the separated men and women who had been identified in previous research as following unpartnered trajectories were actually in committed and stable living apart together relationships. In Germany, the formation of post-marital unions and childbearing can be delayed by the requirement that couples live separately for one year prior to the finalization of the divorce (or three years if the spouses disagree), and by joint child custody and alimony support arrangements. Receiving alimony payments and sharing a household with children have traditionally deterred women from living with a new partner. These considerations are less likely to apply to men or to recent cohorts of women, who tend to have greater labor market resources than previous cohorts. Along these lines, additional analyses (not presented here) that followed family trajectories after divorce revealed that the share of individuals who had not started a cohabiting relationship within five years of divorcing is smaller. However, the rates of second-order marriage and post-marital childbearing remain low.

Our results also indicate that socioeconomic resources determine women's repartnering behavior. For example, we found that women who were earning more than their ex-husbands were more likely to follow a lone parenthood trajectory. Women's resources might also correlate with their family orientations, as the divorced women in our sample with higher absolute incomes were less likely to remarry and were more likely to remain childless. Overall, these findings confirm that among divorcees, social strata and living arrangements are associated. However, we do not know whether spousal resources provide an individual with the opportunity to choose to be childless or to maintain less formalized partnership living arrangements; or whether spousal resources are more or less associated with the individual's family orientation. Our results provide some evidence that the latter is the case: we found that the divorcees who had a strong family orientation but no children from their first marriage tended to divorce at younger ages, and often started a new family in a formalized relationship with children.

In sum, we found that marital circumstances, like the timing of marriage in the life course and in historical time; spousal resources; and the presence of preschool children are all linked to post-separation trajectories.

We note some limitations of our research, and areas that deserve further scrutiny. Our study covered the relatively short period of five years after a marital separation, during which many relevant family transitions may be expected to occur. Since we found relatively little family development in the period we studied, further research may be needed to examine patterns of continuity and change over longer periods of time. The reasons why post-marital trajectories are heterogeneous during the initial stages of separation also merit further scrutiny. While event history models yield reliable estimates of correlates of holistic life courses, no causality should be inferred from these estimates. Despite these limitations, our study has shed more light on the diversity and the nature of post-marital trajectories in contemporary Germany.

4.6 References

Astone, Nan Marie, Constance A. Nathanson, Robert Schoen, and Young J. Kim. 1999. 'Family Demography, Social Theory, and Investment in Social Capital'. *Population and Development Review* 25(1):1–31. doi: 10.1111/j.1728-4457.1999.00001.x.

Beaujouan, Éva. 2012. 'Repartnering in France: The Role of Gender, Age and Past Fertility'. *Advances in Life Course Research* 17(2):69–80. doi: 10.1016/j.alcr.2012.03.001.

Beaujouan, Éva. 2016. 'Second Unions Now More Stable than First? A Comparison of Separation Risks by Union Order in France'. *European Journal of Population* 32(2):293–321. doi: 10.1007/s10680-016-9376-2.

Becker, Gary S., Elisabeth M. Landes, and Robert T. Michael. 1977. 'An Economic Analysis of Marital Instability'. *Journal of Political Economy* 85(6):1141–87.

BIB, Bundesinstitut für Bevölkerungsforschung. 2016. 'Total Divorce Rate in Germany, Western and Eastern Germany, 1970 to 2014'. Retrieved 28 November 2016 (http://www.bib-demografie.de/EN/Facts_Figures/Divorces/Figures/a_05_06_zusgef_ehescheidungsziffer_d_w_o_ab1970.html?nn=3214408)

Brückner, Hannah, and Karl Ulrich Mayer. 2005. 'De-Standardization of the Life Course: What It Might Mean? And If It Means Anything, Whether It Actually Took Place?' *Advances in Life Course Research* 9:27–53. doi: 10.1016/S1040-2608(04)09002-1.

Buber, Isabella, and Alexia Prskawetz. 2000. 'Fertility in Second Unions in Austria: Findings from the Austrian FFS'. *Demographic Research* 3(2). doi: 10.4054/DemRes.2000.3.2.

Buhr, Petra, and Johannes Huinink. 2014. 'Fertility Analysis from a Life Course Perspective'. *Advances in Life Course Research* 21:1–9. doi: 10.1016/j.alcr.2014.04.001.

Carlson, Marcia J., and Frank F. Furstenberg. 2006. 'The Prevalence and Correlates of Multipartnered Fertility Among Urban U.S. Parents'. *Journal of Marriage and Family* 68(3):718–32. doi: 10.1111/j.1741-3737.2006.00285.x.

Dewilde, C., and W. Uunk. 2008. 'Remarriage as a Way to Overcome the Financial Consequences of Divorce--A Test of the Economic Need Hypothesis for European Women'. *European Sociological Review* 24(3):393–407. doi: 10.1093/esr/jcn025.

Elzinga, Cees H., and Aart C. Liefbroer. 2007. 'De-Standardization of Family-Life Trajectories of Young Adults: A Cross-National Comparison Using Sequence Analysis: Dé-Standardisation Des Trajectoires de Vie Familiale Des Jeunes Adultes: Comparaison Entre Pays Par Analyse Séquentielle'. *European Journal of Population / Revue Européenne de Démographie* 23(3–4):225–50. doi: 10.1007/s10680-007-9133-7.

Gabadinho, Alexis, Gilbert Ritschard, Matthias Studer, and Nicolas S. Müller. 2011. 'Mining Sequence Data in R with the TraMineR Package: A User's Guide'. *University of Geneva*.

Gałęzewska, Paulina, Brienna Perelli-Harris, and Ann Berrington. 2017. 'Cross-National Differences in Women's Repartnering Behaviour in Europe: The Role of Individual

Demographic Characteristics'. *Demographic Research* 37(8):189–228. doi: 10.4054/DemRes.2017.37.8.

Goldscheider, Frances, Gayle Kaufman, and Sharon Sassler. 2009. 'Navigating the "New" Marriage Market: How Attitudes Toward Partner Characteristics Shape Union Formation' edited by R. M. Bures. *Journal of Family Issues* 30(6):719–37. doi: 10.1177/0192513X09331570.

de Graaf, Paul M., and Matthijs Kalmijn. 2003. 'Alternative Routes in the Remarriage Market: Competing-Risk Analyses of Union Formation after Divorce'. *Social Forces* 81(4):1459–98. doi: 10.1353/sof.2003.0052

Grünheid, Evelyn. 2013. 'Ehescheidungen in Deutschland: Entwicklungen Und Hintergründe'. in *BiB Working Paper*. Vol. 1. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.

Guzzo, Karen Benjamin. 2017. 'Is Stepfamily Status Associated With Cohabiting and Married Women's Fertility Behaviors?' *Demography* 54(1):45–70. doi: 10.1007/s13524-016-0534-2.

Guzzo, Karen Benjamin., and Frank F. Furstenberg. 2007. 'Multipartnered Fertility Among American Men'. *Demography* 44(3):583–601. doi: 10.1353/dem.2007.0027.

Hakim, Catherine. 2002. 'Lifestyle Preferences as Determinants of Women's Differentiated Labor Market Careers'. *Work and Occupations* 29(4):428–59.

Heintz-Martin, Valerie, Céline Le Bourdais, and Dana Hamplová. 2014. 'Childbearing among Canadian Stepfamilies'. *Canadian Studies in Population* 41(1–2):61–77. doi: 10.25336/P6D89W.

Henz, Ursula, and Elizabeth Thomson. 2005. 'Union Stability and Stepfamily Fertility in Austria, Finland, France & West Germany'. *European Journal of Population 21*(1):3–29. doi: 10.1007/s10680-004-7267-4.

Holland, Jennifer A., and Elizabeth Thomson. 2011. 'Stepfamily Childbearing in Sweden: Quantum and Tempo Effects, 1950–99'. *Population Studies* 65(1):115–28. doi: 10.1080/00324728.2010.543693.

Huinink, Johannes, and Martin Kohli. 2014. 'A Life-Course Approach to Fertility'. *Demographic Research* 30(45):1293–1326. doi: 10.4054/DemRes.2014.30.45.

Ivanova, Katya, Matthijs Kalmijn, and Wilfred Uunk. 2013. 'The Effect of Children on Men's and Women's Chances of Re-Partnering in a European Context'. *European Journal of Population / Revue Européenne de Démographie* 29(4):417–44. doi: 10.1007/s10680-013-9294-5.

Jansen, Mieke, Dimitri Mortelmans, and Laurent Snoeckx. 2009. 'Repartnering and (Re)Employment: Strategies to Cope With the Economic Consequences of Partnership Dissolution'. *Journal of Marriage and Family* 71:1271–93. doi: 10.1111/j.1741-3737.2009.00668.x.

Jaschinski, Ina. 2011. 'Der Übergang in eine nacheheliche Partnerschaft: Eine vergleichende Analyse zwischen Männern und Frauen auf Basis des Deutschen Generations and Gender Survey'. *Zeitschrift für Familienforschung* 23(2):219–40. doi:10.20377/jfr-208.

Jensen, Todd M., Kevin Shafer, Shenyang Guo, and Jeffry H. Larson. 2017. 'Differences in Relationship Stability Between Individuals in First and Second Marriages: A Propensity Score Analysis'. *Journal of Family Issues* 38(3):406–32. doi: 10.1177/0192513X15604344.

de Jong Gierveld, Jenny. 2004. 'Remarriage, Unmarried Cohabitation, Living Apart Together: Partner Relationships Following Bereavement or Divorce'. *Journal of Marriage and Family* 66(1):236–43. doi: 10.1111/j.0022-2445.2004.00015.x.

Kalmijn, Matthijs. 1998. 'Intermarriage and Homogamy: Causes, Patterns, Trends'. *Annual Review of Sociology* 24(1):395–421. doi: 10.1146/annurev.soc.24.1.395.

Kreyenfeld, Michaela, Esther Geisler, Teresa Castro Martín, Tina Hannemann, Valerie Heintz-Martin, Marika Jalovaara, Hill Kulu, Silvia Meggiolaro, Dimitri Mortelmans, Inge Pasteels, Marta Seiz, and Anne Solaz. 2017. 'Social Policies, Separation, and Second Birth Spacing in Western Europe'. *Demographic Research* 37(37):1245–74. doi: 10.4054/DemRes.2017.37.37.

Kulu, Hill. 2014. 'Marriage Duration and Divorce: The Seven-Year Itch or a Lifelong Itch?' *Demography* 51(3):881–93. doi: 10.1007/s13524-013-0278-1.

Li, Jui-Chung Allen. 2006. 'The Institutionalization and Pace of Fertility in American Stepfamilies'. *Demographic Research* 14(12):237–66. doi: 10.4054/DemRes.2006.14.12.

Lillard, Lee A., and Linda J. Waite. 1993. 'A Joint Model of Marital Childbearing and Marital Disruption'. *Demography* 30(4):653–81. doi: 10.2307/2061812.

Meggiolaro, Silvia, and Fausta Ongaro. 2010. 'The Implications of Marital Instability for a Woman's Fertility: Empirical Evidence from Italy'. *Demographic Research* 23(34):963–96. doi: 10.4054/demres.2010.23.34.

Pasteels, Inge, and Dimitri Mortelmans. 2015. 'Dyadic Analysis of Repartnering after Divorce. Do Children Matter?' *Zeitschrift für Familienforschung* 27(Sonderheft):143–64.

Pasteels, Inge, and Dimitri Mortelmans. 2017. 'The Socioeconomic Determinants of Repartnering after Divorce or Separation in Belgium'. *Demographic Research* 36(58):1785–1812. doi: 10.4054/DemRes.2017.36.58.

Prskawetz, Alexia, Andres Vikat, Dimiter Philipov, and Henriette Engelhardt. 2003. 'Pathways to Stepfamily Formation in Europe: Results from the FFS'. *Demographic Research* 8(5):107–50. doi: 10.4054/DemRes.2003.8.5.

Schimmele, Christoph M., and Zheng Wu. 2016. 'Repartnering After Union Dissolution in Later Life: Repartnering in Later Life'. *Journal of Marriage and Family* 78(4):1013–31. doi: 10.1111/jomf.12315.

Schnor, Christine, Inge Pasteels, and Jan Van Bavel. 2017. 'Sole Physical Custody and Mother's Repartnering After Divorce: Sole Physical Custody and Repartnering'. *Journal of Marriage and Family* 79(3):879–90. doi: 10.1111/jomf.12389.

Schupp, Jürgen, Jan Goebel, Martin Kroh, Carsten Schröder, Charlotte Bartels, Klaudia Erhardt, Alexandra Fedorets, Markus Grabka, Marco Giesselmann, Peter Krause,

Simon Kuehne, David Richter, Rainer Siegers, Paul Schmelzer, Christian Schmitt, Daniel Schnitzlein, Knut Wenzig, and German Institute For Economic Research. 2017. 'Socio-Economic Panel (SOEP), Data from 1984-2015'. doi: DOI: 10.5684/soep.v32.1

Steele, Fiona, Constantinos Kallis, Harvey Goldstein, and Heather Joshi. 2005. 'The Relationship Between Childbearing and Transitions From Marriage and Cohabitation in Britain'. *Demography* 42(4):647–73. doi: 10.1353/dem.2005.0038.

Sweeney, Megan M. 2010. 'Remarriage and Stepfamilies: Strategic Sites for Family Scholarship in the 21st Century'. *Journal of Marriage and Family* 72(3):667–84. doi: 10.1111/j.1741-3737.2010.00724.x.

Teachman, Jay D. 2008. 'Complex Life Course Patterns and the Risk of Divorce in Second Marriages'. *Journal of Marriage and Family* 70(2):294–305.

Thomson, Elizabeth. 1997. 'Her, His and Their Children: Influences on Couple Childbearing Decisions.' *Madison :University of Wisconsin, Center for Demography and Ecology*.

Thomson, Elizabeth, Jan Hoem, Andres Vikat, Alexia Prskawetz, Isabella Buber, Laurent Toulemon, Ursula Henz, Amy Godecker, and Vladimira Kantorova. 2002. 'Childbearing in Stepfamilies: How Parity Matters'. Pp. 87–99 in *Dynamics of fertility and partnership in Europe: insights and lessons from comparative research*, edited by E. Klijzing and M. Corijn. Geneva, Switzerland: United Nations.

Thomson, Elizabeth, Trude Lappegård, Marcia Carlson, Ann Evans, and Edith Gray. 2014. 'Childbearing Across Partnerships in Australia, the United States, Norway, and Sweden'. *Demography* 51(2):485–508. doi: 10.1007/s13524-013-0273-6.

Thomson, Elizabeth, Maria Winkler-Dworak, Martin Spielauer, and Alexia Prskawetz. 2012. 'Union Instability as an Engine of Fertility? A Microsimulation Model for France'. *Demography* 49(1):175–95. doi: 10.1007/s13524-011-0085-5.

Van Bavel, Jan, Mieke Jansen, and Belinda Wijckmans. 2012. 'Has Divorce Become a Pro-Natal Force in Europe at the Turn of the 21st Century?' *Population Research and Policy Review* 31(5):751–75. doi: 10.1007/s11113-012-9237-6.

Van Winkle, Zachary. 2018. 'Family Trajectories Across Time and Space: Increasing Complexity in Family Life Courses in Europe?' *Demography* 55(1):135–64. doi: 10.1007/s13524-017-0628-5.

Vanassche, Sofie, Martine Corijn, and Koen Matthijs. 2015. 'Post-Divorce Family Trajectories of Men and Women in Flanders'. *Demographic Research* 32(31):859–72. doi: 10.4054/DemRes.2015.32.31

Vanassche, Sofie, Martine Corijn, Koen Matthijs, and Gray Swicegood. 2015. 'Repartnering and Childbearing After Divorce: Differences According to Parental Status and Custodial Arrangements'. *Population Research and Policy Review* 34(5):761–84. doi: 10.1007/s11113-015-9366-9.

Vikat, Andres, Elizabeth Thomson, and Alexia Prskawetz. 2004. 'Childrearing Responsibility and Stepfamily Fertility in Finland and Austria'. *European Journal of Population/Revue Européenne de Démographie* 20(1):1–21. doi: 10.1023/B:EUJP.0000014536.56286.41.

Wagner, Gert G., Jan Göbel, Peter Krause, Rainer Pischner, and Ingo Sieber. 2008. 'Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)'. *AStA Wirtschafts- und Sozialstatistisches Archiv* 2(4):301–28. doi: 10.1007/s11943-008-0050-y.

Widmer, Eric D., and Gilbert Ritschard. 2009. 'The De-Standardization of the Life Course: Are Men and Women Equal?' *Advances in Life Course Research* 14(1–2):28–39. doi: 10.1016/j.alcr.2009.04.001.

Wolfinger, Nicholas H. 2007. 'Does the Rebound Effect Exist?: Time to Remarriage and Subsequent Union Stability'. *Journal of Divorce & Remarriage* 46(3–4):9–20. doi: 10.1300/J087v46n03_02.

4.7 Appendix

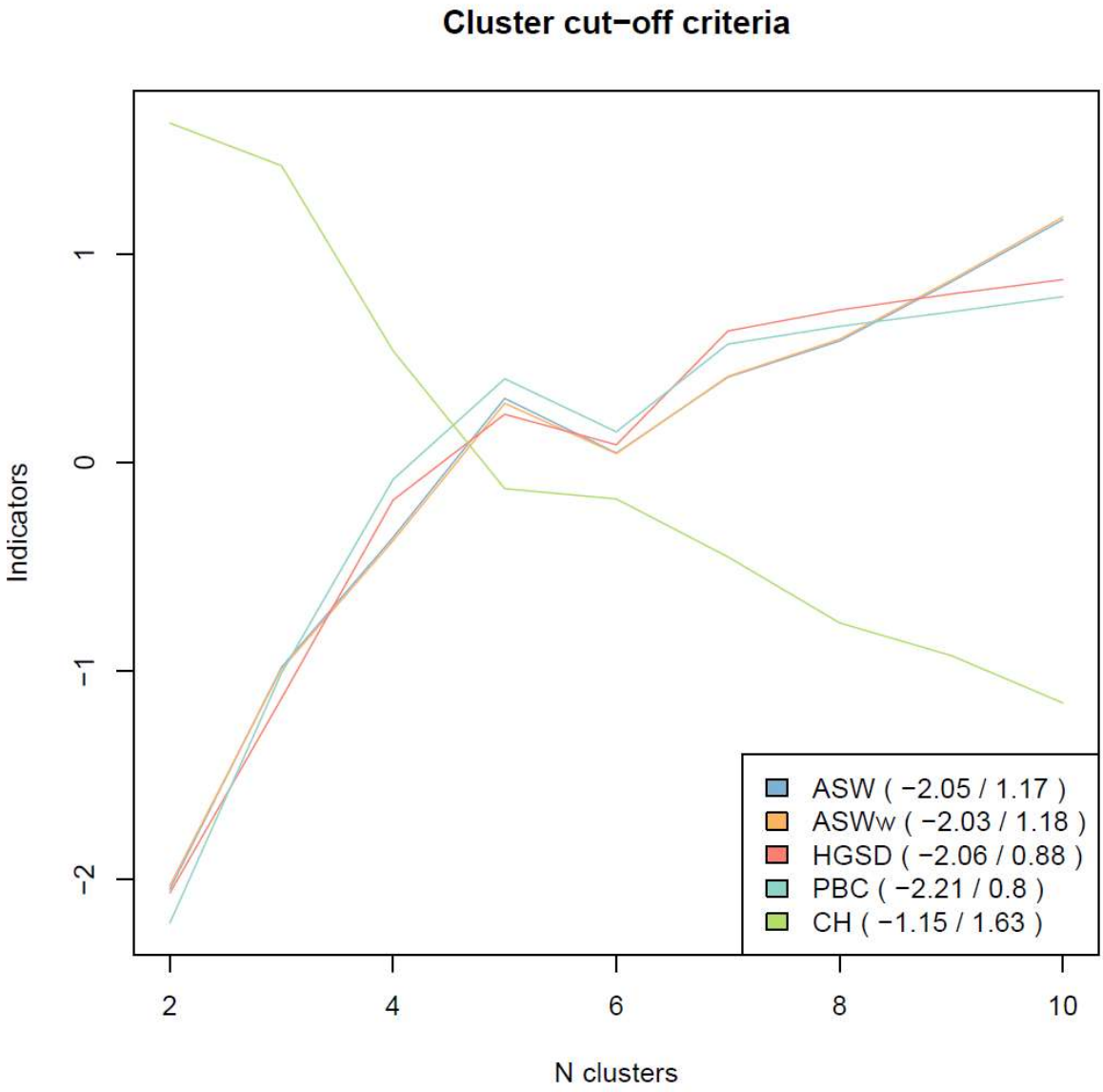

Figure 4.A 1: Cluster cut-off criteria. Source: SOEP (v32), own calculations.

Note: ASW-Average silhouette width; ASWw-Average silhouette width (weighted); HGSD-Hubert's Sommers´ D; PBC-Point Biserial Correlation; CH-Calinski-Harabasz index (see Studer 2013 for definitions).