## Loose ties?

## Determinants of father-child contact after separation in Germany

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#### Abstract

With the increase in separation and divorce rates, non-resident fathers have become a growing group in all European countries. The contact that these fathers keep with their children is a policy relevant issue which has been intensively addressed in prior studies for Englishspeaking countries. For continental Europe there has been far less research on this topic. In this paper, we use newly available data from the German Family panel (pairfam) to study the determinants of father-child contact after separation. We find that non-residential fatherhood is considerably more prevalent in the eastern than in the western states of Germany. In both parts of the country, non-resident fathers are less educated and more often unemployed than resident fathers. Fathers who were married at childbirth more regularly see their children than cohabiting fathers or fathers in less institutionalized relationships, like living apart together relationships (LAT). However, after accounting for joint custody, we do no longer find differences in father-child contact by union status at birth. It is also shown that the positive association between joint custody and father-child contact is independent of the marital status at childbirth. The union and fertility history of the father, in particular whether he has children with a new partner, is another important factor which impacts the frequency of contact between non-resident fathers and their minor children.


Key words: Father, non-resident fathers, Germany, life course, family policy

## BACKGROUND

Despite the fact that the share of lone fatherhood has increased in some countries (Bures 2009: 581; Goldscheider et al. 2009: 587), the overwhelming majority of children co-reside with their mothers after separation. This raises the question of how the relationship between the child and the non-resident father develops after separation, how father-child contact varies between countries, and how country variations may be explained by differences in legal practice and cultural understandings of paternal roles. Prior evidence on the father's involvement after separation has mainly focused on the determinants of father-child contact in English-speaking countries. In this literature it has been shown that fathers who have never co-resided with the mother of their children often remain absent from their children's lives altogether (Kiernan 2006). For fathers who lived with their children, father-child contact varies by length and type of partnership, age of the children and duration of separation (Stephen et al. 1993; Stephens 1996; Tach et al. 2010). There is also evidence from longitudinal data that quantity and intensity of father-child contact deteriorates with time since separation (Cheadle et al. 2010). However, duration of separation and age of the children are often confounded and it has also been shown that older children often intensify the relationship to their biological fathers when they reach an age which enables them to establish contact by themselves (Scott et al. 2007).

The partnership biography of both biological mother and father are other decisive factors in explaining the relationship of non-resident fathers with their children. There is consistent evidence that the quality and intensity of the relationship between the non-resident father and his children worsens, when either the mother or the father re-partners (Bradshaw et al. 1999; Stephens 1996; Stewart 2010). The frequency and intensity of contact between the nonresident father and his children declines particularly when the mother moves in with a new
partner, and thus forms a stepfamily. The arrival of a new child in the stepfamily is another factor that alters the relationship of the non-resident father and his children (Juby et al. 2007).

Apart from these socio-demographic determinants, the legal context also influences the frequency and quality of father-child contact. There is evidence that the amount and regularity of maintenance payments are positively associated with close father-child contact (Cheadle et al. 2010; Hofferth et al. 2010). Shared custody is another factor that positively relates to the relationship that non-resident fathers have with their children (Seltzer 1998; Stephen et al. 1993). However, it has been rather difficult to establish a clear causality here, as fathers who regularly pay child support or opt for a joint custody differ in many other respects from less involved fathers.

In this project, we add to the literature on the determinants of father-child contact. Our research strategy is innovative in at least two ways. Firstly, we believe that this study is one of the first ones addressing the topic of father-child contact for a continental European country. Prior research has concentrated on English-speaking countries and the question has remained unanswered whether these findings can be transferred to other countries with different legal and socio-economic contexts. Secondly, our data allows us to scrutinize how the union history of the father relates to father-child contact. In particular, we are able to address whether unmarried parenthood at childbirth predicts lower commitment and reduced father-child contact after separation.

## METHOD

## Data

This study is based on data from the 2008/09-launched German family panel pairfam ("Panel Analysis of Intimate Relationships and Family Dynamics"), a multi-disciplinary, longitudinal study for researching partnership and family dynamics in Germany (Huinink et al. 2011). The
annually surveyed nationwide random sample includes information from more than 12.000 respondents of the birth cohorts 1971-73, 1981-83 and 1991-93, as well as information on their partners, parents, and children. In 2009/10, a subsample (DemoDiff) was drawn that oversampled eastern Germans of the cohorts 1971-73 and 1981-83. This sample, which enhances the possibilities to conduct in-depth comparisons of the eastern and western German population, was motivated by the observation that marked differences in family dynamics between eastern and western Germans remained, even for those cohorts that were raised after unification (Kreyenfeld et al. 2012). By now, there are four waves of data from the German family panel available. The German family panel is well-suited for understanding how fatherchild contact is contingent on the prior and current union history of the father as it includes detailed information on the union history of the respondents. The data provides a full retrospective account of the union history of all respondents, including spells of living apart together relationships (LAT). Also in another respect, the data goes beyond prior family surveys. It is here possible to clearly relate children to partnerships, because respondents are requested to provide the name of the fathers of all children as well as the name of all partners. In wave 2, which will be used in this study, information on custody regulations, child support and father-child contact is included as well.

## Sample selection

In this study, we use information on male respondents of the birth cohorts 1971-73 and 198183 from the second wave of the German family panel. The younger cohorts (1991-93) are excluded as hardly anyone of these cohorts has any children yet. At interview in 2009/10, the respondents from the cohorts 1971-73 were on average about 38 years of age and from the cohorts 1981-83 they were at the end of their twenties. There are 1382 fathers in the sample who have fathered 2473 children. For the investigation of father-child contact, the sample is
further restricted to non-resident fathers with valid information on the contact they have with their children, which reduced the sample to 275 fathers with 187 children (for an overview on the sample, see Table A1 in the Appendix).

## Variables

Dependent variable. The dependent variable in our investigation is the frequency of personal contact between the non-resident father and his child. Respondents could choose between the following seven categories (daily, several times per week, once per week, $1-3$ times per month, several times per year, less often). We collapsed these categories into three groups that distinguish between less than every month, every month, and at least every week. As respondents might have more than one child, a father might have a non-residential relationship with several children, or he may not live together with a child while he resides with another child that he has with a new partner. In the multivariate analysis, we accounted for it by providing robust standard errors for the regression estimates to allow for multiple observations per person. In the descriptive analysis, we have dealt with this issue by providing descriptive statistics on the child as well as on the father level. For analysis on the father level, we distinguished non-resident and resident fathers. Non-resident fathers have been defined as fathers who have at least one child that lives with the biological mother. A resident father co-resides with the mother of his children and does not have any children that coreside with the biological mother only.

Independent variables. Education was measured as low (no vocational and no college degree), medium (vocational degree) and high (university degree). Employment status of the father considers three main categories: full-time employment, unemployment and other. Country of origin distinguishes fathers who were born in eastern Germany, western Germany and in
another country. Custody regulations consider whether the non-resident father has joint custody with the mother or whether the mother has sole custody. Maintenance payments distinguish fathers who pay child support from those fathers who do not. Unfortunately, the corresponding data does not distinguish for which of the children child support was paid. Cohort membership indicates whether the father was born between 1971-73 or between 198183. The birth order of the child (as it relates to the father) is included in three categories (first, second, third or higher) whereas the age of the child has been measured continuously. To depict the union history of the non-resident father, four variables have been constructed. ${ }^{1}$ Family status was measured at two points in time: at childbirth and at time of the interview. It includes the following categories: single, living apart together, cohabiting and being married. Duration of separation is accounted for by categorical variables (0-3 years since separation, 36 years since separation, more than 6 years since separation, not in union at childbirth). Finally, it is regarded whether there is at least one more child with a new partner.

## Analytic strategy

First, we present descriptive findings on the prevalence of non-resident fathers and the socioeconomic composition of this population. Second, descriptive results on the frequency of father-child contact are provided. Finally, the determinants of father-child contact are assessed in a multivariate framework. Since, the frequency of father-child contact is measured ordinally, we use an ordered logistic regression model:

$$
Y_{i}^{*}=\beta X_{i}+\varepsilon_{\mathrm{i}}
$$

where $X_{i}$ is a vector of independent variables with coefficient vector $\beta . \varepsilon_{i}$ is the random

[^0]disturbance term, is assumed to be independent of $X_{i}$ and follows a logistic distribution. The outcome variable $Y_{i}^{*}$ is unobserved but an observation rule defines $\mathrm{Y}_{\mathrm{i}}$ representing the category into which $Y_{i}^{*}$ falls: $\quad \mathrm{Y}_{\mathrm{i}}=0$ if $Y_{i}^{*} \leq \delta_{1}$
\[

$$
\begin{aligned}
& \mathrm{Y}_{\mathrm{i}}=1 \text { if } \delta_{1}<Y_{i}^{*} \leq \delta_{2} \\
& \mathrm{Y}_{\mathrm{i}}=2 \text { if } Y_{i}^{*}>\delta_{2}
\end{aligned}
$$
\]

where $\delta_{\mathrm{S}}$ are unknown threshold parameters to be estimated. Coefficients and thresholds are estimated by maximum likelihood method (Liao 1994).

## RESULTS

Table 1 provides information on the co-residence of fathers with their first born children. We distinguish four groups of fathers: resident fathers, non-resident fathers, single fathers and others (see also Appendix Table A1 for details on classification). The table suggests that 83 percent of fathers co-reside with their first born children whereas 9 percent do not. Another 2 percent of fathers have opted for shared parenthood. Single fathers make up about 5 percent of the population. ${ }^{2}$ In the subsequent part of this paper, we compare resident and non-resident fathers only. Thus, single fathers and other fathers are excluded from the investigation and the small group of fathers that opted for an arrangement of shared parenthood is considered as non-resident fathers here.
[Tab. 1 about here]

[^1]
## Descriptive Results - Prevalence of non-residential fatherhood and group characteristics

Table 1 showed with respect to the living arrangements of fathers with their first born children that fathers of non-German nationality were most likely to be resident fathers. In addition, there are marked differences between fathers from East and West Germany with East German men being much more likely being non-resident fathers than West German men. This is not so much a result of a higher likelihood of separations of couples with children in the eastern part of the country (Schnor 2012) but more a consequence of a higher prevalence of couples who broke up during pregnancy or of relatively uncommitted relationships in the East as compared to the West (Bastin et al. 2012).

Table 2 gives an overview on the composition of resident and non-resident fathers. With respect to socio-economic characteristics, non-residential fathers are less likely to be highly educated and more likely to have a medium education than their counterparts. However, there is no particular concentration of separated fathers at the lowest stratum of the educational hierarchy. Nevertheless, this group is clearly disadvantaged in terms of employment. They are more than twice as likely than resident fathers to be unemployed at the time of interview and have lower chances of full-time employment suggesting that there might be harsh economic circumstances for part of this group. Regarding socio-demographic characteristics, it is obvious that non-resident fathers stick out in several ways. They are much less likely to have been married when their children were born than resident fathers and thus more likely to have been single, cohabiting or in a living apart together relationship. Non-resident fathers have about the same number of children as resident fathers. However, the children of non-resident fathers are somewhat older than the ones of resident fathers. In addition, it is interesting to note that the majority of non-resident fathers have joint custody for their children and almost three quarters of fathers pay child support.
[Tab. 2 about here]

## Descriptive Results - Frequency of father-child contact

Frequency of father-child contact refers to close personal contact. Respondents were asked how often they see their children. Table 3 reveals a reverse U-shaped pattern with a peak in the middle category and lower frequencies at both ends of the distribution. About 30 percent of the fathers in our sample see their first born children several times per month and around a third has less or more frequent contact.
[Tab. 3 about here]

## Multivariate Results - Determinants of father-child contact

We start with a set of models which include variables related to the partnership history of the father that are introduced stepwise (Table 4).

Fathers of older children are less likely to see them often than fathers of younger children. This might partly be because older children simply "opt out". Fathers who were married at childbirth or cohabiting have more frequent contact with their children than fathers having been living alone or apart from their partners. Fathers tend to see their first child more often than children of higher order. When introducing whether the father ever co-resided with the child the positive impact of cohabiting at childbirth vanishes. This suggests that fathers were cohabiting with their partner but not necessarily with their child. What really matters for father-child contact is whether they lived with their children. Fathers who never co-resided
with the child are far less likely to establish a close relationship based on personal contact later on. Controlling for fathers' current family status does not add to the model because of a relatively high correlation with family status at childbirth. Having children with a new partner strongly reduces the frequency of father-child contact.

The following set of models focuses on socio-economic characteristics and arrangements after separation (Table 5a).
[Tab. 5 about here]

Adding fathers' employment status to the model indicates that unemployed fathers are somewhat less likely to have frequent contact with their children. Noteworthy, level of education which is an indicator for economic resources does not have a significant influence on father-child contact. The single most important factor is the custody arrangement. It wipes out the positive impact of a more institutionalized relationship at childbirth on the frequency of father-child contact. Having joint custody with the ex-partner makes a regular contact to the children much more likely. Paying child support does not have an additional impact.
[Tab. 6 about here]

Table 6 investigates the idea of a close interaction between family status at childbirth and custody arrangements. Contrary to expectations, the positive association between joint custody arrangements and father-child contact is independent of the family status at the time
of childbirth. Across all family statuses, a sole custody of the mother lowers the frequency of father-child contact considerably.

## DISCUSSION

In this paper, we presented first results on the determinants of father-child contact in Germany. Our analyses have shown that non-resident fathers are a sizeable group in Germany, a group that is more prevalent in eastern than in western Germany. One reason might be that non-marital childbearing and lone motherhood are far more common in East than in West Germany going back to different partnership dynamics in the past and still varying opportunity structures in the present (Huinink et al. 2012). Non-resident fathers in Germany are a select group in several ways. They are more likely to be less educated and economically disadvantaged than fathers in general. These unfavorable characteristics have been found in other countries as well (see for the UK: Bradshaw et al. 1999, for the US: Goldscheider et al. 2009, Tach/Edin 2011). However, there might be important cross-national differences in the size of this relative disadvantage and in the underlying mechanisms. A closer inspection of the economic situation of non-resident fathers in Germany is certainly warranted.

In terms of the regularity of close contact of non-resident fathers with their children, we find a tendency towards polarization. About a third of fathers is more or less absent from the lives of their non-resident children while another third has very regular contact. We are aware that seeing the child can mean a variety of things and involve very different activities (Bradshaw et al. 1999) and that the frequency of contact might be a poor proxy for relationship quality (Amato/Gilbreth 1999). However, we just start to explore this topic in Germany so that all information is valuable to improve our sparse knowledge base.

Regarding the determinants of father-child contact, our results indicate in line with previous research (Bradshaw et al. 1999) that the family status at childbirth matters for a continuing relationship with the child. Fathers who were married more regularly see their children than cohabiting fathers or fathers in less institutionalized relationships, like living apart together. What seems to be of even greater importance is whether the father ever co-resided with hischild. Fathers who never shared this experience are far less likely to establish a close relationship later on (Kiernan 2006).

This finding points to the relevance of the life course perspective for understanding fatherchild contact after separation. With respect to the living situation after separation, our research confirms the importance of custody arrangements (Seltzer 1998). As expected, fathers who have joint custody with the mother are considerably more likely to see their child regularly. As noted, the causality might run both ways since fathers who share custody might be more involved in the first place. As we could show, the positive association between custody arrangements and father-child contact holds across all family statuses at childbirth. It shall be noted that in Germany joint custody after divorce is the norm only since the legal reform of 1998 and it is possible for parents who are not married to apply for joint custody insofar the mother agrees (Peschel-Gutzeit 2009). Interesting and unexpected is that paying child support does not have a decisive impact on the frequency of father-child contact. For the relatively young cohorts we have been investigating here, the most recent policy reforms seem to be supportive in enabling a more regular contact between fathers and their non-resident children.

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## APPENDIX

Table A2: Composition of Sample for Multivariate Analysis

| Place of Birth |  |
| :---: | :---: |
| West Germany | 0.43 |
| East Germany | 0.49 |
| Other | 0.08 |
| Cohort |  |
| 1971-73 | 0.83 |
| 1981-83 | 0.16 |
| Family status at birth |  |
| Single/LAT | 0.06 |
| Cohabiting | 0.33 |
| Married | 0.61 |
| Current family status |  |
| Single | 0.42 |
| LAT | 0.17 |
| Cohabiting | 0.22 |
| Married | 0.19 |
| Duration since separation |  |
| 0-3 years | 0.20 |
| 3-6 years | 0.20 |
| More than 6 years | 0.41 |
| Not in relationship at childbirth | 0.20 |
| Level of education |  |
| No degree | 0.14 |
| Vocational degree | 0.73 |
| University degree | 0.12 |
| Employment status |  |
| Full-time employed | 0.68 |
| Unemployed | 0.19 |
| Other | 0.13 |
| Order of child |  |
| First child | 0.68 |
| Second child | 0.24 |
| Third or higher order | 0.08 |
| Custody |  |
| Joint custody | 0.46 |
| No joint custody | 0.39 |
| Missing | 0.16 |
| Child support |  |
| No payments | 0.42 |
| Child support payments | 0.59 |
| Children with new partner |  |
| No | 0.76 |
| Yes | 0.23 |
| Mean age of child (st. error) | 10.14 (0.29) |
| Number of fathers (children) | 275(187) |

Source: German family panel 2009/10

## Tables \& Figures

Table 1: Living arrangement of children by place of birth, column percent (child perspective)

|  |  |  |  |  | $N$ |
| :--- | :--- | :---: | :---: | :---: | :---: |
|  | West Germany | East Germany | Other | Total | (children) |$|$

Notes: Weighted estimates. Weight is product of cross-sectional post-stratification weight of wave 1 and longitudinal weight of wave 2 . Source: German family panel 2009/10

Table 2: Characteristics of Non-residential and Residential Fathers, Column Percent

|  | Resident | Non-Resident |
| :---: | :---: | :---: |
| Child level |  |  |
| Family status at birth |  |  |
| Single/LAT | 0.04 | 0.32 . |
| Cohabiting | 0.20 | 0.24 |
| Married | 0.76 | 0.76 |
| Custody |  |  |
| Joint custody | - | 0.48 |
| Mother sole custody | - | 0.36 |
|  | - | 0.16 |
| Child support |  |  |
| No payments | - | 0.25 |
| Child support payments | - | 0.72 |
|  |  | 0.02 |
| Mean age of child (st. error) | 6.41 (0.09) | 9.73(0.28) |
| Mean age at father at birth (st. error) | 29.71 (0.10) | 26.54 (0.26) |
| N (children) | 1990 | 293 |
| Father level |  |  |
| Place of birth |  |  |
| West Germany | 0.65 | 0.70 |
| East Germany | 0.11 | 0.19 |
| Other | 0.24 | 0.12 |
| Level of education |  |  |
| No degree | 0.14 | 0.15 |
| Vocational degree | 0.60 | 0.67 |
| University degree | 0.26 | 0.17 |
| Employment status |  |  |
| Full-time employed | 0.89 | 0.78 |
| Unemployed | 0.05 | 0.14 |
| Other | 0.06 | 0.08 |
| Mean number of children (st. error) | 1.86 (0.03) | 2.01 (0.08) |
| N (fathers) | 1,062 | 198 |

Notes: A non-residential father is here defined as a father who has at least one non-residential child who lives with the biological mother of the child. Vice versa, a residential father is a father who does not have any children who reside with the mother. Source: German family panel 2009/10

Table 3: Father-child contact (child perspective), column percent

|  | in \% | Absolute |
| :--- | :--- | :--- |
| Several times per week | 0.25 | 72 |
| Several times per month | 0.39 | 105 |
| Less than several times per month (rarely) | 0.30 | 98 |
| Missing | 0.06 | 18 |
| Total (children) | 1.00 | 293 |

Notes: Weighted estimates. Weight is product of cross-sectional post-stratification weight of wave 1 and longitudinal weight of wave 2. Source: German family panel 2009/10

Table 4: Results from ordered logit model, odds ratios, Dependent variable: father child contact (1: rarely 2 : several times per month 3 : several times per week)

|  | Model 1 |  | Model 2 |  | Model 3 |  | Model 4 | Model 5 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country of birth |  |  |  |  |  |  |  |  |  |  |
| West Germany | 1 |  | 1 |  | 1 |  | 1 |  | 1 |  |
| East Germany | 0.80 |  | 0.84 |  | 0.82 |  | 0.75 |  | 0.93 |  |
| Other | 1.00 |  | 1.15 |  | 1.13 |  | 0.93 |  | 1.13 |  |
| Age of child (continuous) | 0.86 | *** | 0.84 | *** | 0.85 | *** | 0.88 | ** | 0.88 | ** |
| Family status at birth |  |  |  |  |  |  |  |  |  |  |
| Single/LAT | 1 |  | 1 |  | 1 |  | 1 |  | 1 |  |
| Cohabiting | 2.07 | * | 1.97 | * | 1.95 | * | 1.59 |  | 2.28 | * |
| Married | 2.48 | ** | 2.60 | ** | 2.63 | ** | 2.01 |  | 2.89 | * |
| Oder of child |  |  | 1 |  | 1 |  | 1 |  | 1 |  |
| First child |  |  | 0.61 | * | 0.60 | * | 0.60 | * | 0.62 |  |
| Second child |  |  | 0.37 | * | 0.35 | * | 0.31 | ** | 0.33 | * |
| Third or higher order |  |  |  |  |  |  |  |  |  |  |
| Current family status |  |  |  |  |  |  |  |  |  |  |
| Single |  |  |  |  | 1 |  | 1 |  | 1 |  |
| LAT |  |  |  |  | 0.78 |  | 0.91 |  | 1.02 |  |
| Single |  |  |  |  | 0.85 |  | 1.13 |  | 1.66 |  |
| Married |  |  |  |  | 0.47 |  | 0.64 |  | 1.24 |  |
| Duration since separation |  |  |  |  |  |  |  |  |  |  |
| 0-3 years |  |  |  |  |  |  | 1 |  | 1 |  |
| 3-6 years |  |  |  |  |  |  | 0.34 | * | 0.34 | * |
| More than 6 years |  |  |  |  |  |  | 0.27 | * | 0.30 | * |
| Not in relations. at birth |  |  |  |  |  |  | 0.25 | * | 0.31 | * |
| Children with new partner |  |  |  |  |  |  |  |  |  |  |
| No |  |  |  |  |  |  |  |  | 1 |  |
| Yes |  |  |  |  |  |  |  |  | 0.37 | * |
| Constant 1 | 0.18 | ** | 0.11 | *** | 0.09 | *** | 0.04 | *** | 0.17 | * |
| Constant 2 | 1.14 |  | 0.72 |  | 0.64 |  | 0.33 |  | 1.32 |  |
| Sample Size (Fathers) | 187 |  | 187 |  | 187 |  | 187 |  | 187 |  |
| Sample Size (Children) | 275 |  | 275 |  | 275 |  | 275 |  | 275 |  |
| Log-Likelihood | -262 |  | -258 |  | -255 |  | -250 |  | -247 |  |

Note: Controlled for cohort as well as missing information on control variables. * $\mathrm{p}<0.1$; ** $\mathrm{p}<0.5 ; * * * \mathrm{p}<0.01$ Source: German family panel 2009/2010.

Table 5: Results from ordered logit model, odds ratios, Dependent variable: father child contact (1: rarely 2 : several times per month 3 : several times per week)

|  | Model 1 |  | Model 2 |  | Model 3 |  | Model 4 |  | Model 5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country of birth |  |  |  |  |  |  |  |  |  |  |
| West Germany | 1 |  | 1 |  | 1 |  | 1 |  | 1 |  |
| East Germany | 0.80 |  | 1.12 |  | 1.09 |  | 1.03 |  | 1.05 |  |
| Other | 1.00 |  | 1.43 |  | 1.62 |  | 1.88 |  | 1.90 |  |
| Age of child (continu.) | 0.86 | *** | 0.86 | *** | 0.86 | *** | 0.89 | *** | 0.89 | *** |
| Family status at birth |  |  |  |  |  |  |  |  |  |  |
| Single/LAT | 1 |  | 1 |  | 1 |  | 1 |  | 1 |  |
| Cohabiting | 2.07 | * | 2.02 | * | 2.10 | * | 1.83 |  | 1.80 |  |
| Married | 2.48 | ** | 2.36 | * | 2.54 | * | 1.35 |  | 1.34 |  |
| Employment status |  |  |  |  |  |  |  |  |  |  |
| Full-time employed |  |  | 1 |  | 1 |  | 1 |  | 1 |  |
| Unemployed |  |  | 0.41 | * | 0.43 |  | 0.55 |  | 0.55 |  |
| Other |  |  | 0.62 |  | 0.66 |  | 0.72 |  | 0.73 |  |
| Level of education |  |  |  |  |  |  |  |  |  |  |
| No degree |  |  |  |  | 1 |  | 1 |  | 1 |  |
| Vocational degree |  |  |  |  | 1.41 |  | 1.70 |  | 1.66 |  |
| University degree |  |  |  |  | 1.46 |  | 1.88 |  | 1.84 |  |
| Custody |  |  |  |  |  |  |  |  |  |  |
| Joint custody |  |  |  |  |  |  | 1 |  | 1 |  |
| Mother sole custody |  |  |  |  |  |  | 0.20 | *** | 0.20 | *** |
| Child support |  |  |  |  |  |  |  |  |  |  |
| No payments |  |  |  |  |  |  |  |  | 1 |  |
| Child support payments |  |  |  |  |  |  |  |  | 1.05 |  |
| Constant 1 | 0.20 | ** | 0.18 | ** | 0.24 |  | 0.16 | * | 0.16 | * |
| Constant 2 | 1.25 |  | 1.19 |  | 1.63 |  | 1.28 |  | 1.30 |  |
| Sample Size (Fathers) | 180 |  | 180 |  | 180 |  | 180 |  | 180 |  |
| Sample Size (Children) | 259 |  | 259 |  | 259 |  | 259 |  | 259 |  |
| Log-Likelihood | -262 |  | -258 |  | -258 |  | -243 |  | -243 |  |

Note: Controlled for cohort as well as missing information on control variables. ${ }^{*} \mathrm{p}<0.1 ;{ }^{* *} \mathrm{p}<0.5 ; * * * \mathrm{p}<0.01$ Source: German family panel 2009/2010.

Table 6: Results from ordered logit model, odds ratios, Dependent variable: father child contact (1: rarely 2 : several times per month 3 : several times per week), interaction of family status at birth and custody regulation

|  | Single/LAT |  | Unmarried |  | Married |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Joint Custody | 1 |  | 1 |  | 1 |  |
| Mother has sole custody | 0.05 | *** | 0.33 | ** | 0.23 | * |

Note: Other variables in model, see Table 3 Model 5
*p<0.1; ** p<0.5; *** $\mathrm{p}<0.01$


[^0]:    ${ }^{1}$ In order to generate these variables, we have drawn on the cleaned union and fertility history produced by Schnor and Bastin (2012).

[^1]:    ${ }^{2}$ The category "single father" includes fathers who reside with their first born child, but do not do so with the mother of the child. The term "single father" may not be fully appropriate here, however, because the father may have a relationship and co-reside with a person who is not the mother of the first child.

