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# Content

## Abstract

Many fathers want to spend more time with their children and engage in household, but most of them continue to work full-time after the birth of a child. To better combine work and family, flexible working time arrangements might play a crucial role for fathers. Using data from the German Socio-Economic Panel and fixed-effects regression models, we investigate the impact of flexible working time arrangements on actual working hours of men and fathers. A change from fixed to flexible arrangements is associated with an increase in working hours, but it is smaller for fathers than for non-fathers. Becoming a parent and changing into flexitime or self-determined working hours within the same year is associated with a short-term decrease in working hours. The study shows that employee-oriented working time arrangements help fathers to better combine work and family, but the decrease in working hours is still small.

## Zusammenfassung

Obwohl Väter zunehmend mehr Zeit mit ihren Kindern verbringen und familiäre Aufgaben übernehmen möchten, arbeitet der Großteil nach der Geburt eines Kindes weiterhin in Vollzeit. Flexible Arbeitszeitmodelle könnten hierbei eine wichtige Rolle spielen, um Beruf und Familie bei Vätern besser zu vereinbaren. Auf Basis von Daten des Sozio-ökonomischen Panels und mit Fixed-Effects-Regressionsmodellen untersuchen wir, inwieweit sich flexible Arbeitszeitmodelle auf die tatsächlich geleisteten Arbeitsstunden von Männern und Vätern auswirken. Die Ergebnisse zeigen, dass bei einem Wechsel von festen zu flexiblen Arbeitszeitmodellen die Arbeitszeit von Männern zunächst ansteigt. Dieser Anstieg ist für Männer mit Kindern geringer als für kinderlose Männer. Wird ein Mann Vater und wechselt im gleichen Jahr zu Gleitzeit mit Arbeitszeitkonto oder selbstbestimmten Arbeitszeiten, dann reduziert sich die tatsächliche Arbeitszeit kurzfristig. Die vorliegende Studie zeigt, dass arbeitnehmerorientierte Arbeitszeitmodelle dazu beitragen können, die Vereinbarkeit von Beruf und Familie bei Vätern zu verbessern, auch wenn der Rückgang der Arbeitszeit bei Vätern noch relativ klein ist.

**JEL-Klassifikation:** J22, J81

**Keywords:** working time arrangements, working-time flexibility, self-determined working hours, flexitime within a working hours account, fatherhood, actual working hours, schedule control

# 1 Introduction

In recent years a new generation of fathers emerged. More and more fathers want to share family tasks and participate in childcare more equally taking the role of an engaged father (Risman 2018). However, there are discrepancies between the fathers' attitudes and wishes and their actual behaviour. After the birth of a first child most fathers continue to work full-time, whereas mothers often reduce their working hours extensively and change to part-time or even exit the labour force to care for child and home (Boeckmann/Misra/Budig 2014; Booth/van Ours 2013; Weber/Zimmert 2017). Thus, many couples experience a traditionalisation of the gendered division of labour (Aboim 2010; Edlund/Öun 2016; Geisler/Kreyenfeld 2011; Grunow/Schulz/Blossfeld 2007; Reimer 2015).

Legal regulations and family policies can influence the division of labour among couples by supporting either more a traditional male breadwinner model or a dual earner dual career model (Bünning/Pollmann-Schult 2016). Countries supporting dual earner dual career families also tend to support norms that involve the liberation of men and women from traditional gender roles (Sjöberg 2004; Bünning 2015).

Besides changes of fathers' attitudes and wishes towards a more egalitarian division of labour and the institutional context also framework conditions in establishments play a crucial role for father's engagement in childcare. Regarding those framework conditions working-time flexibility through various working time arrangements plays a key role. Establishments can support employee-oriented flexible working time arrangements to better combine work and family (Beste-Fopma/Baisch 2017), thus not only influencing mothers', but also fathers' possibilities to engage in childcare. In this respect, Germany provides an interesting role model, because flexible employment forms and especially flexible working time arrangements spread throughout the labour market since the past three decades. However, their use is still considerably employer-driven (Zapf/Weber 2017) and thus still oriented towards the ideal worker norm with male employees working full-time and being available for the establishment without any familial time restrictions (Bernhardt/Bünning 2017). Against this background we investigate the impact of flexible working time arrangements on actual working hours of men and fathers and whether and how flexible working time arrangements contribute to realise shorter and thus potentially family-friendlier working hours of men after becoming a parent.

Previous literature analyses as a first strand the determinants of working hours of men and fathers focusing on the institutional context, family context and establishment-specific framework conditions (e.g. Bernhardt/Bünning 2017; Bünning 2015; Bünning/Pollmann-Schult 2016; Hobler/Pfahl 2015; Kanji/Samuel 2017; Koslowski 2010; Pollmann-Schult 2008; Reimer 2015; Weinshenker 2015). On the one hand, generous family allowances and well-paid, non-transferable parental leave of fathers enable them to work less than childless men (Bünning/Pollmann-Schult 2016). Fathers spending (more) time on parental leave also work fewer hours than fathers spending no (or less) time (Bünning 2015; Koslowski 2010). On the other hand, the partner's

employment status is important. Men decrease actual working hours when becoming a father, but only significantly when their partner works full-time (Pollmann-Schult/Reynolds 2017).

Furthermore, establishment-specific framework conditions were analysed (Alemann/Beaufays/Oechsle 2017; Liebig/Peitz/Kron 2017). Clear regulations in the establishment for combining work and family addressing all employees and a supportive culture regarding the temporary replacement of absent employees favour fewer working hours of fathers (Bernhardt/Bünning 2017). Flexible work organisations and the possibility to work from home also appear to support fathers, but many fear to claim flexible options or part-time work as they expect penalties (Reimer 2015). Moreover, workplace cultures, such as the culture of presence, hinder fathers to take more time with their children (Alemann/Beaufays/Oechsle 2017; Liebig/Peitz/Kron 2017; Possinger 2013; Reimer 2015).

The second strand of the literature analyses the outcomes of flexible working time arrangements (e.g. Hill et al. 2001; Lott 2015, 2017; Lott/Chung 2016; Russell/O'Connell/Mc Ginnity 2009; White et al. 2003). In general, flexible working time arrangements lead to unpredictable and unreliable work schedules resulting in a poorer work-life balance (Lott 2017). They also lead to higher work pressure, overtime (Lott 2015; Lott/Chung 2016) and longer working hours (Grunau et al. 2017; Hill et al. 2001; Matta 2015). But they can also lead to greater job and life satisfaction (McNall/Masuda/Nicklin 2009; Wheatley 2017a) and a higher level of autonomy and decision-making (Lott 2017). To which extent a change to flexible working time arrangements also helps male employees, in particular fathers, to reduce actual working hours and thus to combine work and family remains undetermined so far.

Combining these two strands of the literature, we contribute to the existing literature on working hours of fathers by focusing on different working time arrangements and their impact on actual hours worked. First, we examine whether changing the working time arrangement is associated with more or less working hours for men in general, and for fathers and non-fathers specifically. Second, we study how becoming a father and changing the working time arrangement affect actual weekly working hours. For this purpose, we estimate different panel regression models using the German Socio-Economic Panel (SOEP, 2003-2015). To the best of our knowledge, the underlying study is the first one analysing the impact of flexible working time arrangements on father's possibilities to reduce actual working hours.

This paper is structured as follows. In the next section, we discuss the impacts of the different working time arrangements on men's and fathers work and private life and present our hypotheses. In section 3, we describe the data, variables and method. In the following, we discuss our empirical findings. The final section provides a short summary and conclusion.

## 2 Theoretical framework and previous research

Nowadays, manifold working time arrangements exist in German establishments mostly with the aim to reach working-time flexibility. The large range of different working time arrangements is narrowed by two extremes. On the one extreme, employers fix employees' working hours to control the amount of labour input and to avoid staff absences. With fixed working hours, employees have a classic five day, nine to five and 40-hour workweek not allowing any working-time flexibility for both employers and employees. On the other extreme, employers completely give up control over employees' working hours and let employees freely choose length and organisation of working hours on their own (Godart/Görg/Hanley 2017; Lott 2014). Those working hours are the so called "trust-based working hours" (Godart/Görg/Hanley 2017: 895). Between these two extremes, employers can fix employees' working hours but change them according to their own needs, as e.g. to quickly respond to fluctuations in demand. Employers can also give up a certain amount of control through "flexitime" (ibid.), allowing employees to vary beginning and ending of working hours. Those flexible working hours are often centred around core working hours (Godart/Görg/Hanley 2017; Hill et al. 2001; Lee/DeVoe 2012; Lott 2014; Reilly 2001).

*The impact of working time arrangements on men*

Working time arrangements affect not only employees' work life, but also private life having gendered meanings (Lott 2015). With fixed working hours men completely lack control over their own working hours, but working hours are predictable and reliable (Lott 2017). Thus, on the one hand, fixed working hours may constrain men's work and private life, as family life must be completely organised around their work life. But on the other hand, fixed working hours may protect men against employer arbitrariness (Lott 2015) and even facilitate their work-life balance (Lott/Chung 2016) through a clear boundary between work and private sphere allowing long-term predictability. In this sense, fixed working hours can even be advantageous to flexible working time arrangements (Jürgens 2003). According to Mas/Pallais (2017) a great majority of workers in the US do not value scheduling flexibility. To avoid flexibility they are willing to take lower wages and choose a traditional Monday to Friday, nine to five schedule instead.

Studies further indicate that flexible working time arrangements generally lead to a poorer work-life balance for men (e.g. Hofäcker/König 2013; Lunau et al. 2014; Russell/O'Connell/McGinnity 2009). Men have a higher risk of working overtime hours and thus having longer actual working hours, but they also experience a higher risk of work pressure (Lott 2015). One possible explanation is that men are more engaged in paid work (Banyard 2010; Bekker et al. 2017; Burchell et al. 2007; Hofäcker/König 2013) and attached to the labour market reflecting the still existing male breadwinner culture with men specializing in paid work and without familial obligations. Within this male breadwinner culture, employer-oriented working-time flexibility can be easily implemented with employers varying employees' working hours according to establishments' needs. Here, men not only lack control over their own working hours, but they

are further unpredictable und unreliable (Lott 2017). Consequently, those flexible working time arrangements can lead to work-life stress for men, if employees needs are not met (Gregory/Milner 2009).

Besides changing working hours by employers, also self-determined working hours and flexitime may affect men negatively, although these arrangements are supposed to be more employee-oriented. Grunau et al. (2017)[1] find that employees with self-determined working hours and flexitime have longer actual working hours. These arrangements weaken the boundary between work and private life, potentially leading to work-to-home conflict. Especially with self-determined working hours the risk of fluent boundaries increases, as employees are solely responsible to manage and maintain the boundary (Lott 2017).

Self-determined working hours promise employees full control over their own working hours and a high level of autonomy. However, employers also use it as a performance enhancing measure providing hidden control (Brannen 2005). A high autonomy can lead to higher job pressure, longer working hours and work uncertainty as well as a higher degree of responsibility and decision-making (Lott 2017), thus straining employees' well-being (Wheatley 2017b). Studies indeed indicate that self-determined working hours lead to longer actual working hours through overtime. Lott/Chung (2016), for example, show that men changing from fixed working hours to self-determined working hours work about two overtime hours more per week. Matta (2015) finds that men with self-determined working hours have longer actual working hours, work a larger number of hours above their contractual agreed working hours and have a higher chance of unpaid overtime hours and overemployment than (before or after) with fixed working hours.

In contrast, flexitime only provides a certain degree of autonomy for employees through determined core working hours. Against this background, the risk of long and intense working hours seems to be lower (Lott 2017) so that employees may reach a good work-life balance. Employees indeed value flexitime with varying beginning and ending of working hours positively (Jürgens 2003). Studies show positive effects on work-life balance and negative effects on work-family conflict (Hill et al. 2001; Russell/O'Connell/McGinnity 2009) and greater job and life satisfaction with flexitime (McNall/Masuda/Nicklin 2009; Wheatley 2017a). However, the positive valuation and effects strongly depend on the negotiated agreements between employers and employees. Establishments can also use flexitime within a working hours account to better adapt working hours to production and market demands prioritising establishment's interests over employees' needs. Not surprisingly, results also show that flexitime leads to longer working hours (Hill et al. 2001). According to Lott/Chung (2016)

[1] In their analysis, Grunau et al. (2017) distinguish between "flexible working time/no fixed working hours" and "flexitime". We assume that no fixed working hours are self-determined working hours.

men changing from fixed working hours to flexitime work about an overtime hour more per week and Matta (2015) shows that men with flexitime have longer actual working hours, work a larger number of hours above their contractual working hours and have a higher chance of overemployment. However, they have a lower chance of unpaid overtime hours than (before or after) with fixed working hours. These contradictory effects seem to be counterintuitive at first sight, but they show how flexitime actually works. Employees temporarily extend their working hours through flexitime and later take time off (Herzog-Stein/Zapf 2014), thus reducing the risk of unpaid overtime hours. However, the results of Matta (2015) are only partly significant.

In light of the theoretical considerations and the existing literature we assume that flexible working time arrangements increase men's actual working hours.

*Hypothesis 1a (H1a): A change in flexible working time arrangements, such as employer-oriented flexible working hours, self-determined working hours and flexitime, is associated with an increase in actual working hours compared to fixed daily working hours for men.*

*Hypothesis 1b (H1b): The less regulated the working time arrangement is, the larger is the increase in actual working hours.*

*The impact of working time arrangements on fathers vs. non-fathers*

Working time arrangements are part of the negotiations between trade unions and employers' associations at the industry level and specified at the establishment level to specifically adapt to employers' and employees' needs. Rubery et al. (2005) find evidence of a move towards an employer-led working time model in Europe, also in Germany work is scheduled mainly according to the needs of employers (Zapf/Weber 2017). By determining working time arrangements the establishment or working place plays a crucial role for employees' possibilities to combine work and family (Bernhardt/Bünning 2017). Thus, establishments can also influence the fathers' possibilities to engage in childcare (Reimer 2015). In Germany, traditional gender norms still exist in establishments. Hence, the regulations of working hours are often still oriented towards the ideal worker norm with (male) employees' working full-time and being available for the establishment without any time restrictions due to familial or private obligations (Bernhardt/Bünning 2017; Reimer 2015).

Previous studies show somehow contradictory results depending on the underlying theoretical model. Pollmann-Schult/Diewald (2007) do not find significant differences between fathers and non-fathers working hours, whereas Kaufman/Uhlenberg (2000) find that fathers work more hours than non-fathers. In contrast, Weinshenker (2015) show that in the short term married fathers do not increase their working hours. However, fathers with egalitarian attitudes work fewer hours than comparable non-fathers, but fathers with traditional attitudes work more hours than comparable non-fathers. The study of Bünning/Pollmann-Schult (2016) shows that fathers work more hours than non-fathers, if their partner is not employed. But fathers even work less, if their

partner works full-time. In general, the results indicate that fathers work less than non-fathers in countries offering well-paid, non-transferable parental leave for mothers and generous family allowances.

Considering the theoretical considerations and previous studies we assume that non-fathers can more easily increase their working hours and thus better fulfil the ideal worker norm, because they do not have familial obligations compared to fathers, such as childcare. This suggests that the increase in actual working hours is larger for non-fathers than for fathers, when changing to flexible working time arrangements.

*Hypothesis 2 (H2): The increase in actual working hours is larger for non-fathers than for fathers.*

*The impact of working time arrangements and fatherhood*

The arrival of a first child still often pushes couples towards traditional gender roles (e.g. Corrigall/Konrad 2007; Grunow/Schulz/Blossfeld 2007). After becoming a parent fathers do not alter their working hours very much, but mothers largely reduce them thus still reflecting the male breadwinner culture (Bünning 2015; Geisler/Kreyenfeld 2011; Hipp/Leuze 2015; Koslowski 2010). However, becoming a parent can have a transformative effect on fathers. Their priorities may change and they may develop a greater desire for combining work and family potentially leading to the need for a new time allocation (Bünning 2015). This may especially apply to fathers of younger cohorts with changing wishes and attitudes regarding their role as a father. Slowly, there seems to be a change from the good provider model to the model of the new or involved fatherhood (Kaufman/Uhlenberg 2000; Pollmann-Schult 2008).

Establishments offer employees different measures to better combine work and family, such as part-time. However, these measures are mainly addressed to mothers, whereas fathers are not perceived as target group so far (Reimer 2015). Against this background, fathers may expect resistance in the establishment and risk disadvantages, when reducing working hours (Bernhardt/Bünning 2017). In contrast, flexible working time arrangements provide an offer to both mothers and fathers and not specifically to mothers. With flexible working time arrangements fathers may have the possibility to use them according to their own needs and thus to take more time for family and children. In this sense fathers can reduce working hours, at least actual working hours.

In line with these theoretical considerations studies show that men in younger cohorts (tend to) reduce their working hours, whereas men in older cohorts (tend to) increase them after becoming a father (Pollmann-Schult/Diewald 2007; Pollmann-Schult/Reynolds 2017). The decrease in younger men's working hours is most, if the partner works full-time, the increase in older men's working hours is most, if the partner switches from full-time to non-employment (Pollmann-Schult/Reynolds 2017). Lundberg/Rose (2000) also find that men increase working hours after the birth of a child, when the

partner interrupts employment, but men decrease them when the partner remains attached to the labour force.

Against this background we assume that men becoming a father and changing to employee-oriented flexible working time arrangements decrease their actual working hours.

*Hypothesis 3 (H3): Fatherhood and employee-oriented flexible working time arrangements are associated with a decrease in actual working hours.*

# 3 Data and methods

## 3.1 Data

To examine our hypotheses, we rely on panel data from the German Socio-Economic Panel (SOEP). The SOEP is an annual representative longitudinal survey of private households. It started in West Germany in 1984 and in East Germany in 1990. Central topics are e.g. the current life situation, employment and working time issues, income, health and illness issues, as well as the family situation (Wagner/Frick/Schupp 2007; Wagner et al. 2008).

Since 2003 the SOEP includes information on working time arrangements, therefore we use the SOEP data from 2003 to 2015 (SOEP 2017). For this time period, the data contain missing cases in some years, because the questions on working time arrangements were not part of the survey program. Therefore, we excluded the years 2004, 2006 and 2008. In some years (2010, 2012, 2013) the questions on working time arrangements were not part of the questionnaire at all. To test if these partially missing years have a statistically significant effect in the models we estimated models with the full sample and without the years concerned. We found no significant differences in the models and therefore included the information of these years. We restrict the sample to men aged between 20 to 55 years, working 15 hours or more per week as dependent employees in full-time or part-time. We exclude self-employed as well as all apprentices and marginal employees from the analysis. In our study we consider all men and fathers and non-fathers, respectively. Paternity is not measured directly in the SOEP, therefore our analyses focus on whether a child up to 16 years is living in the household. That child may be biological but also a step, foster or adopted child.

Our final sample contains 13,445 men, providing a total of 38,660 person-years. Approximately 10 per cent of these person-years were not used in the regression analyses because of missing values on one or more of the covariates. Within the observation period 8,029 men changed their working time arrangement and 1,742 men changed their status from “non-father” to “father” and vice versa.

## 3.2 Variables

### 3.2.1 Dependent variables

The dependent variable in our analyses is the self-reported number of actual weekly working hours in the respondent's main job including overtime. The question is, 'And how many hours do you generally work, including any overtime?' We consider values between 15 and 80 hours a week, but we exclude all extreme values under 15 hours and above 80 hours from the analyses.

### 3.2.2 Explanatory variables

The two major explanatory variables of interest in this study are the different working time arrangements and the information about children. Considering different types of working hours available, respondents were asked 'Which of the following possibilities is most applicable to your work?' The items of this variable are (1) fixed daily working hours, (2) working hours fixed by employer, which may vary from day to day, (3) no normally fixed working hours, decide my own working hours and (4) flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account. The first item describes working hours set by the company with no possibility of changes, thus providing no flexibility at all. The second item refers to flexible working hours which can be solely varied by the employer leading to employer-oriented working hours. The items (3) and (4) comprise employee-oriented flexible working time arrangements with self-determined working hours and flexitime. The reference category in the multivariate regression models is fixed daily working hours.

The child variable is derived from information about the number of resident children (biological, step, adopted and foster children) at each wave. We use a single dummy variable that indicates whether or not a man is living with one or more children up to 16 years in the household (fathers vs. non-fathers). We assume that the effect of the arrival of the first child on men's actual working hours is unique as well as the last child's departure (or in our sense reaching the age of 17 years). We also tried a set of dummy variables to identify transitions from childlessness to fatherhood considering different categories of the youngest child's age group (0-2, 3-5, 6-10, 11-16 years) to account for the effect that the age of the children affect the working hours differently. We also tried to capture fatherhood by the number of children. For the analyses in this paper we used nevertheless the dummy variable whether a child up to 16 years is living in the household, because we wanted to concentrate on the event "becoming a father" and the effects on hours worked. Comparing the different results of the models depending on the different child-variables revealed no significant disparities and the results of the remaining explanatory variables were very similar to those reported in Table 3 and Table 4.

### 3.2.3 Control variables

Our control variables reflect previous research, which suggests that actual working hours vary as a function of personal, job and employer characteristics as well as characteristics in the family context. The variables are constructed to measure changes between interviews, so that all variables are time-varying. For detailed information on descriptive statistics see Table 5 in the Appendix with the summary statistics.

Considering personal characteristics we include age and furthermore to examine whether age has a non-linear relationship with working hours we also include age squared. To identify respondents who increased their qualification level since the previous interview, we distinguish between men without vocational degree, men with completed vocational training and men with a university degree. We also measure changes in men's regional living area using a dummy variable whether the person moved into a rural area or not. The models further control whether the person has taken up a secondary job or not.

In addition to these personal characteristics we control for changes in the job characteristics. Here, we include the information whether the employee has changed from a full-time to a part-time job. Considering this change we can meet the assumption that a change in working time arrangements implies a parallel change from full-time to part-time, which may cover the effect on hours worked. In addition, we exclude marginal part-time person-years, because marginal employees often have limited possibilities to use working time arrangements. We include the information if there was a transition from an agreed to a trust-based working time contract. Whereas the employee determines the length of his working hours by his own within trust-based working time hours, in self-determined working hours the employee has fully control over the start and finish times of his work, whereas the length of working hours may be agreed.[2] Furthermore, we include whether the respondent worked overtime hours or not in the month before the interview. We also control whether the employee changes from an employment in a temporary work agency to a regular firm and whether the employee changes from a temporary (or fixed-term) employment contract to an unlimited (or permanent) contract.

[2] A Cramér's V correlation was run to assess the relationship between working time arrangements and trust-based working time. There was a moderate correlation Cramér's V = 0.3075, with trust based working time explaining 10.5 per cent of the variation in working time arrangements.

We consider also changes in the level of autonomy in the job (1=low to 5=high)[3], because an increase in working hours might be due to the respondents higher autonomy in the job. This is a generated variable and strongly correlated to the classification of occupations (KldB92) and the Treiman Prestige Scale (Hoffmeyer-Zlotnik/Jürgen/Geis 2003) measuring the prestige, which is attributed to the professional position. We also control for changes in men's earnings, the variable is based on the gross monthly income divided by the agreed working hours per month. These hourly gross wages are categorized into percentiles (1<=1. percentile, 2<=median, 3<=9. percentile, 4> 9. percentile) to distinguish changes between low, middle and high hourly income groups. Furthermore seniority is included because the number of years working within the same establishment is expected to have an impact on the current working conditions. To capture aspects of the horizontal segregation in the profession of the respondent that might influence working hours, we include the proportion of men working in the occupation based on the classification of occupations. The more male-dominated the profession the more pronounced may be male characteristics such as competitiveness and long presence at the workplace. The data for this male market share variable is derived from the official statistics of the German Federal Employment Agency on a two-digit occupational level according to the classification system KldB92.

To control for employer characteristics, we include the information whether the employee has changed into the public sector. Jobs in the public sector may be connected with more job security and therefore respondents might change their working hours. We control also for transitions between sizes of establishments (1=less than 20 employees, 2=20 to 199 employees, 3=200 to 1999 employees, 4=2000 or more employees).

Besides the child-variable we control for changes in the presence and employment behaviour of partners. We consider whether a partner exists in the household and whether changes in the partner's employment status occur (0=no partner, 1=partner inactive, currently in education, 2=full-time, 3=part-time, 4=marginal employed) to measure the resources partners are able to afford for the household. This may have an impact on the respondents' working hours.

## 3.3 Methods

In our multivariate analyses, we make use of the panel data structure of the SOEP by estimating fixed-effects regression models (see on that procedure Wooldridge 2010,

[3] The value "1" is assigned mainly to manual workers with a low level of status and a low level of autonomy. Group 2 encompasses work in production, services demanding a minimal level of specialization, and farm work. Activities that require completion of the middle track of secondary education and entail a limited amount of responsibility are classified in Group 3. Group 4 includes activities carried out either with or without super-vision that require a degree from a college of applied sciences or university, but are not very high in prestige. Managers and freelance academics are both placed in Group 5 (highest autonomy).

Torres-Reyna 2007). The most important advantage of panel data is that we can observe how actual weekly working hours within respondents are changing, when altering the working time arrangement in the course of time. As the SOEP data include multiple observations per person, in fixed-effects regressions, the individual-specific mean of each variable is subtracted from its actual value in each period. Thus, the fixed-effects estimators are comparing the same man over time and therefore are solely based on intra-individual change. Time-invariant characteristics (which may be observed or unobserved stable characteristics) are not taken into account. For the fixed-effects estimators only the change of working hours of one individual before and after a change of the working time arrangement is considered, but not the differences between men with and without change. Fixed-effects estimators only use a specific part of the existing variation and respondents, who do not change the working time arrangement in the observation period are not considered.

Therefore, fixed-effects models can be used to deal with unobserved heterogeneity, f.e. because of individual differences due to omitted variables. Fixed-effects models control for all time-invariant characteristics between the employees and consequently the estimated coefficients cannot be biased due to omitted time-invariant differences, like e.g. personality, ability or culture. The fixed-effects estimations therefore account for self-selection of employees that means selection into jobs with special working time arrangements due to time-invariant individual characteristics. For example, employees may select themselves into jobs with working time autonomy because of career aspiration and ambition or employees with high work-life-balance-ambitions may select themselves into highly regulated arrangements. Hence, the most important advantage of our analytical strategy is that we are able to control for time-invariant characteristics that influence working hours and the likelihood of fatherhood or the use of specific working time arrangements, whereas cross-sectional studies comparing fathers and non-fathers cannot achieve this, potentially leading to biased results.

To control if the assumed fixed-effects model is in fact the preferred model, all models were estimated by ordinary least squares (OLS), random-effects (RE) and fixed-effects (FE) regressions. Turning into the estimated coefficients of the different models, there is remarkable consensus across the different specifications in terms of the sign and the statistical significance of the estimated coefficients. This suggests the robustness of the estimation results. In all cases, the F test (with prob. > F = 0.000) rejects the null hypothesis of zero individual-specific unobserved heterogeneity, suggesting that the fixed-effects specification, which accounts for unobserved individual-specific effects, is the preferred specification.

By focusing on within-person changes between waves, the fixed-effects models show us how changes in the working time arrangement are associated with changes in actual hours worked. For our purposes, we follow a three-stage procedure: In the first step, we examine if average changes in actual working hours are associated with changes to different working time arrangements considering all men (H1a and H1b). In the second step, we examine how changes in actual hours worked differ between

fathers and non-fathers after a change of the working time arrangement (H2). And in a third step we include interaction effects for men becoming a father between two waves to examine if and how the link between men's working hours and working time arrangements changes with the arrival of a child in the household (H3).

# 4 Results

## 4.1 Descriptive analyses

To get an initial impression of the data Table 1 shows the proportion of male employees in the various working time arrangements. These descriptive statistics are weighted by the appropriate population weights supplied with the SOEP. In 2015 approximately 38 per cent of men worked with fixed daily conditions, where the working hours were set by the company with no possibility of changes. 22 per cent had employer-oriented working hours with flexible working schedules set by the employer and possible variation from day to day. 13 per cent had self-determined working hours, i.e. no formal working hours, but entirely determined by the employee leading to working-time autonomy. 27 per cent of men had flexitime within a working hours account and a certain degree of self-determination. Especially the use of working time accounts has increased since 2003 to the detriment of fixed daily working hours.

Table 1 also presents descriptive statistics for fathers and non-fathers. It is noteworthy that fathers more often had self-determined working hours and less often fixed daily working hours in 2015 than men without children – in 2003 we had the reverse situation with a greater share of fathers with fixed daily working hours and a (slightly) smaller proportion of fathers with self-determined working hours. These shares give an initial indication that fatherhood is associated with different working time arrangements and that changes occurred over time.

**Table 1**
**Type of working time arrangement by paternity - shares in %**

| | 2003 | 2009 | 2015 |
|---|---|---|---|
| All | | | |
| Fixed daily working hours | 43.0 | 41.4 | 38.3 |
| Employer-oriented working hours | 23.2 | 20.5 | 21.7 |
| Self-determined working hours | 12.8 | 14.9 | 13.3 |
| Flexitime | 20.9 | 23.2 | 26.8 |
| "Non-Fathers" | | | |
| Fixed daily working hours | 41.3 | 41.9 | 39.2 |
| Employer-oriented working hours | 24.4 | 21.5 | 21.3 |
| Self-determined working hours | 13.3 | 14.3 | 12.3 |
| Flexitime | 21.1 | 22.4 | 27.1 |
| "Fathers" | | | |
| Fixed daily working hours | 45.6 | 40.3 | 36.2 |
| Employer-oriented working hours | 21.6 | 18.5 | 22.3 |
| Self-determined working hours | 12.1 | 16.3 | 15.3 |
| Flexitime | 20.7 | 24.8 | 26.1 |

Source: SOEP 2003, 2009, 2015. Weighted results. Own calculations.

Table 2 shows actual working hours (and for 2015 also the contractual working hours) differentiated by working time arrangements and paternity. Men's actual working hours are on average longest if working hours are self-determined and shortest if daily

working hours are fix. This holds true for fathers and non-fathers, but fathers work on average more hours than non-fathers, except for the year 2003. The differences in contractual working hours by type of working time arrangement are by far not as pronounced as in actual working hours. This illustrates that the different types of working time arrangements differ in the amount of overtime and the options to compensate these hours by time off. Especially men with self-determined working hours are more likely to work overtime hours which are not compensated, whereas men with flexitime can compensate their overtime hours to a large extend at a later stage by temporarily working shorter then (Matta 2015).

**Table 2**
**Actual working hours by type of working time arrangement and paternity – in hours**

| | 2003 | 2009 | 2015 | |
|---|---|---|---|---|
| | actual working hours | actual working hours | actual working hours | contractual working hours |
| All | | | | |
| Fixed daily working hours | 41.5 | 42.4 | 41.7 | 38.8 |
| Employer-oriented working hours | 44.2 | 45.7 | 43.2 | 38.7 |
| Self-determined working hours | 48.2 | 48.8 | 46.5 | 38.6 |
| Flexitime | 42.9 | 42.7 | 42.6 | 38.9 |
| Total | 43.3 | 44.1 | 42.9 | 38.8 |
| "Non-Fathers" | | | | |
| Fixed daily working hours | 41.7 | 42.2 | 41.5 | 38.7 |
| Employer-oriented working hours | 44.1 | 46.4 | 43.0 | 38.4 |
| Self-determined working hours | 46.6 | 48.6 | 46.2 | 38.2 |
| Flexitime | 42.7 | 42.3 | 42.7 | 39.0 |
| Total | 43.1 | 44.0 | 42.7 | 38.7 |
| "Fathers" | | | | |
| Fixed daily working hours | 41.3 | 42.7 | 42.0 | 39.2 |
| Employer-oriented working hours | 44.3 | 44.2 | 43.5 | 39.3 |
| Self-determined working hours | 50.8 | 49.5 | 46.8 | 39.1 |
| Flexitime | 43.4 | 43.4 | 42.3 | 38.6 |
| Total | 43.5 | 44.2 | 43.1 | 39.1 |

Source: SOEP 2003, 2009, 2015. Weighted results. Own calculations.

## 4.2 Multivariate analyses

Table 3 and Table 4 show the results from the fixed-effects regressions. First to identify the effect of more flexibility in working time organization the actual working hours of all men are regressed on the different working time arrangements. Changes in the practiced working time model since the previous interview are associated with significant changes in actual working hours among men (Table 3, Model 1). Model 2 and 3 make a distinction whether children are living in the household: whereas Model 2 only covers non-fathers, Model 3 only covers fathers. Table 4 additionally includes different interactions, as the interaction between working time arrangements and fatherhood (Model 4), between working time arrangements and overtime (Model 5) and between

working time arrangements, fatherhood and overtime (Model 6). A significant coefficient suggests that the effect of a change of the working time arrangement for men who recently became father is significantly different from the effect for all men.

The results of Model 1 for all men indicate that a change from fixed daily working hours to flexible working time arrangements increases actual working hours, as assumed in H1a. The magnitude of the effect is different between the various working time arrangements, although in general the increase in actual working hours is larger the less regulated the working time arrangement is. The transition from fixed daily working hours to self-determined working hours has the biggest effect of 1.5 hours more and the change to employer-oriented working hours is associated with a 0.9-hour increase in the length of actual working hours. The transition from fixed daily working hours to flexitime leads to a 0.5-hours increase of actual working hours. Thus, the results support H1b. Furthermore, men changing from employer-oriented working hours to self-determined working hours increase their actual working hours by 0.6 hours, whereas men changing from self-determined working hours to flexitime decrease their actual working hours by 1.0 hour.

Those differences in the increase of working hours through schedule flexibility can also be observed when we differentiate between non-fathers and fathers (Table 3, Model 2 and 3). When switching from fixed daily working hours to self-determined working hours, men without children work almost 2 hours more per week and 1 hour more when switching to employer-oriented working hours. When changing to flexitime non-fathers work 0.7 hours more. Compared with the estimates for non-fathers, the increase in actual working hours is nearly 0.7-hours less for fathers when changing from fixed hours to self-determined working hours, around 0.3 hours less when changing to employer-oriented working hours and 0.4-hours less when changing to flexitime, but in the latter case at an insignificant level. Thus, the increase in actual working hours for non-fathers is larger than for fathers irrelevant whether the arrangement is employee- or employer-oriented. These results support H2.

**Table 3**
**Fixed effects regressions of actual working hours on flexible working time arrangements and controls**

| Dependent variable: Actual weekly working hours | Model 1 All | | Model 2 "Non-Fathers" | | Model 3 "Fathers" | |
|---|---|---|---|---|---|---|
| *Fixed Daily Working Hours (WH) (Ref)* | | | | | | |
| Employer-oriented WH | 0.887*** | (0.117) | 1.014*** | (0.184) | 0.735*** | (0.158) |
| Self-determined WH | 1.524*** | (0.172) | 1.971*** | (0.294) | 1.247*** | (0.220) |
| Flexitime | 0.457*** | (0.137) | 0.694*** | (0.207) | 0.298 | (0.190) |
| Age | 0.294*** | (0.076) | 0.349*** | (0.100) | 0.078 | (0.147) |
| Age squared | -0.003*** | (0.001) | -0.003*** | (0.001) | -0.001 | (0.002) |
| *No qualifications (Ref)* | | | | | | |
| Vocational training | 0.957*** | (0.342) | 0.913** | (0.465) | 0.540 | (0.554) |
| University degree | 1.935*** | (0.601) | 1.841*** | (0.695) | 1.940 | (1.229) |
| Part-time employment | -9.726*** | (0.462) | -10.593*** | (0.730) | -8.959*** | (0.631) |
| Trust-based working time | 1.211*** | (0.282) | 0.718 | (0.449) | 1.340*** | (0.386) |
| Overtime Hours | 2.733*** | (0.081) | 2.664*** | (0.133) | 2.762*** | (0.107) |
| No temporary work agency | 0.989*** | (0.288) | 1.525*** | (0.424) | 0.667 | (0.431) |
| No temporary contract | 0.308** | (0.153) | 0.101 | (0.224) | 0.381* | (0.224) |
| *Occupational autonomy Low=1 (Ref)* | | | | | | |
| =2 | 0.133 | (0.188) | -0.106 | (0.307) | 0.083 | (0.255) |
| =3 | 0.615*** | (0.219) | 0.210 | (0.360) | 0.725** | (0.295) |
| =4 | 1.382*** | (0.259) | 1.029** | (0.411) | 1.413*** | (0.355) |
| High=5 | 2.600*** | (0.395) | 2.470*** | (0.700) | 2.447*** | (0.516) |
| *Gross wage <= 1st percentile (Ref)* | | | | | | |
| <= Median | -3.815*** | (0.598) | -3.940*** | (0.803) | -3.838*** | (0.938) |
| <= 9th percentile | -5.960*** | (0.609) | -5.513*** | (0.820) | -6.412*** | (0.949) |
| > 9th percentile | -7.814*** | (0.633) | -7.329*** | (0.872) | -8.345*** | (0.975) |
| Male market share | 0.008*** | (0.003) | 0.015*** | (0.005) | 0.001 | (0.004) |
| *Firm size up to 20 employees (Ref)* | | | | | | |
| 20 to 199 employees | 0.086 | (0.195) | 0.196 | (0.289) | -0.035 | (0.281) |
| 200 to 1999 employees | -0.450** | (0.222) | -0.197 | (0.347) | -0.658** | (0.311) |
| 2000 employee and more | -0.388* | (0.231) | -0.162 | (0.355) | -0.534* | (0.325) |
| Children (up to 16 years) | -0.011 | (0.135) | | | | |
| *No partner (Ref)* | | | | | | |
| Inactive partner | 0.167 | (0.213) | -0.080 | (0.279) | 1.263* | (0.748) |
| Full-time employed partner | 0.056 | (0.216) | -0.288 | (0.312) | 1.155 | (0.734) |
| Part-time employed partner | 0.160 | (0.235) | -0.125 | (0.416) | 1.231* | (0.740) |
| Marginal employed partner | 0.222 | (0.218) | -0.011 | (0.314) | 1.256* | (0.743) |
| Constant | 36.99*** | (1.683) | 34.63*** | (2.222) | 42.14*** | (3.314) |
| Observations | 34,757 | | 15,307 | | 19,450 | |
| Number of individuals | 12,526 | | 7,029 | | 6,960 | |

Notes: Ref = Reference group. Robust standard errors in parentheses. Apart from variables displayed in the table, the models also contain a variable for seniority and dummies for moving into a rural living area, taking up a secondary job, changing into a job in the public sector and the survey year. *** p<0.01, ** p<0.05, * p<0.1

Source: SOEP 2003-2015. Own calculations.

Additionally, some results for the control variables in Table 3 are worth noting. The results for non-fathers indicate that with increasing age their working hours are getting longer, but as the significant squared age variable indicates, the increase in working hours is not linear. The estimates suggest that age is related to working hours in a U-shaped pattern. However, we cannot confirm this correlation, when considering only the group of fathers. We find a positive correlation of investments in human capital

and larger increase in actual working hours. Higher education is often associated with higher development possibilities in the job and therefore employees increase their efforts through longer working hours. Moreover, the acquired human capital of employees can be efficiently used and investment costs can be amortised more quickly by working longer.

A change to part-time is on average associated with a ten hours decrease in actual working hours, non-fathers decrease their working hours to a greater extent – additionally 1.6 hours more - than fathers. In a further analysis we also tested a combined effect of fatherhood and a change to part-time employment. We found no evidence that switching to part-time work leads to a different change in working hours when becoming a father. Men changing to trust-based working time increase their actual working hours by around 1.2 hours and the increase is even slightly higher for fathers. This result further indicates that a deregulation of working hours leads to longer working hours. Not surprisingly, men changing to overtime hours are working on average 2.7 hours more per week, this increase holds true before and during fatherhood.

Employees changing from a temporary work agency to a standard employment relationship in an establishment increase their working hours by one hour. As temporary agency workers often have poorer working conditions, employees changing to a regular firm might be willing to signal their employer, motivation, effort and commitment by increasing their actual working hours (Spence 1973). Here, the increase for non-fathers is more than twice than for fathers and statistically significant. More autonomy in the job also leads to a larger increase in actual working hours. Especially switching to the highest autonomy-category, for instance becoming a manager leads to 2.6 hours more per week. This holds true for fathers and non-fathers. Men changing from the lowest to higher income groups have a larger decrease in actual working hours. This holds true for non-fathers and fathers. This result seems to be counterintuitive at first, however it shows that men with a higher hourly gross wage can now afford shorter working hours.

The male market share in an occupation shows a positive impact on working hours, the higher the share the larger the increase in actual working hours, although the effect is very small.

Men becoming a partner increase their actual working hours irrelevant of the partner's employment status. However, this result holds only true for the group of fathers. When the men's partner changes from full-time to part-time, marginal employment or complete inactiveness, the actual working hours of fathers slightly increase. This is in line with the results of Pollmann-Schult/Reynolds (2017) indicating that those fathers have an incentive to work more as they take up the role of the male breadwinner.

**Table 4**
**Fixed effects regressions of actual working hours on flexible working time arrangements and interaction with fatherhood and overtime**

| Dependent variable: Actual weekly working hours | Model 4 Interaction WTA and Children | | Model 5 Interaction WTA and Overtime | | Model 6 Interaction WTA, Children and Overtime | |
|---|---|---|---|---|---|---|
| *Fixed Daily WH (Ref)* | | | | | | |
| Employer-oriented WH | 1.053*** | (0.169) | 0.594*** | (0.156) | 0.988*** | (0.233) |
| Self-determined WH | 1.842*** | (0.251) | 1.300*** | (0.245) | 1.560*** | (0.384) |
| Flexitime | 0.651*** | (0.171) | 0.866*** | (0.163) | 1.008*** | (0.216) |
| Overtime Hours | 2.732*** | (0.081) | 2.724*** | (0.106) | 2.677*** | (0.159) |
| Children (up to 16 years) | 0.211 | (0.170) | -0.012 | (0.135) | 0.161 | (0.189) |
| *Fixed Daily WH # Children (Ref)* | | | | | | |
| Employer-oriented WH # Children | -0.282 | (0.217) | | | | |
| Self-determined WH # Children | -0.537* | (0.286) | | | | |
| Flexitime # Children | -0.335* | (0.197) | | | | |
| *Fixed Daily WH # Overtime Hours (Ref)* | | | | | | |
| Employer-oriented WH # Overtime | | | 0.475** | (0.193) | | |
| Self-determined WH # Overtime | | | 0.306 | (0.261) | | |
| Flexitime # Overtime | | | -0.559*** | (0.158) | | |
| *Working hours arrangement # child # overtime*[1] | | | | | | |
| Fixed daily WH # child # overtime | | | | | 0.077 | (0.201) |
| Employer-oriented WH # no child # overtime | | | | | 0.115 | (0.293) |
| Employer-oriented WH # child # no overtime | | | | | -0.672** | (0.296) |
| Employer-oriented WH # child # overtime | | | | | 0.139 | (0.359) |
| Self-determined WH # no child # overtime | | | | | 0.390 | (0.417) |
| Self-determined WH # child # no overtime | | | | | -0.441 | (0.463) |
| Self-determined WH # child # overtime | | | | | -0.111 | (0.478) |
| Flexitime # no child # overtime | | | | | -0.487** | (0.228) |
| Flexitime # child # no overtime | | | | | -0.247 | (0.259) |
| Flexitime # child # overtime | | | | | -0.778** | (0.330) |
| Constant | 36.90*** | (1.685) | 37.03*** | (1.683) | 36,92*** | (1.686) |
| Observations | 34,757 | | 34,757 | | 34,757 | |
| Number of individuals | 12,526 | | 12,526 | | 12,526 | |

Notes: Ref = Reference group. Robust standard errors in parentheses. The model includes age, age squared, regional area, qualification, work agency, temporary contract, part-time employment, overtime hours, contracted working hours, seniority, secondary job, gross wage, occupational autonomy, male market share, firm size, public sector, partner and survey year.
1 Reference group: No child, no overtime, fixed daily working hours and overtime or fixed daily working hours and child. *** p<0.01, ** p<0.05, * p<0.1

Source: SOEP 2003-2015. Own calculations.

Surprisingly, Model 1 in Table 3 reports that the coefficient for children is not statistically significant, indicating that fatherhood does not change the actual working hours initially in the short run. To further investigate a possible association between fatherhood and working hours we add first an interaction variable to examine if and how the connection between working hours and the different working time arrangements varies when taking the arrival of the first child into account. A significant interaction effect would indicate that the effect of fatherhood on men's actual working hours depends

on the working time arrangement of the respondent. Model 4 shows that fatherhood is associated with changes in men's working hours when changing the working time arrangement, but only at the 0.1 level. Whereas the main effects of a change from fixed to flexible working time arrangements show an increase in actual working hours, the interaction effects show that men decrease their actual hours significantly after the arrival of the first child when they switch from fixed schedules to self-determined working hours at the same time. Their working hours are 0.5 hours lower compared to when they were childless and having fixed daily working hours on a 0.1 confidence interval. Men becoming a father and switching from fixed schedules to flexitime also decrease their actual working hours, but to a smaller extent (0.3 hours) and this change is also only significant at the 0.1 level. We thus confirm H3 that fatherhood and increasing flexibility makes a difference in working hours. For men becoming a father, a switch from fixed daily working hours to either self-determined working hours or flexitime helps to reduce the actual hours worked. Therefore in the short run, these arrangements seem to provide greater possibilities of influencing working hours and solving time-restrictions, but at a high level of average working hours.

Model 5 further yields insights on how overtime hours and a change to flexible working time arrangements are associated with actual working hours. Overtime is associated with a 0.6 hours decrease in actual working hours when men are switching from fixed daily hours to flexitime. This is in line with the common practice that employees temporarily bank overtime hours in their working hours account and then take time off at a later point in time. Thus, overtime is most likely compensated by time off with an employee-oriented and more regulated working time arrangement like flexitime.

In Model 6 we combine the interaction variables fatherhood and overtime with the working times arrangement variable. Fatherhood is associated with a short term decrease in actual working hours when changing from fixed daily to employer-oriented working hours, but only if they do not work overtime hours anymore. Men changing to overtime work and flexitime do also reduce their actual working hours. This holds true for fathers and non-fathers, but the reduction is higher for fathers. The significant interaction terms partly confirm H3 that flexible working time arrangements make a short-term difference in actual working hours depending on fatherhood and overtime.

Overall, we found that switching to more flexible working time arrangements matters when becoming a father in terms of a reduction in working hours in the short run. But this holds only true if the flexibility is employee-oriented, like with self-determined working hours and flexitime.

# 5 Summary and conclusion

Although many fathers want to spend more time with their children and new legal regulations encourage a more involved fatherhood, many fathers continue to work full-time after the birth of a child. The aim of our study was to examine the effects of different working time arrangements on actual working hours of men and, more spe-

cifically, of fathers and non-fathers. Previous research, on the one side, largely focused on gendered outcomes when investigating the association between working hours and working time arrangements. On the other side, studies largely neglected the impact of working time arrangements when analysing the effect of fatherhood on hours worked. We closed that research gap by including working time arrangements and the information about children as major explanatory variables for men's actual working hours using panel data from Germany and fixed-effects regression models.

We find that a change from fixed to flexible working time arrangements, such as employer-oriented flexible working hours, self-determined working hours and flexitime, increases men's actual working hours. The increase is larger the less regulated the working time arrangement is. This holds true for fathers and non-fathers, but the increase in actual working hours is more pronounced for non-fathers than for fathers. We find a negative effect on actual working hours, when a change in the working time arrangement and fatherhood occur simultaneously. Men's actual working hours decrease if the arrival of the first child coincides with a switch from fixed working hours to self-determined working hours or flexitime. For the latter, the decrease is even higher when they work overtime hours indicating that men compensate these hours by taking time off later. Furthermore, we found that fatherhood and changing to employer-oriented working hours is associated with a decrease in actual working hours, but only if men do not work overtime hours.

Overall, our findings show that flexible working time arrangements help to decrease actual working hours when men become a father. But the reduction remains relatively small not allowing substantial engagement of fathers in childcare and household. Fathers value flexible working time arrangements positively, but they seldom use them to reach a better work-life balance. In this sense, our results support the notion that flexible working time arrangements are considered too much importance in their contribution to a better work-life balance for men. Rather the male "work devotion scheme" (Blair-Loy 2003: 6; Blair-Loy/Williams 2017) ensures that employees respond to the ability to work flexibly by exerting additional effort to return benefits to their employer (Kelliher/Anderson 2010). Several reasons seem to play a role here.

First, German regulations still support the male breadwinner culture. Although the parental leave reform sets more incentives for fatherly engagement, the still existing tax splitting for married couples and the non-contributory family insurance in the health insurance discourage a more equal division of labour in households (Pollmann-Schult 2008). So far, Germany is only slowly making progress towards equitable gender arrangements in the division of paid work (Pollmann-Schult/Reynolds 2017). Governmental tax policy needs to be changed to foster a more equal division of labour among couples and to provide financial incentives so that fathers reduce working hours to a greater degree. Second, gender role expectations and normative beliefs still ascribe men the breadwinner role and women the role of the housewife (e.g. Geisler/Kreyenfeld 2011; Hobler et al. 2017; Pollmann-Schult 2008). This traditional division of labour even persists in partnerships with women being the main earner (Hipp/Leuze 2015).

Role expectations in society need to be changed towards a more equal division of labour encouraging fathers to reduce working hours and to increase childcare and household activities instead. Third, traditional gender norms in society are also practiced in establishments. Consequently, many fathers do not feel eligible for measures to better combine work and family so far and they also risk disadvantages, as colleagues may see them less efficient and may question their engagement, motivation and commitment (Bernhardt/Bünning 2017). Here, supervisors play an important role and may act as a forerunner to develop a father-oriented company culture (Beste-Fopma/Baisch 2017). One way is that supervisors clearly communicate and install flexible working time arrangements as family friendly measure not specifically addressing women, but both men and women, thus creating a low barrier for fathers to use this measure.

However, a far too reaching flexibility seems not to be expedient to better combine work and family as our results generally indicate increases in actual working hours with flexible working time arrangements. Instead, flexible working time arrangements with a certain degree of regulation setting a boundary between work and private life seem to be promising. Especially regulations of flexitime negotiated between employers' and employees' representatives considering (even more) employees' needs may be expedient. Research indeed indicates that men take advantage of flexitime as gender-neutral flexibility systems to improve their work-life balance at the margins (Gregory/Milner 2009). But also the stipulation and monitoring of agreed working hours in contracts and actual working hours is essential so that the difference between these working hours is limited to a necessary degree.

Some limitations to our study should be noted. With the underlying data we can only investigate changes of employees' working time arrangement, but we do not have information why this change occurs and who drives that change: it may be employer-driven or trade unions and works councils enforced influencing the degree to which employees can use it according to their needs. Moreover, our results indicate that men becoming a father and changing to flexible working time arrangements reduce actual working hours. However, we do not know whether this working hours reduction actually leads to a better work-life balance for men. Future research may point to these open questions, especially what kind of organisational support may lead to a reduction in working hours for fathers. In times of a lack of qualified personnel and a new generation of parents, establishments have to react to fathers' needs. Indeed, research indicates that family-friendliness is not only important for employees, but also for employers believing that family-friendliness will be paid off economically (Beste-Fopma/Baisch 2017). But further alterations are necessary in what men consider socially acceptable (Pollmann-Schult/Reynolds 2017) and what organizations consider as cultural norm in their opinion of shared, cooperative parenting and responsibility.

## References


Aboim, Sofia (2010): Gender cultures and the division of labour in contemporary Europe: a cross-national perspective. In: The Sociological Review, 58(2): 171-196.

Alemann von, Annette; Beaufays, Sandra; Oechsle, Mechtild (2017): Aktive Vaterschaft in Organisationen-Anspruchsbewusstsein und verborgene Regeln in Unternehmenskulturen. In: Zeitschrift für Familienforschung-Journal of Family Research, 29(1): 72–89.

Banyard, Kat (2010): The Equality Illusion: The Truth about Women and Men Today, London: Faber and Faber.

Bekker, Sonja; Hipp, Lena; Leschke, Janina; Molitor, Friederike (2017): Comparing Part-time Employment in Germany, Sweden, Ireland and the Netherland. In: de Groot, Sarah; Kluwer, Wolters (eds.) (2017): Work-life Balance in the Modern Workplace: Interdisciplinary Perspectives from Work-family Research, Law and Policy, Bulletin of Comparative Labour Relations, 98: 27-50.

Bernhardt, Janine; Bünning, Mareike (2017): Arbeitszeiten von Vätern: Welche Rolle spielen betriebskulturelle und betriebsstrukturelle Rahmenbedingungen? In: Zeitschrift für Familienforschung, 29(1): 49–71.

Beste-Fopma, Nicole; Baisch, Volker (2017): Wettbewerbsvorteil Familienbewusstsein. "Familienpolitik" von Unternehmen. In: Aus Politik und Zeitgeschichte, 67: 30–31.

Blair-Loy, Mary (2003): Competing devotions: Career and family among executive women. Cambridge, MA: Harvard University Press.

Blair-Loy, Mary; Williams, Stacey J. (2017): Devoted Workers, Breadwinning Fathers: The Case of Executive Men in the United States. In: Liebig, Brigitte; Oechsle, Mechtild (eds.): Fathers in Work Organizations. Opladen/Berlin/Toronto: Barbara Budrich Publishers: 41–60.

Boeckmann, Irene; Misra, Joya; Budig, Michelle. J. (2014): Cultural and institutional factors shaping mothers' employment and working hours in postindustrial countries. In: Social Forces, 93(4): 1301-1333.

Booth, Alison L.; van Ours, Jan C. (2013): Part-time jobs: what women want? In: Journal of Population Economics, 26(1): 263-283.

Brannen, Julia (2005): Time and the negotiation of work-family boundaries. Autonomy or illusion? In: Time & Society, 14(1): 113–131.

Bünning, Mareike (2015): What happens after the ‘daddy months’? Fathers’ involvement in paid work, childcare, and housework after taking parental leave in Germany. In: European Sociological Review, 31(6): 738–748.

Bünning, Mareike; Pollmann-Schult, Matthias (2016): Family policies and fathers’ working hours: cross-national differences in the paternal labour supply. In: Work, employment and society, 30(2): 256–274.

Burchell, Brendan; Fagan, Colette; O’Brien, Catherine; Smith, Mark (2007): Working Conditions in the European Union: The Gender Perspective. Dublin: European Foundation.

Corrigall, Elizabeth A.; Konrad, Alison M. (2007): Gender role attitudes and careers: A longitudinal study. In: Sex Roles, 56(11–12): 847–855.

Edlund, Jonas; Öun, Ida (2016): Who should work and who should care? Attitudes towards the desirable division of labour between mothers and fathers in five European countries. In: Acta Sociologica, 59(2): 151-169.

Geisler, Esther; Kreyenfeld, Michaela (2011). Against all odds: Fathers' use of parental leave in Germany. In: Journal of European Social Policy, 21(1): 88–99.

Godart, Olivier; Görg, Holger; Hanley, Aoife (2017): Trust-Based Work Time and Innovation: Evidence from Firm-level Data. In: Industrial & Labor Relations Review, 70(4): 894-918.

Gregory, Abigail; Milner, Susan (2009): Editorial: Work–life balance: A matter of choice? In: Gender, Work and Organization, 16(1): 1–13.

Grunau, Philipp; Wolter, Stefanie; Bellmann, Lutz; Müller, Dana (2017): ICT and Actual Working Time in Germany. In: Management Revue, 28(3): 359–374.

Grunow, Daniela; Schulz, Florian; Blossfeld, Hans-Peter (2007): Was erklärt die Traditionalisierungsprozesse häuslicher Arbeitsteilung im Eheverlauf: soziale Normen oder ökonomische Ressourcen? /What Explains the Process of Traditionalization in the Division of Household Labor: Social Norms or Economic Resources? In: Zeitschrift für Soziologie, 36(3): 162–181.

Herzog-Stein, Alexander; Zapf, Ines (2014). Navigating the great recession: the impact of working-time accounts in Germany. In: ILR Review, 67(3): 891–925.

Hill, E. Jeffrey; Hawkins, Alan J.; Ferris, Maria F.; Weitzman, Michelle (2001): Finding an extra day a week: the positive influence of perceived job flexibility on work and family life balance. In: Family Relations, 50(1): 49–58.

Hipp, Lena; Leuze, Kathrin (2015): Institutionelle Determinanten einer partnerschaftlichen Aufteilung von Erwerbsarbeit in Europa und den USA. In: KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 67(4): 659–684.

Hobler, Dietmar; Klenner, Christina; Pfahl, Svenja; Sopp, Peter; Wagner, Alexandra (2017): Wer leistet unbezahlte Arbeit. Hausarbeit, Kindererziehung und Pflege im Geschlechtervergleich. Aktuelle Auswertungen aus dem WSI GenderDatenPortal. Report 35. (https://www.boeckler.de/pdf/p_wsi_report_35_2017.pdf) (Accessed on 28.02.2018).

Hobler, Dietmar; Pfahl, Svenja (2015): Einflussfaktoren auf die Arbeitszeitdauer von Vätern nach den Elterngeldmonaten. Friedrich Ebert Stiftung. (http://library.fes.de/pdf-files/dialog/12118.pdf) (Accessed on 28.02.2018)

Hofäcker, Dirk; Stefanie König, (2013): Flexibility and work-life conflict in times of crisis: a gender perspective. In: International Journal of Sociology and Social Policy, 33(9–10): 613–635. (https://doi.org/10.1108/IJSSP-04-2013-0042) (Accessed on 28.02.2018)

Hoffmeyer-Zlotnik, Jürgen H. P.; Geis, Alfons J. (2003): Berufsklassifikation und Messung des beruflichen Status/ Prestige. In: ZUMA Nachrichten 27(52): 125–138. (http://nbn-resolving.de/urn:nbn:de:0168-ssoar-207823) (Accessed on 28.02.2018)

Jürgens, Kerstin (2003): Die Schimäre der Vereinbarkeit. Familienleben und flexibilisierte Arbeitszeiten. In: Zeitschrift für Soziologie der Erziehung und Sozialisation, 23(3): 251–267.

Kanji, Shireen; Samuel, Robin (2017): Male breadwinning revisited: How specialisation, gender role attitudes and work characteristics affect overwork and underwork in Europe. In: Sociology, 51(2): 339–356.

Kaufman, Gayle; Uhlenberg, Peter (2000): The influence of parenthood on the work effort of married men and women. In: Social forces, 78(3): 931–947.

Kelliher, Clare; Anderson, Deirdre (2010): Doing more with less? Flexible working practices and the intensification of work. In: Human Relations, 63(1): 83-106.

Koslowski, Alison Smith (2010): Working fathers in Europe: Earning and caring. In: European Sociological Review, 27(2): 230–245.

Lee, Byron; DeVoe, Sanford. E. (2012): Flextime and profitability. In: Industrial Relations: A Journal of Economy and Society, 51(2): 298–316.

Liebig, Brigitte; Peitz, Martina; Kron, Christian (2017): Familienfreundlichkeit für Väter?. In: Arbeit, 26(2): 211–230.

Lott, Yvonne (2014): Working Time Autonomy and Time Adequacy. What if performance is all that counts? In: WSI-Diskussionspapier 188.

Lott, Yvonne (2015): Working-time flexibility and autonomy: A European perspective on time adequacy. In: European Journal of Industrial Relations, 21(3): 259–274.

Lott, Yvonne (2017): Stressed despite or because of flexible work arrangements? Flexible work arrangements, job pressure and work-to-home conflict for women and men in Germany. In: Working Paper Forschungsförderung, 46.

Lott, Yvonne; Chung, Heejung (2016): Gender Discrepancies in the Outcomes of Schedule Control on Overtime Hours and Income in Germany. In: European Sociological Review, 32(6): 752–765.

Lunau, Thorsten; Bambra, Clare; Eikemo, Terje A.; van Der Wel, Kjetil A.; Dragano, Nico (2014): A balancing act? Work–life balance, health and well-being in European welfare states. In: The European Journal of Public Health, 24(3): 422–427.

Lundberg, Shelly; Rose, Elaina (2000): Parenthood and the earnings of married men and women. In: Labour Economics, 7(6): 689–710.

Mas, Alexandre; Pallais, Amanda (2017): Valuing alternative work arrangements. In: American Economic Review, 107(12): 3722–3759.

Matta, Vanita Irene (2015): Führen selbstgesteuerte Arbeitszeiten zu einer Ausweitung der Arbeitsstunden? Eine Längsschnittanalyse auf der Basis des Sozio-oekonomischen Panels. In: Zeitschrift für Soziologie, 44(4): 253–271.

McNall, Laurel A.; Masuda, Alina D.; Nicklin, Jessica M. (2009): Flexible work arrangements, job satisfaction, and turnover intentions: The mediating role of work-to-family enrichment. In: The Journal of Psychology, 144(1): 61–81.

Pollmann-Schult, Matthias (2008): Familiengründung und gewünschter Erwerbsumfang von Männern – Eine Längsschnittanalyse für die alten Bundesländer/The influence of fatherhood on preferred working hours: A longitudinal study for Germany. In: Zeitschrift für Soziologie, 37(6): 498–515.

Pollmann-Schult, Matthias; Diewald, Martin (2007): Auswirkungen der Familiengründung auf den Berufsverlauf von Männern. In: KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 59(3): 440–458.

Pollmann-Schult, Matthias; Reynolds, Jeremy (2017): The Work and Wishes of Fathers: Actual and Preferred Work Hours among German Fathers. In: European Sociological Review, 33(6): 823–838.

Possinger, Johanna (2013): Hürden fürsorglicher Vaterschaft – Väter im Spannungsfeld von Erwerbs- und Familienzeiten. In: Familienpolitik neu denken – faire Bildungschancen für alle Kinder schaffen. Tagungsband zur interdisziplinären Nachwuchswissenschaftlertagung der Bertelsmann Stiftung. Gütersloh: W. Bertelsmann, S. 8–29 (http://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/GP_Familienpolitik_neu_denken.pdf) (Accessed on 28.02.2018)

Reilly, Peter A. (2001): Flexibility at Work: Balancing the Interests of Employer and Employee, Hampshire: Gower Publishing Limited.

Reimer, Thordis (2015): Working time arrangements and family time of fathers: How work organization(s) shape fathers' opportunities to engage in childcare. In: Management Revue, 26(3): 228–252.

Risman, Barbara J. (2018): Where the millennials will take us: A new generation wrestles with the gender structure. Oxford University Press.

Rubery, Jill; Ward, Kevin; Grimshaw, Damian; Beynon, Huw (2005): Working time, industrial relations and the employment relationship. In: Time & Society, 14(1): 89–111.

Russell, Helen; O'Connell, Philip J.; McGinnity, Frances (2009): The impact of flexible working arrangements on work–life conflict and work pressure in Ireland. In: Gender, Work and Organization, 16: 73–97.

Sjöberg, Ola (2004): The role of family policy institutions in explaining gender-role attitudes: a comparative multilevel analysis of thirteen industrialized countries. In: Journal of European social policy, 14(2): 107-123.

Socio-Economic Panel (SOEP), data for years 1984-2015, version 32.1, SOEP, 2017, 10.5684/soep.v32.1.

Spence, A. Michael (1973): Time and communication in economic and social interaction. In: The Quarterly Journal of Economics, 87(4): 651–660.

Torres-Reyna, O. (2007), "Panel data analysis: fixed and random effects using STATA", Princeton University. (http://dss.princeton.edu/training) (Accessed on 18.07.2012).

Wagner, Gert G.; Göbel, Jan; Krause, Peter; Pischner, Rainer; Sieber, Ingo (2008): Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland–Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender). In: AStA Wirtschafts-und Sozialstatistisches Archiv, 2(4): 301–328.

Wagner, Gert G.; Frick, Joachim; Schupp, Jürgen (2007): The German Socio-Economic Panel study (SOEP)-evolution, scope and enhancements. In: SOEPpapers on Multidisciplinary Panel Data Research 1.

Weber, Enzo; Zimmert, Franziska (2017): The creation and resolution of working hour discrepancies over the life course. IAB-Discussion Paper 29.

Weinshenker, Matthew (2015): The effect of fatherhood on employment hours: Variation by birth timing, marriage, and coresidence. In: Journal of Family Issues, 36(1): 3–30.

Wheatley, Daniel (2017a): Employee satisfaction and use of flexible working arrangements. In: Work, employment and society, 31(4): 567–585.

Wheatley, Daniel (2017b): Autonomy in paid work and employee subjective well-being. In: Work and Occupations, 44(3): 296–328.

White, Michael; Hill, Stephen; McGovern, Patrick; Mils, Colin; Smeaton, Deborah (2003): 'High-performance' management practices, working hours and work–life balance. In: British Journal of Industrial Relations, 41: 175–195.

Wooldridge, Jeffrey M. (2010): Econometric analysis of cross section and panel data. MIT press. (http://www.edu.gber.ge/uploads/files_85_1.pdf) (Accessed on 28.02.2018)

Zapf, Ines; Weber, Enzo (2017): The role of employer, job and employee characteristics for flexible working time. An empirical analysis of overtime work and flexible working hours' arrangements. IAB-Discussion Paper 4.

# Appendix

**Table 5**
**Men's characteristics by fatherhood: descriptive statistics**

| Variables | "Non-Fathers" | | "Fathers" | |
|---|---|---|---|---|
| | *Mean* | *Standard deviation* | *Mean* | *Standard deviation* |
| Actual working hours | *43.66* | *7.53* | *44.14* | *7.72* |
| Working hours arrangement | | | | |
| Fixed Daily WH | *0.42* | | *0.40* | |
| Employer-oriented WH | *0.22* | | *0.21* | |
| Self-determined WH | *0.13* | | *0.15* | |
| Flexitime | *0.23* | | *0.24* | |
| Age at time of interview | *40.35* | *10.47* | *40.59* | *6.52* |
| Qualification | | | | |
| No qualifications | *0.14* | | *0.13* | |
| Vocational training | *0.64* | | *0.60* | |
| University degree | *0.22* | | *0.27* | |
| Rural area | *0.34* | | *0.34* | |
| Secondary Job | *0.07* | | *0.08* | |
| Part-time employment | *0.19* | | *0.19* | |
| Trust-based working time | *0.06* | | *0,06* | |
| Overtime Hours | *0,59* | | *0,61* | |
| No temporary work agency | *0.96* | | *0.97* | |
| No temporary contract | *0.87* | | *0.90* | |
| Occupational autonomy | | | | |
| Low=1 | *0.14* | | *0.14* | |
| =2 | *0.32* | | *0.25* | |
| =3 | *0.26* | | *0.24* | |
| =4 | *0.25* | | *0.31* | |
| High=5 | *0.04* | | *0.06* | |
| Gross wage | | | | |
| <= 1st percentile | *0.02* | | *0.01* | |
| <= Median | *0.39* | | *0.30* | |
| <= 9th percentile | *0.47* | | *0.50* | |
| > 9th percentile | *0.12* | | *0.19* | |
| Seniority | *10.54* | *9.74* | *10.32* | *8.08* |
| Male market share | *69.78* | *24.36* | *70.08* | *23.99* |
| Public sector | *0.21* | | *0.20* | |
| Firm size | | | | |
| up to 20 employees | *0.19* | | *0.17* | |
| 20 to 199 employees | *0.30* | | *0.28* | |
| 200 to 1999 employees | *0.23* | | *0.24* | |
| 2000 employee and more | *0.28* | | *0.31* | |
| Partner and Employment | | | | |
| No partner | *0.40* | | *0.02* | |
| Inactive partner | *0.29* | | *0.12* | |
| Full-time employed partner | *0.16* | | *0.37* | |
| Part-time employed partner | *0.04* | | *0.13* | |
| Marginal employed partner | *0.11* | | *0.37* | |
| Number of individuals | *15,307* | | *19,450* | |

Source: SOEP 2003-2015. Own calculations.

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