Does the birth of a child still prompt a marriage? A comparison of Austria, France, Germany and Hungary

Nicolai Groepler, Johannes Huinink & Timo Peter

Published online: 08 May 2021.

Submit your article to this journal

Article views: 414

View related articles

View Crossmark data

Does the birth of a child still prompt a marriage? A comparison of Austria, France, Germany and Hungary

Nicolai Groepler ⓘ, Johannes Huinink and Timo Peter

SOCIUM Research Center on Inequality and Social Policy, University of Bremen, Bremen, Germany

ABSTRACT
Austria, France, Germany, and Hungary are four neighbouring European societies all with conservative welfare regimes, yet with distinct institutional and structural features. We investigate how these differences shape a particular example of culturally contingent behaviour: cohabiting couples' marriage behaviour when they have a child. Based on a discussion of relevant differences in family policy, legal frames and normative contexts, we develop hypotheses on country-specific marriage patterns. We test these hypotheses using longitudinal data from the Generations and Gender Programme (GGP) and the German Family Panel (pairfam). A number of relevant covariates were harmonized in order to be able to control for potential confounders which may affect the fertility process as well as marriage formation. Using discrete-time event history analysis, we observe robust differences in the effects of fertility on the marriage rate of cohabiting couples between the four countries. Pregnancy increases the marriage rate in Austria, Germany and Hungary, whereas no significant effect of fertility is found for France. After childbirth, the transition rate drops to its pre-pregnancy level in Austria and Germany and even below that in Hungary. Our findings point to a critical role of the socio-cultural context in which couples make relevant decisions about their private lives.

1. Introduction

Having children and getting married are closely connected in Europe even today (Holland 2017). This is a remarkable finding, given the proliferation of unmarried cohabitation in decades past. Even though

CONTACT Nicolai Groepler ✉ groepler@uni-bremen.de 🖂 SOCIUM Research Center on Inequality and Social Policy, University of Bremen, P.O. Box 33 04 40, Bremen 28334, Germany

considerable research has been undertaken on the interdependence of fertility and marriage, systematic cross-national comparisons are few and far between: Some more detailed comparisons involve only two countries, or in some cases inferences are made from single-country studies with incongruent designs. Furthermore, existing studies by now span an extensive timeframe – some of them are quite dated and the periods covered also differ across countries. For these reasons, the conclusions about cross-national variability in the relationship between childbirth and marriage that could be drawn from the existent body of research remain tenuous. Earlier cross-national research suggested a more or less uniform process across countries characterized by a steep incline in the rate of transition to marriage after the discovery of a pregnancy and a later drop to below the pre-pregnancy level circa six months after the birth (Mills and Trovato 2001; Blossfeld et al. 1993). This perspective was challenged by the inclusion of further countries into comparative studies, such as France or Sweden, which did not display the known pattern to the same extent (Baizán et al. 2004; Le Goff 2002). Later, more large-scale cross-national studies incorporated a cohort comparison and demonstrated diversity in developmental paths across countries despite a general trend towards decreasing transition rates to marriage among cohabiters during the childbearing period (Holland 2017; Perelli-Harris et al. 2011). The discussion thus far makes clear that in the absence of a universal pattern, more detailed insights into cross-national differences in how childbirth and marriage are interrelated are needed to be able to better assess the role that context plays. On top of this, the underlying demographic behaviours are subject to social change and predictions are difficult to make with no identifiable universal trend. It is an empirical question as to whether findings from previous studies will hold for more recent cohorts.

In order to be able to answer the question of whether the birth of a child still prompts marriage, a cross-national comparative perspective is essential. Our study contributes to the literature by taking a more detailed look at how the socio-cultural context shapes marriage patterns around childbirth and by taking advantage of a dataset which combines prospective and retrospective longitudinal data on cohabiters from recent cohorts. Following a most similar systems design (Przeworski and Teune 1970), we focus on four neighbouring European countries with the commonality of a conservative welfare regime, yet diverging institutional and structural features: Austria, France, Germany and Hungary. Holding constant some dimensions of the general cultural and institutional

background, our approach allows a detailed comparison of relevant cross-national differences regarding the legal status of unmarried and married couples, family policy, and family-related cultural norms. Observable differences in marriage patterns across the four societies may be due to cultural norms regarding the appropriate marital status in case of parenthood or differential economic incentives for being married when having a child. Different institutional settings permitting parents varying degrees of biographical autonomy should also affect the motivation to marry during the transition to parenthood. We assume that these aspects induce structural, institutional and cultural incentives as well as disincentives for marriage when a couple has a child. Our empirical analysis is based on event history models of the transition to marriage using data from the Generations and Gender Programme (GGP) for Austria, France and Hungary and the German Family Panel (pairfam) for Germany. The combination of prospective and retrospective longitudinal data allows us to control for a number of individual and household-level characteristics. The inability to factor in the temporal order of the decisions underlying observed behaviour is a shortcoming of many earlier studies. Our models address this problem by incorporating information on whether or not a firm intention to marry has already been formed at the start of the observation period. The advantages of our approach, however, come at the cost of a shorter observation period of approximately three years which means that we cannot observe potential delayed effects of childbirth on marriage. We focus instead on marital transitions during the period around childbirth.

2. Previous research and theoretical background

The theoretical point of departure for our study is the assumption that cross-national differences in the interrelationship between marriage and childbearing reflect different patterns of individual behaviour, as shaped by the different structural, institutional, and cultural conditions for the partners' communal life. Following a life-course perspective (Bernardi *et al.* 2019), we investigate the temporal interdependence between two behavioural processes within the family domain in different societal environments as the outcome of individual decisions over time.

2.1. Why and how are marriage and childbearing interrelated?

A positive association between fertility among cohabiting couples and their transition to marriage has been established across diverse European

contexts by a large body of research (Žilinčíková and Hiekel 2018; Berrington 2001; Blossfeld and Mills 2001). Four classes of arguments can be found in the literature regarding the incentives and disincentives for couples to behave in this way.

First, the *security utility* of marriage is addressed. When children live in the family, marriage becomes particularly important for protecting the parents from unwanted losses in case of a separation. One of the parents – usually the mother – may have to reduce their working hours or even withdraw from the labour market for a certain period of time. In such a situation, the spouse's income in combination with statutory spousal maintenance obligations becomes highly relevant. Moreover, mothers or fathers who reduce their working hours forgo the opportunity to invest in their earnings potential, leaving them more vulnerable to a breach of contract than their partner. The regulations typically laid down in divorce law go at least some way towards protecting spouses from a breach of contract in case of asymmetrical effects on the relative bargaining positions at later points in time (Ott 1992). However, this also implies that the better off parents are in regard to economic autonomy, the less attractive marriage should be (Konietzka and Kreyenfeld 2005; Huinink 1999).

Second, *income utility* can be at work. Special tax advantages, for instance, may be granted to married couples. Certain welfare benefits may also depend on marital status, such as coverage of a non-employed spouse in the partner's health insurance.

Third, there may be incentives due to legal benefits of marriage and parenthood. For instance, such *status-related utility* comes into play when being married matters with regard to having custody of a prospective child or maintaining access to one's child after a relationship breakup (Huinink 1999).

Fourth, the role of normative pressure to legitimate a child conceived within a non-marital cohabiting union (*socio-cultural utility*) has to be considered (Hărăguş 2015; Blossfeld and Mills 2001; Berrington 2001). Religiosity can be one major aspect here. This argument is easily extended to encompass the feeling of satisfaction which emanates from acting in accordance with one's personal values and attitudes pro or contra marriage (Hiekel *et al.* 2014b), inasmuch as this can be understood as an anticipatory reward for conforming with the expectations of significant others (Lindenberg 1991).

Disincentives to marry are to be considered as well. Huinink (1999) suggests that depending on institutional regulations of social benefits, especially for mothers with low income, not getting married following

childbirth could be economically advantageous. In all countries under study, basic social benefits, as a rule, are subject to a means test which considers the household unit regardless of marital status. Even though limited special provisions for single parents do exist in each of the four countries, estimates of average social benefits paid to single mothers in Europe (González 2007) do not warrant making a case for differential incentives across countries for unmarried couples to conceal their union from the authorities to claim such benefits. The greater commitment to one's partner and the legally defined responsibilities and obligations tied to marriage will also discourage less determined couples. Costs of a possible future divorce might act as a deterrent against institutionalizing one's romantic relationship. However, we assume that the costs of marriage do not moderate the effect of childbirth in a significant way. The benefits of marriage in the case of parenthood simply outweigh to a greater or lesser extent the potential costs of commitment as specified in divorce law.

The strength of the incentives to marry varies between countries according to the societal context and how it changes over time. Therefore, we propose that a couple's joint decision to marry is contingent upon a variety of structural and institutional conditions, which affect the subjective expected utility of marriage in case of childbirth. In summary, we have the following expectations:

- Policies and institutions which support mothers in maintaining economic autonomy (employment) after childbirth correspond with lower marriage rates, since the social security provided by marriage becomes irrelevant for any partner if there is no need for mothers to interrupt their employment career when they have children. Bargaining theory suggests that their effect on the marriage rate should be concentrated before employment is potentially reduced by one partner – typically prior to birth.
- Policies and institutions which disadvantage non-married couples with children vis-à-vis their married counterparts in legal and fiscal terms are linked to higher rates of marriage due to direct gains in income and status accompanying marriage. Less time pressure tends to be associated with such incentives and their effect on marriage should be more spread over the time surrounding childbirth.
- More traditional cultural norms relating to consensual unions with children and parenthood are associated with higher marriage rates, as nonconformity is sanctioned with social disapproval from

significant others. Marriage rates should rise during pregnancy and drop once the child is born and considered 'illegitimate'.

2.2. Differences in the structural, institutional and cultural contexts for childbearing and marriage across the four countries

Previous studies have found a range of macro-level determinants to be associated with cross-national differences in marriage behaviour, e.g. gender roles, religiosity, economic circumstances and anomie (Kalmijn 2007). Since the focus of this study is on the impact of pregnancy and childbirth on entry into marriage, the review of macro-level explanatory factors presented here concentrates only on those influences that specifically relate to differences in nuptiality in the period before and after the birth of a child. The four countries which were selected for the comparative analysis differ systematically with respect to several key dimensions of the structural and institutional context relevant to the establishment of partnerships and family formation. Following an overview of structural differences in marriage patterns and trends, we discuss family policy, the legal framework and marriage norms in each of the four countries during the period corresponding to our observation period in the late 2000s. Note that macro-level circumstances may have changed since.

In East and West Germany, cohabitation and non-marital fertility have become more widespread since the 1970s, albeit at a far slower rate and to a considerably lesser extent than in France, where non-marital cohabitation and non-marital fertility have increased greatly for decades since the 1970s (Le Goff 2002). In Austria, unmarried cohabitation has spread at a rate similar to West Germany, whereas non-marital childbearing has risen very highly, yet from a considerably higher baseline level (Prskawetz et al. 2008). The long-established high rates of non-marital childbearing have been attributed to cultural norms originating from inheritance practices and related restrictions on marriage in some parts of the country (Kytir and Münz 1986). Non-marital childbearing is by implication to a lesser extent related to cohabitation in Austria than in France. Since the 1990s, Hungary has also seen a dramatic decline in marriage rates and substantial postponement of first marriage (Murinkó and Spéder 2015) accompanied by a rise in unmarried cohabitation and reductions as well as postponement in fertility (Kapitány and Spéder 2015). Some of these trends already set in long before the regime change (Fodor et al. 2002; Dupcsik and Tóth 2014). In 2011, the percentage of family

households headed by a married couple was 75% in Germany, 70% in Austria and 65% in France and Hungary, with 12%, 14%, 21% and 15% of parents living in an unmarried union, respectively (Eurostat 2015).

2.2.1. Economic dependence on a partner

Reducing workload in the domestic domain through the public provision of services, first and foremost of affordable childcare, so as to enable women to enhance their attachment to the labour market is considered a key strategy for establishing economic autonomy of parents (Orloff 1993). In France, labour market participation for women has for many decades meant chiefly full-time employment. Women's and in particular mothers' attachment to the labour market has deliberately been promoted via certain peculiarities of the French welfare system which regards the compensation of parents for the costs of children as a priority (Lewis 1992; Korpi 2000). As a result, extensive public provision of childcare and further targeted measures enable mothers in France, more than in the other countries, to reconcile work and family responsibilities (Toulemon *et al.* 2008). In 2007, the participation rate in formal childcare for children under the age of three was 42.0% in France as opposed to 10.9%, 15.5% and 9.0% in Austria, Germany and Hungary, respectively (OECD 2021).

Having spent 3.2% of its GDP in 2007 on family benefits (OECD 2021), Hungary's family policy can be described as being rather generous by international comparison. It traditionally has been characterized by its conservative, pronatalist emphasis with long parental leaves and a preference for cash transfers over services (Inglot *et al.* 2012). The formerly well-developed childcare infrastructure was largely dismantled after the fall of the Iron Curtain and has been expanded again only gradually since (Makay 2015), leading to the aforementioned low coverage of childcare for younger children. Family policy in Hungary was thus not designed to facilitate the reconciliation of work and care but to financially support childcare at home. This is demonstrated by the employment rate of mothers of children under the age of three, which at only 10.3% was the lowest in the European Union in 2007 (OECD 2021). The compatibility problem is further aggravated by a general lack of opportunities for part-time work (Drobnič 1997; Makay 2015). Reforms aimed at improving the situation for working mothers have been implemented only in recent years.

The male-breadwinner model has long been a cornerstone of the Federal Republic of Germany's family policy, which features generous parental leave regulations and likewise gives precedence to cash transfers (Trappe *et al.* 2015). In contrast, the former GDR followed a dual-worker model. However, as a consequence of the adoption of the West German institutional frame in the new federal states, a gradual convergence of women's and in particular mother's employment patterns in the two parts of the country can be observed since reunification, although a considerably higher proportion of employed mothers in the eastern part still works full-time rather than part-time (Trappe *et al.* 2015). The design of public childcare has been described as being ill-suited to effectively foster the employment of mothers (Kreyenfeld and Hank 2000). A legacy from the socialist era, the supply of childcare is much more extensive in Eastern than in Western Germany in terms of both coverage and opening hours, despite major cutbacks following reunification. Only more recently have a number of fundamental reforms been implemented which were aimed at actively promoting a more egalitarian division of labour between the sexes.

Family policy in Austria is also characterized by a general family support model, oriented towards preserving traditional family patterns (Korpi 2000). At the same time, even based on older data from the 1990s, Korpi (2000) finds Austria, like France, to have only a medium level of gender inequality in terms of labour force participation. While more recent figures show a consistent rise in women's employment and a convergence among countries, the order of the countries with respect to the impact of parenthood on women's employment patterns persists, placing Austria in between France and Germany (Eurostat 2009). These mixed findings are in accordance with the fact that the provision of childcare infrastructure is lagging behind in Austria, forcing a large proportion of working mothers to compensate for the lack of institutional support by relying on informal childcare (Prskawetz *et al.* 2008). *The higher level of economic autonomy, which the extensive public provision of childcare in France and to a smaller degree in Eastern Germany allows, should lead to lower rates of transition to marriage in anticipation of childbirth for cohabiting couples in France and Eastern Germany than for couples in Austria, Western Germany or Hungary, where the opportunities for reconciling work and family roles are by comparison poorly developed.*

2.2.2. The legal status of unmarried and married couples

Maintenance regulations, such as alimony for a partner and child support, apply in all four countries primarily to married couples. Cohabiting partners are effectively not given any legal means for making a claim or only on condition that their union is officially registered;[1] though in Austria and Germany alimony may be paid to the primary childcare provider after separation if the couple has common children (Perelli-Harris and Sánchez Gassen 2012). In Hungary, limited maintenance obligations of cohabitants were laid down by law after the end of our observation period (Szeibert 2014). In all four societies, the statutory regulation of mutual support in partnerships thus reinforces the primacy of marriage.

Apart from maintenance regulations, the laws on taxation and social security also privilege married couples in all societies, albeit to varying degrees. Via double exemptions, income splitting and preferential tax rates in the case of joint taxation schemes, the tax and transfer system may directly provide incentives for marriage and by encouraging a traditional division of labour after family formation or, in the case of separate taxation, may support spousal economic autonomy (Sainsbury 1999; Lewis 1992). The four countries differ as to whether and under which conditions their tax laws allow joint taxation. Whereas cohabiting couples are always taxed separately in Germany, the German tax system offers married couples the option to have their joint earned income split before taxation (income splitting), which in case of an asymmetric earnings situation will yield a financial advantage. In contrast to Germany, France stands out due to its largely equal treatment of married and unmarried couples in its legislation (Le Goff 2002). As a component of the French tax system, the family quotient takes the number of household members into account in tax splitting and therefore grants a financial advantage to all families with children, even though joint taxation is only available to registered partners (PACS) and married couples (Perelli-Harris and Sánchez Gassen 2012). Whereas the Austrian and Hungarian tax systems differ from the other two in that they do not offer joint taxation at all, the defining feature of the French system is that marriage is not a prerequisite for joint taxation

---

[1]Due to data limitations, we are unable to consider the 'pacte civile de solidarité' (PACS) in our empirical analysis. Exclusion from the analysis means that we effectively treat the PACS like marriage. This interpretation is backed by the fact that, in our data, no transitions to marriage are observed among respondents who have registered a PACS. The question to what extent movement between PACS and marriage does occur is outside the scope of the present study.

as in Germany. Instead, the family is the basis for income splitting in France and each family member is considered with a certain factor. Consequently, French tax law offers indirect incentives for marriage by rewarding a traditional division of labour among the partners. *The privileged status of married couples in the French and especially the German tax systems should lead to higher rates of marriage transitions among cohabiting couples around childbirth than in Austria and Hungary, where joint taxation is not an option for couples.*

Great variation also exists with respect to the treatment of married and unmarried couples in other areas of family law, such as guardianship: In Germany, the establishment of paternity and custody of a child depend on the mother's consent (Perelli-Harris and Sánchez Gassen 2012). In case of disagreement, the status quo has to be contested judicially. In Austria, joint custody likewise requires a separate application, once a child has been recognized by its unmarried father (Perelli-Harris and Sánchez Gassen 2012). In France, children of unmarried and married couples are treated equally and – provided that the father recognizes his child – unmarried cohabiting couples automatically acquire joint custody for their child. Joint custody likewise is assumed in Hungary as the default rule (Szeibert 2013). *The relatively weak position of fathers in Germany regarding guardianship should reinforce the marriage patterns predicted on the basis of the differences identified in tax law.*

As reviewed by Perelli-Harris and Sánchez Gassen (2012), there are a number of other areas of law that may treat unmarried and married couples unequally and thus may give subtle incentives to marry. The authors' analysis demonstrates that outside of the PACS and the legal status of children, French law does not treat unmarried and married couples more equally overall than Austrian or German law (Hungary is not included in the analysis). The example of an inheritance tax in France, which does not apply to registered cohabiters or spouses, serves to illustrate this point. Cohabiters have no automatic right to inherit in any of the countries. In all four countries, situational legal incentives to marry persist, though partly in different areas and with different strengths.

2.2.3. Norms and values pertaining to marriage

It is argued that the strength of norms and values regarding the institution of marriage have declined in Hungary along with the dramatic changes in demographic behaviour (Róbert and Bukodi 2005). Some evidence even seems to suggest that they no longer differ much from those

in Western European countries (Hiekel *et al.* 2014b). On the other hand, a cross-national comparative investigation of the meanings attached to cohabiting unions, put forward by Hiekel *et al.* (2014b), classifies a considerably higher proportion of cohabitants in Hungary as in other Central and Eastern European countries as 'conformist', meaning that they have the intention to marry even though they reject the institution of marriage or at least feel indifferent about it. In line with what is already known from social reporting on attitudes regarding marriage and the family in Hungary (Pongrácz 2012), these research findings may be interpreted as an indication of the presence of comparatively strong normative pressure from family members or the wider community in Hungary rather than positive personal attitudes toward marriage among cohabitants. Traditional social norms regarding consensual unions and parenthood should affect the decision to marry primarily during pregnancy, assuming that having children outside marriage is negatively sanctioned by the social environment (Blossfeld and Mills 2001). *Therefore, the existence of more traditional social norms in Hungary as compared with Austria, France and Germany should lead to higher rates of transitioning into marriage during pregnancy in Hungary and a more pronounced subsequent decline in transition rates after childbirth.*

It is evident that our considerations on the societal differences across the three dimensions yield partly contradictory predictions. Which of these dimensions is most influential for marriage decisions is an open empirical question and is difficult to determine a priori. Following the logic of different ideal types of cohabitation developed by Heuveline and Timberlake (2004), one may argue that economic and legal incentives may become more relevant in contexts where cultural norms and hard institutional pressures have eroded, as cohabitation becomes more indistinguishable from marriage. This helps to devise a hierarchy for our predictions. *In Hungary cohabitation is still seen more as a prelude to marriage and couples marry when a child is on the way and less after the birth. Institutional support for raising children outside of marriage is most developed in France: Marriage should be less frequent, less time-dependent and may be delayed, following more pragmatic motives. We expect Germany and Austria to fall in between with high marriage rates during pregnancy. This should be mitigated by institutional support in Eastern Germany, whereas fewer economic incentives for an unequal division of labour among partners reduce the institutional pressure in Austria. Furthermore, we expect that these differences in fertility effects hold after accounting for the composition of the sample with regard to individual characteristics.*

3. Data and methods

3.1. Databases

Combining longitudinal data for Austria, France and Hungary from the Generations and Gender Programme (GGP) and for Germany from the German Family Panel (pairfam), a harmonized event history dataset was generated. The two sources of data have a sufficiently large overlap to justify their use in a comparative study (Hiekel *et al.* 2014a). The variables extracted from the two data sources have been harmonized using an ex-post harmonization approach (Granda *et al.* 2010).

The GGP is a cross-national longitudinal survey on intergenerational as well as intimate relationships (Vikat *et al.* 2007), which was launched in 2004 and has hitherto collected data on 20 countries.[2] The Austrian sample initially consisted of 5,000 respondents, 10,079 and 13,540 respondents participated in the first interview of the French and Hungarian surveys. The GGP covers an age range of 18–80 years. Up until now, two waves of harmonized data are available for the three countries with an interval of three years between the two waves (four years in the case of Austria and Hungary): Data collection took place in 2008/2009 and 2012/2013 for the Austrian, in 2005 and 2008 for the French and in 2004/2005 and 2008/2009 for the Hungarian survey. Panel mortality between the two waves was 21% for Hungary, 22% for Austria and 35% for France. Selective attrition is a potential threat and may bias our regression estimates if the variables driving it were unobserved and related to the marriage and fertility processes themselves. The available evidence is not alarming (Buber-Ennser 2014).

The German Family Panel pairfam is a multidisciplinary, longitudinal, multi-actor study for the analysis of intimate relationships and family dynamics (Huinink *et al.* 2011). The first wave of data collection was launched in 2008/2009 with a random sample of 12,402 persons spread evenly across three birth cohorts: 1971‒1973, 1981‒1983 and 1991‒1993. Eleven waves of data are available at present, as interviews take place on an annual basis. The rate of attrition for pairfam was 23% in the second wave, but subsequently dropped to just over 10% by wave 4.

---

[2]We originally considered all countries with at least two survey waves for our analysis, but too small samples of cohabiters and missing or incompatible essential variables reduced the number of candidates quickly. Three Eastern European countries (Bulgaria, Georgia, Poland) were included in preliminary analyses, but the number of observed marital transitions and births in those samples was too low for meaningful multivariate analysis.

In order to deal with the differences in the observation periods between the two surveys, the period between the first and the fourth wave of the pairfam survey is considered for the analysis. To match the age range covered by the other two cohorts in pairfam, the GGP samples were restricted to those aged between 24 and 38 at the time of the initial interview and the youngest of the three original cohorts in the pairfam sample was excluded from the analysis, because these respondents are younger than the youngest respondents in the GGP. Since the interval between the first and the second wave of the Austrian and Hungarian surveys amounts to four years instead of the usual three years, only the first 36 months are included in the analysis in these cases. Owing to the specification of the research question, the samples are further restricted to those respondents who are living in an unmarried cohabiting union at the time of the initial interview. This may be the first or a subsequent union. After sample selection, 25 French cohabitants living in a registered union (PACS) were present in the sample. We decided to exclude them from the analysis since no marriage transitions occurred in this group. A total of 2,298 observations enter the analysis.

3.2. Analytic strategy

To test our hypotheses empirically, we applied discrete-time logistic regression models (Allison 1982). The event of interest is the occurrence of a first marriage after the initial interview in wave 1. We assess the role of childbearing for marriage behaviour by distinguishing a possible pregnancy effect and an effect of the time period after the birth of a child on the rate of transition to marriage. The observation period for any co-residential unit is treated as censored if the couple either separates or still has not married at the end of the observation period, marked by the wave 2 interview for the GGP samples and by the wave 4 interview for the pairfam sample. Corresponding with our comparative approach, separate models are run for Austria, France, Eastern and Western Germany and Hungary. We present average marginal effects (AME) in order to be able to better assess the relative magnitude of the effects.

Union formation and fertility are interrelated processes, which is expressed in a temporal dependence of the occurrence of an event in one process on the current stage of the other process (Brien *et al.* 1999; Willekens 1991). From the implications of previous research on the interrelatedness of family formation processes, which suggests that partnership formation and fertility may be planned jointly (Brien *et al.* 1999;

Musick 2007), a methodological challenge arises: Seeing as our analysis focuses on the decisions of individuals living in consensual unions, we might be observing a selective group. In particular, to the degree that the partners conceive their co-residential union as a precursor to marriage or otherwise anticipate marriage, the effect of fertility on marriage will be overestimated if the underlying orientations are not taken into account. The problem is further accentuated in the context of cross-national research if the distribution of these underlying orientations among cohabiting couples varies between the countries as evidenced by various research results (Hiekel and Castro-Martín 2014; Baizán et al. 2004; Le Goff 2002).

From this discussion it follows that the potential source of bias needs to be dealt with in the best possible way by controlling for 'confounding' factors which affect both fertility and marriage decisions in consensual unions. Theoretical considerations and also some empirical evidence point to the role of orientations in coordinating decision-making in both processes (Willekens 1991; Musick 2007).

To deal with the potential bias caused by unobserved heterogeneity, our strategy relies on the reduction of unobserved heterogeneity as far as possible by including relevant covariates in the models, including an indicator for having the intention to marry. Nevertheless, it cannot be completely ruled out that unobserved heterogeneity remains a substantial source of bias. In precursory analyses, we attempted to model the marriage process and the fertility process jointly using simultaneous equation models to account for unobserved heterogeneity (Lillard 1993). However, data restrictions in the form of a lack of repeated marriage events due to the short observation period did not allow us to estimate the correlation between the two processes. Nevertheless, we make the point that the data allows us to account for the theoretically most relevant variables explicitly, first and foremost the intention to marry, which should capture the bulk of the heterogeneity associated with the variables of interest.

The explanatory variables of central interest are constructed as time-varying dummy variables for the time period between conception and the birth of a child and the period after the birth of a child. The reference category spans the period of time before conception is observed. The point of conception was defined as eight months before birth to take account of the likely delay between the time of conception and its discovery. We only observe conceptions if a successful birth was reported, thereby conditioning on future events. This means that results may be biased – the effect of pregnancy is overestimated – insofar as abortion

(or miscarriage) is not random and significant selection occurs (Blossfeld and Mills 2001). We consider first as well as subsequent births.

We control for a wide range of time-variant and time-constant variables. The duration of the partnership in years, its square and the fertility history of the couple but also the respondent's labour force participation enter the analysis as time-varying covariates. Surveyed retrospectively, these measures are available on at least a monthly basis. The remaining variables are treated as time-constant covariates and reflect the status quo at the time of the first interview, since partners' activity histories and housing histories, in particular, were not available in the data.

- The *economic activity status* of the partner is operationalized as a categorical variable distinguishing between three statuses: employed, in education and not employed. The same distinction was used for the time-varying variable specifying the respondent's activity status.
- Each partner's *level of education* up to the first wave was classified into three categories representing a high, an intermediate and a low level of education. The coding is based on the ISCED 2011 classification for Austria and Hungary and the ISCED 1997 classification for Germany and France (UNESCO Institute for Statistics 2012), whereby all levels up to lower secondary education were subsumed under low education and tertiary education was considered a high level of education. Education level enters the models in the form of two gender-specific variables (one for each partner), as the preceding discussion suggests that social contexts likely shape educational effects in gender-specific ways.
- *Home ownership* is a dummy variable which takes on the value 1 if the couple lives in their own property, indicating a significant relationship-specific investment associated with a long-term financial commitment.
- Two items available in both data sources that capture *attitudes towards family life* were included: 'Marriage is a lifetime relationship and should never be ended' and 'A pre-school child is likely to suffer if his/her mother works'. Both items are measured on a 5-point scale, with 5 indicating complete agreement.
- An indicator of the respondent's *religious affiliation* distinguishes between the categories 'Catholic', 'other denomination' and 'no affiliation'.
- The measurement of *marriage intentions* differed between the two surveys. The GGP asks respondents whether they intend to marry

within the next three years, whereas pairfam asks whether a marriage is planned within the next 12 months. Apart from that, the number of response categories differed slightly between the countries. These slight variations notwithstanding, any affirmative response was treated as being indicative of the intention to marry, even if reservations were expressed.

* *Conflict frequency* is a composite measure capturing the frequency of disagreements in three different domains, i.e. leisure time, household chores and financial matters. In the GGP, the question more precisely refers to the last 12 months before the interview. The frequency of conflict is measured on a 5-point scale ranging from '(almost) never' to 'very frequently'. An index was constructed by summing the scores on each item and dividing by the number of items.

4. Findings

4.1. Descriptive overview

In Table 1, we highlight some relevant contrasts between the countries with respect to a few selected demographic indicators. The figures are from official statistics (Iacovou and Skew 2010, Eurostat 2021; Statistisches Bundesamt 2008, 2021) and refer to the year 2007 which is in between the different observation periods. They indicate that a much larger proportion of the French population in their twenties living in a childless union were not married than was the case in Austria, Germany or Hungary. In Austria and Hungary, only slightly more than half of those young couples were living together without being married, a twenty-percentage-point difference to France. What is more, the basic pattern remains stable when considering only couples with

Table 1. Selected demographic indicators for Austria, France, Hungary, Western and Eastern Germany (2007).

	Total fertility rate	% of births outside marriage	% of cohabiting unions among unions in twenties wo/w kids	% of children living with cohabiting parents
Austria	1.38	38.3	54.6 / 24.6	7.4
France	1.98	51.7	78.8 / 46.8	21.0
Hungary	1.32	37.5	56.6 / 24.2	9.9
Germany West	1.38	25.8	64.4 / 18.6	5.0
Germany East	1.37	57.8		17.2

Sources: Eurostat (2021); Iacovou and Skew (2010); Statistisches Bundesamt (2021, 2008).

children. Even among these couples almost 50% were not married in France, while the proportions are one-quarter for Austria and Hungary and one-fifth for Germany. The proportion of births out of marriage and the percentage of children living with cohabiting parents provide evidence for a much weaker link between childbearing and marriage in France than in Austria, Western Germany and Hungary. However, the values for Eastern Germany are much more similar to those for France than to those for Western Germany. Interestingly, the lower prevalence of marriage among French couples does not appear to affect fertility negatively. The total fertility rate is around 50% higher in France than in Austria, Germany or Hungary.

In accordance with official statistics, we find the highest incidence of marriage among the Western German cohabitants in our sample (32%; see Table 4 in the appendix) and the lowest among the French and Hungarian couples (18% and 17%) with the Austrians and Eastern Germans ranging in the middle (23% and 22%). Conversely, 27% of cohabiting couples in our French sample experience a birth before censoring, which contrasts with only 8% in the Western German sample. Austria, Eastern Germany and Hungary fall in between, with a birth occurring in 20%, 14% and 16% of co-residential unions in the sample, respectively.

Table 2 shows estimates of the survival function intended to give a purely descriptive overview of the timing of marriage in relation to the timing of birth in each sample. In line with our expectations, we observe the lowest probability to marry before birth and overall in France. In Hungary, marriage appears to take place almost exclusively before birth. The probability to continue cohabiting beyond childbirth is lowest in Western Germany.

Table 2. Survival estimates of the transition to marriage in relation to the timing of birth among cohabiters who experienced a birth during the observation period.

	Still in cohabitation at conception	Still in cohabitation at birth	Still in cohabitation one year after birth	Still in cohabitation two years after birth
Austria	0.89	0.79	0.74	0.64
France	0.90	0.86	0.78	0.71
Hungary	0.80	0.68	0.68	0.65
Germany West	0.77	0.52	0.43	0.38
Germany East	0.88	0.70	0.64	0.64

4.2. Results from discrete-time models of marital transition

Figure 1 shows a graphical representation of the average marginal effects (AME) of a pregnancy and the period after the birth of a child on the transition rate to marriage before and after controlling for covariates. A positive effect of the period after the conception of a child and before birth is observable in Austria, the two parts of Germany and in Hungary, whereas in France pregnancy has no effect at all. The positive pregnancy effect appears to be less pronounced in Austria than in Germany or Hungary. This effect is positive in both parts of Germany and, after controlling for confounders, there is no statistically significant difference in the AME between the two parts of the country.

After the birth of a child, the rate of marriage decreases again to its original level in Germany. In Hungary, the effect of the period after the birth becomes negative. This finding is in line with the argument that normative pressure may play a greater role in Hungary than in the other three countries. A slight increase in the marriage rate after the birth of a child is discernible in France, but it is not statistically significant. The lack of an effect of childbearing on the transition to marriage in France points to the better economic protection of unmarried mothers in this country due to better opportunities for reconciling work and family. Finally, it is worth noting that controlling for potential confounders hardly influences the effects of pregnancy and birth.
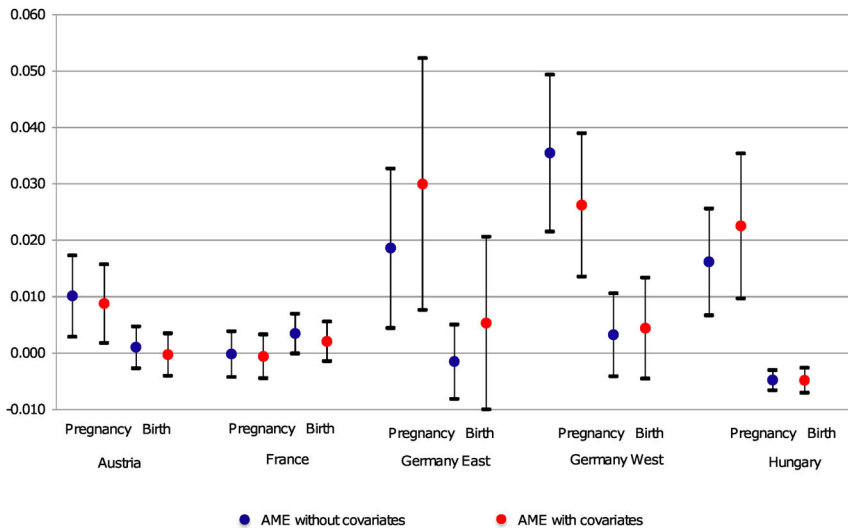

Figure 1. AME of pregnancy and birth on marriage rate with and without controls, 90% confidence interval.

Table 3 shows the complete models with AME for all covariates. With the exception of Eastern Germany, the results indicate significant socio-economic differences in the transition to marriage, as measured by differences in educational attainment between dyads. In particular, the least educated tend to be less likely to marry across the other countries. Beyond this, Hungary and Western Germany share an asymmetric effect of educational attainment on the transition to marriage: Only for the male partner is a higher level of education conducive to marriage. In Austria and France, the educational effects appear to be more symmetric between the two genders, though a particularly strong positive effect is observed among women with intermediate education in France. In addition, non-employed respondents in France show a

Table 3. Discrete-time event history model (cloglog) of marital transition, average marginal effects.

	Austria	France	Hungary	Germany West	Germany East
Pregnancy	0.0088*	−0.0006	0.0226**	0.0263***	0.0300*
Birth	−0.0002	0.0021	−0.0048***	0.0044	0.0053
Female	−0.0001	0.0013	0.0003	0.0013	0.0010
Age at start of union	−0.0002	−0.0004+	−0.0005+	−0.0002	0.0002
Duration of union	0.0001	0.0000	−0.0001	0.0001	0.0002+
Duration of union sq.	−0.0000	−0.0000	0.0000	−0.0000	−0.0000+
Ever divorced	0.0018	−0.0017	0.0033	0.0066	0.0098
Education level female partner (Ref.: low)					
Medium education	0.0026	0.0062***	0.0002	−0.0029	0.0064
High education	0.0056+	0.0041**	0.0017	−0.0027	0.0023
Education level male partner (Ref.: low)					
Medium education	0.0046	0.0028+	0.0043***	0.0080***	−0.0014
High education	0.0058+	0.0052*	0.0081**	0.0132***	0.0019
Activity status (Ref.: employed)					
In education	0.0005	0.0035	0.0017	−0.0055	−0.0008
Not employed	0.0025	−0.0047***	−0.0006	−0.0026	−0.0034
Activity status partner					
Partner in education	−0.0017	0.0010	0.0014	−0.0017	−0.0021
Partner not employed	−0.0004	−0.0004	−0.0013	−0.0041	−0.0029
Home owner	−0.0003	−0.0003	0.0018	−0.0013	−0.0029
Freq. of conflict	−0.0023+	−0.0018+	−0.0018+	−0.0022	−0.0007
No. of joint children	0.0001	0.0007	−0.0035+	−0.0038+	0.0005
Att. Marriage lifelong	0.0005	−0.0003	0.0006	0.0009	−0.0003
Att. Child suffers	0.0001	−0.0001	−0.0002	0.0008	−0.0005
Religious affiliation (Ref.: Catholic)					
Other	0.0047	−0.0020	−0.0032+	−0.0018	−0.0109
No affiliation	0.0042	−0.0017	−0.0039*	−0.0068**	−0.0151
Intention to marry	0.0123***	0.0089***	0.0000	0.0183***	0.0130***
N	436	392	352	555	233

+ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

significantly lower transition rate to marriage than the employed. Catholic respondents tend to marry at a higher rate than those with no or other religious affiliations. The effect of religion is significant only in Hungary and Western Germany; in Austria, it is not observed. As the first child would be expected to be more likely to trigger marriage, it is worth noting that the number of joint children has no significant effect in any country. Only in Hungary is this effect close to being significant. Finally, having the intention to get married at the beginning of the observation period increases the risk of a subsequent marriage, except in Hungary. Even though the effect of this variable is found to be significantly positive for Austria, France and for the two parts of Germany, including it hardly changes the effect of the fertility variables. This leads us to the conclusion that the observed fertility effects are not biased by heterogeneity in terms of family orientation in these countries. A closer look at the distribution of responses to this question in Hungary (see Table 4 in the appendix) casts doubt on this variable's ability to discriminate between respondents with a high family orientation and those with a low family orientation in the Hungarian context. An overwhelming majority of nearly 70% claims to have the intention of marrying their partner. Having the intention to marry might not mean the same thing in Hungary as in the other countries under study (Hiekel *et al.* 2014b). As discussed earlier, this could be due to strong normative expectations to marry outweighing individual preferences.

5. Discussion

In this paper, we investigated the propensity of cohabiting couples to marry in response to a pregnancy or the birth of a child in Austria, France, Germany and Hungary, four European countries whose welfare regimes and family policies are generally based on a conservative ideology. Overall, the findings provide evidence for the existence of robust differences in fertility effects on marriage rates between these countries. We also identified country-specific marriage patterns in the contrast between the effect of a pregnancy and the effect of the birth of a child. In conclusion, the birth of a child still triggers marriage in all countries under study except France, where the incidence of marriage does not differ significantly before and after conception, at least within the observation window. This is not to say that there are no reasons to marry associated with children, as our discussion has shown. The legal status of unmarried and married couples, family policy and cultural norms

were identified as important aspects of an incentive structure for cohabiting couples when they become parents and face the decision whether or not to get married.

The results of our empirical analysis broadly corroborate insights gained from research using data on older cohorts (Le Goff 2002; Baizán *et al.* 2004; Hărăguş 2015). An important inconsistency concerns the period after the birth of a child in Hungary. To be sure, the negative effect in our models was also identified by Hărăguş (2015) using retrospective data from the same data source. However, further analysis revealed that a subgroup of women, who gave birth after 1989, did not exhibit the same pattern and had an increased risk of marrying after childbirth. The models differ too much to be directly comparable. Thus, it must be left to future research to investigate the historical change in marriage patterns in Hungary since the transformation.

The societal differences resulted in a distinct pattern of marriage in connection with childbirth for each country which was largely in line with our theoretical predictions. The overall picture suggests that the economic autonomy of mothers permitted by the specific configuration of French family policy may be the crucial factor distinguishing France from the other countries; hence, it may be responsible for the absence of any observable effect of fertility on marriage in France in this study. Surprisingly, similar results did not emerge in the case of Eastern Germany, which also was identified as having a high childcare coverage rate. It can be conjectured that the reconciliation of work and family in Eastern Germany is not on a sufficient level (as indicated by the lower childcare coverage rates for children under three as compared to France). Alternatively, a gradual adaptation to the common German legal frame after reunification may counterbalance the effect of the childcare infrastructure.

Tax regulations seem to play a minor or at most complementary role in the structuring of marriage behaviour around the time of birth. The tax incentives of the French 'quotient familial', which are neither strong enough nor exclusive to marriage (i.e. equal status of PACS), fail to stimulate marriage around childbirth. At the same time, the individualized tax system in Hungary does not negate the effect of a pregnancy. Austria appears to take an intermediate position with respect to the effect of a pregnancy on the marriage rate, which is in line with the lack of incentives provided by its tax system. The smaller effect of pregnancy in Austria could also be the result of the discussed regional variations in marriage patterns.

Normative pressure from relatives or the wider community is probably responsible for the drop in marriage transitions after childbirth in Hungary. In this case, a polarization between one group following this normative pressure and another group doing quite the opposite would be likely, as is indicated by the results of the survival analysis. This could be typical of a society in transition, where the potential to shape marriage patterns by relevant norms still prevails.

Despite the advantages of using comparable longitudinal data for this research, some limitations are associated with our approach, which need to be addressed. Some problems can be attributed to the fact that different data sources were combined to serve as a basis for the empirical analysis. Even though the conceptual overlap between the GGP and pairfam is considerable, the number of countries that could be considered for the comparison and the availability of relevant covariates in both data sources is limited. Only two covariates in the model include information specifically on the partner, although there is no reason to assume that one partner's details already adequately capture all relevant aspects of a dyadic relationship. Discrepancies between partners are especially to be expected in the attitudinal statements. Dyadic analyses would therefore, in principle, be desirable when union transitions are the outcome of interest.

Another potential bias may result from self-selection to the degree that cohabiting couples differ from each other in the extent to which they view their co-residential union as a prelude to marriage. Unfortunately, data restrictions prevented us from conducting further robustness checks in the form of multi-equation models. We tried to deal with this issue by controlling for relevant covariates. In particular, we observe differences in the intention to marry the current partner, which our literature review identified as central to the selectivity issue, and account for them. The estimates remained virtually unchanged after controlling for covariates. This may be seen as an indication that the results are hardly affected by selectivity.

Funding

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Nicolai Groepler has been working as a research assistant with the German Family Panel (pairfam) at Chemnitz University of Technology and the University of Bremen since 2015. He studied sociology and economics at the University of Potsdam and sociology at the University of Mannheim. His research currently revolves around the transition to adulthood and the decisions individuals make in the family domain and pays special attention to these processes' contingence on institutional and cultural contexts, but also touches on methodological questions in cross-national comparative research.

Johannes Huinink is a Research Professor for Sociology at the SOCIUM Research Center on Inequality and Social Policy at the University of Bremen. His main interests lie in the research fields of evolutionary socciology, social change, and sociology of the life course (especially family and spatial mobility).

Timo Peter has been working as a research assistant with the German Family Panel (pairfam) since 2014. He studied sociology and political science at the University of Kassel and the University of Bremen.

ORCID

Nicolai Groepler 🔟 http://orcid.org/0000-0002-3582-0178

References

Allison, P. D. (1982) 'Discrete-time methods for the analysis of event histories', *Sociological Methodology* 13: 61–98.

Baizán, P., Aassve, A. and Billari, F. C. (2004) 'The interrelations between cohabitation, marriage and first birth in Germany and Sweden', *Population and Environment* 25: 531–61.

Bernardi, L., Huinink, J. and Settersten, R. A. Jr. (2019) 'The life course cube: a tool for studying lives', *Advances in Life Course Research* 41: 1–13.

Berrington, A. (2001) 'Entry into parenthood and the outcome of cohabiting partnerships in Britain', *Journal of Marriage and Family* 63: 80–96.

Blossfeld, H.-P., Manting, D. and Rohwer, G. (1993) 'Patterns of change in family formation in the Federal Republic of Germany and the Netherlands: some consequences for solidarity between generations', in H. A. Becker and P. L. J. Hermkens (ed.), *Solidarity of Generations: Demographic, Economic and Social Change, and its Consequences*, Amsterdam: Thesis Publishers, pp. 175–96.

Blossfeld, H.-P. and Mills, M. (2001) 'A causal approach to interrelated family events: a cross-national comparison of cohabitation, nonmarital conception, and marriage', *Canadian Studies in Population* 28: 409–37.

Brien, M. J., Lilliard, L. A. and Waite, L. J. (1999) 'Interrelated family-building behaviors: cohabitation, marriage, and nonmarital conception', *Demography* 36: 535–51.

Buber-Ennser, I. (2014) 'Attrition in the Austrian generations and gender survey: is there a bias by fertility-relevant aspects?', *Demographic Research* 31: 459–96.

Drobnič, S. (1997) 'Part-time work in Central and Eastern European countries', in H.-P. Blossfeld and C. Hakim (ed.), *Between Equalization and Marginalization: Women Working Part-Time in Europe and the United States of America*, Oxford: Oxford University Press, pp. 71–89.

Dupcsik, C. and Tóth, O. (2014) 'Family systems and family values in twenty-first-century Hungary', in Z. Rajkai (ed.), *Family and Social Change in Socialist and Post-Socialist Societies: Change and Continuity in Eastern Europe and East Asia*, Leiden: Brill, pp. 210–49.

Eurostat (2009) *Reconciliation Between Work, Private and Family Life in the European Union*, Luxembourg: Eurostat, Statistical books.

Eurostat (2015) *People in the EU: Who Are We and How Do We Live?*, Luxembourg: Eurostat, Statistical books.

Eurostat (2021) *Fertility Indicators: Database*, https://ec.europa.eu/eurostat/data/database

Fodor, E., Glass, C., Kawachi, J. and Popescu, L. (2002) 'Family policies and gender in Hungary, Poland, and Romania', *Communist and Post-Communist Studies* 35: 475–90.

González, L. (2007) 'The effect of benefits on single motherhood in Europe', *Labour Economics* 14: 393–412.

Granda, P., Wolf, C. and Hadorn, R. (2010) 'Harmonizing survey data', in J. A. Harkness, M. Braun, B. Edwards, T. P. Johnson, L. Lyberg, P. P. Mohler, B.-E. Pennell, T. W. Smith (ed.), *Survey Methods in Multinational, Multiregional, and Multicultural Contexts*, Hoboken: Wiley, pp. 315–32.

Hărăguş, M. (2015) 'From cohabitation to marriage when a child is on the way. A comparison of three former socialist countries: Romania, Bulgaria and Hungary', *Journal of Comparative Family Studies* 46: 329–50.

Heuveline, P. and Timberlake, J. M. (2004) 'The role of cohabitation in family formation: the United States in comparative perspective', *Journal of Marriage and Family* 66: 1214–30.

Hiekel, N. and Castro-Martín, T. (2014) 'Grasping the diversity of cohabitation: fertility intentions among cohabiters across Europe', *Journal of Marriage and Family* 76: 489–505.

Hiekel, N., Huinink, J. and Peter, T. (2014a) *Combining data from the Generations and Gender Surveys and the German Family Panel to Conduct Comparative Research on Couples' and Family Dynamics*, The Hague and Bremen: pairfam, pairfam Technical Paper No 9.

Hiekel, N., Liefbroer, A. C. and Poortman, A.-R. (2014b) 'Understanding diversity in the meaning of cohabitation across Europe', *European Journal of Population* 30: 391–410.

Holland, J. A. (2017) 'The timing of marriage vis-à-vis coresidence and childbearing in Europe and the United States', *Demographic Research* 36: 609–26.

Huinink, J. (1999) 'Die Entscheidung zur Nichtehelichen Lebensgemeinschaft als Lebensform – Ein Vergleich zwischen Ost- und Westdeutschland', in T. Klein and W. Lauterbach (ed.), *Nichteheliche Lebensgemeinschaften: Analysen zum Wandel partnerschaftlicher Lebensformen*, Opladen: Leske + Budrich, pp. 113–38.

Huinink, J., Brüderl, J., Nauck, B., Walper, S., Castiglioni, L. and Feldhaus, M. (2011) 'Panel analysis of intimate relationships and family dynamics (pairfam): conceptual framework and design', *Journal of Family Research* 23: 77–101.

Iacovou, M. and Skew, A. (2010) *Household Structure in the EU*, Luxembourg: Eurostat, Methodologies and working papers.

Inglot, T., Szikra, D. and Raţ, C. (2012) 'Reforming post-communist welfare states: family policy in Poland, Hungary, and Romania since 2000', *Problems of Post-Communism* 59: 27–49.

Kalmijn, M. (2007) 'Explaining cross-national differences in marriage, cohabitation, and divorce in Europe, 1990–2000', *Population Studies* 61: 243–63.

Kapitány, B. and Spéder, Z. (2015) 'Fertility', *Demographic Portrait of Hungary* 3: 41–55.

Konietzka, D. and Kreyenfeld, M. (2005) 'Nichteheliche Mutterschaft und soziale Ungleichheit im familialistischen Wohlfahrtsstaat: Zur sozioökonomischen Differenzierung der Familienformen in Ost- und Westdeutschland', *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 57: 32–61.

Korpi, W. (2000) 'Faces of inequality: gender, class, and patterns of inequalities in different types of welfare states', *Social Politics* 7: 127–91.

Kreyenfeld, M. and Hank, K. (2000) 'Does the availability of child care influence the employment of mothers? Findings from western Germany', *Population Research and Policy Review* 19: 317–37.

Kytir, J. and Münz, R. (1986) 'Illegitimität in Österreich', *Demographische Informationen* 6: 7–21.

Le Goff, J.-M. (2002) 'Cohabiting unions in France and West Germany: transitions to first birth and first marriage', *Demographic Research* 7: 593–624.

Lewis, J. (1992) 'Gender and the development of welfare regimes', *Journal of European Social Policy* 2: 159–73.

Lillard, L. A. (1993) 'Simultaneous equations for hazards: marriage duration and fertility timing', *Journal of Econometrics* 56: 189–217.

Lindenberg, S. (1991) 'Social approval, fertility and female labour market', in J. J. Siegers, J. de Jong-Gierveld and E. van Imhoff (ed.), *Female Labour Market Behaviour and Fertility: A Rational-Choice Approach*, Berlin: Springer, pp. 32–58.

Makay, Z. (2015) 'Family support system – childraising – employment', *Demographic Portrait of Hungary* 3: 57–74.

Mills, M. and Trovato, F. (2001) 'The effect of pregnancy in cohabiting unions on marriage in Canada, the Netherlands, and Latvia', *Statistical Journal of the United Nations ECE* 18: 103–18.

Murinkó, L. and Spéder, Z. (2015) 'Marriage and cohabitation', *Demographic Portrait of Hungary* 3: 9–26.

Musick, K. (2007) 'Cohabitation, nonmarital childbearing, and the marriage process', *Demographic Research* 16: 249–86.

OECD (2021) *OECD Family Database: Database*, https://www.oecd.org/els/family/database.htm

Orloff, A. S. (1993) 'Gender and the social rights of citizenship: the comparative analysis of gender relations and welfare states', *American Sociological Review* 58: 303–28.

Ott, N. (1992) *Intrafamily Bargaining and Household Decisions*, Berlin: Springer.

Perelli-Harris, B., Kreyenfeld, M., Sigle-Rushton, M., Keizer, R., Lappegård, T., Jasilioniene, A., Berghammer, C. and Di Giulio, P. (2012) 'Changes in union status during the transition to parenthood in eleven European countries, 1970s to early 2000s', *Population Studies* 66: 167–82.

Perelli-Harris, B. and Sánchez Gassen, N. (2012) 'How similar are cohabitation and marriage? Legal approaches to cohabitation across Western Europe', *Population and Development Review* 38: 435–67.

Pongrácz, M. (2012) 'Characteristics of partnership', *Demographic Portrait of Hungary* 2: 11–19.

Prskawetz, A., Sobotka, T., Buber, I., Engelhardt, H. and Gisser, R. (2008) 'Austria: persistent low fertility since the mid-1980s', *Demographic Research* 19: 293–360.

Przeworski, A. and Teune, H. (1970) *The Logic of Comparative Social Inquiry*, New York: Wiley.

Róbert, P. and Bukodi, E. (2005) 'The effects of the globalization process on the transition to adulthood in Hungary', in H.-P. Blossfeld, E. Klijzing, M. Mills and K. Kurz (ed.), *Globalization, Uncertainty, and Youth in Society*, London: Routledge, pp. 177–215.

Sainsbury, D. (1999) 'Taxation, family responsibilities, and employment', in D. Sainsbury (ed.), *Gender and Welfare State Regimes*, Oxford: Oxford University Press, pp. 185–209.

Statistisches Bundesamt (2008) *Haushalte und Familien: Ergebnisse des Mikrozensus 2007*, Wiesbaden: Statistisches Bundesamt, Fachserie 1 Reihe 3.

Statistisches Bundesamt (2021) *Zusammengefasste Geburtenziffer: Entwicklung der Fertilitätsrate in Deutschland von 1990 bis 2019: Table.* https://de.statista.com

Szeibert, O. (2013) 'Family Law Book as fourth book of the new Hungarian Civil Code', *International and Comparative Law Review* 13: 83–93.

Szeibert, O. (2014) 'Solidarity and maintenance obligations in the family – old and new elements in the new Hungarian Civil Code', *ELTE Law Journal* 2: 77–87.

Toulemon, L., Pailhé, A. and Rossier, C. (2008) 'France: high and stable fertility', *Demographic Research* 19: 503–56.

Trappe, H., Pollmann-Schult, M. and Schmitt, C. (2015) 'The rise and decline of the male breadwinner model: institutional underpinnings and future expectations', *European Sociological Review* 31: 230–42.

UNESCO Institute for Statistics (2012) *International Standard Classification of Education: ISCED 2011*, Montreal: UNESCO Institute for Statistics.

Vikat, A., Spéder, Z., Beets, G., Billari, F. C., Bühler, C., Désesquelles, A., Fokkema, T., Hoem, J. M., MacDonald, A., Neyer, G., Pailhé, A., Pinnelli, A. and Solaz, A. (2007) 'Generations and Gender Survey (GGS): towards a better understanding of relationships and processes in the life course', *Demographic Research* 17: 389–440.

Willekens, F. J. (1991) 'Understanding the interdependence between parallel careers', in J. J. Siegers, J. de Jong-Gierveld and E. van Imhoff (ed.), *Female Labour Market Behaviour and Fertility: A Rational-Choice Approach*, Berlin: Springer, pp. 11–31.

Žilinčíková, Z. and Hiekel, N. (2018) 'Transition from cohabitation to marriage', *Comparative Population Studies* 43: 3–30.

Appendix

Table A1. Descriptive statistic (percentages and means).

	Austria	France	Hungary	Germany West	Germany East
Marriage	23.0	17.8	17.1	31.7	22.1
Separation	11.9	6.7	14.4	18.3	19.9
Pregnancy	25.2	33.0	21.4	12.9	17.3
Birth	19.7	26.8	15.5	8.2	13.6
Female	60.7	57.7	54.6	56.4	56.3
Age in wave 1	30.2	30.7	29.5	29.4	29.9
Duration of union	68.1	72.8	61.8	45.7	61.6
Ever divorced	3.9	5.3	15.3	7.6	6.3
Educ. female partner	8.4	11.6	18.0	15.5	9.6
Low education					
Medium education	69.7	44.4	58.7	55.8	64.8
High education	21.9	44.0	23.4	28.7	25.6
Educ. male partner	3.9	14.5	17.3	10.7	8.1
Low education					
Medium education	71.9	54.4	65.4	55.0	69.4
High education	24.2	31.1	17.3	34.3	22.5
Activity status Employed	81.2	87.3	77.5	77.7	75.0
In education	4.3	6.2	1.4	9.8	7.2
Not employed	14.4	6.5	21.1	12.5	17.8
Act. status partner	86.3	83.4	72.8	68.9	59.8
Partner employed					
Partner in education	3.5	1.6	3.8	18.6	16.6
Partner not employed	10.3	15.0	23.4	12.5	23.6
Home owner	43.4	41.1	64.0	19.1	17.7
Freq. of conflict	2.0	2.1	2.1	2.1	2.0
No. of joint children	0.6	0.9	0.6	0.3	0.6
Att. Marriage lifelong	3.0	3.3	2.1	3.1	2.8
Att. Child suffers	3.0	2.8	4.2	2.6	2.1
Religious affiliation					
Catholic	78.9	74.2	50.5	36.3	3.0
Other	4.7	4.6	21.0	39.6	15.1
No affiliation	16.4	21.3	28.6	24.1	81.9
Intention to marry	56.2	40.2	69.3	35.1	36.6
N	488	433	445	660	272