Gender Discrepancies in the Outcomes of Schedule Control on Overtime Hours and Income in Germany

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Abstract

Schedule control can have both positive—e.g., increased income—and negative outcomes—e.g., increased overtime. Here our core interest is whether there are gender discrepancies in these outcomes. Given the different ways in which schedule control can be used, and perceived to be used by men and women, their outcomes are also expected to be different. This is examined using the German Socio-Economic Panel Study (SOEP) (2003–2011), and panel regression models. The results show that schedule control is associated with increases in overtime and income—but only for men. Women in full-time positions also increase their overtime hours when using schedule control; yet, they do not receive similar financial rewards. The results of this study provide evidence to show that increases in schedule control has the potential to traditionalize gender roles by increasing mainly men’s working hours, while also adding to the gender pay gap.

Introduction

Increasing numbers of companies and governments are introducing schedule control—allowing workers more control over when and how long they work—as a less costly option to help working families manage work and family demands compared to, for example, paid leaves (Eurofound, 2015). Accordingly, a number of studies examine the outcomes of schedule control; schedule control has been shown to have a positive impact on workers’ work–life balance (see for a review Michel et al., 2011; Allen, et al., 2013), work commitment (Gallie et al., 2012), health (Ala-Mursula et al., 2004), and even income (Weeden, 2005; Leslie, 2012). However, it can also have negative outcomes, with increased working hours (Burchell et al., 2007; Gambles et al., 2006) and work intensity (Kelliher and Anderson, 2010) being among the most problematic.

However, there remain a number of limitations to existing analyses of schedule control. Notably, these studies are mostly gender blind in that there is little scrutiny of how these outcomes may vary between men and women. Control over working hours can be used by workers for a variety of reasons, i.e., for work–life balance purposes, but also performance-enhancing purposes (Ortega, 2009). Further, it is used, and expected to be used, by men and women for different purposes (Adler, 1993; Brescoll et al., 2013). Thus, and especially in light of evidence that work-related rewards are shaped by gender (Schieman et al., 2013), we can expect
that both positive and negative consequences of having schedule control can be shaped by gender.

A second limitation is that most studies analysing schedule control primarily look at flexitime—i.e., control over when to start and end your working day and the ability to change the number of hours worked per day within certain limits—or do not distinguish flexitime from working-time autonomy—i.e., workers having full control over when and how long they work (e.g., Golden, 2009; Anttila et al., 2015). Flexitime and working-time autonomy, however, may have different outcomes because the extent to which time boundaries can be maintained between work and other spheres of lives are different for these arrangements (Clark, 2000). Third, so far most studies have focused on the United States, and not much is known about how these relationships play out in the European context.

This study aims to examine the gendered outcomes of the use of flexitime and working-time autonomy, on overtime and income specifically, through the use of panel regression models using the German Socio-Economic Panel Study (SOEP, 1984–2012). The German case is an interesting one given its legacy as an ideal type of the conservative male breadwinner model, with large gender inequality in the labour market (Esping-Andersen, 1999; Lewis et al., 2008). Moreover, the use of working-time flexibility is rather employer-driven (Chung and Tijdens, 2013), demonstrated in German employees’ lower benefit from schedule control compared to the Netherlands and Sweden (Lott, 2015).

**Gendered Outcomes of Schedule Control**

**Defining Schedule Control**

The concept of schedule control builds on the job demands–control model developed by Karasek (1979) but focuses on control over when work is done rather than how it is done (Kelly and Moen, 2007). Within this broader definition, flexitime is the control over one’s work schedule within certain limits. On the other hand, working-time autonomy entails (almost) full control over when and how long one works.

Schedule control is used for a variety of reasons, including to increase the family friendliness of a company, as a means of enhancing performance, or some blend of both goals (Ortega, 2009). This is in contrast to other family-friendly arrangements, such as parental leave or childcare service provision, which are inevitably targeted towards parents of young children.

Work–family border theory (Clark, 2000) and flexibility enactment theory (Kossek et al., 2005) suggest
performance. Flexible, and especially autonomous, work arrangements are often accompanied by indirect measures to increase performance and output (Felstead and Jewson, 2000: p. 110). Thus, employees who are officially ‘free’ to work whenever, wherever, and however they wish are often expected to work longer and more intensely (Gambles et al., 2012), encouraged by measures such as teamwork, performance-related payments, and target setting. In other words, to meet targets and increase pay, workers may increase rather than decrease their work intensity and overtime/working hours when given more control over their working hours and no clear working hour boundaries are set (see also, Brannen, 2003; Golden, 2009; Kelliher and Anderson, 2010). This would especially be the case for workers in environments where work is understood as central to one’s lives—i.e., in the ideal worker culture (Williams et al., 2013).

H1a: Schedule control is associated with longer overtime.

Various studies suggest that with schedule control it is primarily men who work longer and more intensely, while women are more likely to increase activities outside the workplace (Burchell et al., 2007; Gambles et al., 2006). The different outcomes of schedule control for men and women can be explained by the discrepancies between men and women in the strength of the work and family domains. For most women, family remains a strong domain because women still do, and are expected to take up, the majority of household tasks and care work (Cooke, 2011; van der Lippe et al., 2011). When the border between work and family becomes flexible through schedule control, women are more likely to (have to) use this flexibility to facilitate family demands, especially if community-time structures—e.g., school opening times—are not flexible. Men, by contrast, not only identify more often with their work but also have the opportunity to become ideal workers because of the support they receive from their wives in regards to the family domain (Moen and Yu, 2000: p. 296; Williams et al., 2013: p. 212). Thus, the introduction of schedule control risks enforcing traditional gender arrangements: women use the flexible measures to reconcile duties outside work with work, while men increase their work effort when time boundaries are relaxed or missing (see also, Moen and Yu, 2000; Gambles et al., 2006).

H1b: Schedule control is associated with longer overtime only for men.

The gendered outcome of schedule control may be especially relevant for women working part-time. Women are more likely to work part-time than men, with 4/5th of all part-time workers being women in Germany 2012 (OECD, 2013a). One of the reasons why women work part-time is because of the time demands they face outside of work and the importance they put on their family roles (Greenhaus et al., 2003). Thus, women working part-time may already be signalling the demands they face in their family roles. Similarly, working part-time may signal the lack of commitment required to be seen as ideal workers. As such, women working part-time are not expected to increase their efforts in support of organizational demands especially if this leads to sacrificing family commitments. When working full-time, however, women as well as men might have to comply with the expectations of the employer and colleagues and keep up with work demands to be ideal workers, and may use schedule control in a similar manner as well.

H1c: Women in full-time positions are equally at risk as men to work more overtime hours when they have schedule control.

Schedule Control and Income

Schedule control can lead to an increase in income for several reasons. First, as mentioned in the previous section, workers with schedule control are likely to increase their overtime hours, which can lead to additional income. In this case, the impact of schedule control on income will be mediated through overtime.

H2a: Schedule control is associated with a higher income via longer overtime.

Based on the ‘happy worker thesis’ (Leslie et al., 2012), workers may also experience income gains due to the increase in work effectiveness and productivity (for a review, see de Menezes and Kelliher, 2011). Workers may increase their work intensity as a part of a gift exchange to reciprocate for the control they have received over their work (Kelliher and Anderson, 2010), which can increase productivity. Further increase in productivity may be seen due to the decrease in stress, sickness, and absenteeism, and better work–life balance brought on by schedule control (Weeden, 2005).

H2b: Schedule control is associated with a higher income beyond that seen via longer overtime.

The association between schedule control and income depends on the way it is being used by the worker and perceived to be used by the employer. Leslie et al. (2012) show that only when managers believe that workers work flexibly for productivity purposes, not to meet personal commitments, does it lead to career premiums. Due to gendered differences in family demands and responsibilities, women may be more likely to use
schedule control for family-friendly purposes, and may be limited in their possibility to use it for productivity purposes, such as increasing work intensity and working hours. Even when women use schedule control for productivity purposes they may not be able to reap the benefits as men do, as employers often hold discriminatory views in the way they perceive schedule control will be used by men and women (Brescoll, et al., 2013).

Furthermore, gender inequality prevails in work-related rewards in that, even in similar positions, women have less power, fewer resources, and gain fewer rewards than their male counterparts (Loscocco, 1989; Acker, 1990). Thus, even when women do increase work intensity or hours through the use of schedule control, as we expect full-time working women to, they may not be rewarded as much as men. Finally, employees may trade-off flexibility in their work in exchange for lower wages, since flexibility can lead to financial savings elsewhere, such as commuting costs or childcare costs (Weeden, 2005). This exchange may be more prevalent amongst women, who may have a stronger pressure to balance work with family life.

$H2c$: Schedule control is associated with a higher income mainly for men—even when women also work full-time.

**Method**

**Data and Sample**

For this study, we use data from Germany. Germany’s legacy is considered as an ideal type of the conservative male breadwinner model with large gender inequality in the labour market (Esping-Andersen, 1999; Lewis, et al., 2008). However, recent changes in family policies aim to promote (high-skilled) women’s employment (Fleckenstein and Seeleib-Kaiser, 2011) while also boosting declining fertility rates. These measures include the reform of parental leave, with so called ‘daddy months’ and relatively high-income replacement rates. Still, the joint taxation system discourages women’s full-time employment. As a result, gender inequality in the labour market remains relatively high, showing in high part-time employment rates for women of 37.8 per cent in 2012 and a high gender pay gaps of 18.7 per cent in 2009 (OECD, 2013a,b).

The data used are taken from the German Socio-Economic Panel (SOEP; http://www.diw.de/soep). The SOEP is a representative panel study of German households that started in the Federal Republic of Germany in 1984 (Haisken-DeNew and Frick, 2003). In 1990, before German reunification, the survey was expanded to include the territory of the former German Democratic Republic. Currently, over 12,000 households and 32,000 persons are interviewed every year. The sample for this study contains 20,398 person-years for men and 19,689 person-years for women. All respondents who were employed, and with contracted working hours, at the time of the interviews are included in the analysis, though excluding the self-employed and those over 65. Working-time arrangements were only observed in the years 2003, 2005, 2007, 2009, and 2011, restricting our analysis to these years. The raw sample originally comprises 49,980 person-years with 9,893 missing values (almost 20 per cent of person-years). These missing values are mostly due to missing values for contracted working-time. Only employees with contracted working hours were taken into account for two reasons: first, overtime hours can only be identified for employees with contracted working hours; secondly, the meaning of working-time arrangements might be different for those employees with contracted working hours compared to those without such regulation (The later might work long hours disregarding their working-time arrangement).

**Measures**

**Outcomes**

The two outcomes of schedule control in this article are overtime and income. Overtime is measured as the difference between actual working hours per week and contractual working hours per week. Income is measured through individual annual pre-tax labour income (adjusted for price changes), including all wages and benefits such as overtime pay, bonus payments, and holiday and Christmas payments. The annual labour income was chosen, over hourly wages or monthly income, since a higher productivity or work performance might not only be rewarded with promotion (showing in higher hourly wages), but with all sorts of extra payments. These might accumulate over the year and might be paid annually.

**Schedule control**

The main explanatory variable in this article is working-time arrangements. In the survey, respondents were asked ‘Which of the following working hours arrangements is most applicable to your work?’ The possible answers are 1 = set by the company with no possibility of changes, 2 = flexible working schedules set by the company (employer-oriented flexibility), 3 = flexitime, and 4 = hours entirely determined by employee...
(working-time autonomy). Fixed schedules are used as the reference category in the multivariate regression models.

Controls
An increase in income and overtime might be due to employees’ higher workplace position, where workplace flexibility is more often available than in lower status positions (Kelly and Kalev, 2006). Since the interest of the study is the effect of schedule control on overtime and income, independent from the status position, we control for workplace positions. The following categorical dummies are used: employee (routine non-manual and routine service sales), professional (administrators, officials, managers in industrial establishments, large proprietors, higher-grade technicians, and supervisors of non-manual employees), civil servant, and manual worker (skilled/semi-skilled manual, farm labour) as the reference category. In addition, job authority is often related to work autonomy (Schieman et al., 2013); thus, a control was used to indicate the level of job authority the worker has: no job authority, management tasks, and extensive leadership. By controlling for these variables, we are examining the increase in income and overtime above and beyond that stemming from changes in job positions or increase in job authority. Moreover, employees’ often have a lower status when not working full-time (Williams et al., 2013). Thus we distinguish workers in full-time, part-time, and marginal/irregular part-time employment. Controls for whether employees receive bonus payments, overtime pay, or holiday and Christmas payments are included in the analysis. Overtime pay and bonus payment, such as company profit share and performance-related pay, might encourage individuals to work more (Brannen, 2005; Gallie et al., 2012). Holiday and Christmas payments add to the annual labour income. We additionally controlled for whether employees have a second job. A second job increases the annual labour income as well as employees’ weekly work hours (measures for overtime and income include total wages as well as weekly work hours including a second job). Since income is highly correlated with education, the educational level—distin-
guished into primary, secondary, and tertiary education—was taken into account. Employees with job insecurity often work longer hours (White et al., 2003); thus, a dummy variable which indicates whether employees have a permanent contract was used. Furthermore, flexible working arrangements are more common in the public than in the private sector (Russell et al., 2009), as such, a control was included for working in the public sector. The article also controls for the sector in which the worker works based on the NACE 2-digit classification: i.e., retail, health/education, metal, chemical, and electronic industries, service industries, and lastly insurance and banking sectors. This allows us to account for the gender segregation of the labour market, as well as to distinguish between the ‘Post-Fordist workplaces’ (Van Echtelt et al., 2009), where indirect measures of control are more often applied. Household characteristics were also considered. Women’s labour market behaviour highly depends on whether they have children (Paull, 2008), and hence, the number of children (no children, one child, two children, and three or more children) was used as a control. Since women participate least in the labour market with very young children, two dummy variables also controlled for the age of the youngest child in the household (0–2 and 3–4 years). Moreover, the split-taxation system which is offered for married couples in Germany often discourages women’s (full-time) employment (Sainsbury, 1999). A control for being married was introduced in the models. To control for period effects, years dummies were used (ref.: 2011). Moreover, individuals who are the main breadwinner in the household might invest more time and effort into work. Controls for being main breadwinner and working longer hours than the partner were introduced in the models. Also, age and age-squared were included in the analysis. Finally, changes in schedule control can be due to job change. Starting a new job might not only be related to a higher salary, but also to overtime, since employees have to become acquainted with the job or want to make a good first impression at the workplace. A control for job change is included for this reason.

Models
Employees with schedule control may self-select into jobs where schedule control is available, i.e., those employees with schedule control might be strongly ambitious individuals who, for this reason, work longer hours, signal more productivity, and are paid better. Also, employees with other time-invariant personality traits such as ‘conscientiousness, agreeableness, and positive affect’ might be those employees who primarily receive access to schedule control (Leslie et al., 2012: p. 1425). The analysis thus should account for employees’ selection into jobs with schedule control due to time-invariant individual characteristics, making hybrid panel regression method appropriate for this study. Hybrid panel regression allows for measuring group differences (e.g., employees without schedule control
compared to employees with) as well as changes in individuals over time (individuals change from fixed schedules to schedule control). Group differences are measured with between-unit estimates and changes in individuals are measured with within-unit estimates (Allison, 2009). The within-unit estimates are identical to estimates obtained in a fixed-effects panel regression model. Because within-estimates are the deviation from the unit-specific mean, time-invariant characteristics, observed and unobserved, are differenced out in the model (Morgan and Winship, 2007). Within-estimates are unbiased under the strict exogeneity assumption that explanatory variables are uncorrelated with the time-variant error term (Woolridge, 2002). Since the exogeneity assumption may often be violated, e.g., if workers with an income increase are more likely to get schedule control, the interpretation of within-estimates as causal effects has to be treated with caution. Still, within-estimates deal with the major problem of self-selection on time-constant unobserved variables such as an individual’s personality traits and, thus, are less biased than cross-sectional analyses. It should be noted that the estimation of within-effects is based only on those individuals for whom a status change has been observed.

This study hypothesizes that an increase of income with schedule control is partially mediated through an increase of overtime hours, and that this mediation is less strong for women than men. To test this, a mediation model is estimated where overtime hours is the mediator for schedule control and income. Table 1 shows the descriptive results and Table 2 shows the

Table 1. Women’s and men’s working-time arrangements

| Working-time arrangements       | All     | Men     | Women    |
|--------------------------------|---------|---------|----------|
| Fixed schedule                 | 45.12   | 44.06   | 46.29    |
| Employer-oriented working time | 21.40   | 20.12   | 22.76    |
| Flexitime                      | 23.62   | 24.62   | 22.52    |
| Working-time autonomy          | 9.87    | 11.17   | 8.44     |

**Note:** Column percentages weighted with cross-sectional weight; pooled sample; frequencies significantly different between women and men according to the Chi-squared test; SOEP 2003, 2005, 2007, 2009, and 2011.

Table 2. Hybrid panel regression models with within-estimates (changes in individuals) and between-estimates (differences between groups) for overtime hours

|               | General 1-1 | Men 1-2 | Women 1-3 | Men full-time 1-4 | Women full-time 1-5 |
|---------------|-------------|---------|-----------|-------------------|---------------------|
| **Changes in individuals** |             |         |           |                   |                     |
| Employer-oriented working time | 0.871***   | 1.223*** | 0.530***  | 1.203***          | 0.614***            |
| Flexitime     | 0.682***   | 0.909*** | 0.489***  | 0.985***          | 0.795***            |
| Working-time autonomy | 1.503***   | 2.056*** | 0.896***  | 2.164***          | 1.838***            |

| **Differences between groups** |             |         |           |                   |                     |
| Employer-oriented working time | 1.944***   | 2.548*** | 1.386***  | 2.587***          | 1.535***            |
| Flexitime     | 0.377***   | 0.686*** | 0.333***  | 0.764***          | 0.646***            |
| Working-time autonomy | 3.912***   | 5.387*** | 2.203***  | 5.830***          | 4.320***            |

**Note:** Linear hybrid panel regression models with robust standard errors in parentheses; dependent variable overtime hours; Models 1-4 and 1-5 for full-time employees only; employees excluding self-employed; results not weighted; SOEP 2003, 2005, 2007, 2009, and 2011. * P < 0.05; ** P < 0.01; *** P < 0.001.
multivariate results for the relation between working-time arrangements and working hours (Hypotheses 1a and 1b). The results for the relation between working-time arrangements and income with and without mediator are given in Tables 3 and 4 (H2a and H2b). The within-estimates (changes in individuals) indicate changes from fixed schedule (reference category) to one of the other working-time arrangements. Changes from fixed schedules to flexitime or working-time autonomy might be related to changing to professional positions, positions with job authority, job change, or finishing an educational degree. This is taken into account by controlling for these (and other crucial) events which might involve changes to schedule control.

Results
Almost half (45 per cent) of the employees in Germany have fixed working-times (Table 1). Women have fixed schedules slightly more often than men (46 vs. 44 per cent) and are more likely to have schedules flexibilized by the employer (about 23 vs. 20 per cent). Men, by contrast, are slightly more likely to have access to flexitime and working-time autonomy. Eleven per cent of male employees have working-time autonomy, but only 8 per cent of female employees. Around 24 per cent of all employees have flexitime, 23 per cent of women and around 25 per cent of men.

Changes from fixed schedules to other working-time arrangements were observed for almost one-third of the employees (72 per cent stayed with fixed schedules throughout the observation years). Seven per cent (799 observations from 402 men and 397 women) of the employees in the data changed from fixed schedules to flexitime, and 4 per cent (435 observations from 210 men and 225 women) changed to working-time autonomy from fixed schedules within the observation period. Thus, changes to schedule control seldom occurred, but the number of observations is still sufficient for estimating within-variation. The standard deviation for the within-variation of overtime is 2.88 h for all employees, 3.15 for men and 2.56 for women. The standard deviation for the within-variation of income is 6,759 euros—7,418 euros for men and 6,000 euros for women.

Gendered Costs: Overtime
Table 2 examines the association of changes in schedule control and the increase of overtime hours (changes within individuals) as well as overtime differences between employees with and without schedule control (differences between groups). On average, employees with working-time autonomy work the longest overtime hours, working almost 4 h more overtime compared to individuals with fixed schedules (Model 1-1, differences between groups). When switching from fixed schedules to flexitime, workers work more than half an hour more overtime per week and almost one and a half hours more when switching to working-time autonomy (Model 1-1, changes in individuals). We confirm Hypothesis 1a. Looking at between-estimates, compared to men, women work significantly longer overtime when using working-time autonomy (Table 5 Model 4-5); men with working-time autonomy work more than five hours more overtime than those with fixed schedules, whereas for women this difference is 2 hours (Models 1-2 and 1-3 between groups). This gender difference also exists for when workers start gaining schedule control. Figure 1 shows the predicted overtime in hours for men (left) and women (right), to allow for the comparison between the different working-time arrangements. Women, on average, work less than half an hour more overtime when changing from fixed schedules to flexitime and less than an hour more when changing to working-time autonomy. Men changing to flexitime work about an hour more overtime per week, and when changing to working-time autonomy work 2 hours more. The gender difference is significant for flexitime and highly significant for working-time autonomy (Table 5 Model 4-5). Thus, Hypothesis 1b can be confirmed: men are at higher risk to work overtime with schedule control, especially with working-time autonomy.

We expected that the gender discrepancy in overtime with schedule control would disappear if we compared men and women in full-time positions (Table 2 Model 1-4, 1-5). Since the majority of men in the sample work full-time (over 95 per cent), the results do not differ largely from the overall sample (Model 1-2). By contrast, 40 per cent of women in the sample have part-time positions, and thus, the results differ greatly between Model 1-3 for all women and Model 1-5 for only full-time working women. Between-group estimates show that in full-time positions, women also work longer overtime hours with working-time autonomy; more than four additional overtime hours compared to those with fixed schedules. The gender-gap in overtime is much smaller when comparing only full-time workers, although still significantly different (Table 5 Model 4-6, differences between groups). However, when looking at changes to schedule control, there is no gender difference in increasing overtime hours at all (Table 5 Model 4-6 changes in individuals). Women in full-time positions increase their overtime to a similar extent as men when changing from fixed schedules to flexitime and to
working-time autonomy (Figure 2, right plot) confirming Hypothesis 1c. Both full-time working men and women seem to undertake a similar amount of additional overtime hours, when given schedule control and time boundaries are relaxed or missing.

**Gendered Rewards: Income**

Table 3 shows the results for the association between schedule control and labour earnings. Employees with flexitime and working-time autonomy earn about 2,800 euros and 6,200 euros more, respectively, compared to those with fixed schedules (Model 2-1, differences between groups). When taking overtime hours into account, the income gains are slightly smaller, about 2,600 euros for flexitime and 4,700 euros for working-time autonomy (Model 2-2 differences between groups). However, it seems that this schedule flexibility premium is gendered. Men with working-time autonomy earn almost 6,700 euros more per year than those with fixed schedules when taking overtime into account (Model 2-4, differences between groups). Women, by contrast, benefit significantly less by having working-time autonomy, earning only around 2,000 euros more compared to those with fixed schedules (Model 2-6 differences between groups).
The gender gap in the schedule control premium also exists when comparing full-time working employees (Table 4, Model 3-2 and 3-4). But when using flexitime women gain more premium (Table 5 Model 4-4). Full-time working men with flexitime earn about 2,000 euros more compared to those with fixed schedules when taking overtime into account, while for women this is higher about 3,700 euros (Model 3-2 and 3-4, between groups).

This gender differences in the earnings gained through schedule flexibility can also be observed in the within-individual changes. Having controlled for income increases coming from other changes such as job authority, employee incomes increase by about 1,200 euros when changing from fixed schedules to working-time autonomy, and when they change to flexitime they earn on average 2,000 euros more compared to those with fixed schedules when taking overtime into account, while for women this is higher about 3,700 euros (Model 3-2 and 3-4, between groups).

Table 3. Hybrid panel regression models with within-estimates (changes in individuals) and between-estimates (differences between groups) for income

|               | General | 2-1 | 2-2 | 2-3 | 2-4 | 2-5 | 2-6 |
|---------------|---------|-----|-----|-----|-----|-----|-----|
| Changes in individuals |         |     |     |     |     |     |     |
| Changing from fixed schedules to |         |     |     |     |     |     |     |
| Employer-oriented working time | 255.780 | 297.216 | 212.804 | 149.08 | (149.08) | (225.16) | 195.11 |
| Flexitime | 875.783*** | 1,246.260*** | 503.770 | (231.35) | (354.19) | (352.12) | 269.75 |
| Working-time autonomy | 1,205.048*** | 2,363.472*** | -20,428.77 | (331.81) | (469.03) | (461.79) | 451.26 |
| Increase of overtime hours | 132.178*** | 148.695*** | 86.996 | (19.93) | (25.85) | (282.253) | (31.21) |
| Differences between groups |         |     |     |     |     |     |     |
| Individuals with fixed schedules and those with |         |     |     |     |     |     |     |
| Employer-oriented working time | 739.208** | 1,291.401** | 377.052 | (281.45) | (476.19) | (490.49) | 290.60 |
| Flexitime | 2,783.200*** | 2,242.821*** | 3,591.107*** | (347.57) | (562.60) | (556.35) | 383.68 |
| Working-time autonomy | 6,203.573*** | 6,941.202*** | 2,672.340*** | (599.74) | (953.78) | (946.44) | 635.96 |
| Overtime hours | 403.285*** | 418.427*** | 306.395*** | (41.25) | (53.35) | (62.58) | (65.01) |
| Constant | -4,316.053* | -2,308.682 | -13,427.064*** | (1,725.38) | (2,726.85) | (2,696.06) | (1,791.34) |

|               | Men | 2-3 | 2-4 | 2-5 | 2-6 |
|---------------|-----|-----|-----|-----|-----|
| Changes in individuals |         |     |     |     |     |
| Changing from fixed schedules to |         |     |     |     |     |
| Employer-oriented working time | 140.715 | 115.312 | 166.707 | (146.67) | (223.76) | (190.18) |
| Flexitime | 785.688*** | 1,111.066** | 461.269 | (231.31) | (352.12) | (272.76) |
| Working-time autonomy | 1,006.446*** | 2,057.754*** | -282.253 | (334.12) | (461.79) | (465.39) |
| Increase of overtime hours | 148.695*** | 86.996 | 86.996 | (25.85) | (282.253) | (31.21) |
| Differences between groups |         |     |     |     |     |
| Individuals with fixed schedules and those with |         |     |     |     |     |
| Employer-oriented working time | -33.670 | 243.243 | 43.325 | (149.08) | (490.49) | (383.68) |
| Flexitime | 2,639.467*** | 1,968.199*** | 3,429.665*** | (344.22) | (556.35) | (382.67) |
| Working-time autonomy | 4,664.378*** | 6,941.202*** | 2,019.035*** | (578.39) | (946.44) | (584.73) |
| Overtime hours | 418.427*** | 418.427*** | 306.395*** | (53.35) | (62.58) | (62.58) |
| Constant | -4,635.630*** | -2,866.369 | -13,456.501*** | (1,710.44) | (2,696.06) | (1,784.80) |

|               | Women | 2-5 | 2-6 |
|---------------|-------|-----|-----|
| Changes in individuals |         |     |     |
| Changing from fixed schedules to |         |     |     |
| Employer-oriented working time | 297.216 | 212.804 | 166.707 | (225.16) | (223.76) | (190.18) |
| Flexitime | 1,246.260*** | 1,111.066** | 461.269 | (354.19) | (352.12) | (272.76) |
| Working-time autonomy | 2,363.472*** | 2,057.754*** | -282.253 | (469.03) | (461.79) | (465.39) |
| Increase of overtime hours | 148.695*** | 86.996 | 86.996 | (25.85) | (282.253) | (31.21) |
| Differences between groups |         |     |     |
| Individuals with fixed schedules and those with |         |     |     |
| Employer-oriented working time | 115.312 | 166.707 | 43.325 | (223.76) | (383.68) |
| Flexitime | 1,111.066** | 461.269 | 382.67 | (352.12) | (382.67) | (382.67) |
| Working-time autonomy | 2,057.754*** | 2,019.035*** | 584.73 | (461.79) | (584.73) | (584.73) |
| Overtime hours | 86.996 | 86.996 | 62.58 | (25.85) | (62.58) | (62.58) |
| Constant | -13,427.064*** | -13,456.501*** | 1,784.80 | (1,784.80) | (1,784.80) | (1,784.80) |

Note: Linear hybrid panel regression models with robust standard errors in parentheses; dependent variable income; employees excluding self-employed; results not weighted; SOEP 2003, 2005, 2007, 2009, 2011. *P < 0.05; **P < 0.01; ***P < 0.001.
autonomy (changes in individuals). Even when increased overtime is taken into account, the income increase is still high at about 1,100 euros and 2,100 euros, respectively. Women, by contrast, do not gain any significant income increases when gaining schedule control, with or without taking overtime into account. The assumption may be that this gender inequality in earnings is due to the high share of part-time employed women. However, when examining full-time working employees separately (Table 4) the results do not change. After taking overtime into account, full-time employed men earn about 1,000 euros more per year when changing to flexitime and 2,200 euros more from gaining working-time autonomy (Model 3-2, changes in individuals). Meanwhile, for full-time working women, changing to either flexitime or working-time autonomy from fixed schedules does not seem to bring income gains, beyond what they gain via overtime (Models 3-3 and 3-4). We thus confirm Hypothesis 2c, that there are gender differences in the income gains coming from schedule control, specifically for working-time autonomy based on the significant interaction terms we find for gender and working-time autonomy (Table 5 Models 4-1 to 4-4).

Conclusion and Discussion

The aim of the study was to reveal the gendered outcomes of using schedule control, focusing on two work outcomes: overtime and income. We find that the increase in overtime is gendered, with men increasing their

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**Table 4.** Hybrid panel regression models with within-estimates (changes in individuals) and between-estimates (differences between groups) for income, only full-time employees

|                      | Men                  | Women                |
|----------------------|----------------------|----------------------|
|                      | 3-1                  | 3-2                  | 3-3                  | 3-4                  |
| **Changes in individuals** |                      |                      |                      |                      |
| Employer-oriented working time | 327.029 (227.54) | 159.581 (225.67) | 57.757 (353.29) | −12.984 (337.91) |
| Flexitime            | 1,173.845** (358.37) | 1,036.612** (356.37) | 362.306 (416.65) | 275.754 (432.94) |
| Working-time autonomy | 2,474.268*** (489.92) | 2,171.407*** (482.23) | −19.196 (960.79) | −239.956 (1,029.25) |
| Increase of overtime hours | 138.333*** (24.87) | 113.104*** (55.71) |
| **Differences between groups** |                      |                      |                      |                      |
| Employer-oriented working time | 1,360.234** (504.31) | 283.459 (519.17) | 115.919 (485.48) | −388.281 (475.38) |
| Flexitime            | 2,280.133*** (581.54) | 1,969.007*** (575.04) | 3,915.480*** (537.13) | 3,703.975*** (536.94) |
| Working-time autonomy | 9,827.045*** (1,048.80) | 7,405.843*** (1,043.95) | 7,076.633*** (1,355.42) | 5,709.723*** (1,234.15) |
| Overtime hours       | 421.405*** (54.99) | 325.435*** (82.56) |
| Constant             | −2,321.030 (2,905.25) | −2,607.875 (2,879.02) | −19,296.317*** (2,439.88) | −19,087.010*** (2,419.29) |

\[ R^2 \]

| Within | 9.64% | 9.98% | 11.86% | 12.06% |
|--------|-------|-------|--------|--------|
| Between| 59.18%| 59.88%| 47.66% | 48.14% |
| Overall| 56.21%| 57.00%| 42.92% | 43.65% |
| N (Individuals) | 19,447 | 19,447 | 10,190 | 10,190 |
| N (groups) | 7,137 | 7,137 | 4,295 | 4,295 |

*Note:* Linear hybrid panel regression models with robust standard errors in parentheses; dependent variable income. Full-time employees only; employees excluding self-employed; results not weighted; SOEP 2003, 2005, 2007, 2009, 2011. *P < 0.05; **P < 0.01; ***P < 0.001.
overtime hours more on average. However, this is largely driven by the part-time working women in the sample, and full-time working women invest as much overtime hours as their male counterparts when using schedule control. We also find a considerable gender gap in the income gained through schedule control. Both men and women gain additional income when using schedule control mediated via overtime hours. However, women, even full-time working women, do not reap the direct benefit men do in terms of income gains. This gender discrepancy exists even when we take into account the sex segregation of the labour market, i.e., sectors and occupations, as well as self-selection of time-invariant characteristics in jobs, i.e., an individual’s ambition or work devotion.

The reason behind this can be several. First of all, men and women may have different motivations when using schedule control, which may end with different outcomes as well. For women, schedule control may be used to meet their family demands, and may even forgo additional income for its access (Weeden, 2005).

Additional analyses (Supplementary Appendix Tables A7 and A8) have shown that mothers increase their overtime hours sometimes to even a larger extent than

Table 5. Hybrid panel regression models with within-estimates (changes in individuals) and for income and overtime (for all and full-time workers) with interaction between working time arrangements and female

| Changes in individuals | Income 4-1 | Income full-time 4-2 | Income 4-3 | Income full-time 4-4 | Overtime 4-5 | Overtime full-time 4-6 |
|------------------------|-----------|----------------------|-----------|----------------------|-------------|-----------------------|
| Employer oriented working time | 318.682 | 349.614 | 133.519 | 178.613 | 1.239*** | 1.220*** |
| (227.38) | (229.78) | (225.84) | (227.76) | (0.15) | (0.15) |
| Flexitime | 1,256.055*** | 1,190.089*** | 1,120.782** | 1,052.431** | 0.905*** | 0.983*** |
| (356.32) | (360.73) | (354.33) | (358.60) | (0.15) | (0.15) |
| Working time autonomy | 2,370.476*** | 2,491.421*** | 2,059.151*** | 2,181.617*** | 2.083** | 2.197*** |
| (472.18) | (493.01) | (465.24) | (485.70) | (0.20) | (0.21) |
| Increase of overtime | 149.481*** | 138.950*** | 138.950*** | 138.950*** | 138.950*** | 138.950*** |
| (29.65) | (29.65) | (29.65) | (29.65) | (29.65) | (29.65) |

Female

| Differences between groups | Income 4-1 | Income full-time 4-2 | Income 4-3 | Income full-time 4-4 | Overtime 4-5 | Overtime full-time 4-6 |
|---------------------------|-----------|----------------------|-----------|----------------------|-------------|-----------------------|
| Employer oriented working time × Female | -92.681 | -274.829 | 43.110 | -178.491 | -0.694*** | -0.577*** |
| (301.03) | (428.43) | (296.34) | (412.82) | (0.18) | (0.22) |
| Flexitime × Female | -732.395 | -785.724 | -642.680 | -738.855 | -0.402* | -0.174 |
| (447.34) | (551.93) | (447.46) | (563.33) | (0.20) | (0.23) |
| Working time autonomy × Female | -2,560.799*** | -2,426.376* | -2,332.527*** | -2,439.535* | -1.166*** | -0.299 |
| (654.41) | (1,084.01) | (660.09) | (1,147.18) | (0.28) | (0.39) |
| Increase of overtime × Female | -58.907 | -24.769 | 149.481*** | 138.950*** | 138.950*** | 138.950*** |
| (41.09) | (24.769) | (29.65) | (29.65) | (29.65) | (29.65) |

Note: Linear hybrid panel regression models with robust standard errors in parentheses; Models 4-1 and 4-2 dependent variables income without controlling for overtime; Models 4-3 and 4-4 dependent variables income with controlling for overtime; Models 4-5 and 4-6 dependent variables overtime; Models 4-2, 4-4, and 4-6 for full-time working employees only; employees excluding self-employed; results not weighted; SOEP 2003, 2005, 2007, 2009, 2011. *P < 0.05; **P < 0.01; ***P < 0.001.
women in general, yet they don’t even receive the same income gains through overtime hours as other workers. Thus, there is evidence to show that mothers may even be trading-off overtime hours for the increased control over their work. Men, by contrast, may gain schedule control as a part of their promotion or use it as high-performance strategy, rather than as a mean to combine different life domains, again, leading to additional income. However, beyond workers own motivations, this discrepancy may be due to employers’ discriminatory perceptions. Thus, even when women use schedule control for performance goals and increase their overtime hours and/or work intensity when gaining schedule control, their efforts might not be perceived as such by employers who might hold traditional gender role ideals (Brescoll et al., 2013). This may also be due to the gendered organization, and the gendered way in which work rewards are given. This is in line with the study by Wright et al. (1995) and others who showed that discrimination is one crucial reason for women’s lack of work-related rewards. We extend this logic to rewards linked to schedule control. It is difficult to tease out exactly which of these dynamics are truly at play with our data, and research is needed to examine this issue further.

The present analysis was constrained by other data limitations. First of all, the number of employees with working-time autonomy is rather small. Thus, more fine-tuned analyses of sub-groups of employees (e.g., receiving bonus payments or any other extra payments) are not possible. Adding additional survey years (expected for the 2013 and 2015 waves of SOEP) would contribute to even more reliable estimates. A larger sample may allow the varying impact of schedule control not only by gender, but also different life course stages—e.g., when children are young, older, or when parents or other family members are in need of care. Further, in this article we have assumed that the increase in income due to the use of schedule control will be observable in the same year, and were not able to see any potential lagged-effects due to the year-gaps in the data. Future studies should examine potential lags in the rise in income due to schedule control. Also, measures of productivity, work intensity, and effectiveness are not available in the data. Using more direct measures would allow further analysis on the relation between work behaviour and rewards, and their gender discrepancies. Similarly, the measure for job demands was missing and job authority in this study is broadly defined, and may not capture all possible promotions at the workplace. Further information on job demands and authority will also be useful to include in future analyses to test whether schedule control is the driving force of the increase in working hours and income, or whether schedule control is only a mere reflection of a job with more demands and higher status. Future studies could also look into the multiple changes in and out of jobs with schedule control to see whether there may be any additive implications throughout one’s life course. Finally, gender-specific work fields and gendered work tasks could not be taken into account. Qualitative research is needed to capture the gendered nature of organizations in more detail, including employer’s actual perceptions on the nature of schedule control.

Despite these limitations, the results of this study provide evidence to show that schedule control has the potential to traditionalize gender roles by predominantly increasing men’s working-time and by adding to the gender pay gap. Thus, when schedule control is implemented at the workplace, social partners as well as works councils may need to advise workers, and especially men, to the risks of missing time boundaries. Also, it will be important to promote policies that allow an equal distribution of financial rewards between women and men to tackle some of the gender biases employers have on the use of schedule control.

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Supplementary Data

Supplementary data are available at ESR online.

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