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Does fixed-term employment delay important partnership events?

Comparing transitions into cohabitation, marriage, parenthood and home ownership among young adults in Germany

Abstract:

This article investigates whether fixed-term employment affects the realization of important partnership events. We are looking at four transitions: entering cohabitation, marriage, parenthood and home ownership. Data were obtained from a random sample of 1,083 young German adults aged 20 to 35 years based on the AGIPEB Survey. We use the Kaplan-Meier method and piecewise-constant exponential models to estimate survival curves and transition rates. Women and men who work under a fixed-term contract are similarly likely to enter cohabitation, marriage and parenthood as persons who work under a permanent contract. In contrast, fixed-term employment compared to working under a permanent contract prolongs the transition into home ownership.

Key words: atypical employment, cohabitation, family economics, fertility, fixed-term employment, marriage, real estate purchase, partnership stabilization

1. Introduction

Due to rising global competition during the last three decades, many European economies faced severe difficulties maintaining their standards of employment protection (Heyes/Lewis 2014). In particular, labor relations and employment standards in welfare state regimes, such as Germany, which according to Esping-Andersen (1990) can be labeled *conservative*, underwent profound changes. Culminating in a variety of deregulation policies, a reduction of employment protection led to an increase in non-standard employment, such as part-time contracts, fixed-term employment or temporary agency work (Jiménez-Rodríguez/Russo 2012; Kalleberg 2000; Keller 2013).

This article studies the influence of fixed-term employment on young adults' partnerships. Although negative effects of fixed-term employment on private life might not be as severe in general as had been expected in former times (Mayer et al. 2010), they might pose serious restrictions to planning private life especially among young adults. In Germany, young adults are the most affected by fixed-term contracts, with more than 40% of

all first-time employees entering the labor market based on a fixed-term contract (Jiménez-Rodríguez/Russo 2012; Kalleberg 2000; Keller 2013). Although the chances to transition into a permanent contract later in their careers are high (Böhnke et al. 2015; Eichhorst/Tobsch 2013), it is reasonable to assume that working under a fixed-term contract may delay important decisions which stabilize intimate relationships (i.e., moving together, marriage, entering parenthood and purchasing real estate), because this type of work can complicate the planning of a young adult's future (Blossfeld/Drobnic 2001; Kurz et al. 2005).

Indeed, earlier studies observed a high degree of reported planning insecurities among young adults regarding their private and family-life when being confronted with atypical employment (Brinkmann et al. 2006; Kurz et al. 2005; Sander 2012). But it is still an open question to what extent fixed-term employment affects the realization of important partnership events. While some studies found evidence for a significant delay of important partnership events, such as entering parenthood (Auer/Danzer 2016; Düntgen/Diewald 2008; Kind/Kleibrink 2013; Kreyenfeld 2008), other research did not find significant associations between fixed-term employment and the transition to parenthood (Brose 2008; Gebel/Giesecke 2009; Kreyenfeld 2010; Kurz et al. 2005; Schmitt 2012b; Tölke/Diewald 2003). However, previous research on the impact of fixed-term employment on important partnership events is mostly limited to family formation. Most strikingly, there is relatively little evidence on how fixed-term employment affects other important events among young adults' life-courses in Germany such as cohabitation, marriage and home-ownership (King/Christensen 1983). To our knowledge, there exist only very few studies so far that tests for effects of fixed-term employment on more than one important partnership event among young adults in a comparative setting. An exception for Germany is the study by Kurz et al. (2005) which examined the effects of fixed-term employment on both on the transition to first marriage and the transition to first birth.¹

The current study examines to what extent working under a fixed-term contract – in comparison to working under a permanent contract affects the institutionalization of partnerships among young German Adults. Adding to previous research, we not only consider the transition into marriage and parenthood, but also focus on entering cohabitation and entering home ownership. The question of how these partnership events are affected by fixed-term employment is of high relevance because a considerable part of young adults is working under fixed-term contracts (see the following section for references).

Unlike previous research which most often rely on data from the German Socio-Economic Panel Study (Göbel et al. 2018), we use an alternate sample consisting of approximately 1,100 young German adults that allows for measuring effects on a monthly basis.² Therefore, our study gives new empirical evidence regarding the much-debated

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- 1 For an overview over current research on effects of atypical employment on private and family life in Germany see Baron and Hill (2017).
 - 2 The data is taken from the research project AGIPEB – “Decisions made under uncertainties. How precarious work influences the institutionalization process in intimate relationships”. The project was funded by the German Research Foundation (DFG) and was carried out from 2012 to 2017. Other panel datasets in Germany, such as the Pairfam Study or the Panel Study Labour Market and Social Security (PASS), turned out to be not suitable for our study because they do not contain

question to what extent fixed-term employment affects private life in general (Dörre 2012; Standing 2013) and important partnership events among young adults in particular.

The following section gives an overview of the development of non-standard employment in the last decades in Germany. In section 3, we outline our theoretical model, and in section 4 we describe our data and our analysis methods. To test our hypotheses, we use an event history analysis approach (Blossfeld et al. 2007; Cleves et al. 2010).³ After presenting our results (Section 5), we conclude with a discussion of our findings and an outlook on future research issues (Section 6).

2. Empirical background

Although non-standard employment has significantly increased in the last decades (Jiménez-Rodríguez/Russo 2012; Kalleberg 2000; Keller 2013), it scarcely applied to fixed-term employment. In 2014, the share of fixed-term contracts among all employment contracts in Germany amounted to 8%, with figures being relatively stable since 1991, when it was 7.5% (Statistisches Bundesamt 2015; Keller/Seifert 2013: 26f.). The question of whether and how fixed-term employment influences young adults' partnerships is nonetheless relevant. This is highlighted by the fact that about 40% of all fixed-term employees are working involuntarily under a fixed-term contract, as they had originally searched for a job with a permanent contract (Statistisches Bundesamt 2015). Moreover, these figures probably underestimate the frequency of fixed-term employment because individuals younger than 25 years, many who are first-time employees, are statistically excluded from the official calculations of the German Federal Bureau of Statistics. After including this group, except for those still in vocational training, Keller and Seifert (2013) concluded that 44% of all job starters in Germany worked under a fixed-term contract in 2012 compared to 32% in 2001.

All in all, there are only slight gender differences, with about 9% female and about 8% male fixed-term laborers (Statistisches Bundesamt 2015). Furthermore, there is some empirical evidence that the prevalence of working under fixed-term contracts in Germany is contingent on belonging to certain occupational groups. Routine operatives (e.g., assemblers and laborers), routine office workers (e.g., telephone operators) and routine service workers (e.g., cleaners and salespeople) are most affected by non-standard employment (comprising both fixed-term contracts and agency work). In contrast, technical experts, managers or skilled service workers are less affected (Marx 2011). Employees with academic degrees and unskilled laborers show the highest amounts of fixed-term contracts (each with 12%), followed by employees in service occupations (11%) (Statistisches Bundesamt 2015).

enough data on participants' occupational biographies in the first case, and on partnership biographies in the second.

3 For further discussions of advantages as well as limitations of our dataset, see the methods section and the concluding discussion in the remainder of this paper.

3. Previous research

Several studies examined the consequences of fixed-term employment on entering parenthood. Some studies for Germany showed that the transition to parenthood was significantly delayed in those partnerships where at least one of the two partners worked under a fixed-term contract (Auer/Danzer 2016; Düntgen/Diewald 2008; Kind/Kleibrink 2013; Kreyenfeld 2008). Additionally, Laß (2017: 182) found a prolonging effect for women who worked under a fixed-term part time contract. However, several other German studies found no significant effects of working under a fixed-term contract on the transition rate into parenthood (Brose 2008; Gebel/Giesecke 2009; Kreyenfeld 2005; Kurz et al. 2005; Schmitt 2012b; Tölke/Diewald 2003).

Most of the aforementioned studies used data from the German Socio-Economic Panel. The only exception is the study by Tölke and Diewald relying on data from the German Family Survey (Tölke/Diewald 2003). Furthermore, Kurz et al. (2005) studied effects on transitions to marriage among young German adults. Here, fixed-term employment did not exert any significant effect.

There is some evidence for delaying effects of fixed-term employment on important partnership events in other European countries. In Spain, for example, fixed-term employment has been found to delay parenthood for women and marriage for men when using data from the European Household Panel (De La Rica/Iza 2005). Furthermore, Lersch and Dewilde (2015) studied effects of fixed-term employment on home-ownership in twenty-two countries based on data from EU-SILC. They found a significant prolonging effect of non-permanent employment on the time until purchasing real estate that is significantly stronger in Northern European countries than in South European countries. Germany was not included in this study.

Concerning other dimensions of employment status, Kreyenfeld found an accelerating effect of being unemployed on the time until birth of the first child on German females with low levels of education (Kreyenfeld 2008). Schmitt (2012a) reported similar results for France, Germany and the United Kingdom. Friedman et al. (1994) reported the same for the United States and argued that realizing life plans by giving birth to a child may compensate for uncertainty in other spheres of life (i.e., occupational careers). Additionally, several studies showed that being in the educational system has a prolonging effect on the time until marriage and entering parenthood among young German couples (Blossfeld/Jaenichen 1992; Mulder/Wagner 2001; Schneider 2016).

In summary, most of the previous studies dealing with the effects of fixed-term employment on important partnership events concentrate on the transitions to parenthood, thereby neglecting other events that are also important for the institutionalization of a partnership, such as the transitions to cohabitation, marriage and home ownership (King/Christensen 1983; Kopp et al. 2010).

4. Theoretical model and research hypotheses

In this section, we will outline our theoretical model to explain the effects of working under fixed-term contracts on important partnership events. Our model is based on life course approaches and economic approaches to family formation.

A key assumption of life course approaches is that different life domains are highly interrelated (Huinink/Kohli 2014). Therefore, transitions during family life cannot be understood and explained without considering other important spheres of life, such as the area of work, especially atypical employment. Another assumption of life course approaches is that each transition may have multiple time dependencies (Blossfeld/Huinink 2001). For example, the transition to cohabitation may depend on both a relationship's duration and the chronological age of the actors involved.

Life-course approaches have proven to be very useful when it comes to conceptualizing empirical studies on important partnership events among young adults (Settersten Jr. 2004). In addition, they are of great relevance when it comes to describing the biographical aspects of family life. However, life course approaches do not represent a cohesive theory (Hill/Kopp 2013; Mayer 1990; Settersten Jr. 2004). Therefore, additional theoretical approaches are needed to explain the effects of fixed-term employment on important partnership events; such as entering cohabitation; marriage; parenthood and home ownership.⁴

Based on the theory of the value of children, it has been assumed that young adults and particularly women may try to compensate perceived socioeconomic uncertainty (i.e., a lack of knowledge regarding the odds of future events) by entering parenthood (Friedman et al. 1994). Thus, actors who work under a fixed-term contract might enter parenthood earlier than those who work under a permanent contract. However, recent research has not found any results supporting this assumption (Brose 2008; Kreyenfeld 2010, 2015; Kurz et al. 2005, Schmitt 2012b, Tölke/Diewald 2003).

Following economic approaches to family formation (Becker 1973, 1981), the decision to invest in an intimate relationship is contingent on the material resources provided to young couples. When comparing income from permanent employment with income from fixed-term contracts, it becomes clear that guaranteed financial resources are far more insecure when working under a fixed-term contract. Based on economic approaches, significant delays in the institutionalization of intimate relationships can be expected because young adults refrain from investing in their partnerships when expecting unsecure payoffs due to short contract durations. In addition, income disadvantages of fixed-term workers may also hamper investments into the partnership. Furthermore, it is reasonable to assume that people who are fixed-term employed may reduce investments into their relationships as they refrain from making decisions that would rule out alternate, future life course options (Elster 1979). Thus, our *first hypothesis* is as follows: Contrary to working under a permanent contract, being in a fixed-term contract delays important partnership events.

4 There are several other approaches such as the spillover-hypothesis (Grzywacz et al. 2002) or the theory of *capitalist landgrab* (Dörre 2012) that discuss the negative consequences of atypical employment for planning of private lives. For analytical reasons, we stick to the relatively strict assumptions of the investment model as it allows for deducing research hypotheses based on action theoretic considerations in a far more sophisticated way than the aforementioned concepts (Coleman 1990).

Confirming Rusbult's family economic investment model (Rusbult 1980; Rusbult et al. 1998), recent studies found that partnership events often occur in the following chronological order: (1.) cohabitation, (2.) marriage, (3.) parenthood and (4.) home ownership (King/Christensen 1983; Kopp et al. 2010). The action theoretical rationale behind this chronological order is that realizing the aforementioned events increases both the anticipated rewards in the form of increased perceived quality of the relationship and the anticipated losses if the partnership dissolves to a different degree.

When comparing the aforementioned events, there are few doubts that cancelling cohabitation is relatively inexpensive, as cohabitation is associated with relatively few monetary and non-monetary investments. Marriage is associated with greater monetary and non-monetary (i.e., social-emotional and juridical) long-term consequences, and giving birth to a child is more expensive than marrying, because the decision to give birth to a child increases the density and necessity of interaction between both partners and cannot be legally or legitimately reversed in the future (Rusbult 1980).

It is less clear whether entering parenthood should be assumed to be more or less expensive than purchasing real estate. Buying a house is, on the one hand, less consequential than giving birth to a child, because it can be reversed. On the other hand, the decision to purchase a house implies opting for a shared place of residence. In this regard, buying a house is more consequential than entering parenthood. Furthermore, the decision to buy a house may tie both partners closer together on a monetary basis than giving birth to a child because home ownership implies carrying large economic burdens for both partners (i.e., paying off a mortgage). Additionally, the decision of young adults to own a real estate might be restricted by having little equity capital. Furthermore, credit institutions in Germany very often refrain from offering real-estate loans to clients who work in insecure employment arrangements such as fixed-term employment. Thus, many fixed-term employees in Germany who wish to buy a home are prevented from doing so due to institutional restrictions.⁵

Our *second hypothesis* is as follows: The more expensive the decision, the greater is the delay of important partnership events in the case of fixed-term employment contrary to working under a permanent contract. Based on the assumption that buying a house and entering parenthood are the most expensive decisions, this hypothesis implies that buying real estate and entering parenthood should be delayed the most in the case of fixed-term employment, followed by marriage. In contrast, the decision to cohabit should stay rather unaffected.

We expect that both women and men may hesitate from investing in their partnerships when being confronted with insecurity, although perhaps to different degrees. For example, fixed-term employment of women may have stronger effects on the transition to parenthood than fixed-term employment of men, because usually women instead of men interrupt their career when they have children. Therefore, we will also present separate analyses for women and men.

5 It is reasonable to assume that some potential home-owners who work under a fixed-term contract refrain from asking for a real-estate loan because they anticipate declining reactions. Due to restrictions of our data we were not able to test for this assumption. For further discussion regarding these arguments see the concluding section of this paper.

5. Data and method

Our data were drawn from the AGIPEP Survey,⁶ which is a stratified random sample consisting of 1,083 German adults aged from 20 to 35 years, who were in a permanent relationship and dependently employed, i.e. working for public or private employers, at the time of the interview (self-reference). The sample covered both East and West Germany. The overall response rate amounted to 39%.⁷

The survey was collected using computer assisted telephone interviews. To ensure a sufficient number of cases of people working under fixed-term contracts, the sample is equally distributed between people who were working under a fixed-term contract at least once during their relationship or in the year prior to the start of their relationship and people who were not.⁸ It is important to note that individuals who were not living in a partnership at the time of the interviews are not included in the sample. This might lead to an underestimation of the effects of fixed-term employment on partnership events.⁹

Data collection took place between August 2012 and March 2013. After excluding cases with missing values for the dependent variable or at least one of the explanatory variables, the remaining samples contain 1,073 cases (829 events) for moving together, 1,035 cases (541 events) for marriage, 1,076 cases (454 events) for entering parenthood and 1,077 cases (274 events) for purchasing real estate. Dependent variables are the transition rates to cohabitation, marriage, parenthood and home ownership.

Our main explanatory variable is employment status. We distinguished between working under a fixed term-contract, working under a permanent contract, being in education, being unemployed or otherwise not employed. All these variables were measured retrospectively on a monthly basis. Although retrospective data gathering techniques are prone to serious amounts of reporting errors (Schnell 2012) this might be of minor relevance for this study because occupational biographies are easier to recall than attitudes or emotions (Brückner 1990).¹⁰ Moreover, measuring fixed-term employment retrospectively on a monthly basis seems more accurate than measuring fixed-term employment on a

6 The full title of the study is “AGIPEB-Decisions made under uncertainties. How precarious work influences the institutionalization process in intimate relationships” (Gesis Study ZA5356).

7 For further methodical details see (Baron/Krüger 2017; Eickemeier et al. 2016).

8 Participants were screened based on a nation-wide representative sample consisting of 6,219 adults in Germany aged between 20 and 35 years who were dependently employed and living in a partnership (lasting at least six months) at the time of the interviews. Of these 6,219 persons, 3,738 agreed to participate in the main study. From this population, participants of this study were randomly drawn using a stratified sampling approach. One half of the sample was randomly drawn from those persons among these 3,738 persons who had at least one fixed-term contract during their occupational careers. The other half was randomly drawn from those actors who had never worked under a fixed-term contract.

9 Furthermore, only one of both partners was interviewed. Implications of this restriction will be discussed in the concluding section of this article. Additionally, it should be noted that actors with non-German citizenship are underrepresented in our sample with a share of 4.8%, compared to 8.2% for Germany in 2013 when the interviews had been conducted (Federal Statistical Office 2014: 26)

10 If interviewees were not able to remember the exact dates of an occupational spell they were asked to report the season when the spell started or ended. The number of interviewees who had to rely on this option was only of very minor importance (self-reference).

yearly basis, which is the case in other existing data for Germany such as the German Socio-Economic Panel or Pairfam.

As mentioned before, individuals had to be dependently employed at the time of the interview in order to participate in the study, but a substantial part of the sample has been in education at earlier stages of their partnership.

The date of the start of the relationship, the date of cohabitation, the date of marriage and the date of buying real estate were also measured on a monthly basis. In contrast, the date of entering parenthood was measured on a yearly basis. Data were modified to use the middle of each year when an event occurred as a proxy for the exact date of birth of the first child. After that, the date of entering parenthood was reduced by 9 months because most pregnancies last approximately 9 months.

As some couples were still not cohabiting, married, parents or homeowners at the time of the interview, this study used event history analysis to estimate transition rates. We used the Kaplan-Meier method (Blossfeld et al. 2007) to estimate survival curves for all four transitions. For each transition, the time clock begins at the time of the start of the relationship. Additionally, we conducted piecewise constant exponential models (Blossfeld et al. 2007) for testing our hypotheses about the effects of fixed-term employment on the aforementioned transitions. Therefore, we split the time axis (i.e., the duration of the relationship) into six time periods: 0 to less than 2 years, 2 to less than 4 years, 4 to less than 6 years, 6 to less than 8 years, 8 to less than 10 years and 10 years or more. This allows for modeling flexible transition rates.

In our multivariate analyses, we control for age (both linear and squared), gender, living in East or West Germany, nationality and educational attainment (having attained at least a college entrance level or an equivalent level of education in contrast to lower education) because these variables can be expected to be associated with both important partnership events and fixed-term employment (Kreyenfeld 2010, 2015). Age was included as a time-dependent variable, whereas living in East or West Germany, nationality and education were only measured at the time of the interview. Furthermore, we tested for interaction effects between fixed-term employment and gender (results not shown in tables).

6. Results

Looking at the distribution of the sample (table 1), 829 persons (77%) had moved in together with their partner at the time when the interviews took place. In addition, 541 persons (52%) had already married, and 454 persons (42%) had transitioned to parenthood. Only 274 persons (25%) had purchased real estate together with their partner. Regarding the measures for employment status, shares of the time spent working under fixed-term contracts varied from 17% (cohabitation) to 23% (home ownership) of the relevant time at risk. Shares of the time spent working under permanent contracts varied between 36% (cohabitation) and 43% (parenthood). For the time spent in the educational system, shares varied from 27% (home ownership) to 40% (cohabitation). The incidences of being unemployed and being otherwise not employed are comparatively low with shares ranging from 3 to 6%.

Table 1: Distribution of the samples

| | Cohabitation | | Marriage | | Parenthood | | Real Estate | |
|--------------------------|--------------|------|----------|------|------------|------|-------------|------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Employment status | | | | | | | | |
| Fixed-term contract | .17 | – | .22 | – | .22 | – | .23 | – |
| Permanent contract | .36 | – | .40 | – | .43 | – | .42 | – |
| In education | .40 | – | .33 | – | .30 | – | .27 | – |
| In unemployment | .02 | – | .02 | – | .02 | – | .02 | – |
| Otherwise not employed | .05 | – | .04 | – | .03 | – | .06 | – |
| Duration of relationship | | | | | | | | |
| Less than 2 years | .48 | – | .34 | – | .31 | – | .27 | – |
| 2 to 4 years | .25 | – | .26 | – | .25 | – | .23 | – |
| 4 to 6 years | .13 | – | .17 | – | .18 | – | .18 | – |
| 6 to 8 years | .07 | – | .11 | – | .12 | – | .14 | – |
| 8 to 10 years | .04 | – | .07 | – | .07 | – | .09 | – |
| More than 10 years | .04 | – | .05 | – | .06 | – | .10 | – |
| Age (years) | 24.03 | 4.48 | 24.73 | 4.14 | 25.06 | 4.17 | 25.61 | 4.25 |
| Female | .60 | – | .62 | – | .61 | – | .62 | – |
| A-level | .64 | – | .66 | – | .67 | – | .63 | – |
| East Germany (0) | .17 | – | .20 | – | .17 | – | .19 | – |
| Non-German | .06 | – | .03 | – | .03 | – | .04 | – |
| No. of persons | 1073 | | 1035 | | 1076 | | 1077 | |
| No. of person months | 38923 | | 67152 | | 75548 | | 89918 | |
| No. of events | 829 | | 541 | | 454 | | 274 | |
| Percentage of events | 77 | | 52 | | 42 | | 25 | |

Note: Source: AGIPEB-Survey 2013. Calculations of the means are based on the number of person months.

In our sample, nearly two thirds of persons had passed A-levels (German ‘Abitur’) which means that persons on lower educational levels were underrepresented. When looking at official statistics based on the German micro-census for 2013, about 46% of adults in the age between 25 and 35 years – persons with migration background not included – had passed A-levels (Statistisches Bundesamt 2014: 78). The underrepresentation of actors on lower educational can be, at least partly, explained by the fact that persons with non-German citizenship were underrepresented in our study. This empirical background should be taken into consideration when interpreting the following results.

Figures 1-4 show the proportion of couples, who had moved in together (Figure 1), married (Figure 2), entered parenthood (Figure 3) or bought home ownership (Figure 4) after a certain period of time since the beginning of their relationship. It took 11 months until one quarter of all couples had moved together (Figure 1). After 28 months, one half of the couples had moved together. Becoming married (Figure 2) and entering parenthood (Figure 3) occurred considerably later, followed by purchasing real estate (Figure 4). This gradation of the survival curves is in line with our theoretical expectation: The more expensive the transition, the later the transition takes place.

Figure 1: Proportion of couples who have moved in together by relationship duration

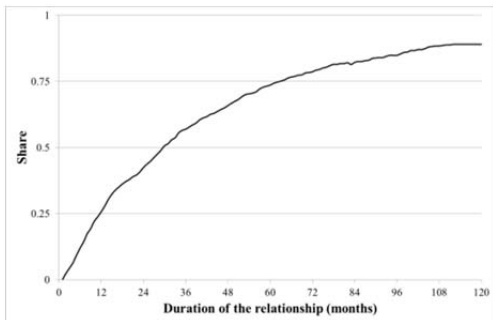


Figure 2: Proportion of couples who have married by relationship duration

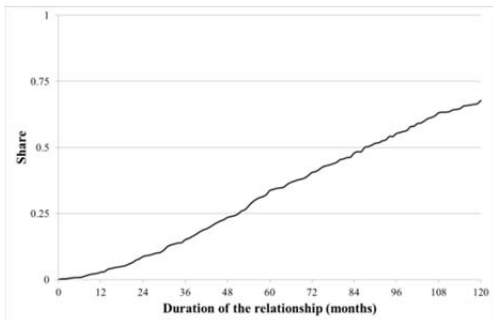


Figure 3: Proportion of couples who have entered parenthood by relationship duration

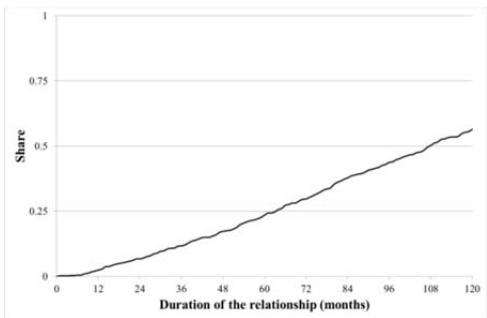
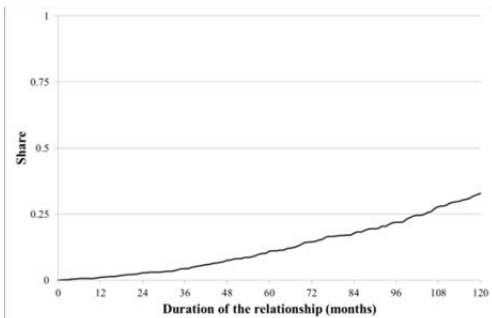


Figure 4: Proportion of couples who have purchased real estate by relationship duration



Note: Source: AGIPEB-Survey 2013. All estimates are Kaplan-Meier Estimates.

Table 2 presents the results of the piecewise exponential models for the transitions into cohabitation (column 1), marriage (column 2), parenthood (column 3) and home ownership (column 4). The presented values are hazard ratios. Values greater than 1 represent an increased transition rate, and values less than 1 represent a reduced transition rate to cohabitation, marriage, parenthood and home ownership.

Controlling for the duration of the relationship, age, gender, education, living in East or West Germany and nationality, working under a fixed-term contract did not affect the transition into cohabitation compared to working under a permanent contract (column 1 of table 2). The same applied for the transition into marriage (column 2 of Table 2) and for the transition into parenthood (column 3 of Table 2). In contrast, working under a fixed-term contract significantly delayed the purchase of real estate by $((1-0.71)*100=)$ 29% when compared to working under a permanent contract (column 4 of Table 2).

Table 2: Effects of fixed-term employment on partnership events
(piecewise-constant exponential models, hazard ratios and standard errors)

| | Cohabitation | | Marriage | | Parenthood | | Real Estate | |
|---|--------------|-----|----------|-----|------------|-----|-------------|-----|
| | HR | SE | HR | SE | HR | SE | HR | SE |
| Employment status | | | | | | | | |
| Fixed-term contract (Ref.: permanent contract) | .97 | .09 | .92 | .09 | 1.06 | .12 | .71 * | .10 |
| In education (Ref.: permanent contract) | .66 ** | .07 | .51 ** | .08 | .59 ** | .10 | .25 ** | .07 |
| In unemployment (Ref.: permanent contract) | .81 | .20 | .83 | .08 | 1.16 | .38 | .27 | .20 |
| Otherwise not employed (Ref.: permanent contract) | .74 | .14 | 1.68 * | .08 | 4.12 ** | .73 | .60 | .16 |
| Duration of relationship | | | | | | | | |
| 2 to 4 years (Ref.: < 2 years) | .86 | .08 | 1.75 ** | .24 | 1.53 ** | .24 | 1.45 | .35 |
| 4 to 6 years (Ref.: < 2 years) | .68 ** | .08 | 2.10 ** | .30 | 1.79 ** | .29 | 2.05 ** | .48 |
| 6 to 8 years (Ref.: < 2 years) | .48 ** | .08 | 2.10 ** | .32 | 2.20 ** | .37 | 2.03 ** | .50 |
| 8 to 10 years (Ref.: < 2 years) | .46 ** | .12 | 2.21 ** | .39 | 2.38 ** | .44 | 2.97 ** | .73 |
| More than 10 years (Ref.: < 2 years) | .26 ** | .10 | 2.44 ** | .45 | 2.78 ** | .54 | 2.82 ** | .71 |
| Age | | | | | | | | |
| Years | 2.00 ** | .20 | 2.08 ** | .32 | 2.15 ** | .25 | 1.40 | .30 |
| Years (squared) | .99 ** | .00 | .99 ** | .00 | .99 ** | .00 | .99 | .00 |
| Female (Ref.: Male) | 1.16 * | .09 | 1.03 | .09 | 1.21 | .12 | 1.14 | .14 |
| A-level (Ref.: No a-level) | 1.12 | .10 | .90 | .09 | .64 ** | .06 | 1.12 | .15 |
| East Germany (Ref.: West Germany) | 1.14 | .10 | .69 ** | .08 | 1.43 ** | .17 | .79 | .13 |
| Non-German (Ref.: German) | .50 ** | .10 | 1.04 | .27 | 1.05 | .24 | .89 | .30 |
| Intercept | .00 ** | .00 | .00 ** | .00 | .00 ** | .00 | .00 ** | .00 |
| No. of persons | 1073 | | 1035 | | 1076 | | 1077 | |
| No. of person months | 38923 | | 67152 | | 75548 | | 89918 | |
| Events | 829 | | 541 | | 454 | | 274 | |
| Log Likelihood | -1554.33 | | -896.05 | | -835.52 | | -633.12 | |

Note: Source: AGIPEB-Survey 2013. * $p < .05$; ** $p < .01$ (two-tailed tests).

Further results from Table 2 show that being in education compared to working under a permanent contract reduced the likelihood of moving in together with a partner (hazard ratio, 0.66; $P < 0.01$). Furthermore, being in education made it less likely to marry (hazard ratio, 0.51; $P < 0.01$), to start a family (hazard ratio, 0.59; $P < 0.01$) and to purchase real estate (hazard ratio, 0.25; $P < 0.01$).

Results remained similar when calculating separate models for women and men (see Table 3 and 4 in appendix). The only exception was that the effect of fixed-term employment on entering home ownership now was significant only for men. However, the difference between women and men is not statistically significant.

Additionally, we tested for interaction effects between educational attainment and employment status for each women and men, but did not find significant interactions between education and fixed-term employment (results not shown in tables).

7. Discussion

The aim of this study was to analyze the effects of fixed-term employment on the institutionalization of relationships among young adults in Germany. Adding to previous research, we did not only focus on the transition into marriage and parenthood, but were

looking at two additional important partnership events: entering cohabitation and home ownership. Furthermore, we used a new sample consisting of young German adults that has not been studied in previous research to test our hypotheses, the AGIPEB Survey.

Based on Rusbult's investment model and family economics, we expected that fixed-term employment delays the realization of important partnership events, because individuals refrain from investing in their partnerships when being confronted with insecurity. Our main hypothesis was that fixed-term employment compared to working under a permanent contract delays the transitions into cohabitation, marriage, parenthood and home ownership. This hypothesis was confirmed for purchasing real estate. In contrast, results showed no effects of fixed-term employment compared to permanent employment on the transition rate into cohabitation, marriage and parenthood.

One possible reason why fixed-term employment delays the transition into home ownership, but not the transition into cohabitation and parenthood, may be that buying a house not only ties the partners closer together but also ties them to a particular place of residence. Another reason might be that the couples' decision to buy a house is overturned by third parties. In particular, creditor institutes may refuse to offer a mortgage to persons working under a fixed-term contract, because they want to minimize the risk of mortgage default. In contrast, cohabitation is associated with relatively few monetary and non-monetary investments, and this could be the reason why we did not find an effect of fixed-term employment on the transition rate into cohabitation.

There may be several reasons why we did not find effects of fixed-term employment on the transition into marriage and parenthood. First, there are theoretical arguments why fixed-term employment does not necessarily delay marriage and parenthood. Based on the theory of the value of children, it has been argued that (some) young adults may try to compensate perceived socioeconomic insecurity by entering parenthood (Friedman et al. 1994). This could contribute to the fact that there are, on average, only marginal differences between transition rates into marriage and parenthood of persons who work under a fixed-term contract compared to those who work under a permanent contract. Second, we were not able to differentiate between wanted and unwanted pregnancies when measuring the transition to parenthood. Also for this reason, the effects of fixed-term employment on fertility decision making might be underestimated in our study. Third, our sample is restricted to persons who were in a permanent relationship and who were dependently employed at the time of the interview. Couples who have separated, possibly because of fixed-term employment, are not included in the sample, and the same applies to persons whose careers as temporary workers ended up in unemployment or inactivity. This might lead to a downward bias of the effects of fixed-term employment on marriage and entering parenthood. However, previous studies for Germany which were based on other samples and which focused on the transition into marriage and parenthood also found no significant effect of fixed-term employment on entering parenthood based on the Family Survey of the German Youth Institute (Tölke/Diewald 2003), or mostly found no significant effects based on the GSOEP (Brose 2008; Gebel/Giesecke 2009; Kreyenfeld 2005; Kurz et al. 2005; Schmitt 2012b), and also found no effect of fixed-term employment on marriage (Kurz et al. 2005).

The present study has several limitations. As already mentioned, our sample is restricted to persons who were in a relationship and who were dependently employed at the

time of the interview, and this might be one reason why we did not find any effects of fixed-term employment on entering cohabitation and parenthood. Another restriction of our data is that we could not consider data on both partners' occupational life courses. Therefore, we were not able to study possible compensation or cumulation effects which might occur when only one partner or when both partners are working under a fixed-term contract. Finally, there are good reasons to expect that the effects of fixed-term employment may differ between subgroups, for example by occupation, employment status, or duration of working under a fixed-term contract. However, due to small case numbers, we could not examine such differences.

Other existing data sets such as German Socio-Economic Panel (GSOEP), the German Family Panel (Pairfam) or the panel study "Labour Market and Social Security" (PASS) do allow for empirical studies that focus on effects of work life on family life – or vice versa – only to a narrow extent. Future research would, thus, profit from a better data basis to analyze the effects of atypical employment on partnership stabilization processes. In this context, a panel study approach using monthly data on young adults' occupational and partnership biographies that also allows for sophisticatedly measuring effects of different types of atypical employment as well as of subjective attitudes towards work on partnership processes would be necessary.

Taken together, previous research based on other data sources and our results indicate that fixed-term employment does, on average, not yield strong postponing effects on important partnership events in Germany. Nonetheless, our study supplements previous research showing that fixed-term employment affects young adults' partnerships at the minimum with regard to one event: the purchase of home ownership will be postponed.

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Appendix

Table 3: Effects of fixed-term employment on partnership events for women
(piecewise-constant exponential models, hazard ratios and standard errors)

| | Cohabitation | | Marriage | | Parenthood | | Real Estate | |
|---|--------------|-----|----------|-----|------------|------|-------------|-----|
| | HR | SE | HR | SE | HR | SE | HR | SE |
| Employment status | | | | | | | | |
| Fixed-term contract (Ref.: permanent contract) | .86 | .11 | .79 | .10 | 1.08 | .15 | .76 | .14 |
| In education (Ref.: permanent contract) | .60 ** | .08 | .43 ** | .09 | .66 | .14 | .25 ** | .08 |
| In unemployment (Ref.: permanent contract) | .55 | .20 | .91 | .35 | 1.24 | .48 | .44 | .31 |
| Otherwise not employed (Ref.: permanent contract) | .65 | .16 | 1.76 ** | .36 | 6.40 ** | 1.26 | .69 | .19 |
| Duration of relationship | | | | | | | | |
| 2 to 4 years (Ref.: < 2 years) | .78 * | .09 | 1.96 ** | .36 | 1.75 ** | .37 | 1.12 | .36 |
| 4 to 6 years (Ref.: < 2 years) | .65 ** | .09 | 1.99 ** | .38 | 2.13 ** | .45 | 1.88 * | .56 |
| 6 to 8 years (Ref.: < 2 years) | .47 ** | .10 | 2.18 ** | .43 | 2.68 ** | .59 | 1.97 * | .60 |
| 8 to 10 years (Ref.: < 2 years) | .57 * | .15 | 2.15 ** | .48 | 2.74 ** | .66 | 2.47 ** | .77 |
| More than 10 years (Ref.: < 2 years) | .25 ** | .11 | 2.41 ** | .55 | 3.48 ** | .84 | 3.04 ** | .94 |
| Age | | | | | | | | |
| Years | 2.07 ** | .26 | 1.72 ** | .31 | 1.77 ** | .34 | 1.77 * | .48 |
| Years (squared) | .99 ** | .00 | .99 ** | .00 | .99 ** | .00 | .99 * | .00 |
| A-level (Ref.: No a-level) | 1.02 | .11 | .91 | .11 | .60 ** | .07 | 1.24 | .20 |
| East Germany (Ref.: West Germany) | 1.04 | .13 | .63 ** | .10 | 1.37 * | .20 | .79 | .17 |
| Non-German (Ref.: German) | .56 * | .14 | 1.20 | .33 | .70 | .20 | 1.00 | .39 |
| Intercept | .00 ** | .00 | .00 ** | .00 | .00 ** | .00 | .00 ** | .00 |
| No. of persons | 613 | | 593 | | 615 | | 615 | |
| No. of person months | 23201 | | 41748 | | 45798 | | 55372 | |
| Events | 493 | | 336 | | 292 | | 174 | |
| Log Likelihood | -916.20 | | -528.48 | | -481.22 | | -384.32 | |

Note: Source: AGIPEB-Survey 2013. * $p < .05$; ** $p < .01$ (two-tailed tests).

Table 4: Effects of fixed-term employment on partnership events for men
(piecewise-constant exponential models, hazard ratios and standard errors)

| | Cohabitation | | Marriage | | Parenthood | | Real Estate | |
|---|--------------|-----|----------|-----|------------|------|-------------|------|
| | HR | SE | HR | SE | HR | SE | HR | SE |
| Employment status | | | | | | | | |
| Fixed-term contract (Ref.: permanent contract) | 1.16 | .17 | 1.21 | .21 | 1.11 | .20 | .61 * | .15 |
| In education (Ref.: permanent contract) | .74 | .11 | .62 * | .14 | .48 * | .14 | .25 ** | .12 |
| In unemployment (Ref.: permanent contract) | 1.26 | .41 | .69 | .41 | 1.06 | .62 | .00 | .00 |
| Otherwise not employed (Ref.: permanent contract) | .96 | .28 | 1.19 | .55 | .89 | .53 | .00 | .00 |
| Duration of relationship | | | | | | | | |
| 2 to 4 years (Ref.: < 2 years) | .96 | .12 | 1.46 | .32 | 1.29 | .32 | 1.99 | .75 |
| 4 to 6 years (Ref.: < 2 years) | .69 * | .13 | 2.22 ** | .48 | 1.41 | .36 | 2.30 * | .88 |
| 6 to 8 years (Ref.: < 2 years) | .50 * | .14 | 1.97 ** | .49 | 1.69 | .45 | 2.01 | .83 |
| 8 to 10 years (Ref.: < 2 years) | .26 ** | .14 | 2.46 ** | .71 | 2.18 ** | .65 | 3.70 ** | 1.49 |
| More than 10 years (Ref.: < 2 years) | .33 * | .17 | 2.69 ** | .90 | 2.07 * | .71 | 1.95 | .86 |
| Age | | | | | | | | |
| Years | 2.28 ** | .44 | 3.07 ** | .94 | 3.43 ** | 1.23 | .87 | .33 |
| Years (squared) | .98 ** | .00 | .98 ** | .01 | .98 ** | .01 | 1.00 | .01 |
| A-level (Ref.: No a-level) | 1.24 | .16 | .92 | .14 | .73 | .12 | .94 | .20 |
| East Germany (Ref.: West Germany) | 1.26 | .18 | .80 | .15 | 1.53 * | .29 | .80 | .22 |
| Non-German (Ref.: German) | .38 * | .16 | .60 | .43 | 2.45 * | .96 | .55 | .40 |
| Intercept | .00 ** | .00 | .00 ** | .00 | .00 ** | .00 | .00 | .02 |
| No. of persons | 460 | | 442 | | 461 | | 462 | |
| No. of person months | 15722 | | 25404 | | 29750 | | 34546 | |
| Events | 336 | | 205 | | 162 | | 100 | |
| Log Likelihood | -626.78 | | -359.64 | | -339.96 | | -239.90 | |

Note: Source: AGIPEB-Survey 2013. * $p < .05$; ** $p < .01$ (two-tailed tests).