Chapter 15
Childbearing Across Partnerships in Finland and Germany

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Abstract This chapter examines gender differences in "multipartner fertility" – i.e., having children with several partners – in Germany and Finland. The analyses focus on women and men born around 1970 who are followed until age 41. We show that multipartner fertility is more common in Finland than in Germany. However, there are large East-West differences within Germany. East Germans are less likely to have a second or third child than West Germans, but those East Germans who progress to a higher order birth often have this child with a new partner. We also find some gender differences in behaviour. Men display lower transition rates than women of having a second child with a new partner. Further, having a first child at an early age is strongly and positively associated with multipartner fertility. No consistent relationship between education and multipartner fertility was found for Germany. In Finland, however, low education is associated with elevated risks of having children with different partners.

Keywords Fertility · Finland · Germany · Multipartner fertility · Stepfamily

15.1 Introduction

In all European societies, the break-up of a co-residential partnership has become a common life course event. While a notable number of studies have focused on antecedents of divorce or separation (see e.g. Lyngstad and Jalovaara 2010), less attention has been given to the question how family behaviour develops after union dissolution. Likewise, a growing share of couples with minor children separate (or divorce). Separated parents may re-partner and have further children, which often occurs in step-family constellations. Thus, post-separation family behaviour is of

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growing importance for understanding family and fertility patterns in contemporary societies.

Prior research on "post-separation fertility" has approached the topic from different angles. Some studies have investigated the fertility behaviour of persons in higher order unions, or the fertility behaviour of men and women in stepfamilies (Beaujouan and Solaz 2012; Beaujouan and Wiles-Portier 2011; Buber and Prskawetz 2000; Galezweska 2016; Henz and Thomson 2005; Holland and Thomson 2011; Vikat et al. 1999; 2004). Other studies have adopted a more holistic view on individual life courses and examined whether a person's children all had the same two parents or whether the children originated from different partnerships (Guzzo and Furstenberg 2007b; Lappegård and Rønsen 2013; Manlove et al. 2008; Scott et al. 2013; Thomson et al. 2014). The latter approach is often referred to as "multiple-partner" or "multipartner" fertility. Much of this research is anchored in concerns over the well-being of children of low educated men. Men with a low level of education are particularly likely to have children with different partners, potentially leading to less paternal involvement and men's difficulties in financially supporting all their children (Guzzo and Furstenberg 2007a, b; Manlove et al. 2008).

This paper adds to the literature on multipartner fertility. We examine how the patterns of multipartner fertility differ between men and women and between the societal contexts of Finland and Germany. Due to their strong differences in family behaviour, we also distinguish between East and West Germany. We adopt a competing risk framework that examines multipartner fertility from the perspective of individual fertility histories. More specifically, we follow individuals from the birth of the first (and second) child and model two outcomes: having a second (or third) subsequent child with the same partner as the previous child, or having a child with a different partner. This approach is similar to the one adopted in Thomson et al. (2014) and Lappegård and Rønsen (2013). The approach differs from analyses on stepfamily fertility and fertility in higher order unions (Beaujouan and Solaz 2012; Holland and Thomson 2011; Vikat et al. 1999) that focus on fertility patterns among persons (or parents) once they have entered a new union. The research design is discussed in greater detail in the data and method section of this chapter.

Data for this analysis come from Finnish registers and from the German Family Panel pairfam (Version 9.1). The analysis focuses on childbearing of cohorts born around 1970 who were around age 41 at last observation. The choice of cohorts maximizes comparability between Finland and Germany. An advantage in analysing persons born around 1970 is that the results will depict behaviour in a recent birth cohort. A caveat is that the cohorts under consideration have not reached the end of their reproductive period yet. This particularly pertains to men, as they are more likely than women to have a child beyond age 41. This censoring is accounted for in the event history modelling, but it is a shortcoming when we present descriptive measures, such as total number of children at the last observation. To assess the proportion of births beyond age 41, we use Finnish data to examine gender-specific age distributions of births in earlier cohorts that can be followed to a higher age.

15.2 Institutional Setting and Prior Research

15.2.1 Policy and Demographic Context of Finland and Germany

By selecting Germany and Finland, we compare behaviour in two contrasting welfare state regimes. Germany is usually typified as belonging to a familialistic regime. Major components of the German system have been a low availability of public child care and a tax and transfer system that favours the married single-earner couple. Germany has reformed its family policies recently, though. It has expanded public day care for children below age three since 2005, and it introduced an earnings-related parental leave benefit system in 2007. Also, the maintenance law was recently reformed. Until 2008, German regulations granted comparatively generous spousal maintenance for the "caregiving" ex-spouse after divorce (in most cases, the ex-wife living with children). When evaluating the need for spousal maintenance, the caregiving partner was generally not expected to work full-time until the youngest child reached age 15. Among other things, this policy was assumed to hinder men from forming a new family after divorce (Bundesministerium der Justiz 2005). In 2008, the law was reformed and since then divorced persons are only granted ex-spousal maintenance as long as the youngest child is younger than age 3. If children are older, the "caregiving part" can claim ex-spousal support only if (s)he provides evidence that (s)he is unable to work due to childcare obligations (Lenze 2014; Peschel-Gutzeit 2008). East German women rarely profited from the regulation of ex-spousal support. They more often work full-time than West German women and, thus, were less likely to be in need of payments from their ex-spouses after divorce. In addition, East German women are often not married when they have children, and, thus have no access to ex-spousal support.[1] More important than ex-spousal support is child alimony. The amount of this alimony depends on the income level of the parent who is required to pay the child maintenance fee.

Despite the very recent policy reform that shifts the German institutional framework closer to a "de-familialized" system, the institutional framework in Finland is still markedly different from the German one. With regard to financial obligations between former spouses, divorce or separation represents a much cleaner break. In principle, the law includes a possibility to claim maintenance from the ex-spouse, but such claims are unusual. In practice, claims can only be made to reach the minimum subsistence level, and this is normally guaranteed within the social insurance system anyway. What also decreases potential differences in income between former husbands and wives is that in Finland, the employment rates of men and women are very similar and not only single women but also partnered women tend to be in full-time employment (Eurostat 2018a). Apart from spousal maintenance, both parents are required to participate in the maintenance of their child(ren) according to

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[1] There is the possibility to claim childrearing support, if the parent living with the child is unmarried and the child is under the age of three.

their maintenance capacity. A non-resident parent is usually required to pay child support. Most non-widowed single parents receive child support, but the levels are comparatively low (Hakovirta 2010; Hakovirta and Jokela 2019; National Institute for Health and Welfare Finland 2016). The maintenance obligations are the same after the breakup of a cohabitation and divorce: The financial obligations are in practice limited to child maintenance, and the regulations do not depend on whether the parents were married or not.

Beyond these legal regulations, the family demographic behaviours in the two countries have also notably differed. Since the early 1970s, the period total fertility rates for Germany have been among the lowest in Europe, while for the Nordic countries they have fluctuated at a comparatively high level. Very recently, German period fertility has seen an upturn, while the rates in the Nordic countries have been strongly declining since 2010 (Eurostat 2018b). Despite this recent convergence in period fertility, completed cohort fertility still differs greatly between the two countries. Total fertility for the cohorts born around 1970 amounts to about 1.5 children per woman in Germany (Pötzsch 2016), while cohort total fertility in Finland was 1.8 for women born in 1970–72, which is the same as for women born in 1945–49 (Jalovaara et al. 2018). Moreover, nonmarital cohabitation and nonmarital child-bearing have become common in Finland. In 2016, 58% of first births and 36% of subsequent births were to unmarried women (Statistics Finland 2018a). For Germany, remarkable differences in family behaviour between East and West Germany have persisted even after the legal unification of the two parts. While East Germans more rapidly progress to the first child than West Germans, parity progressions to second and third children are lower in the East than in the West. Other characteristic features of East German behaviour are low marriage rates and high shares of nonmarital childbearing: Roughly 75% of all first births are to unmarried women in East Germany compared to 25% in the West (Pötzsch 2012). Divorce rates in East and West Germany are on a similar level. In 2015, the divorce rate stood at 0.35 in both parts of the country (Bundesinstitut für Bevölkerungsforschung 2018). Little is known on the separation behaviour of couples with children. Our own estimates based on data from the German family panel suggest that 14% of West German and 27% of East German couples had separated by the time the first child reached the age of ten (Kreyenfeld et al. 2017). In Finland, the share amounts to 23% (ibid.).

15.3   Prior Findings

Two broad strands of literature have emerged that examined fertility behaviour after separation. The first strand deals with fertility behaviour in higher order unions. Initially, this research focused on fertility behaviour in higher order marriages (Griffith et al. 1985; Thornton 1978; Wineberg 1990). With the increase in cohabitation, this research broadened to include cohabiting unions. Researchers particularly turned their attention to married and cohabiting unions with step-children, i.e.

unions where at least one child originated from a prior partnership. Research on "stepfamily fertility" has revealed that the family size of stepfamilies tends to be larger than that of families with only common children (Kreyenfeld and Martin 2011; Martin 2008; Mignot 2008). This pattern is attributed to "union commitment" whereby couples want to cement their relationship with a common child, so that partners in a stepfamily are more likely to progress to births of higher order than partners with only common children (Henz and Thomson 2005; Holland and Thomson 2011; Thomson 2004; Vikat et al. 1999). Thomson (2004) investigated the fertility preferences of stepfamily members in six European countries, including Finland and Germany (broken down to East and West Germany) and reports that the odds of Finnish stepfamily members to aspire another child are higher than among the West German respondents. However, she reports highly elevated fertility desires among East German stepfamilies, in particular those with two children. Similar results are reported by Henz (2002), who compared stepfamily fertility between East and West Germany.

A limitation in the "stepfamily approach" is that it takes the formation of a step-family as a point of departure and thus focuses on only one step in the processes leading to multipartner fertility. One consequence is that births outside cohabitations and marriages are left out of the picture. The second strand of literature fills this void by taking a more holistic stance. This approach studies individuals' fertility histories and focuses on the question whether children originate from the same or different partners. The term "multi-partnered fertility" or "multipartner fertility" is frequently used to typify this area of research (Carlson and Furstenberg 2006; Guzzo and Furstenberg 2007a, b; Manlove et al. 2008).[2] Carlson and Furstenberg (2006) used data from the US and employed a logistic regression approach to compare the characteristics of mothers and fathers who had all their children with the same partner with those who had children with different partners. Apart from a strong negative educational gradient in multipartner fertility in the father sample, low age at first birth and having a non-union birth were found to be strong predictors of multipartner fertility for both mothers and fathers. Similar findings are reported by Manlove et al. (2008). Kreyenfeld et al. (2017) examined the transition rates to the second child in seven European countries. They controlled for partnership status with a time-varying covariate that distinguished persons in on-going unions, persons in new partnerships, and singles. The patterns were rather uniform in most countries, showing little differences in second birth progressions between on-going and new unions. An exception were East Germans who displayed highly elevated second birth rates in new compared to ongoing unions. The paper also examined differences in second birth transitions by educational levels for Finland and West Germany. It was shown that high education accelerates second birth transitions for persons in ongoing unions. For couples in new unions and for singles, patterns were

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[2] Albeit widely used, the terminology is contested (see footnote 1 in the paper by Thomson et al. 2014).

rather irregular, showing no clear relationship between level of education and second birth transition.

The studies that come closest to the approach adopted in this paper were those by Guzzo and Furstenberg (2007a), Thomson et al. (2014), and Lappegård and Rønsen (2013). Guzzo and Furstenberg (2007a) used a competing risk framework with survey data from the US that included female respondents. They modelled the risk of having a child with the same partner as the previous child, and the risk of having another child with a new partner. They found large differences in multipartner fertility by ethnicity with black respondents displaying highly elevated risks of having another child with a new partner. A woman's low age at first birth and low level of education increased the transition rates to multipartner fertility. They further reported that the respondents who were married at previous birth were more likely to have another child with the same partner, but less likely to have a child with a new partner. Lappegård and Rønsen (2013) used Norwegian register data and a competing risk framework to examine men's transition to a further (second, third or fourth) birth. Consistent with previous studies, age at first birth and union context (whether the person was previously married or ever divorced) was shown to be a strong predictor of multipartner fertility. The latter factor was, however, discussed critically and concerns were raised over whether the past partnership was endogenous to multipartner fertility. Thomson et al. (2014) adopted the same approach to examine women's fertility in Australia, US, Norway and Sweden. They reported a mostly positive educational gradient for births with the same partner, but a negative educational gradient for births with a new partner. Interaction model by time period furthermore showed that the negative educational gradient in multipartner fertility had emerged in recent years only and had become steeper in the 2000s.

15.4 Hypotheses

Our analysis builds on these prior investigations and compares multipartner fertility from a cross-national perspective. While previous studies often examined the patterns of multipartner fertility among either men or women, we pay particular attention to the gender differences in behaviour. After divorce and separation, the fertility schedule of women and men may follow a different track because of the different constraints women and men are exposed to after the breakdown of their unions. In most cases, children reside with the mother which may limit the possibilities for women to enter a new partnership and have children with a new partner. If mothers have a lower chance of re-partnering after childbirth, they should also be less likely to have a child with a new partner than men. However, women who separate after the birth of a first child may also be inclined to accelerate the transition to the second birth. First, women may feel more pressure to have their children soon because of the biological limits of fertility, which weigh more heavily on women than on

men. Second, a frequently cited motivation for having a second child is to provide a companion to the first-born child (Thomson 2004). As children commonly reside with their mothers after separation, this "sibling effect" may be a stronger motor of fertility for women than for men. Against this background, we expect that the risk of having a child with a new partner is higher for women than for men, in particular when the previous child is still young *(Hypothesis 1)*.

As outlined above, the social policy context in Finland and Germany differs strongly. While Finland follows the concept of a "clean break", Germany adheres to the concept of "post-divorce solidarity". This concept of post-divorce solidarity entails eligibility to ex-spousal support for the economically "weaker partner". This regulation is much less effective in East Germany due to the low marriage rate and the high employment rates among women. In West Germany, such regulation was considered to be a hindrance for divorced men to form a new family (Bundesministerium der Justiz 2005). The maintenance law was reformed in 2008. As most children in our sample were born before the reform of the maintenance law, we assume that the West German men would be less likely to form a new family after divorce than West German women. For Finland and East Germany, we do not expect any gender differences (*Hypothesis 2*).

Low education has repeatedly been shown to be negatively associated with multipartner fertility (e.g., Thomson et al. 2014). We include education in our models and examine whether its effect differs by gender and country context. Multipartner fertility is a result of several possible prior transitions, in particular the birth of a child outside of any union, separation or divorce. While a strong educational gradient has been reported for all these processes for the case of Finland (Jalovaara and Kulu 2018; Jalovaara and Fasang 2015), evidence for Germany is more mixed. While an educational gradient in non-union births has recently emerged (Konietzka and Kreyenfeld 2017), there is no consistent relationship between education and divorce (Schnor 2014). Against this hypothesis, we assume that high female and male education lowers the chances of multipartner fertility in Finland, but that the pattern may be irregular in the case of Germany *(Hypothesis 3a)*. We also control for migration background. The US literature examines differences in behaviour by race or ethnicity, but not by migration background. In these studies, it is generally found that ethnic minorities, such as black Americans, display elevated risks of "multipartner fertility" (e.g., Carlson and Furstenberg 2006; Guzzo and Furstenberg 2007a, b). These findings are difficult to translate to the European context with the different ethnic minorities and a diverse migrant population. There is evidence that migrants' separation and divorce rates are relatively low in Germany (Milewski and Kulu 2014), while they are elevated in Finland (Statistics Finland 2018b). Judged only by the migrant's divorce behaviour one would expect multipartner fertility to be more prevalent among the native-born population in Germany than among the foreign-born, while it should be vice versa in Finland *(Hypothesis 3b)*. There are, however, other factors that determine multipartner fertility among migrants, which is why this hypothesis remains more speculative.

15.5   Data and Method

15.5.1   Data Sources

For Finland, we use data compiled at Statistics Finland by linking data from a longitudinal population register and registers of employment, educational qualifications and vital events as well as other register sources. The extract used in this study is taken from an 11% random sample of persons born between 1940 and 1995, which had been recorded in the population of Finland between 1970 and 2009 (permission number TK53–663-11). In this study, we include cohorts born 1969–1971, with full histories of childbearing until 2012. Data on persons who died or emigrated from Finland before the last date for which we have data were omitted from the analyses, which would have reflected the situation had a comparable sample survey been conducted. The main variables of interest are the birth dates of children and the relationship of the children with each anchor person. For Finland, the information concerns the date and year of the birth of each (registered) child and the "id codes" of the other registered parent. The "id codes" were randomly assigned to each person at Statistics Finland and would not enable identification of individuals, but they do enable comparisons of whether the codes are the same or not (e.g. if maternal siblings have the same fathers). For 1.3% of the children in our data there is no father registered. If, for example, the father of the first child is registered, but this is not the case for the second child, we assume that the second child is from a different father.

For Germany, the data come from the German Family Panel pairfam (Huinink et al. 2011). The German Family Panel is an annual panel survey initiated in 2008. It includes respondents from three birth cohorts: 1971–1973, 1981–1983 and 1991–1993. For this analysis, we use data from the year 2015/16. Furthermore, we have restricted the analysis to the cohorts born 1971–1973 who were on average aged 41 at the time of the last interview. The German Family Panel collects retrospective fertility and partnership histories which are updated at each interview. Different from standard surveys, the partnership biography includes all partnerships, including "dating" relationships. In principle, only partnerships lasting more than 3 months are surveyed. However, if a child resulted from a relationship, the respondents are requested to list the partnership, regardless of the duration and intensity of that particular relationship. We assumed that children are from different partners if the respondent reported having different partners at the times of the births of the respective children. In some cases, we observed a birth in the data, but the respondent did not report to be in a relationship at the time of childbirth (4% of all births). If a respondent did not report a relationship for e.g. the first birth, but had a partner at the time of the second birth, we assumed that the two children originated from different relationships. A great virtue of both data sets is that we are able to link births and partnerships. However, there are limitations related to a country comparison that relies on survey data on the one hand and register data on the other. Unlike register data, survey data suffer from (selective) non-response, and there is

panel attrition. In addition, separated men, for instance, may be more likely to drop out of the panel. Thus, some of the country differences may be attributed to the different types of data that we are using for both countries.

15.5.2 *Method and Variables*

Following the approach in Thomson et al. (2014) and Lappegård and Rønsen (2013), we considered the risk of having a child with a new partner as a competing event to the risk of having a child with the parent of the previous child. Thus, in the models, we distinguished two outcomes:

- Having a child with the parent of the previous child (referred to as "same partner")
- Having a child with a partner who is not the parent of the previous child (referred to as "different partner" or "several partners")

We studied second and third births, meaning that the individuals can enter the sample twice. We excluded fourth and higher order births because they are infrequent in our focal countries. The baseline hazard was modelled as a piecewise-constant function (Blossfeld et al. 2007). The process time started at the birth of the previous child and was censored at the latest after 13 years. The results are presented as hazard ratios.

There has been some discussion in the literature over whether and how to account for partnership history in the investigations of multipartner fertility (see e.g. Thomson et al. 2014: 494). On the one hand, it seems important to account for the partnership situation because men and women who have entered a stable partnership are much more likely than single individuals to have children. On the other hand, the partnership situation and in particular family status may be endogenous to the birth of a child with a new partner. Those who were unmarried at the previous birth may be more likely to have a child with a new partner because unmarried persons are more likely to dissolve a union. As the goal of our investigation was to provide clear-cut estimates that are not conflated by potential endogeneity of the control variables, we did not control for past or current partnership status. A drawback of this approach is, however, that we disregard re-partnering behaviour, which definitely is an important factor in fully understanding gender differences in post-separation fertility behaviour.

The regression models used *time since previous birth* as a baseline hazard. We distinguished 0–1 years, 2–3 years, 4–7 years and 8–13 years after previous birth. We also included the *parity* of the parent and distinguished between persons with one and two children. Education was measured as a time constant (highest ever) and ordinal scaled variable that distinguished low (ISCED 1–2), medium (ISCED 3–4) and high (ISCED 5–6) education levels. Age at first birth was collapsed in three categories (−22, 22–29, and 30+ years). We also included a dummy variable indicating whether the person was *born in the respective country* or outside it. The

models either included an indicator for *gender* or are fitted separately for men and women. We observed 14,634 births in the Finnish sample, 2415 births in the West German and 928 births in the East German sample. Note that the number of events in the descriptive statistics and the regression analysis varied slightly because the multivariate analysis censored the cases after 13 years. In the descriptive analysis, events at longer durations were retained.

In the first step of the analysis, we provided descriptive measures on the prevalence of multipartner fertility. We presented the total number of children, differentiating according to whether the children had the same or different parents. The next step was the competing risks analysis. We first fitted models to study gender differences in multipartner fertility. We then explored how birth risks differed by birth order and time since the previous birth. The final step included competing risk models by gender which included the abovementioned socio-demographic covariates (education, age at first birth, time since previous birth, and country of origin).

15.6   Results

15.6.1   Descriptive Findings

Table 15.1 shows the percentage distributions of women and men by the number of children as well as the prevalence of multipartner fertility among fathers and mothers with two and three children. In the East and West German samples, the mean number of children for women is 1.5 and in the Finnish one it is 1.8, closely corresponding to the previously reported levels of completed fertility for these cohorts at age 40 (Human Fertility Database 2018; Jalovaara et al. 2018). The table furthermore shows that there are notable differences in the parity distribution across the three societies. Childlessness levels are highest in West Germany, whereas the proportion of men and women with three or more children is largest in Finland. We also observe clear differences across the societies in the prevalence of multipartner fertility: The levels are by far the highest in East Germany and lowest in West Germany, with Finland in between. For instance, in West Germany, 12% of mothers of two children had the children with different fathers, compared to 23% in East Germany and 14% in Finland. For women with three children, the shares are higher. Among West German three-child mothers, 25% did not have all their children with the same partner. In East Germany, the percentage is 39% and in Finland 29%.

Table 15.2 provides information on the socio-demographic characteristics linked to multipartner fertility. The table includes all parents who had two or three children and distinguishes between whether all children were with the same partner (column "same partner") or whether they were from different partners (column "several partners"). The distributions are very consistent across the three societies. Low educated persons, women, persons who had their first child under age 22, and parents with three rather than just two children are overrepresented among those who had

Table 15.1 Parity distribution and prevalence of multipartner fertility, in %; men and women in East Germany, West Germany and Finland

	West Germany		East Germany		Finland	
	Men	Women	Men	Women	Men	Women
Mean number of children	1.3	1.5	1.2	1.5	1.6	1.8
Mean age at censoring	40.3	40.5	41.2	41.3	42.0	42.0
N	1453	1797	1453	1797	10,559	10,222
Childless, %	36	26	31	19	31	22
One child, %	19	19	28	30	16	16
Two children, %	30	35	29	37	31	35
Three children, %	11	16	7	10	16	18
Four or more children, %	3	4	4	3	7	9
Total	100	100	100	100	100	100
N	1454	1795	716	756	10,559	10,222
Persons with two children						
Same partner, %	92	88	87	77	89	86
Several partners, %	8	12	13	23	11	14
Total	100	100	100	100	100	100
N	489	713	240	303	3270	3529
Persons with three children						
Same partner, %	86	75	57	61	76	71
Several partners, %	14	25	43	39	24	29
Total	100	100	100	100	100	100
N	180	313	60	89	1638	1877

children with more than one partner. Conversely, the highly educated, men, persons who had their first child at age 30 or above, and parents with two rather than three children are overrepresented among those who had their children with the same partner.

The descriptive analysis of Tables 15.1 and 15.2 suffers from censoring. The average age at censoring is around age 41 in the German sample and age 42 in the Finnish one (see Table 15.1). In all three societies, childbearing beyond that age is rare. However, it is more likely for men than for women to have children beyond that age. To assess the share of births that are missed due to early censoring, we conducted a supplementary analysis. We used Finnish data to examine the gender-specific age distributions of births with the same and different partners in somewhat older cohorts, born between 1955–64, that can be followed until ages 48–57. While the levels of multipartner fertility may be somewhat lower in the older cohorts than the recent ones, the age distribution of births can be assumed to be similar. The results are displayed in Figs. 15.2 and 15.3 in the Appendix. The figure supports the expectation that men have greater chances of having children beyond age 41, which particularly pertains to third children with new partners. As a result, the simple descriptive statistics as displayed in Tables 15.1 and 15.2 give first insights into differences in multipartner fertility across the three societies, but do not provide highly reliable information to examine gender differences in multipartner fertility.

Table 15.2 Characteristics of parents by whether they had children with the same or several partners; parents with two or three children

	West Germany		East Germany		Finland	
	Same partner	Several partners	Same partner	Several partners	Same partner	Several partners
Low education	10	16	4	3	10	20
Medium education	53	57	53	66	38	43
High education	38	27	42	31	52	37
Male	47	34	49	38	49	42
Female	53	66	51	62	51	58
Native born	76	78	92	97	93	90
Foreign born	24	22	8	3	7	10
First birth under age 22	10	31	12	40	7	26
First birth age 22–29	36	42	38	43	56	57
First birth age 30+	54	27	50	17	37	17
Parity 2	73	28	84	49	70	49
Parity 3	27	72	16	51	30	51
Total, %	100	100	100	100	100	100
N	1459	236	528	164	8511	1803

15.6.2   Regression Results

Table 15.3 shows results from an event history model that accounts for censoring. The outcomes are the risks of having a second or third child with the same partner as the previous one vs. a new partner. The model only includes the age since previous birth (baseline), gender and parity. The main observation is that women have children with new partners at a higher rate than men in West Germany and Finland (Table 15.3). For East Germany, the gender difference is small and not statistically significant. Compared to second births, third ones are more likely to be births with a new partner. Finally, the shape of the baseline hazard differs between the two outcomes. The risk of having a child with the same partner is at its highest at relatively early intervals (2–3 years since previous birth). The risk of having a child with a new partner is, however, at its highest at longer intervals (at 4–6 years in West Germany, and 7–13 years in East Germany and Finland). The difference in baseline hazards is very plausible, given that in most cases, having a child with a new partner is preceded by processes of separation from a previous partner, and possibly an entry into a new co-residential union.

The next question that we address is whether the baseline hazards for multipartner fertility vary by gender and societal context. Figure 15.1 shows the duration-specific hazards of having a child with a new partner, separately for men and women, for second and third parity, and for West Germany and Finland. The low numbers of

Table 15.3 Relative risk of having a second or third child with the same partner and a new partner, results from piecewise exponential models

	West Germany		East Germany		Finland	
	Same partner	New partner	Same partner	New partner	Same partner	New partner
Age previous child 0–1	0.33***	0.27***	0.43***	0.26***	0.39***	0.35***
Age previous child 2–3	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Age previous child 4–6	0.49***	1.43***	0.67***	2.05***	0.48***	1.48***
Age previous child 7–13	0.17***	1.09	0.29***	2.26***	0.20***	2.88***
Male	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Female	0.94	1.38**	0.92	1.15	1.03	1.28***
Second birth	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Third birth	0.36***	0.35***	0.41***	0.35***	0.38***	0.37***
Person-months	292,538	292,538	160,344	160,344	1,312,371	1,312,371
Subjects	4311	4311	1064	1064	14,027	14,027
Events	2120	295	741	187	14,609	2408

Note: $*p < 0.1$; $**p < 0.05$; $***p < 0.01$

observations did not allow us to study the patterns in East Germany. The results for second births suggest a gender difference in the shape of the baseline. For women, the rate increases rapidly, is at its highest 4–6 years after first birth and then decreases (Germany) or stabilizes (Finland). For men, the increase is slower; this is particularly clear for Finland, where the rate is highest in the last interval (7–13 years). The results suggest that some of the gender differences in the birth rates may be tempo effects, with women accelerating the transition to the next birth after separation.

Next, we examined how education, migration background and age at first birth are associated with the chances of having children with different partners. We modelled the risks of having a (second or third) birth with the same and the new partner separately for men and women. We could have estimated a joint model for both sexes and could have controlled for gender, as in the analysis above (see Table 15.3). Including gender and age at first birth in one model seemed inappropriate, however, as age at first birth varies by gender. Age at first birth would explain much of the differences by gender, and the substantive meaning of the results would be limited.

The results are shown in Tables 15.4a (men) and 15.4b (women). The regression analyses are in line with the previous descriptive statistics. They show for all three societies that foreign-born persons are less likely than native-born persons to have a child with a new partner. They also suggest that low age at first birth is a strong predictor of multipartner fertility. Women and men who were under age 22 when they had their first children are much more likely than other women and men to have children with different partners. Results for education are more inconsistent. For
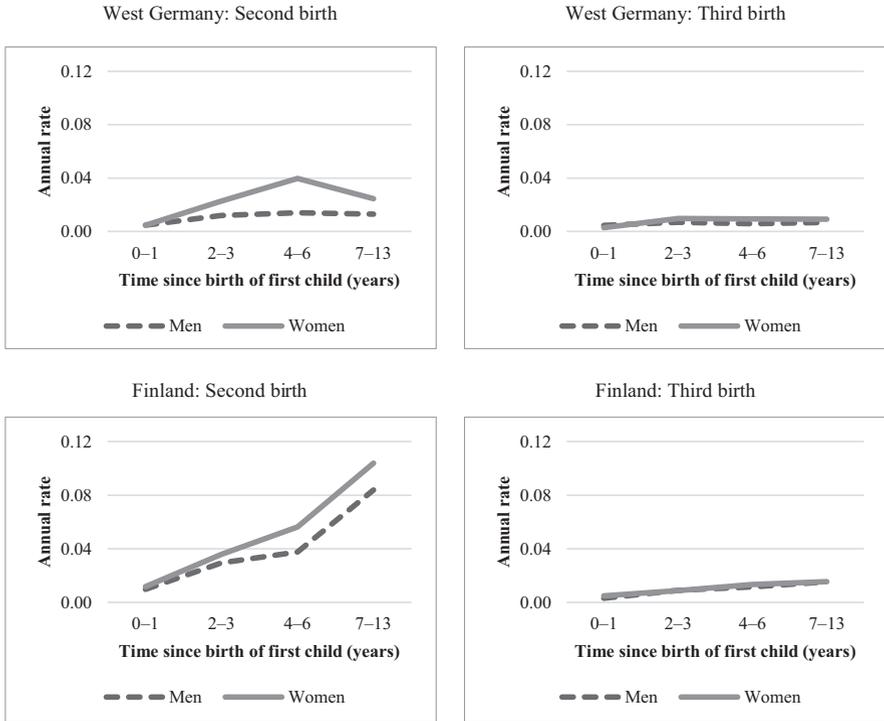
West Germany: Second birth

West Germany: Third birth

Finland: Second birth

Finland: Third birth

Fig. 15.1 Duration specific rates of having second and third birth with a new partner from a hazard rate model that only includes the baseline (duration since last birth)

Finland, the educational gradient is in line with prior findings for the US. While a positive educational gradient is found for births with the same partner, a negative gradient exists for multipartner fertility. For Germany, the pattern is rather irregular. This particularly pertains to the case of East Germany. Part of this irregularity can be attributed to the small sample size. In addition, the East Germans born around 1970 are rather homogenous in terms of its educational attainment. The overwhelming majority of this cohort had a vocational degree, and only very few and selective respondents of this cohort had only a low level of education.

15.7   Conclusions

This study investigated the transitions to second and third childbirth in East Germany, West Germany and Finland, focusing on societal and gender differences in the timing and probability of having children with more than just one partner. The analysis adopted a competing risk approach, focusing on fertility in recent cohorts born around 1970, following them until around age 41. We found large differences

Table 15.4a Relative risk of having a second or third child with the same partner and a new partner, results from piecewise exponential models, men

	West Germany		East Germany		Finland	
	Same partner	New partner	Same partner	New partner	Same partner	New partner
Age previous child 0–1	0.31∗∗∗	0.40∗∗∗	0.37∗∗∗	0.10∗∗∗	0.38∗∗∗	0.32∗∗∗
Age previous child 2–3	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Age previous child 4–6	0.47∗∗∗	1.27	0.68∗∗∗	1.03	0.51∗∗∗	1.35∗∗∗
Age previous child 7–13	0.19∗∗∗	1.12	0.25∗∗∗	1.61	0.20∗∗∗	2.70∗∗∗
Second birth	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Third birth	0.35∗∗∗	0.38∗∗∗	0.38∗∗∗	0.51∗∗	0.35∗∗∗	0.34∗∗∗
Low education	0.98	0.71	2.60∗∗∗	1.03	0.88∗∗∗	1.26∗∗
Medium education	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High education	1.15∗	1.30	1.68∗∗∗	1.01	1.15∗∗∗	0.94
First birth under age 22	0.82	2.12∗∗	0.66∗	2.73∗∗∗	1.15∗∗	2.13∗∗∗
First birth age 22–29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
First birth age 30+	1.06	0.92	0.97	0.40∗∗∗	0.59∗∗∗	0.38∗∗∗
Native born	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Foreign born	1.20∗∗	1.05	1.53∗	0.73	0.92	0.78∗
Person-months	108,515	108,515	66,863	66,863	633,112	633,112
Subjects	1715	1715	852	852	6788	6788
Events	852	89	333	71	6987	1012

Note: $∗p < 0.1$; $∗∗p < 0.05$; $∗∗∗p < 0.01$

in levels of multipartner fertility across the three societies. The levels of multipartner fertility were clearly highest in East Germany and lowest in West Germany. This attests to the persisting heterogeneity in family demographic behaviour within Germany. The differences between East and West Germany are in line with previous studies (Henz 2002; Thomson 2004) and also consistent with our expectation that in West Germany, heavy demands on financial support to ex-spouses (often ex-wives) after divorce, together with low proportions of nonmarital childbearing, would discourage men from having further children with new partners after union dissolution (see hypothesis 2). However, we also found gender differences in Finland, albeit on a smaller scale, despite the fact that there are only limited financial obligations between former spouses and partners. The obligations are limited to sharing responsibility for the maintenance of common children, and claims for spousal maintenance are rare exceptions.

We also examined how standard socio-demographic characteristics correlate with multipartner fertility. There are only few studies on how migration background affects multipartner fertility. Most of the US studies have focused on ethnicity and

Table 15.4b Relative risk of having a second or third child with the same partner and a new partner, results from piecewise exponential models, women

	West Germany		East Germany		Finland	
	Same partner	New partner	Same partner	New partner	Same partner	New partner
Age previous child 0–1	0.34***	0.22***	0.48***	0.46	0.37***	0.35***
Age previous child 2–3	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Age previous child 4–6	0.51***	1.46**	0.68***	3.15	0.50***	1.75***
Age previous child 7–13	0.16***	0.94	0.33***	2.57	0.21***	3.24***
Second birth	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Third birth	0.35***	0.30***	0.39***	0.23***	0.35***	0.32***
Low education	1.12	1.29	1.41	1.01	0.88**	1.28***
Medium education	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High education	1.18**	1.16	1.37***	1.00	1.03	0.81***
First birth under age 22	1.03	1.37*	1.17	2.66***	1.05	2.04***
First birth age 22–29	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
First birth age 30+	0.84***	0.29***	0.83	0.50**	0.50***	0.23***
Native born	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Foreign born	0.98	0.59***	1.04	0.51	0.81***	0.70***
Person-months	184,023	184,023	93,481	93,481	679,259	679,259
Subjects	2596	2596	1064	1064	7239	7239
Events	1281	206	408	116	7622	1396

Note: $*p < 0.1$; $**p < 0.05$; $***p < 0.01$

showed elevated multipartner fertility among black minorities (e.g., Carlson and Furstenberg 2006; Guzzo and Furstenberg 2007a, b). Our results rather suggest that foreign-born men and women in Germany and Finland were less likely to have children with different partners. In line with previous studies, we show that early first childbearing increased the risks of multipartner fertility. The effect of age at first birth and migration background was consistent across the different societies. However, the effect of education was more irregular. It was only for Finland that we found support for hypothesis 3 claiming that low education and multipartner fertility were strongly correlated. This is in line with previous findings from other countries (e.g., Thomson et al. 2014). For Germany, the pattern was more irregular showing no clear association between education and multipartner fertility. It is possible that the country differences pertain to educational differences in separation behaviour. While a strong educational gradient in separation and divorce exists for Finland, there is not such a strong gradient for Germany.

An important finding from our analysis is that the second birth schedule of men and women differed for those who had children across different partnerships. Supporting hypothesis 1, the results suggest that overall the rate of having a second or third child with a new partner was higher for women than for men, particularly when the first child was still young. This is surprising in light of studies showing that mothers have a lower chance of re-partnering after separation and divorce than fathers (Ivanova et al. 2013). Against this background, one could expect that they were also at a disadvantage when it came to having a second or third child after separation. Our study suggests that this is not the case. There are forces that may encourage women with young children to more rapidly progress to the next child after separation. First, they may be more aware than men of their limitations of having further children as they age. Second, the great majority of young children reside with their mothers after separation. On the one hand, young children inhibit the possibilities to search for a new partner. On the other hand, the desire to provide a sibling to the firstborn child may be stronger for women than for men. Whatever the right interpretation may be, it means that the fertility schedule of women and men diverges after separation. This is an interesting finding for life course researchers who focus on gendered life course patterns (Beaujouan and Solaz 2012). However, it is also of general interest for demographers suggesting that vital statistics data, which are usually collected for females, may provide a one-sided picture of birth patterns in a society. Our study thus supports prior calls for the collection of male fertility data in vital statistics.

There several caveats that may limit the generalization of our results. Firstly, data were censored at age 41. Childbearing beyond that age is rare. Nevertheless, women and men encounter different probabilities of having children beyond age 41, in particular when they have children with several partners. The gender differences that we present in the descriptive statistics are affected by that limitation and should be interpreted with caution. The event history model accounts for censoring, but the model relies on the proportionality assumption which likely is violated, as women accelerate childbearing after union breakup. A strength of our paper is that we compare behaviour in two contrasting welfare regimes and three societies. Our overall conclusion is that ex-spousal support may have inhibited West German divorced men from having further children in a new partnership. Obviously, this is a very strong conclusion based on a comparison of two countries. We leave it to future research and call for studies that include further countries into the investigation that better highlight the potentially important role of the policy context for post-separation behaviour.
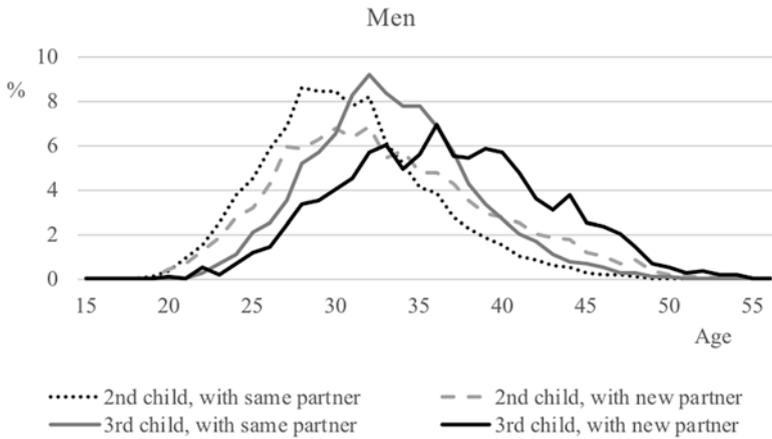
Appendix

Fig. 15.2 Age distributions (%) of second and third births with same and new partner by 2012, Finland, men born 1955–64
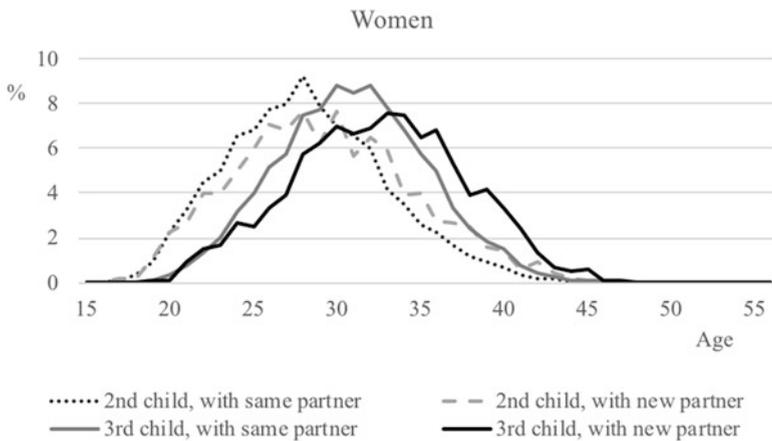

Fig. 15.3 Age distributions (%) of second and third births with same and new partner by 2012, Finland, women born 1955–64

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