Westfälische Wilhelms-Universität Münster

CIW Centrum für Interdisziplinäre Wirtschaftsforschung

Centrum für Interdisziplinäre Wirtschaftsforschung Diskussionspapier

1/2014

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Nele Franz

Center for Interdisciplinary Economics Discussion Paper

Centrum für Interdisziplinäre Wirtschaftsforschung
Diskussionspapier
1/2014

April 2014

ISSN 2191-4419

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Abstract

Subject of this paper is the investigation of wage developments of women interrupting their careers for giving birth tochildren in comparison to men's wages not facing a parental interruption. We estimate OLS regression models for di_erent subcategories de_ned by age and point in time. We use data from the German Socioeconomic Panel from 1984 to 2011 to show the importance of legal job protection on reentry wages. Furthermore, we show that wages and the penalty for maternity differs by the duration of interruption as well as in short-, intermediate and long-run perspective. We _nd less wage penalty for women interrupting their careers within legal protection in the short run, but delayed compensating penalties for the same group in the long run.

JEL classifcation : C21; J13; J24; J31

Keywords : Human capital; parental leave; wages; OLS

Im Internet unter:

http://www.wiwi.uni-muenster.de/ciw/forschen/downloads/DP-CIW_01_2014.pdf

Westfälische Wilhelms-Universität Münster
CIW – Centrum für Interdisziplinäre Wirtschaftsforschung
Scharnhorststraße 100
D-48151 Münster

Tel: +49-251/83-25329 (Sekretariat)
E-Mail: clementine.kessler@uni-muenster.de
Internet: www.wiwi.uni-muenster.de/ciw

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1 Introduction

Gender-specific wage differences are to a main extend explained by career-interruptions because of giving birth and caring for children. Because in most western countries still mothers take responsibility for their children, this seems to be a meaningful explanation for wage differences without mentioning wage discrimination between the sexes. In this paper the consequences of maternity leave of different durations is analyzed in the short as well as the intermediate and long run. It will be shown how much wage losses a mother has to carry due to skipping one or more years of employment in comparison to continous careers of men. The main question is how the length of a job interruption affects the wage penalty and if it makes sense to get back into full employment early. In Germany, a strongly discussed legal claim to access to day-care facilities for 1-3 year old children came into effect on august 1st, 2013. The discussion about expanding the supply of child care centers for children between one and three years is strongly connected with the question about chances and penalties in the labor market after an interruption. Since 1986, mothers in Germany get job protection for a certain, until 2007 stepwise expanded, period after giving birth. Starting with 10 months legally regulated maternity leave[1] in 1986[2], today mothers can interrupt their careers for up to three years being job protected. Those premissions for a maternity leave may have an influence on the decision about the length of an interruption as well as they definitely have an impact on subsequent payments. Previous literature mostly ignores legal circumstances of career interruptions. Pathbreaking approaches of Mincer and Polachek (1974) and Mincer and Ofek (1982) handle with premissions and data under completely different conditions. This approach appends those ideas about work profiles

[1]Note that "'Maternity Leave"' in this article is used as a generic term for any employment interruption connected with childbearing.

[2]Please note that an earlier introduction of job protected six months cannot be considered here since data do not cover this period.

of mothers interrupting their careers due to children on more recent circumstances using data from the German socio-economic panel (GSOEP) covering the period 1984-2011. This period just covers the main years since job protection for young mothers were introduced. Our main interest of analysis is how the duration of a maternity leave affects its wage consequences and if the job protection implemented and expanded continously in Germany plays a role for wage penalties. Of special interest will be, if job protection defends or only delays wage penalties for mothers leaving employment due to childcaring responsibilities.

The paper is organized as follows: Next we will give an overview of the related literature and some empirical finings for Germany. In Section three, the theoretical background of this approach is given using the idea from Mincer and Ofek (1982) and adapt it to the German case. In section four we present our methodology and used variables. After explaining our summary statistics in section five, we present our estimation results in section six. Section seven concludes.

2 Previous Literature

The Gender Gap in general and especially the costs of employment interruptions due to maternity leave has been the focus of a vast literature before. The majority of empirical studies uses the National Longitudinal Survey of Labor Market Experience of Young Woman, a Panel Survey for the USA. For Germany, several Studies use mostly either employer-employee-survey-data served by the Institute for Employment Research (IAB) or data from the Socio-Economic Panel (GSOEP).

The main literature about costs and consequences of career interruptions is based on the human capital approach developed by Gary S. Becker (1964, 1985) and wage equations developed by Jacob Mincer (1974). Becker explains differences in men‘s and women‘s wages in gender specific investments in human capital. Following his argumentation, women do not invest in human capital as much as men because women anticipate career interruptions and family responsibilities (Becker 1985). Mincer and Polachek published a first concrete analysis of maternity leaves and womens' earnings in context to their households (Mincer/Polachek 1974). In their approach wage profiles after schooling are segmented into (up to eight) periods of participation and non-participation, which makes a differentiated analysis of investments and

depreciation of human capital possible. The paper of Mincer and Polachek (1974) has been the basis of many further approaches to measure the effect of career interruptions. Their seminal paper focus on investments in human capital after schooling and differentiate several household types connected with marriage and children.

Mincer and Ofek follow this paper with a first longitudinal analysis of panel data, in which long- and shortterm consequences of career interruptions due to motherhood for employed married white women in the USA are discussed. They simplify the former approach sketching a work-life profile only including one single interruption. The implementation of a restoration effect catching up a short-run wage penalty is root of the matter. They conclude that there is a wage penalty of career interruptions for married women and that the short term-effects are higher than in the long run. The construction of a wage profile for women over lifetime will be the matter of this paper, thereby rethinking the existence of a restoration effect. However, the definitions of long- and short term effects being either just dropped into the market or resuming work at least one year ago leave room for interpretation. (Mincer/Ofek 1982)

Waldfogel (1997) presents a study for women in the USA in which not only the lack of labor market experience is taken for an explanation of the family gap between women with and without children. Instead, Waldfogel explains a child penalty in wages by differentiating work experience in full- and part time jobs. Furthermore, Waldfogel takes possible heterogeneity between mothers and childless women into account. In this study, a wage penalty of 4 percent for having one child and 12 percent for having two or more children remains even after controlling for time invariant personal characteristics (with a individual fixed-effects-model), part time experience and current part time employment (Waldfogel 1997).

Another study done by Waldfogel (1998) presents a comparison between First-Difference- and Fixed-Effects-estimations for the family gaps in the USA and Great Britain. A decomposition of wages afterwards shows that 41 percent (for the USA) and 48 percent (for GB) of the total wage gap between mid-age men and women can be explained by differences in the returns of family and parental status between the sexes. In addition to those results, Waldfogel analyses the use of maternity leave protection and finds out, that in Great Britain and the USA the wages of women who benefit from maternity leave protection gain much more wage than mothers who are

not. The advantage of a maternity leave protection is the better the earlier women start working after giving birth (Waldfogel 1998).

Budig and England (2001) pick up the question about reasons for a wage penalty for motherhood using and extending Waldfogel's study of 1997. Budig and England point out 5 possible reasons for a family gap:

Experience: interrupted (full-time-)employment and therefore a lack of work experience,

Choice: accepting lower wages in advance of jobs that are better to combine with family responsibilities,

Productivity: productivity losses at work when having responsibilities for children at home,

Discrimination: employer's discrimination and,

Heterogeneity: unobserved heterogeneity, e.g. the correlation between motherhood and lower wages may be of no causality.

The article is focused on a detailed analysis of different job characteristics, different industries and influences of marriage and childbearing on wages. But it does not give an answer to the question about different effects of a parental leave in the short and the long run.

Furthermore, Anderson et al. (2002) find strong evidence on educational correlation with the size of the family gap. In their cross sectional and fixed effects study the educational level (no diploma/high school graduate/college graduate) is a key influencing variable to predict the height of the wage penalty for one child and in higher intensity for 2 or more children. While low-skilled mothers do not suffer any wage penalty for one or more children, for high-skilled-mothers a wage penalty of 4 percent for one child and 15 percent for two or more children is identified (Anderson et al. 2003).

For Germany, Kunze (2002) finds different wage penalties for career interruptions caused by unemployment, non-work and parental leave. Parental leaves especially for women have the highest short- and long run wage penalties with up to 18 percent wage losses compared to pre-birth wages. Kunze uses data from the IAB employment sample (IABS) from 1975 to 1997 and applies those to an expanded model relying on Mincer and Polachek (1974).

Beblo and Wolf (2003) find different consequences of work interruptions for men and women and differences in the consequences of unemployment periods, time outs and parental leaves. They find evidence for a higher wage penalty for maternity leaves in comparison to paternal leaves or interruptions for any other reason. But this analysis is limited on full time employed 40 years old men and women in West Germany (Beblo/Wolf 2003). A more recent study using data from the German socioeconomic panel (GSOEP) identifies different short- and long-run-effects of maternity leaves on wages (Goerlich/De Grip 2009). However, the focus of that study is the dependancy of skill levels and depreciation of human capital rather than the influence of the length of an interruption and the duration of wage restauration after a maternity break. The main hypothesis there is based on an occupational seggregation between men and women as a result of different wage penalties in female dominated in contrast to male dominated jobs. Therefore the differentiation between short- and long-run effects of career interruption stays rather vague - the authors simply differ between less and more than five years since reentry into labor force. The results show that there is a difference between low- and high-skilled occupation as well as significant catch-up or restauration effect of employment on wages. A clear (long-run) difference in the restauration of wages in male or female dominated sectors is not found (Goerlich/De Grip 2009).

Most recent studies for Germany use data from the German Socioeconomic Panel (GSOEP) and the Institute for employment Research (IAB)to investigate the decision about the length of maternity leave and direct wage effects of maternity leaves. Ejrnoes and Kunze (2013)find out a direct wage penalty of 3-5.7 percent per year of maternity leave. Kuhlenkasper and Kauermann (2009) find out that the duration of maternity leave depends, besides educational level and prebirth income, also on the legal framework in Germany.

In this analysis we will take those findings about the importance of skills, family backgrounds, duration of reemployment and occupational cases into consideration. At least to our knowledge this will be the first detailed analysis of womens' wage penalties in comparison to eqivalent male wages and at different points in time. Our analysis allows not only an intrapersonal comparison of wages before and after an interruption, but will show the (in our oppinion) real wage penalty comparing female wages to the wages of male counterparts of the same age and not facing a maternity leave. In addition,

throughout our estimations in the short, intermediate and long run we will be able to take possible delayed wage penalties into account. As a result, we will be able to draw a wage development for mothers in comparison to men. We took men's wages as a reference group, since we assume male wages as the real market wages.[3] Furthermore, we will focus on the existance of a restoration effect defined by Mincer and Ofek (1982). Firstly, we will analyse if there is a restoration of (possibly) shrinked wages after an interruption and secondly, we will explore if wage growth in that critical period directly after an interruption is faster for mothers than for men, since that in our opinion are the key ctriteria when analysing wage effects of maternity leaves.

3 Wage penalties for interrupted work careers

Mincer and Ofek (1982) decompose female life-cycle employment into four periods:

Period 1: The pre-birth period starts with completion of education, i.e. an academic degree. In comparison to male career paths, the pre-birth years of female wage development may be less steep but essentially linear and - due to human capital gains - increasing. If an interruption is anticipated, effort and investments in human capital may be lower and so a flatter wage growth may be reasonable.

Period 2: While men will follow this linear increasing wage path until retirement, (many) women will interrupt their career when giving birth. In that second period wages are supposed to be zero. For simplicity, women are supposed to interrupt their career only once.

Period 3: Starting the third period, when mothers return to work, Mincer and Ofek (1982) suppose that mothers will reentry into employment at a lower wage level than before. During their interruption, women will not only miss accumulating more human capital, but also face a depreciation of their previously accumulated human capital. The longer the interruption, the more human capital is depreciated and the lower the reentry wages are. The "restoration period" (Mincer/Ofek 1982,

[3]For a discusssion about reference wages see Oaxaca (1973)

p. 5) is characterized by catching up with the pre-birth wages. Mincer and Ofek identify higher wage growth during the first five years after an interruption period, which they associate with the accumulation of job tenure.

Period 4: The fourth period describes a post-restoration interval with wages growing as fast as men's wages or slower, if another interruption is expected later on. Graph (a) in Figure 3 sketches those four periods of employment introduced by Mincer and Ofek (1982).

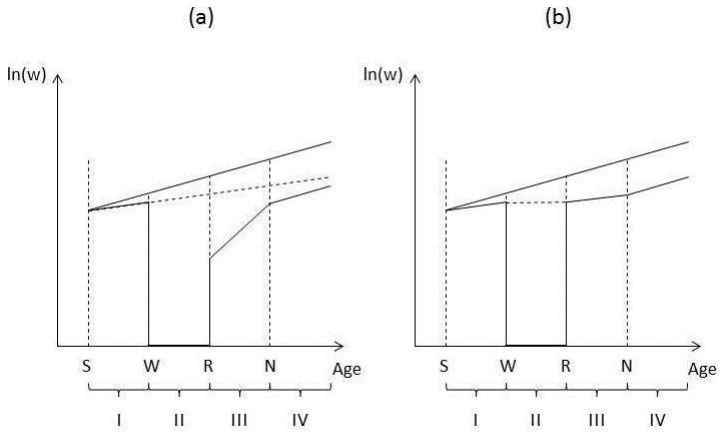

Figure 1: Stylized wage profiles over lifetime

Note: Graph (a) sketches the idea of Mincer and Ofek (1982); Graph (b) shows possible adjustments; (S) defines starting point of employment after finishing education, (W) pictures withdrawal of employment, (R) marks the reentry into employment and (N) specifies a "normalization" of wage growth

On particular importance for this approach is the finding that mothers will earn less than before when reentering into employment. Only based on depreciating wages during a break a 'restoration of wages' afterwards can be derived. However, for many countries social regulations associated with parental leave were strongly expanded since the early 1980's. In Germany, since 1979 mothers had a job-protected maternity leave of up to six months. After 1985, maternity leave legislation was expanded from 8 months in 1986

to 34 months in 1993. Note that these are terms of job protection, not terms of paid career breaks (see Ejrnoes and Kunze (2013) for a brief overview). Since 1993 mothers (or fathers) get a one-year compensation for interruptions, which they may split to 24 months. In 2007, compensations were expanded to 67 percent of former income (but not more than 1800 Euro) and parental leave is payed for 14 months if both parents share time off employment. However, a wage decline is prohibited for employment interruptions up to three years.

From this follows that a restoration effect won't take place either. Broken down on hourly wages, women can even earn slightly more after an interruption than before. Individual differences between women's hourly wages when reentering after an interruption caused by child-care and wages when leaving employment are, in this data set, positive at an average difference of 0.457 Euro/hour (for a closer view on average wages see also table 2). That means, the whole discussion about a restoration effect catching up previously declined wages has to be thought over. Wage profiles are likely to follow a different pattern than those predicted by Mincer and Ofek (1982).

For more recent data we suppose that instead of a larger growth of post-interruption wages the wages of mothers will grow slower than before their break. Following Mincer/Ofek and others, human capital of mothers declines during their break. In relation to their human capital, mothers are overpaid when returning to work if job protection prohibits lower reentry wages. Additionally, the majority of mothers returning to work is then only working parttime. Working parttime goes along with less human capital accumulation and therefore lower wage advantages. In the first years after an employment interruption, the wages of mothers will grow only slowly. Consequently, the wage-gap between men and mothers will increase. The cost of nonparticipation is lower in the short run, but will increase due to slower growthrates.

Although women may restore their former depreciated human capital, employers will compensate overpayment suspending later wage increases. In a following period - when human capital and wages are leveled off once again - wage development will continue as before child-bearing. At this point in time, the differences between men and mothers will not rise anymore. In the long run wages will assimilate to wage profiles of men (but on a lower level) when human capital and wages correspond to each other again. Graph (b) in figure 3 sketches our idea about the development of wage profiles, that will

be tested here. Obviously, the main difference to (Mincer/Ofek 1982) is the period after interrupting work careers.

So far an interruption was considerd in the literature to be one of an undifferentiated time period. But since financial support and job protection are limited, there may be differences in reentry wages, and therefore in the further development of wages depending on the length of the interruption. Consequences of breaks might not increase linear with the length of an interruption because not only the depreciation of human capital but also job protection is relevant here. Our approach categorizes interruption spells depending on their legal framework and children's growth stage. Maternity leave is partitioned in four interruption time categories $j \in \{1, 2, 3, 4\}$:

First A short maternity leave which takes up to one year. In Germany, parental allowance since 1979 is payed for the first 12 months after giving birth. Since 2007 parents can receive parental allowance for 14 months for single parents, or if the parental leave is shared between mother and father. However, since less than 2,5 percent of all mothers and no statistical relevant share of fathers get parental allowance for more than 12 months, the relevant period for mothers still is the first year after birth (Federal Statistical Office 2013a).

Second The protected period to interrupt employment for parenting without the employers' agreement ends with the third birthday of a child.

Third This category is defined as staying at home until children are old enough to take part in kindergarten/nursery schools, which in Germany starts at age three and ends with entering school at the age of six years. This is the first categorical period in which parents are not protected anymore, so a significant rise in wage differences is expected in contrast to the first two categories. Mothers belonging to this category spend between three and six years at home.

Fourth This category is built upon mothers who (at the earliest) start working while their children got to elementary school. In the last category all working mothers are summarized, who did not work for 6 years or longer after they gave birth to their first child. Referring to Mincer and Polachek (1974), this would be the third stage of sustainable reemployment Mincer and Polachek focused on (Mincer/Polachek 1974, p. 83). Obviously, periods of labor market participation have shifted.

Based on this four types of interruptions the influence of maternity leave endurance will be explored in different estimations for each type. Simply stated, our hypothesis is that there will be an increase in long run wage penalties for each higher type of interruption. In the short run the main difference is expected between the second and third type, because that exactly is the border of legal job protection.

4 Empirical Strategy

The purpose of this analysis is to identify wage penalties for work interruptions due to maternity and explicitly show differences in those penalties depending on the length of the interruption. To keep the analysis simple and to avoid interactions, only women with one birth related career interruption are considered. The number of children is of inferior interest here, because our focus lies on the consequences of an interruption. As shown in figure 3 wage profiles of men and women without children are supposed to proceed linear during lifetime, even though women's profile might be flatter. Men's wage profiles are kept as reference, since a "normal" wage profile without distortions due to mootherhood or discrimination is most likely.[4] Nevertheless, wages of women without children are additionally taken into account in seperated estimations.

4.1 Methodology

The structure of our analysis is kept simple, although the advantages of the panel structure of the used data are fully exploited. Via ordinary least squares regressions at four different points in time we are able to draw a picture of the consequences for women to drop out of employment due to child-caring. Employment interruption is partitioned into four break time categories $j \in \{1, 2, 3, 4\}$, as already described in chapter 3. For each estimation a different sub-sample is built up, consisting (future) of mothers of each type of j. Additionally, the sub-sample includes all men being in the same age group like the observed mothers. The different age groups are

[4] Of course, also the reverse assumption could be made and lower female wages could be used as reference, but that would not change results essentially. For a detailed discussion on this see Oaxaca (1973).

defined by the 25th and the 75th percentiles of the corresponding motherhood group. Table 4 in the appendix describes the relevant sub-samples. We compare men and women of the same age matching them in different subsamples. For each type of interruption estimations of wages in four points of time $k \in \{1, 2, 3, 4\}$ are done, namely (1) year of withdrawal, (2) year of reentry into the labor market, (3) 5 years after reentering and (4) 10 years after reentering the labor market. For example: The first subsample implies women right before giving birth, who will drop off employment for one year or less (j=1). Those women are between 25 (25th percentile) and 30 (75th percentile) years old. The corresponding group of men are all men between 25 and 30. The last measured wage before maternity leave and wages of men being 25-30 years old built the dependent variable together. The same procedure is done for women reentering employment and so on. All in all, 16 subsamples are the basis of our estimations. Withdrawal and reentering wages are estimated to explore short run effects of maternity leave. As Mincer and Ofek describe a restoration effect within the first five years after an interruption, the third point of time in which wages are estimated is five years after reentering employment, since there is either a restoration effect or a (here supposed) delayed wage penalty should be visible. Finally, ten years after an interruption wage development should have normalized and the wage penalty of motherhood will hypothetically not increase between the fifth and the tenth year after an interruption. Measuring wage effects of maternity leaves in comparison to male wages at the same age allows us to observe not only absolute wage losses and gains for an individual, but also to compare them to a "normal" wage profile not facing interruptions. We suppose that maternity leave has two effects: First, a real wage loss visible comparing former and later wages. Second, an indirect wage loss facing no or slower wage growth during an interruption and post-interruption period. Both effects can be estimated through our approach comparing cross-sectional estimations.

The underlying wage equation follows a standard Mincer wage equation. For each type j and date k the following is estimated:

$$\ln(w_i) = \beta_0 + \beta_1 \text{break}_\text{i} + \beta_2 \text{edu}_\text{i} + \beta_3 \mathbf{exp_i} + \beta_4 \mathbf{x_i} + \epsilon_\text{i}$$

where i indexes individuals. w_i denotes the individual wage of a mother immediately before giving first birth, 0, 5 or 10 years after reentering the job market or the individual wage of a man in the same sub-sample. Note that there is only one observation for mothers in each subsample but up to seven observations for each man fitting into the age group belonging to specific

events. A woman reentering the labor market after a one year interruption is between 27 (25th percentile) and 32 (75th percentile) years old. So wages of each man between the ages of 27 and 32 belong to that subsample. To account for that we used robust standard errors. Since the wage equation is estimated at different points in time, the estimation boils down to a cross sectional analysis.

The explanatory variable of interest is the employment interruption caused by giving first birth, break_i, defined as a dummy variable representing the women in the sample. Edu_i describes education, the vector $\mathbf{exp_i}$ includes experience variables. The vector $\mathbf{x_i}$ captures the remaining individual controls. With this simple OLS equation we are able to differentiate wage penalties in the long and in the short run, focusing the different length categories of interruptions.

4.2 Data and Variables

This analysis is based on data from the Socio- Economic Panel (SOEP), a representative survey of private households in Germany yielding data from 1984 to 2011 (Wagner et al. 2007; SOEP 2011). Advantage of this data set is its size in terms of respondents per year as well as with regard to length of 28 waves from 1984 to 2011. These data allow an analysis of long run consequences of a career break related to giving birth for Germany serving a satisfying number of observations. Since continuous and complete data from 1984 to 2011 for each person are not necessary and to maximize numbers of observations, the panel data used here are unbalanced. The sample is limited to individuals between the ages of 20 and 67. All observed individuals are supposed not to be older than 45 when the documentation started in 1984, since the employment of mothers and the duration of their interruptions can not be observed retrospectively. For the same reason women having children born before 1983 are dropped from the sample. Our data set overall consists of 33,485 individuals, of whom 49 percent are women. 55 percent of the men and 45 percent of the women have children living in the same household and are born after 1982.

The independent variable in this study is the hourly wage of mothers and men belonging to the different subsamples defined by j respectively the corresponding age group (cf. 4). Altogether there are 16 different subsamples each representing interruption types $j \in \{1, 2, 3, 4\}$ and $k \in \{1, 2, 3, 4\}$ events of measurement.

Following the standard methodology, all wage-related variables in the regression estimations are following logarithms. Wages here are defined as generated hourly gross labor income, calculated from generated gross monthly wages of employed individuals and the number of hours worked. Not included are self-employed persons. Calculating hourly wages is appropriate because an hourly wage is not influenced by reduced working hours which is a popular form of employment for mothers. In the socioeconomic panel, two different specifications of weekly working hours are offered: First, agreed weekly working hours which refer to contractual specified hours. Second, actual working hours per week are based on a question about how many hours respondents work on average per week. We prefer actual working hours. SOEP sided adjustment is the limitation of weekly working hours to a maximum of 80 hours. Here actual working hours are replaced by agreed weekly hours if actual working hours are denoted to be lower than 30 hours, but the employment status is stated to be full time. Same procedure is disposed for part-time work and implausible actual working hours. If actual and agreed weekly hours are implausible, actual working hours are replaced by the average values for part-time and full-time employment.[5] Monthly wages are divided through *actual working hours* per week (times four), so (unpaid) overtime is included to generate a realistic measure of employee‘s payment. Gross wages are taken here because of the German tax system, especially the parental split, which could bias results otherwise (Ziefle 2004). All wages are deflated with the Consumer Price Index yearly published by the federal statistical office (2013b) and presented in prices of 2010.

The most important independent variable is the binary variable representing *maternity leave*. Since the samples are split, a dummy representing all mothers per sample describes wage effects of maternity leave in comparison to male wages. A further independent variable is the human capital indicator containing a generated variable translating school and job-related education in general *years of education*[6]. Experience as one of the most important human capital variable in this analysis is included as *missed experience*, defined as potential experience (Age minus 6 minus years of education) minus actual work experience.

[5]Here implausible and missing values are replaced by 22 hours for part-time employment and 40 hours for full-time employment. Agreed/Actual weekly working hours for full-time employment are 39/41, for part-time employment 20/24 hours, respectively.

[6]For detailed information about the underlying codification see (Anger et al. 2011)

Control variables are *marriage status*, (direct) *migration background* and residence in *East Germany* (former GDR). All those variables are defined as binary variables. In east Germany wage differences between mothers should be lower because of the historically stronger labor market orientation of mothers. Especially marriage is put high attention on in Mincer and Ofek (1982) and Mincer and Polachek (1974). We do not attach such a high importance on the marriage status anymore and do not differ between couples living together and couples married living together. Both categories are integrated in the binary variable *marriage*. Tests estimated with stricter definitions of marriage did not change the regression results significantly. Migration background is existent if a person was born abroad. The *remaining household income*, measured in Euro earned additional to the individual income per year, may be relevant for the decision about when and at which wage mothers return to work.

Information about the occupational surrounding is additionally included. The *size of the company* is a discrete variable split into four types of company sizes: (1) less than 20 employees, (2) between 20 and 199 employees, (3) 200 to 1999 and (4) 2000 and more employees engaged. The size of a company may influence the length of an interruption as well as the growth of wages afterwards. A bigger company is suggested to be able to compensate maternity leaves better than small companies. Moreover, big companies may serve a better infrastructure such as daycare facilities or schooling for reentering mothers. The size of a company is suggested to have a positive effect on wages for mothers (Busch/Holst 2013).

Another job-related variable is the *sector* in which an individual works. Traditionally the service sector has a higher proportion of women than the (manufacturing) industry. The third observed sector is Trade, transport, accommodation and food services, in the following abbreviated as *Trade*. Being employed in *civil service* is documented additionally in a dummy variable. The *profession* of an employer may also be dominated by males or females. Like Busch/Holst (2013) we describe sex segregation of professions as *female* dominated if the share of women in occupation held is at least 70 percent. Professions in which 30 percent or less women work are defined as *male* dominated. Remaining are called *intermediate* and used as the reference category. The last job-related variable is the identification of a job held being a *leading position*. This binary variable is taken out of the occupational position information specified in the data. Characteristics described as "managerial",

"high qualified professional" and "executive civil servant" are drawn together to the binary variable *leadership* (Busch/Holst 2013).

5 Descriptive Analysis

Our analysis of the consequences of a child-related career interruption for mothers starts with the observation of the general effect of children on women and men. In table 1 the average gross monthly and hourly wages show a clear difference between the wages of men and women and an even more distinct difference between the wages of fathers and mothers: on average fathers double mothers' monthly wages. Obviously, that difference is influenced by the 24 percent of all mothers working part time (defined as working less than 35 hours a week), while for men part time work does not play a notable role. The hourly wages give a better impression of the wage differences between men and women and fathers and mothers. It becomes apparent that there is a difference between the wages of men and women and that this difference increases with the existence of children. Since the men in our sample are older, seniority and labor force experience might be partly responsible for the measured wage gap, but education might not since the observed years of school are similar.

Figure 2 shows the stylized development of hourly wages over lifetime for men, women without children and mothers in the ages of 20 to 60 years. Obviously, men earn more than women and women without children earn more than mothers. While in the beginning 20ies women without children and men have similar, highly increasing wage rates, the growth of wages of women and especially of mothers is flatter. Up to the age of about 40, men's wages increase faster than those of women. Men's wage growth declines with advancing age, while wages of women without children seem to grow more constantly over time. The least wage growth face mothers in their 30ies and fourties. Afterwards, possibly when the age of mothers' children allows for, wages grow faster than women's wages not having children and even grows faster than men's wages. The wage gap between men and mothers declines while the gap between women without children and mothers completely disappears. Note that because of a declining number of observations with rising ages jumps in average earings beyond the age of 50 may not serve interpretation content. Altogether, the inspection of average hourly wages over lifetime

	without children		with children	
	male	female	male	female
Gross monthly wage	2827.59	2173.55	3514.39	1717.26
	(2107.432)	(1470.59)	(2672.96)	(1377.36)
Gross hourly wage	16.51	13.97	19.70	14.39
	(11.53)	(8.27)	(13.12)	(9.34)
Actual work experience	16.00	9.59	20.07	10.91
(years)	(13.15)	(10.55)	(11.16)	(7.46)
Missing experience	5.05	4.04	4.55	7.56
	(4.40)	(4.90)	(3.86)	(5.43)
Parttime/Fulltime	0.12	0.22	0.03	0.30
	(0.28)	(0.35)	(0.13)	(0.31)
Age	37.29	34.09	40.86	36.13
	(12.79)	(11.68)	(11.52)	(8.00)
Education (years)	12.12	12.38	12.28	12.18
	(2.61)	(2.62)	(2.78)	(2.55)
Actual working hours	42.73	38.83	44.59	30.54
per week	(9.94)	(9.46)	(9.24)	(12.47)

Table 1: Descriptive statistics for males and females with and without children; standard deviations in parentheses

supports the hypothesis of a catch up effect for mothers.

Splitting up descriptive statistics about mothers into categories of the length of their career interruptions uncovers considerable differences in personal and human capital characteristics. The longer the time staying off the labor force, the younger (when giving birth), less educated and experienced the mothers are. In comparison to women without children, mothers earn less per month and per hour. The only exception are mothers spending less than or exactly one year in maternity leave. Here the advanced age and education may play a role. Conspicuous is that mothers living in the formerly GDR spend less time out of work in average. Interruptions longer than six years are rare. As expected, the share of parttime experience is much higher for all women than for men, while there is only little difference between women without children and mothers facing the four different categories of interruptions. For a detailed descriptive overview see table 5.

The mean duration of a child-related career interruption in this data-set is 2 years, starting at an average age of 27 years and having a full time experience of 5 years. In table 2 wages of a man and a woman not facing a career interruption (Columns 1 and 2) are compared to mothers facing maternity leaves of different endurance referring to the categories described

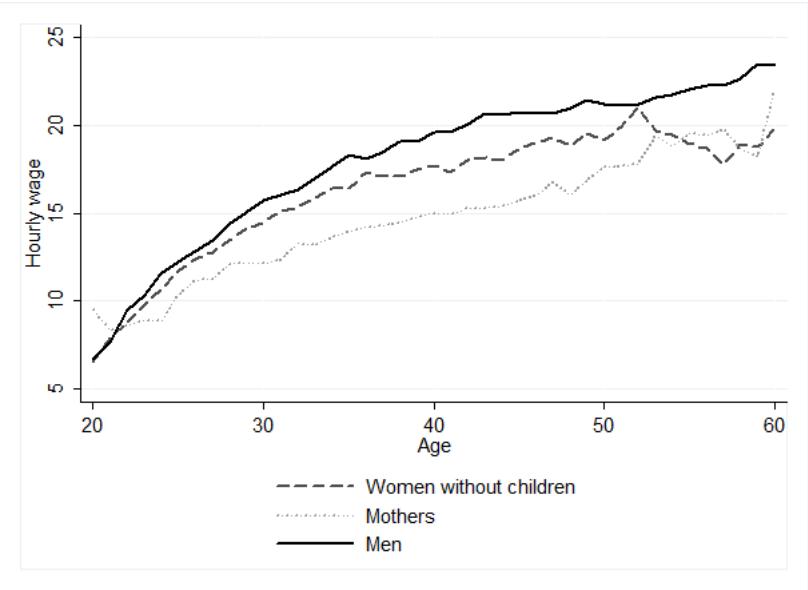

Figure 2: Stylized wage profiles over lifetime

Category of Interruption	None male	None female	First 0-1 years	Second 1-3 years	Third 3-6 years	Fourth 6 < years
Withdrawal age (median)	27	27	28	27	27	26
Withdrawal hourly wages	13.12	12.12	14.70	13.96	13.87	12.48
	(5.38)	(4.99)	(6.00)	(5.29)	(5.73)	(5.33)
Reentry hourly wage	15.71	13.50	15.25	13.71	13.87	11.81
	(10.09)	(12.94)	(7.45)	(7.30)	(7.67)	(7.86)
hourly wage	17.63	14.19	17.08	13.37	12.22	11.20
5 Years after reentry	(7.91)	(7.11)	(9.87)	(6.17)	(5.00)	(4.86)
hourly wage	19.09	15.18	16.49	14.75	13.07	13.15
10 Years after reentry	(8.87)	(7.85)	(9.12)	(6.52)	(5.40)	(8.10)

Table 2: Mean withdrawal and reentry wages by length of interruption period; standard deviations in parentheses

above. The first two columns are representing an average person having 1.3 to 8 years of full time labor experience, facing no interruption and gaining 2 more years of full time experience before measuring "reentry hourly wage". These reference persons are constructed on basis of average indicators for mothers.

The average withdrawal hourly wages show that women with higher earn-

ings before giving birth will - on average - choose a shorter maternity leave. Leaving one year or less for maternity seems not to have a large impact on wages or wage growth in the short and intermediate run. The level of income in this group is higher than for any other female group and even starts on a higher level than men (withdrawal wages). Only in the growth of average wages a penalty for interrupting work careers can be seen for women having a short maternity leave of one year or less. In the long run, after 10 years of employment after a child related interruption, a decline of average wages can be seen. This finding might indicate a delayed wage penalty as described in our hypotheses. For longer interruptions, the highest wage penalty for interruptions can be seen 5 years after an interruption. While for breaks between one and six years there is no or only a slight wage decline directly after an interruption, a break longer than six years leads to considerably lower wages immediately after reentering the labor market. In comparison to men, a catch up effect cannot be seen for any mother facing a career interruption. In comparison to women without children average results are not clear: while for the first and third category wage growth for mothers is slower than for women without children at any time, for categories two and four wages grow faster between the fifth and the tenth year of employment after an interruption than wages of women without children grow.

Alltogether, we can see constantly increasing wages for men and women not facing a maternity leave, while mothers of all types of interruptions will have to accept declining wages at least once. However, the time lag between reentering labor force and declining wages differs.

6 Results

Our descriptive results give reason to the assumption of delayed or even non existant restoration effects for different groups of interruptions. Table 3 presents the key results of our estimations summarizing the influence of a maternity leave on wages of all different types of interruptions in comparison to men. For a detailed view on our estimations including the results for each variable in each estimation, see also tables A.6 to table A.10 in the appendix. As we already could see in the descriptive analysis, maternity goes along with a significant wage surplus before dropping out of employment, but only if interruptions are not too long.

For mothers leaving employment for one year or less, a wage difference to

category of interruption	First 0-1 years	Second 1-3 years	Third 3-6 years	Fourth 6> years
Withdrawal	0.111***	0.159***	0.080*	0.030
	(0.026)	(0.031)	(0.040)	(0.044)
Reentry	0.074**	0.010	-0.159***	-0.189**
	(0.032)	(0.036)	(0.047)	(0.072)
5 years after	0.036	-0.093*	-0.191***	-0.251***
reentry	(0.039)	(0.050)	(0.052)	(0.051)
10 years after	-0.053	-0.121*	-0.122**	-0.234***
reentry	(0.039)	(0.063)	(0.057)	(0.076)

Table 3: β Coefficients for mothers and men; robust standard-errors in parentheses; ***/**/* denotes significance at the 1%/5%/10% level

men even after an interruption is still significantly positive. Five years after an interruption (or later) there is no siginficant difference between the wages of men and mothers who have had a one year break. Later on, the difference remains insignificant, but even switches to a negative sign. Interpreting these findings as far as possible in the context of a restoration effect, we find no catch up of wages either in the short nor in the long run. Job protection during early motherhood may prevent mothers to lose their jobs, but may not prevent wage penalty. Since estimates for lacks in wages five and ten years after reemployment are not significant, there cannot be measured a significant difference between men's and mothers' wages.

For mothers interrupting their careers for more than one and up to three years, a surplus in wages before entering maternity leave completely disappeares when reentering workforce. Note that during this period women still are job protected, so the wage growth of men will be the main reason for the catching up of women's wages during a period of 1-3 years. Our descriptive findings shown in figure 2 underline these results: During the period in which most women interrupt their careers for maternity reasons, men gain the highest wage growth in lifetime. The advance in wages of women with career breaks shorter than three years disappear while or after their interruption. Moreover, for women belonging to interruption group two, the wage penalty in comparison to men rises significantly over time. We find a significant delayed wage penalty for mothers after five and even after ten years later than reentering employment. We do not see any restoration effect for

women having maternity leaves up to three years.

Women interrupting their career for longer than three years (categories three and four) do not have or only have a slight wage surplus in comparison to men in the same age when leaving workforce due to maternity. For these mothers the direct wage penalty for interrupting their careers (when reentering workforce) is significant and remarkable. Women leaving employment for three to six years will earn 15.9, women leaving for more than six years will earn 18.9 percent less than their male counterparts of same age. For those ,and only those, women a wage penalty as described by Mincer and Ofek (1982) can be found in our more recent data for Germany and in comparison to men. Here a slight catch up in wages can be inspected after 10 years of employment. But this slight restoration of wages still is not sufficient to prove the results of Mincer and Ofek (1982) for Germany.

This supports our hypothesis, that a direct wage penalty prevented by law for short breaks directly after reentering labor force will only delay a wage loss through less wage growth in the long run. We cannot find evidence for a considerable restoration effect for any of the clustered types of mothers. Since wages in the initial situation for most mothers are significantly higher than men's wages, there should have been even a more distinct catch up effect between reentry and later wages.

Figure 3 stylizes the estimated results for wage penalties due to motherhood in relation to men's wages.[7] For maternity leaves lasting longer than three years, the highest wage penalty can be seen after five years, afterwards the difference to mens' wages recovers slightly. For shorter interruptions, the comparison to mens' wages in the same age category worsens continously. Taking the differences of wages into account when mothers leave employment, the wage penalty for women leaving employment for one to three years is worse in the long run. Here a delayed wage penalty may compensate the job protection during maternity leave and therefore worsen wage developments after an interruption. After ten years, the wage difference to their male counterparts is the same for mothers spending 1-3 years or 3-6 years out of workforce.

Education is one of the most important human capital indicators and plays as such a major role for the height of wages. For all categories of motherhood, education is most important for the wages after reetering em-

[7]Note that for some estimates, especially for short maternity leaves (0-1 years) the third and fourth estimation is not significant and therefore may not be interpreted as such.

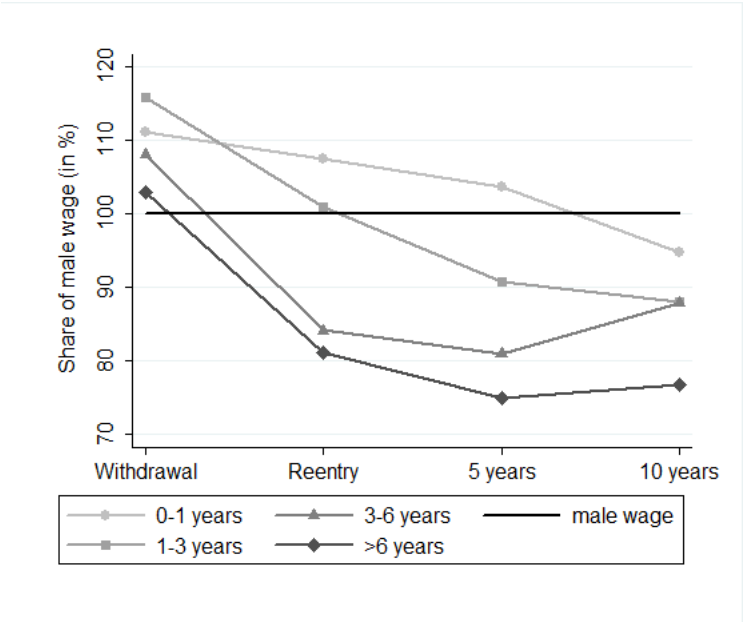

Figure 3: Wage development of mothers in shares of mens' corresponding wages

Note: β Coefficients for being a mother for all different subsamples; Note that 100 percent for each estimated wage difference is the equivalent wage of men in each age-specific subsample

ployment, while the differences of the influence of education between the categories is small but rising with the length of interruption. Before maternity leave the influence of one more year of education varies between 0.4 percent for mothers in category four to 1.2 percent in category three. After ten years of employment subsequent to materity leave this influence rises to 4.0-4.9 percent. The importance of missed experience does not vary much during time and category, through all groups and points of time the results vary around 1.8 percent wage loss for each additional year missed.

The size of a company has a highly significant and positive influence on wages. This does not vary over time or between the different groups estimations are made for. Working in a male- or female dominated profession for all categories of interruption except cateory four has the same positive or negative effect on wages, respectively. Working in a job in which more than 70 percent of all employees are women means a 8.8 to 10 percent lower hourly wage in comparison to a profession, in which neither men nor women

dominate. Conversely, a male dominated job means a wage surplus of 8.8 to 11.1 percent. The advantage of working in a male dominated profession declines over time.

7 Conclusions

Subject of this paper is the analysis of wage consequences of maternity leaves with special focus on a discrete separation of interruption types, a distinct comparison between maternal and male wages in well-defined agegroups and the observation of wages over time.

Throughout our analysis, we can confirm results of Kuhlenkasper and Kauermann (2010), that the length of an interruption is determined by education and wealth of mothers. The comparison of wages between men and women within our subsamples and for the fragmented types of interruption expose a remarkable difference between mothers' labor market behavior when bearing children. When leaving labor market, the female employees already differ considerably in terms of wages, education, actual working hours and type of profession. Women intermitting their careers longer than one year are less educated, more likely to be employed in a female dominated job, are less likely charged with leadership tasks and less likely employed in civil service. Note that in genereal civil service for women is associated with wage advantages.

Considering the absolute differences of mothers' wages to men's wages in their corresponding group, the wage penalty is the larger, the longer the interruption period was. This holds in the short as well as in the long run. However, wage penalties for motherhood do not rise linear with the length of an interruption. A difference can be made between mothers leaving employment less than three years and mothers with longer interruptions. As expected, employment breaks longer than three years are related with more extensive wage penalties than breaks shorter than three years in the short run. Even though maternity leaves longer than three years recover slightly in the long run, the difference to men's wages in the same agegroup stays with up to 25 percent remarkable. For shorter interruptions no restoration of wages can be observed, but the difference to men is not significant for mothers spending less than one year out of employment. A remarkable effect is the long-term situation for women leaving employment for up to three years: here the wage difference to mens' wages is almost identical to the difference

for women belonging to interruption type three.

Taking the initial levels of wages into account (when women leave employment), results differ in the short, intermediate and the long run. In the short run, when women reenter employment, women taking a break up to three years 'only' forfeit parts of their former advantage in wages in comparison to men. In contrast to that, wage losses for women taking longer breaks are much bigger and even rise until the third point of measurement five years after reentering employment. While for the group of mothers in interruption type one the wages do not differ significantly from their male counterparts anymore in the long run, for group two the wage deficit to men rises constantly. This finding supports our hypothesis of delayed wage penalties for maternity leaves in this group. Altogether, in the long run women interrupting their careers for one to three years are worse off. Here women taking a short break of up to one year are the only ones having an advantage in terms of wage penalties. These results hold while controlling for years of missed experience: here the coefficients are significant, but do not differ much above subgroups. While reults show evidence for a delayed wage penalty, our hypothesis about increasing wage effects with an incerasing duration of maternity leave in the long run has to be rejected here, since the second group of mothers interrupting their careers face the highest relative wage penalty.

Alltogether, the separation of interruption types rather than a linear observation of the length of maternity leaves reveals a difference in wage penalties for women taking a break within job protected periods and beyond. Surprisingly, overall wage penalties are not smaller for women staying within the protected period: While women taking a break longer than three years face an immidiate wage penalty which recovers (slightly) over time, the direct wage effect of shorter interruptions is smaller but constantly increases. After ten years, wage deficits are the highest for women interrupting their careers for more than one but less than three years. Furthermore, a development of female wages after interrupting their careers like Mincer and Ofek have described cannot be found for our dataset. Instead, maternity leaves and the related wage penalty can only be compensated over lifetime and if the break is short enough. Every birth-related interruption longer than one year is conducted with a wage penalty of at least twelve percent in comparison to male counterparts. That means, one child and a short maternity leave is the only possible way to combine family and career without remarkable losses of wages. As we can see in our results, the reproductive behaviour in Germany already mirrors the consequences. Legal protection of jobs and wages

during maternity seems not to have a long lasting effect on wage penalties for mothers leaving employment more than one year. Maybe this result can be a policy advice to strengthen mothers' career chances after intermitting careers, since the demograpphic change asks for better incentives for families in Germany.

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8 Appendix

	Sample 1 0-1 years	Sample 2 1-3 years	Sample 3 3-6 years	Sample 4 6 < years
Withdrawal age				
25th	25	24	24	23
50th	27	27	27	26
75th percentile	30	30	31	29
Number of Obs.	168	278	171	315
Reentry age				
25th	27	28	29	32
50th	30	30	32	35
75th percentile	32	34	37	39
Number of Obs.	282	285	185	375
5 years after reentry				
25th	31	32	33	36
50th	34	34	37	40
75th percentile	36	37	40	43
Number of Obs.	192	205	137	306
10 years after reentry				
25th	36	36	38	41
50th	38	39	41	44
75th percentile	41	41	44	48
Number of Obs.	137	126	91	186

Table 4: Withdrawal and reentry ages by length of interruption period

Category of Interruption	None male	None female	First 0-1 years	Second 1-3 years	Third 3-6 years	Fourth <6 years
Gross	3284.39	1929.46	2065.56	1692.84	1522.47	1312.24
monthly wage	(2518.80)	(1439.57)	(1301.99)	(917.10)	(949.67)	(865.81)
Gross	18.63	14.20	15.31	13.38	12.48	11.62
hourly wage	(12.47)	(8.86)	(8.27)	(6.22)	(6.33)	(12.64)
Age	39.65	34.92	32.72	31.35	32.74	33.67
	(12.09)	(10.40)	(8.37)	(7.52)	(8.33)	(8.43)
Withdrawal age		26.91	28.72	27.91	27.59	25.97
		(5.10)	(4.60)	(4.58)	(5.03)	(4.82)
Education (Years)	12.21	12.27	12.67	12.15	11.84	11.18
	(2.71)	(2.59)	(2.66)	(2.44)	(2.46)	(2.37)
Actual working hours	43.95	34.81	35.00	32.98	31.76	30.45
per week	(9.53)	(11.78)	(11.71)	(10.93)	(12.43)	(12.34)
Full time	18.06	7.87	7.27	6.24	6.06	4.44
experience	(12.20)	(8.13)	(5.43)	(4.74)	(4.95)	(4.65)
Part time	0.48	2.44	2.67	2.37	2.42	1.23
experience	(1.66)	(4.24)	(4.02)	(3.64)	(3.55)	(2.36)
Share of part time	0.07	0.26	0.240	0.24	0.27	0.25
experience	(0.20)	(0.33)	(0.28)	(0.28)	(0.30)	(0.34)
Missed	4.74	5.98	3.82	4.58	6.41	10.21
experience	(4.08)	(5.49)	(3.13)	(3.00)	(3.85)	(6.01)
married	0.25	0.17	0.43	0.46	0.50	0.65
	(0.43)	(0.38)	(0.49)	(0.49)	(.50)	(0.48)
Number of children	1.30	0.98	1.65	1.56	1.80	2.36
	(1.20)	(1.13)	(0.70)	(0.65)	(0.78)	(0.91)
Migration	0.12	0.16	0.13	0.13	0.19	0.27
	(0.33)	(0.36)	(0.34)	(0.34)	(0.39)	(0.44)
East Germany	0.1	0.07	0.12	0.15	0.09	0.07
	(0.3)	(0.26)	(0.33)	(0.36)	(0.29)	(0.24)
Remaining household	1312.08	2613.29	2424.65	2340.33	2412.02	2300.83
income	(2666.64)	(3651.21)	(2936.44)	(2226.49)	(2532.86)	(2213.33)
Leadership	0.16	0.08	0.11	0.07	0.04	0.07
	(0.37)	(0.26)	(0.32)	(0.26)	(0.20)	(0.13)
Civil Service	0.06	0.06	0.18	0.17	0.11	0.05
	(0.24)	(0.24)	(0.39)	(0.37)	(0.32)	(0.22)
Company size (in %)						
1-19 employees	24.35	31.77	29.65	30.57	38.39	38.26
20-199 employees	28.05	27.59	26.65	24.49	22.35	27.48
200-1999 employees	22.12	20.16	19.67	22.36	18.53	19.23
2000 or more employees	25.48	20.47	24.03	22.57	20.74	15.03
Sector (in %)						
Industry	37.55	16.89	16.98	19.99	16.46	21.66
Trade	22.12	21.03	20.10	17.02	24.62	25.01
Service	40.33	62.08	62.92	62.99	58.92	53.33
Profession (in %)						
dominated by women	4.92	53.12	49.14	54.19	56.85	56.91
neutral	23.58	36.33	38.85	36.49	33.38	34.30
dominated by men	71.50	10.54	12.01	9.32	9.77	8.79

Table 5: Descriptive statistics for males and females by category of interruption; standard deviations in parentheses

VARIABLES	(1) Withdrawal	(2) Reentry	(3) 5 years after reentry	(4) 10 years _l_10 after reentry
Maternity Leave	0.111***	0.075**	0.036	-0.053
	(0.026)	(0.029)	(0.039)	(0.039)
Years of education	0.011***	0.014***	0.030***	0.040***
	(0.003)	(0.003)	(0.002)	(0.002)
Missed Experience	-0.017***	-0.015***	-0.017***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)
Marriage status	0.096***	0.087***	0.082***	0.083***
	(0.009)	(0.009)	(0.008)	(0.008)
Migration background	-0.028**	-0.033**	-0.044***	-0.041***
	(0.013)	(0.013)	(0.011)	(0.010)
Res. in East Germany	-0.283***	-0.294***	-0.334***	-0.367***
	(0.011)	(0.010)	(0.009)	(0.009)
Rem. household income	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Company size (ref. < 20)				
20-199	0.080***	0.081***	0.084***	0.080***
	(0.013)	(0.012)	(0.010)	(0.010)
200-1999	0.198***	0.199***	0.179***	0.178***
	(0.013)	(0.012)	(0.010)	(0.010)
2000 and more	0.233***	0.230***	0.220***	0.216***
	(0.013)	(0.012)	(0.010)	(0.010)
Sector (ref. Industry)				
Trade	-0.062***	-0.060***	-0.094***	-0.082***
	(0.011)	(0.011)	(0.009)	(0.009)
Service	-0.059***	-0.038***	-0.012	0.007
	(0.013)	(0.012)	(0.009)	(0.009)
Profession (ref. intermediate)				
Female	-0.088***	-0.093***	-0.085***	-0.051***
	(0.021)	(0.020)	(0.017)	(0.015)
Male	0.088***	0.076***	0.007	-0.010
	(0.012)	(0.011)	(0.009)	(0.008)
Leadership	0.218***	0.209***	0.197***	0.211***
	(0.015)	(0.014)	(0.010)	(0.009)
Civil Service	-0.072***	-0.077***	-0.069***	-0.080***
	(0.015)	(0.014)	(0.010)	(0.009)
Constant	2.381***	2.372***	2.372***	2.302***
	(0.041)	(0.039)	(0.027)	(0.025)
Observations	8,966	9,522	11,895	13,288
R-squared	0.231	0.248	0.340	0.387

Source: SOEP 2011; Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table 6: Estimation results of the wage regression considering Sample one: Men compared to mothers, enlarged controls

VARIABLES	(1) Withdrawal	(2) Reentry	(3) 5 years after reentry	(4) 10 years after reentry
Maternity Leave	0.159***	0.010	-0.093*	-0.122*
	(0.030)	(0.043)	(0.050)	(0.063)
Years of education	0.007**	0.018***	0.031***	0.042***
	(0.003)	(0.002)	(0.002)	(0.002)
Missed Experience	-0.021***	-0.015***	-0.017***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)
Marriage status	0.103***	0.081***	0.078***	0.080***
	(0.010)	(0.008)	(0.008)	(0.008)
Migration background	-0.028**	-0.036***	-0.046***	-0.045***
	(0.014)	(0.013)	(0.012)	(0.011)
Res. in East Germany	-0.275***	-0.302***	-0.336***	-0.371***
	(0.012)	(0.010)	(0.009)	(0.009)
Rem. household income	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Company size (ref. < 20)				
20-199	0.075***	0.081***	0.078***	0.075***
	(0.013)	(0.012)	(0.011)	(0.011)
200-1999	0.200***	0.197***	0.174***	0.178***
	(0.015)	(0.012)	(0.011)	(0.011)
2000 and more	0.242***	0.234***	0.218***	0.212***
	(0.014)	(0.012)	(0.011)	(0.011)
Sector (ref. Industry)				
Trade	-0.053***	-0.070***	-0.092***	-0.084***
	(0.012)	(0.010)	(0.010)	(0.010)
Service	-0.085***	-0.041***	-0.009	0.007
	(0.015)	(0.011)	(0.010)	(0.010)
Profession (ref. intermediate)				
Female	-0.099***	-0.099***	-0.083***	-0.053***
	(0.023)	(0.020)	(0.018)	(0.016)
Male	0.105***	0.056***	0.002	-0.014
	(0.013)	(0.011)	(0.009)	(0.009)
Leadership	0.238***	0.198***	0.200***	0.212***
	(0.017)	(0.012)	(0.011)	(0.010)
Civil Service	-0.060***	-0.071***	-0.067***	-0.084***
	(0.016)	(0.013)	(0.011)	(0.010)
Constant	2.396***	2.375***	2.375***	2.299***
	(0.045)	(0.036)	(0.029)	(0.027)
Observations	8,133	10,026	10,289	11,494
R-squared	0.229	0.264	0.359	0.390

Source: SOEP 2011; Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table 7: Estimation results of the wage regression considering sample two: men compared to mothers, enlarged controls

VARIABLES	(1) Withdrawal	(2) Reentry	(3) 5 years after reentry	(4) 10 years after reentry
Maternity Leave	0.080**	-0.267***	-0.191***	-0.122**
	(0.040)	(0.063)	(0.056)	(0.057)
Years of education	0.012***	0.027***	0.037***	0.045***
	(0.003)	(0.002)	(0.002)	(0.002)
Missed Experience	-0.020***	-0.015***	-0.018***	-0.017***
	(0.002)	(0.002)	(0.002)	(0.001)
Marriage status	0.129***	0.098***	0.076***	0.083***
	(0.009)	(0.007)	(0.007)	(0.008)
Migration background	-0.029**	-0.046***	-0.040***	-0.045***
	(0.013)	(0.010)	(0.010)	(0.010)
Res. in East Germany	-0.282***	-0.322***	-0.356***	-0.390***
	(0.011)	(0.008)	(0.008)	(0.008)
Rem. household income	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Company size (ref. < 20)				
20-199	0.065***	0.082***	0.072***	0.062***
	(0.012)	(0.009)	(0.009)	(0.010)
200-1999	0.189***	0.186***	0.169***	0.171***
	(0.013)	(0.009)	(0.010)	(0.010)
2000 and more	0.231***	0.224***	0.215***	0.200***
	(0.013)	(0.009)	(0.009)	(0.010)
Sector (ref. Industry)				
Trade	-0.058***	-0.081***	-0.090***	-0.072***
	(0.011)	(0.008)	(0.008)	(0.009)
Service	-0.090***	-0.018**	-0.005	0.007
	(0.013)	(0.008)	(0.008)	(0.009)
Profession (ref. intermediate)				
Female	-0.087***	-0.084***	-0.062***	-0.042***
	(0.022)	(0.016)	(0.014)	(0.015)
Male	0.098***	0.029***	-0.004	-0.014*
	(0.012)	(0.008)	(0.008)	(0.008)
Leadership	0.253***	0.198***	0.207***	0.221***
	(0.015)	(0.009)	(0.009)	(0.009)
Civil Service	-0.057***	-0.076***	-0.071***	-0.080***
	(0.015)	(0.010)	(0.009)	(0.009)
Constant	2.337***	2.335***	2.332***	2.283***
	(0.040)	(0.026)	(0.024)	(0.025)
Observations	10,352	15,901	14,542	15,650
R-squared	0.236	0.315	0.380	0.385

Source: SOEP 2011; Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table 8: Estimation results of the wage regression considering Sample three: Men compared to mothers, enlarged controls

VARIABLES	(1) Withdrawal	(2) Reentry	(3) 5 years after reentry	(4) 10 years after reentry
Maternity Leave	0.030	-0.189**	-0.251***	-0.234***
	(0.044)	(0.076)	(0.056)	(0.077)
Years of education	0.004	0.033***	0.043***	0.049***
	(0.004)	(0.002)	(0.002)	(0.002)
Missed Experience	-0.025***	-0.018***	-0.018***	-0.012***
	(0.003)	(0.002)	(0.001)	(0.001)
Marriage status	0.121***	0.089***	0.083***	0.092***
	(0.011)	(0.007)	(0.007)	(0.008)
Migration background	-0.020	-0.041***	-0.045***	-0.071***
	(0.016)	(0.010)	(0.010)	(0.011)
Res. in East Germany	-0.269***	-0.347***	-0.381***	-0.409***
	(0.014)	(0.008)	(0.008)	(0.008)
Rem. household income	-0.000***	-0.000***	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Company size (ref. < 20)				
20-199	0.068***	0.075***	0.072***	0.061***
	(0.015)	(0.009)	(0.010)	(0.011)
200-1999	0.187***	0.172***	0.180***	0.175***
	(0.017)	(0.009)	(0.010)	(0.011)
2000 and more	0.237***	0.212***	0.209***	0.210***
	(0.016)	(0.009)	(0.010)	(0.011)
Sector (ref. Industry)				
Trade		-0.047***	-0.094***	-0.074***
-0.064***				
	(0.013)	(0.008)	(0.009)	(0.009)
Service		-0.107***	-0.012	0.003
-0.002				
	(0.017)	(0.008)	(0.009)	(0.009)
Profession (ref. intermediate)				
Female	-0.090***	-0.065***	-0.048***	-0.056***
	(0.026)	(0.015)	(0.015)	(0.018)
Male	0.111***	0.002	-0.016**	-0.027***
	(0.014)	(0.008)	(0.008)	(0.008)
Leadership	0.258***	0.207***	0.219***	0.225***
	(0.020)	(0.009)	(0.009)	(0.009)
Civil Service	-0.057***	-0.071***	-0.077***	-0.063***
	(0.019)	(0.009)	(0.009)	(0.009)
Constant	2.402***	2.354***	2.288***	2.238***
	(0.052)	(0.024)	(0.025)	(0.026)
Observations	7,393	15,625	15,480	15,539
R-squared	0.210	0.355	0.381	0.393

Source: SOEP 2011; Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1

Table 9: Estimation results of the wage regression considering sample four: men compared to mothers, enlarged controls

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Herausgeber:
Westfälische Wilhelms-Universität Münster
CIW – Centrum für Interdisziplinäre Wirtschaftsforschung
Scharnhorststr. 100
D-48151 Münster

Tel: +49-251/83-25329
Fax: +49-251/83-28429

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