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REASONS FOR NOT WORKING FROM HOME IN AN IDEAL WORKER CULTURE: WHY WOMEN PERCEIVE MORE CULTURAL BARRIERS

Yvonne Lott, Anja Abendroth

ABSTRACT

The present study analyzes workers' reasons for not working from home in German workplaces. We ask to what degree cultural barriers, besides technical barriers, are reasons for not working from home. The analyses are based on the second wave (2014–15) of the German Linked Personnel Panel (LPP). Factor analyses confirm the importance of technical and cultural barriers to working from home. Linear regression analyses show that because men work more often than women in areas where working from home is technically unfeasible, they are more likely to perceive job unsuitability of working from home. Women – independent of their status positions – are more likely not to work from home due to perceived cultural barriers. In workplaces with a pronounced ideal worker culture, employees are more likely to perceive cultural barriers to working from home. Finally, company-level work-life balance support diminishes perceived cultural barriers.

Content

1	Introduction	3
2	The Role of Cultural and Technical Barriers for the Non-Use of Working from home	5
2.1	Cultural Barriers and the Reasons for Not Working from Home	5
2.2	Variation in Cultural Barriers Depending on Organizational Culture	5
2.3	Variation in Cultural and Technical Barriers across Occupations	7
2.4	Variation in Cultural and Technical Barriers between Men and Women	7
3	Empirical Strategy	9
3.1	Data and Sample	9
3.2	Measurement of the Reasons for Not Working from Home	9
3.3	Measurement of a High-Performance Work Culture	10
3.4	Horizontal and Vertical Segregation	11
3.5	Covariates	11
3.6	Econometric Strategy	12
4	Results	13
4.1	Factor Analysis	14
4.2	Multivariate Analyses	14
5	Conclusion and Discussion	19
	References	23
	Appendix	29

1 Introduction

Due to the development of digital technologies, working from home is becoming a viable option for an increasing number of employees. Working from home can be beneficial for employees because it can help them to achieve a better work-life balance by giving them more discretion in combining work and family tasks (Appelbaum 2000; Ortega, 2009). However, whether employees benefit from working from home is controversial. Besides work-home conflict (Van der Lippe/Lippényi 2018) and mental health problems (Mann/Holdsworth 2003), some studies (Glass/Noonan 2016; Martinez/Gomez 2013; Maruyama/Tietze 2012) have shown that working from home is related to negative career consequences, whereas other studies (Riley/McCloskey 1996; Tolbert/Simons 1994) have found no support for working from home being harmful to career advancement.

One reason for these ambiguous findings might be that most studies to date have been based on samples of individuals who work from home. However, employees who have access to working from home are a selective group of individuals, mainly comprising privileged employees in higher-level positions (Felstead et al. 2002; Golden 2008). Moreover, those employees who expect negative consequences for their career advancement might actually have good reasons for doing so, and, as a result, might choose not to work from home. Because of this possible selection bias, the negative career consequences of working from home might have been underestimated in previous research. Following from this, we ask to what degree cultural barriers, besides technical barriers, contribute to the reasons for not working from home. In an ideal worker culture (Williams et al. 2013), supervisors and co-workers expect employees to be present at the workplace, and employees who make use of flexible work arrangements are often stigmatized (Chung 2018; Leslie et al. 2012; Lott/Klenner 2018; Munsch 2016). Employees might therefore perceive cultural barriers to working from home because they expect career penalties or they fear lack of visibility to management. Therefore, it is crucial to study the group of non-users and their various reasons for not working from home. Duxbury et al. (1987) and Mokhtarian et al. (1998) studied career-related constraints on the desire to work from home, but they restricted their samples to employees with the ability to work from home. Olson and Primps (1984) considered only employees who worked from home. For Germany, first evidence shows that some employees report cultural barriers, the unsuitability of working from home, and restricted access as reasons for not working from home, whereas others report that they do not want to work from home (Grunau et al. 2019). However, the wish not to work from home may be mingled with perceived cultural barriers at the workplace.

We contribute to this research by asking about variation in the importance of cultural and technical barriers across workplaces and occupations, and between men and women. Existing research indicates variation across workplaces and occupations in the adherence to the ideal worker norm. Some workplaces deviate from the ideal worker norm by investing in the work-life balance of their employees (e.g., Den Dulk 2001), whereas others exaggerate the ideal worker norm with high performance and availability

expectations (e.g., Cha/Weeden 2014). Fear of harming career advancement by working from home might prevail especially in workplaces with a high-performance work culture (Williams et al. 2013), whereas in workplaces with work-life support measures expected negative career consequences due to working from home might be weakened. Similarly, occupational structure entails expectations about workers' time investments and productivity (Cha/Weeden 2014; Leuze/Strauss 2016). Previous studies (Mann et al. 2000; Mokhtarian et al. 1998; Pratt 1984) have further shown that women are more likely to perceive negative career consequences when working from home or to fear lack of visibility to management. These gender differences might be due in part to the gendered segregation of the labor market (e.g., Busch/Holst 2011; Cha/Weeden 2014). Women work less often than men in higher-level workplace positions with negotiating power, and men work more often in workplaces for example, in production where working from home is less suitable. However, above and beyond the gendered segregation of the labor market, women might perceive cultural barriers to working from home more than men, because women, more than men, are stigmatized when they make use of flexible work arrangements (Leslie et al. 2012; Lott/Chung 2016; Munsch 2016).

The present analysis is based on data from the second wave of the Linked Personnel Panel (LPP) conducted in 2014–15, where 1,777 employees were observed who reported that they did not work from home and gave reasons for doing so. Factor analysis was used to cluster the different reasons for not working from home. Linear regression analyses revealed the associations between the retained factors and gender, possibly mediated by the vertical and horizontal segregation of the labor market, ideal worker norms, and workplace measures that can weaken these norms.

The present study contributes to the existing literature in three ways. First, a major research gap – namely, reasons for not working from home is addressed. Second, gender differences and the gendered segregation of the labor market as a possible mediator between the reasons for not working from home and gender are taken into account. Third, the workplace context that is, high performance work cultures and workplace measures to combat such ideal worker cultures is considered. Our findings can help to understand how working from home can be encouraged in the workplace, and for whom such measures would be particularly beneficial. The present study shows, first, that cultural barriers are a major reason for not working from home, especially for women (independent of their status position) and especially in high-performance work cultures. Second, work-life support at the workplace diminishes perceived cultural barriers to working from home. Finally, third, men reported more often than women that their job was unsuitable for working from home.

2 The Role of Cultural and Technical Barriers for the Reasons for Not Working from Home

2.1 Cultural Barriers and the Reasons for Not Working from Home

Existing research has identified an “ideal-worker norm of a worker who has few family obligations and prioritizes work” (Abendroth/Reimann 2018, p. 328; see also Acker 1990; Cha/Weeden 2014; Hodges/Budig 2010; Kossek et al. 2010). Working from home in the interests of work-life balance contradicts this ideal worker norm. As a consequence, following signaling theories (Spence 1973) and stigmatization theories (Goffman 1963), working from home is likely to be interpreted as a signal that they are less committed to their work (see also Konrad/Yang 2012). In line with this, existing research refers to the “flexibility-stigma,” whereby employees who work from home are perceived to be less committed to their work (e.g., Chung/van der Horst 2018; Konrad/Yang 2012; Williams et al. 2013). For example, Almer et al. (2004) showed in a vignette experiment that employees who used flexible work arrangements were viewed as being less likely to advance. In the same vein, Blair-Loy and Wharton (2002) showed that employees were more likely to use family-friendly workplace arrangements when their supervisors had enough power to protect them from any negative career consequences. In the U.S. context, Mokhtarian et al. (1998) provided first evidence that workers do not work from home because they fear career penalties. Employees’ fear of harming their careers by working from home was also observed in the United States by Duxbury et al. (1987) and Olson and Primps (1984). As a consequence, it can be argued that employees do not work from home due not only to the absence of technical solutions enabling professional activities to be performed at home, but also to cultural barriers within workplaces that follow the ideal worker norm. Thus, we hypothesize:

Hypothesis 1 (cultural barrier hypothesis): Employees do not work from home when the work could be performed at home due in part to perceived cultural barriers.

2.2 Variation in Cultural Barriers Depending on Organizational Culture

Existing research provides first evidence that workplaces vary in their adherence to the ideal worker norm, and that, depending on the level of adherence, working from home has different consequences for work-family balance and the gender pay gap (Abendroth/Reimann 2018; Abendroth/Diewald 2019). We argue that differences in the adherence to the ideal worker norm across workplaces also reflect differences in the strength of cultural barriers to working from home.

On the one hand, an exaggeration of the ideal worker norm with an economization of labor and goal-oriented management has been identified, which manifests itself in increased expectations regarding employee work perfor-

mance, availability, and accessibility (Cha/Weeden 2014; Lott 2015; Green 2004; Putman et al. 2014). First evidence suggests that, in workplaces where exaggerated ideal worker norms prevail, working from home is associated with long working hours, an increase in work intensity, and more conflicts between work and personal life (e.g., Abendroth/Reimann 2018; Gambles et al. 2006; Kelliher/Anderson 2010; Lott/Chung 2016). Chung (2019, p. 25) explained this increase in work intensity due to working from home with the gift exchange dynamic, “that is, workers work harder to reciprocate for the gift of control over their work their employers have given them; or because workers are better able to work harder and longer due to being able to work when they want; or because of employer enforcement of work intensity through the back door.” Following from this, we expect greater cultural barriers to working from home in workplaces with high-performance work cultures, where working from home can be used only to coordinate work and basic family responsibilities, and users are required to signal their career ambition by increasing their accessibility and availability for work. Thus, we hypothesize:

Hypothesis 2 (high-performance work culture hypothesis): Cultural barriers to working from home are greater in workplaces with a high-performance work culture that exaggerates the ideal worker norm.

On the other hand, previous research has identified deviations from the ideal worker norm with family-friendly workplace cultures where supervisors and co-workers support the work-life integration of employees, or where employers invest in flexible workplace arrangements and additional leave and childcare arrangements (Abendroth/Reimann 2018; Kossek et al. 2010; Den Dulk 2001). Family-friendly workplace policies have been attributed to economic reasoning, whereby employers perceive benefits in investing in the employability of their employees (Den Dulk 2001). In addition, from a neo-institutionalist perspective, it has been argued that increased pressure from the organizational environment encourages work organizations to at least present themselves as family-friendly in order to gain external legitimacy (Den Dulk 2001). First evidence shows that work-family support by supervisors can protect employees from implications of working from home for work-life conflict (Abendroth/Reimann 2018; Blair-Loy/Wharton 2002). We assume that work-family support from supervisors and co-workers indicates an alternative perception of an ideal worker, where family obligations are not perceived as detrimental to productivity, and that this alternative perception diminishes cultural barriers to working from home. Moreover, audits of the family-friendliness of the organization at least legitimize claims regarding working from home. We hypothesize:

Hypothesis 3 (work-life support hypothesis): Cultural barriers to working from home are less pronounced in work-life-supportive workplaces.

2.3 Variation in Cultural and Technical Barriers across Occupations

Position in the organizational hierarchy has consequences for the negotiating power of specific groups of employees (for an overview, see Tomakovic-Devy/Avent-Holt 2019). Employees in high-status positions are perceived to be especially productive and more difficult to replace, which indicates that it is economically beneficial for employers to invest in the work-life satisfaction of these employees. Indeed, research has found that flexible workplace arrangements such as working from home are granted especially to high-status employees rather than to all employees (e.g., Felstead et al. 2002; Golden 2008). However, those in high-status positions (e.g., managers) are also more likely to work from home to get more work done (Mokhtarian/Bageley 1998), as these positions involve high work demands and long working hours (Cha/Weeden 2014). This indicates that, in high-status positions, working from home is likely to be used to combine basic family demands and high work demands (see also Abendroth/Reimann 2018). Moreover, for managers, working from home is “less of a noticeable departure from the status quo,” because they may be managed remotely themselves (Mokhtarian/Bageley 1998, p. 1121). As a consequence, cultural barriers to working from home in high-status positions are likely to be weaker because working from home is used to meet high work expectations. Thus, we hypothesize:

Hypothesis 4a (hierarchical segregation hypothesis): Employees in management positions are less likely to perceive cultural barriers to working from home.

However, jobs vary not only in terms of status but also in terms of the feasibility of doing parts of the job at home (Brenke 2016; Golden 2008). Production work is still performed at specific sites in the work organization. However, in the future, remote control and other digital developments might allow production workers to remotely control and coordinate the work of machines from home. At present, working from home is more likely to be possible for employees in marketing, public administration, and business and financial services (Brenke 2016). We hypothesize:

Hypothesis 4b (vertical segregation hypothesis): Employees working in production are more likely to perceive working from home to be unsuitable for their jobs.

2.4 Variation in Cultural and Technical Barriers between Men and Women

Men and women are segregated in different occupations, with men being more likely to occupy high-status positions (horizontal gender segregation; e.g., Busch/Holst 2011; Cha/Weeden 2014). This indicates that men experience less cultural barriers to working from home, as these positions are characterized by greater negotiating power and high work demands, and as elaborated above working from home is more likely to meet high work expectations. Besides the horizontal segregation of the labor market, existing research further highlights its vertical segregation, with men being more

likely to work in production and women in services and sales. In 2017, less than 14 percent of employees in production jobs in Germany were women (Institute for Employment Research, IAB 2018). As production work can rarely be performed from home, we expect that perceived job unsuitability of working from home is more likely to apply to men. Following from this, we hypothesize:

Hypothesis 5a (horizontal gender segregation hypothesis): Men are more likely than women to experience job unsuitability of working from home; this is due in part to horizontal gender segregation.

Hypothesis 5b (vertical gender segregation hypothesis): Women are more likely than men to experience cultural barriers to working from home; this is due in part to vertical gender segregation.

Irrespective of occupational gender segregation, existing research indicates that women are more likely to work from home to better combine work and family life, whereas men are more likely to fulfill high work demands with the help of working from home (Lott 2018). This can be explained by prevailing patterns of the gendered division of work, where women are still predominantly responsible for childcare and household tasks (Dechant/Blossfeld 2015; Trappe et al. 2015). On the one hand, this indicates that due to greater family responsibilities it is more difficult for women to signal high accessibility and availability when working from home. On the other hand, statistical theories of discrimination in the labor market (e.g., Phelps 1972) and theories on gender as a status characteristic (Ridgeway/Correll 2004; Tomaskovic-Devey/Avent-Holt 2019) have been used to argue that women in general are perceived to be more family-oriented due to the gendered division of labor (Correll et al., 2007; England 1994 2010; Oakley 2000; Phelps 1972; Reskin 2000; Ridgeway/Correll 2004). More specifically, research on gender as a status characteristic indicates that people tend to categorize others according to gender, and that assumed gendered skills and status perceptions consciously or unconsciously shape their judgments and behavior (Ridgeway/Correll 2004; Risman 2004). As a consequence, we expect that irrespective of occupational gender segregation women are more likely to experience cultural barriers to working from home because they are less able to signal high career ambition in exchange for the “gift of control over their work” (Chung 2019, p. 25), and because stereotypes of being less career-oriented due to working from home are especially likely for women. Chung and van der Horst (2018) also suggest that the flexibility stigma is gendered. We hypothesize:

Hypothesis 6 (gendered stereotype hypothesis): Women are more likely to experience cultural barriers to working from home irrespective of occupational gender segregation.

3 Empirical Strategy

3.1 Data and Sample

The data for the present study are drawn from the second wave of the absolutely anonymized Campus File of the Linked Personnel Panel (LPP). The data was accessed via a campus file, which was made available via the research data centre of the Federal Employment Agency in the Institute for Employment Research (IAB) in Germany (Frodermann et al. 2017). The second wave was conducted in 2014–15. The LPP is a representative panel study of German establishments with 50 employees and more in the industry and service sectors. Data are collected for employees and establishments; the individual and establishment data are linked to form the dataset “Linked Employer-Employee Data of the IAB” (LIAB). The main focus of the LPP is on human resource management, workplace culture, and management instruments. In the first wave, conducted in 2012–13, 1,219 establishments and 7,508 employees were observed. They were then followed, where possible, in the years 2014–15; (771 establishments and 7,282 employees), 2016–17 (846 establishments and 6,779 employees), and 2018–19 (not yet available).

The reasons for not working from home were observed in the second and third waves of the LPP. Due to the relatively high panel attrition among establishments and employees in the third wave, data from the second wave, conducted in 2014–15, were used in the present study. German working time regulations did not undergo considerable change between 2014–15 and 2016–17, either at state level or in collective agreements. Although using data from 2014–2015 may raise questions regarding the currency of our findings, we would argue that they are still highly relevant because, first, technological advances in the past four to five years have not been so dramatic that working from home has since become more feasible in workplaces in production, for example; and, second, the pace of change in workplace cultures is rather slow. In the second wave of the LPP, 1,777 employees were observed who provided valid information on reasons for not working from home and for whom the explanatory variables and covariates of the analysis were observed. The age range was 18 to 64 years, thereby including all employees below statutory retirement age (65 years).

3.2 Measurement of the Reasons for Not Working from Home

Employees who reported that they did not work from home were asked what their reasons were for doing so. They were presented with a list of seven possible reasons for not working from home, and requested to indicate in each case whether that reason applied (1) or did not apply (0) to them. Interviewees could agree to more than one of the seven statements. Because the present study focused on cultural barriers to working from home, limited access to working from home, and the unsuitability of working from home in some workplaces, the statements that could not be assigned

to these reasons were not included in the factor analysis. The excluded statements were “I do not work from home because I want to separate work and private life,” and “I do not work from home because it makes cooperation with my colleagues difficult.” The latter statement is ambiguous in that it can mean either that working from home is not tolerated/supported in the workplace or that it actually hampers cooperation. The following reasons were chosen for the factor analysis:

I do not work from home

- because I am not allowed to, although it would be technically feasible.
- because the technical prerequisites do not exist.
- because I cannot perform my professional activity at home.
- because my supervisors attach great importance to presence in the workplace.
- because I fear that my promotion prospects would suffer as a result.

For the descriptive analysis, the survey questions as to whether employers offered working from home (0 = no; 1 = yes) and whether employees used working from home (0 = no; 1 = yes) were also included.

3.3 Measurement of a High-Performance Work Culture

In a high-performance work culture, it can be expected that particularly high-performing employees, or employees who signal high performance by working long hours or being present in the workplace, will be promoted independent of professional criteria or actual performance. A high-performance work culture was measured with two indicators for employees' perception of the promotion criteria in their establishment that are collected in the LPP Employee Survey: “In our establishment, the employees who are promoted are generally those who have particularly distinguished themselves by their performance,” and “In our establishment, promotions are not generally based on professional criteria or performance.” Respondents could choose one of the following options: completely agree, mostly agree, undecided, mostly disagree, completely disagree. Because there were only a few observations for some of these categories, the variables were coded with agree (1 = completely agree/mostly agree) and disagree (0 = all other categories). Two indicators for work-life support at the workplace were also used: perceived managerial support and company-level auditing and certification processes. Perceived managerial support is a crucial resource for employees' use of flexible work arrangements (Den Dulk et al. 2011). It was measured with a sum index of the following two statements with the response options completely agree, mostly agree, undecided, mostly disagree, and completely disagree: “Supervisors show understanding for their staff,” and “Supervisors show that they trust their staff.” Establishments that participate in auditing and certification processes do so with the aim of improving process quality, work-life balance, health management and/or the quality of the workplace. In doing so, they might also

weaken an ideal worker culture. In the LPP Establishment Survey, auditing and certification processes are measured with the question “Does your establishment participate in voluntary auditing and certification processes?” This variable was used as a dummy variable.

3.4 Horizontal and Vertical Segregation

The horizontal segregation of workplaces was measured with the proxy variable for occupations (1= production; 2 = sales/marketing; 3 = cross-divisional function/administration; 4 = services). Vertical segregation was measured with the two proxy variables: management position (0 = no, 1 = yes) and status position (0 = blue-collar worker, 1 = white-collar worker) and pre-tax monthly wages (continuous variable).

3.5 Covariates

In order to estimate effects that are not biased by employees' workplace characteristics, covariates had to be included in the model. Because part-time employees are often stigmatized in the workplace, and employees who work overtime are perceived to be “ideal workers” (Williams et al. 2013; Lott/Klenner 2018), contractual working time and overtime hours (continuous variables) were controlled for. At German workplaces with collective agreements for example, in the industry sectors employees who are paid above the collectively agreed pay scale generally work in the highest status positions, and employees in higher status positions more often have access to flexible work arrangements (Lott/Chung 2016). A dummy variable therefore controlled for whether or not employees received non-collective pay. As employees with fixed-term contracts are often excluded from general work arrangements (Felstead et al. 2002), a dummy variable was used to control for whether employees had a permanent contract.

Various establishment characteristics were taken into account. Flexible work arrangements are offered mainly in larger establishments (Brenke 2016), and may also be more common in large, powerful establishments in industry sectors such as the automotive industry, which is located in specific regions in Germany, especially in the south. In addition, access to flexible work arrangements depends also on the sector (Chung 2019). We therefore controlled for the size of the establishment (1 = 0–99 employees; 2 = 100–249 employees; 3 = 250–499 employees; 4 = 500 and more employees); the region (1 = North; 2 = East; 3 = South; 4 = West); and the sector based on the German Classification of Economic Activities, issue 1993 (WZ 93; 1 = manufacturing industries; 2 = metal/electronics/automotive industries; 3 = retail/transport/media sectors; 4 = business services/financial services; and 5 = information, communications, other services).

Moreover, because the household context can also bias the reasons for not working from home, a number of household characteristics were considered. Employees especially women who have (very young) children, or who have live with a partner and are expected to have children, might be highly

stigmatized in the workplace. Thus, the analysis took into account whether employees lived with a partner (0 = no and 1 = yes) and whether they had children (0 = no children; 1 = one child; 2 = two children; and 3 = three and more children). The age of the youngest child was taken into account with two dummy variables (0–3 years and 4–5 years).

Because senior employees might perceive less cultural barriers than entry-level staff, and because employees with a migration background might perceive cultural barriers to a greater degree than employees without a migration background, the analysis took age (continuous variable) and migration background (0 = no and 1 = yes) into account. Finally, as the implications of flexible work arrangements differ between educational groups (Fuller and Hirsh 2019), we controlled for education (1 = primary school; 2 = secondary education; 3 = university or university of applied sciences). Table A1 in appendix A gives an overview of all the variables used in the analyses.

3.6 Econometric Strategy

In order to regroup the statements on the reasons for not working from home into a limited set of constructs, exploratory factor analysis specifically, principal factor analysis with orthogonal rotation was performed, (Yong/Pearce 2013). Factor analysis was also used in the present study in order to deal with the fact that respondents could give multiple responses to the question about reasons for not working from home. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) was used to assess the appropriateness of using factor analysis on the data (Kaiser/Rice 1974). The minimum threshold of the MSA is 0.5 (Hair et al. 2006). An MSA value higher than 0.5 indicates that the sample is appropriate for factor analysis. As the latent root criterion is the most common factor to determine the number of extracted factors (Hair et al. 1998), it was applied in the present study. The extracted factor scores at the individual level were used as the dependent variables in the multivariate linear regression analyses. Because observations were clustered in establishments, robust standard errors at the establishment level were estimated.

Table 1: Reasons for not working from home
Percentages of employees who agree to the statements

	All	Men	Women	Chi-Squared Test for gender differences
Working from home not allowed, but technically feasible	14.31	11.86	22.01	***
Working from home technically unfeasible	58.23	59.21	55.16	(+)
Working from home unsuitable for the job	77.85	81.89	65.13	**
Presence in the workplace important to supervisors	69.32	69.02	70.26	*
Working from home not used because of fear that promotion prospects would suffer	5.59	5.34	6.40	*

Note: Percentages of employees who agree to the statements (weighted with cross-section weight); N = 1,777.

*** p < 0.001; **p < 0.01; *p < 0.05; +p < 0.10.

Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

4 Results

In 2014, half of the observed establishments (51%) offered working from home, but less than a quarter of employees (around 22%) said that they worked from home. As can be seen from Table 1, perceived job unsuitability and expected presence in the workplace were the main reasons for not working from home. Almost 78% of employees indicated that they did not work from home because they could not perform their professional activities at home; 69% reported that their supervisors attached great importance to presence in the workplace. Working from home was perceived to be technically unfeasible by 58% of the employees. Only a small percentage of employees stated that they did not work from home because working from home was not allowed (14%) or because they feared that working from home would harm their promotion prospects (almost 6%). Interestingly, 22% of female employees compared to around 12% of male employees indicated that working from home was not allowed, although it would have been technically feasible.

Men work from home more often than women (24% vs. 16%). Table 1 provides insight into the reasons for this gender gap in working from home. Slightly more women than men perceived working from home to be detrimental to their career prospects (69% vs. 70%) and indicated that presence in the workplace was of great importance to their supervisors (5% vs. 6%). These gender differences are small, but according to the chi-squared test they are statistically significant. Perceived job unsuitability of working from home was more common among male employees (almost 82%) than female employees (almost 65%).

Table 2: Total variance explained

Component	Initial	% of variance	Cumulative %
	Eigenvalue		
Factor 1	1.48	29.77	29.77
Factor 2	1.16	23.29	53.06

Note: Principal factor analysis with orthogonal rotation; N = 1,777.

Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

WSI

Table 3: Rotated component matrix

Components (5)	1	2
Working from home not allowed, but technically feasible	(-)0.652	
Working from home technically unfeasible	0.651	
Working from home unsuitable for the job	0.796	
Presence in the workplace important to supervisors		0.746
Working from home not used because of fear that promotion prospects would suffer		0.682

Note: Principal factor analysis with orthogonal rotation; N = 1,777.

Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.



4.1 Factor Analysis

Factor analysis was carried out on the five reasons for not working from home in order to test whether they could be clustered. The MSA of the factor analysis was 0.54. The sampling adequacy was mediocre, but factor analysis was still appropriate for the data. Two factors were extracted. Table 2 shows the percentage variance accounted for by each factor. Both factors had an eigenvalue higher than 1. The total variance explained was 53%. Table 3 shows the variables loading on each of the components, which produced the following factors: (1) perceived job unsuitability of working from home and (2) perceived cultural barriers to working from home. The factor analysis confirms Hypothesis 1: Employees do not work from home when the work could be performed at home due in part to perceived cultural barriers.

4.2 Multivariate Analyses

The extracted factors were used as dependent variables in multivariate regression analyses. It was assumed that employees would perceive cultural barriers mainly in workplaces with a high-performance work culture, and that work-life support in the workplace would reduce perceived cultural barriers. Table 4 shows the results of the multivariate regression analyses for the role of a high-performance work culture and work-life-supportive workplace measures. The extent to which employees perceived cultural barriers to working from home was higher at workplaces where employees indicated that particularly high performance was crucial for promotion and/or that promotion decisions were not based on professional criteria or performance. Both indicators were statistically significant at the 95% level. Hypothesis 2 is thus confirmed: A high-performance work culture is positively related to perceived cultural barriers to working from home.

Managerial support had no significant effect on perceived cultural barriers. Participation of the establishment in voluntary auditing and certification processes was negatively related to perceived cultural barriers to working from home. The effect was statistically significant at the 90% level. Thus, em-

employees who worked in establishments with voluntary auditing and certification processes perceived cultural barriers to working from home to a lesser degree. Hypothesis 3 is partly confirmed: Cultural barriers to working from home are less pronounced in work-life-supportive workplaces that participate voluntarily in auditing and certification processes.

Variations in perceived cultural barriers across workplace positions and occupations were also expected. The effects of management position on perceived job unsuitability and perceived cultural barriers were negative but statistically not significant. There was no support for Hypothesis 4a that employees in management positions are less likely to perceive cultural barriers. However, there was empirical evidence for H4b: Employees working in production jobs are more likely to perceive job unsuitability of working from home. All other functional areas were statistically significantly associated with perceived job unsuitability, and the effects were negative compared to production. Compared to employees working in production jobs, employees in all other occupations perceived job unsuitability to a lesser extent.

Table 4: Ordinary least squares (OLS) regression for perceived job unsuitability and perceived cultural barriers to working from home in a high-performance work culture and in workplaces with work-life support

	Perceived job unsuitability	Perceived cultural barriers
High-performance work culture		
Promotion of particularly high performers	-0.078 (0.06)	0.108* (0.05)
Promotion independent of professional criteria/performance	-0.045 (0.05)	0.109* (0.05)
Work-life support		
Managerial support	0.007 (0.01)	-0.001 (0.01)
Auditing/certification processes	-0.055 (0.05)	-0.109+ (0.05)
Management position	-0.069 (0.05)	-0.016 (0.05)
Occupations		
Production	ref	ref
Sales/marketing	-0.310** (0.09)	0.035 (0.10)
Cross-divisional function/administration	-0.443*** (0.09)	0.073 (0.08)
Services	-0.166* (0.05)	-0.066 (0.06)
Constant	0.615 (0.45)	0.554 (0.51)
R ²	0.169	0.043
N	1,777	1,777

Note: OLS regression, robust standard errors in parenthesis. Dependent variables: perceived job unsuitability of working from home and perceived cultural barriers to working from home. Controlled for work characteristics (contractual working time, overtime hours, non-collective pay scale, fixed-term contract, horizontal and vertical segregation), establishment characteristics (sector, region, establishment size), household characteristics (living with partner, number of children, age of youngest child), and socio-economic characteristics (education, age, sex, migration background). *** p<0.001; **p<0.01; *p<0.05; +p<0.10.



Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

Table 5 shows the results of the effect of female workers on perceived job unsuitability and perceived cultural barriers. The coefficient was negative for women and statistically significant at the 99% level before controlling for vertical segregation (Model 1), and at the 95% level when vertical segregation was taken into account (Model 2). Thus, men perceived job unsuitability of working from home more than women did. Vertical segregation mediated the negative effect of gender on perceived job unsuitability only to a small extent; the effect size was -0.142 when vertical segregation was taken into account in Model 2 as opposed to 0.204 without vertical segregation in Model 1. The analysis revealed that the effect was driven mainly by horizontal segregation. When occupations were introduced in Model 3, the effect was not statistically significant, and the effect size was relatively small (-0.090). Due to horizontal gender segregation, men perceived job unsuitability of working from home more than women. Hypothesis 5a is therefore confirmed: Men are more likely than women to experience job unsuitability of working from home, and this is due in part to horizontal gender segregation.

Gender differences were also expected for perceived cultural barriers to working from home. The results show that female workers perceived cultural barriers to working from home more than men did (Table 6). The effect for female workers was positive and statistically significant at the 99% level across all models. When the indicators for vertical segregation were introduced in Model 2, the effect for women was still statistically significant at the 99% level, and the effect size was comparable to that in Model 1. Hypothesis 5b is not confirmed: Women are not more likely than men to experience cultural barriers due to vertical gender segregation. When we controlled for horizontal segregation in Model 3, the effect size (0.179) was slightly smaller than that in Model 1 (0.191). The effect of female gender on perceived cultural barriers was mediated only weakly by horizontal segregation. Thus, women perceived cultural barriers to working from home to a greater degree than men, and this effect was independent of horizontal and vertical segregation. Hypothesis 6 is confirmed: Women are more likely to experience cultural barriers to working from home irrespective of occupational gender segregation.

Table 5: OLS regression for perceived job unsuitability of working from home

	Model 1	Model 2	Model 3	Model 4
Female workers	-0.204** (0.06)	-0.142* (0.06)	-0.090 (.06)	-0.078 (0.06)
White-collar worker		-0.458*** (0.04)		-0.356*** (0.05)
Management position		-0.051 (0.05)		-0.061 (0.05)
Pre-tax wages (ln)		-0.004*** (0.00)		-0.005*** (0.00)
Functional areas				
Production			ref	ref
Sales/marketing			-0.447*** (.09)	-0.302** (0.09)
Cross-divisional function/administration			-0.611*** (.08)	-0.440*** (0.09)
Services			-0.191*** (.05)	-0.114* (0.05)
Constant	0.546 (0.46)	0.676 (0.45)	0.573 (0.45)	0.645 (0.44)
R ²	0.107	0.152	0.140	0.167
N	1,777	1,777	1,777	1,777

Note: OLS regression, robust standard errors in parenthesis. Dependent variable: perceived job unsuitability of working from home. Controlled for work characteristics (contractual working time, overtime hours, non-collective pay scale, fixed-term contract), establishment characteristics (sector, region, establishment size), household characteristics (living with partner, number of children, age of youngest child), and socio-economic characteristics (education, age, migration background). *** p<0.001; **p<0.01; *p<0.05; +p<0.10.



Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

Table 6: OLS regression for perceived cultural barriers to working from home for women and men

	Model 1	Model 2	Model 3	Model 4
Female workers	0.191** (0.065)	0.195** (0.06)	0.176** (0.06)	0.179** (0.06)
White-collar worker		-0.024 (0.05)		-0.042 (0.05)
Management position		-0.007 (0.05)		-0.006 (0.05)
Pre-tax wages		0.001* (0.057)		0.001* (0.00)
Functional areas				
Production			ref	ref
Sales/marketing			0.042 (0.10)	0.060 (0.10)
Cross-divisional function/administration			0.074 (0.08)	0.095 (0.08)
Services			-0.063 (0.06)	-0.053 (0.06)
Constant	0.563 (0.514)	0.582 (0.51)	0.562 (0.51)	0.588 (0.51)
<i>R</i> ²	0.035	0.035	0.036	0.037
<i>N</i>	1,777	1,777	1,777	1,777

Note: OLS regression, robust standard errors in parenthesis. Dependent variable: perceived cultural barriers to working from home. Controlled for work characteristics (contractual working time, overtime hours, non-collective pay scale, fixed-term contract), establishment characteristics (sector, region, establishment size), household characteristics (living with partner, number of children, age of youngest child), and socio-economic characteristics (education, age, migration background). *** p<0.001; **p<0.01; *p<0.05; +p<0.10.

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Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

5 Conclusion and Discussion

High expectations have been formulated with regard to an increase in flexible working due to digital technologies. However, not all employees have access to flexible work arrangements or make use of these arrangements when they are available. The aim of the present study was to shed light on the group of non-users of flexible work arrangements specifically, working from home. We asked to what degree cultural barriers contribute to not working from home and technical barriers. Following existing research highlighting the norm of an ideal worker in many workplaces, we investigated the role of cultural as opposed to technological barriers to working from home. As adherence to the ideal worker norm has been found to vary across workplaces and occupations and to be gendered, we further investigated variation in cultural and technical barriers across workplaces and occupations and between men and women.

We conclude that, besides job unsuitability of working from home (also because the technical prerequisites are lacking) and limited access to working from home, employees perceive cultural barriers to working from home that

is, they fear career penalties, and/or their supervisors attach great importance to the physical presence of staff in the workplace. We found that the perceived cultural barriers prevailed especially in high-performance work cultures. However, work-life support at the workplace specifically, participation of the enterprise in voluntary auditing and certification processes weakened perceived cultural barriers. Furthermore, women perceived cultural barriers to working from home more than men. This finding confirms previous studies (Mann et al, 2000; Mokhtarian et al. 1998; Pratt 1984). However, the present study further showed that this gender difference is independent of employees' status position. Moreover, women stated more often than men that working from home was not allowed, although it would have been technically feasible. Finally, men reported more often than women that their jobs were unsuitable for working from home. Our analyses indicate that this was due mainly to the horizontal segregation of the labor market and to the fact that men work more often in production jobs than women.

All in all, the results show that men and women at the same workplaces come to the same conclusion regarding the technical feasibility of working from home, but that all else being equal women more than men fear being sidelined if they make use of it. Men are held back from working from home by job characteristics (e.g., they cannot assemble cars at home); cultural barriers make women wary of working from home, even when working from home is technically feasible.

The present study has several theoretical implications. The fact that cultural barriers were found to be a major reason for not working from home indicates that individuals who work from home are a selective group of individuals who do not fear career penalties or the lack of visibility to management and who might have good reasons for doing so, for example, because their workplaces have a work-life supportive work culture. Thus, recent studies based on individual who worked from home might have underestimated the negative career consequences of working from home and especially the negative career consequences for women, who more often than men forgo the possibility of working from home. Future research must therefore take into account selection into working from home on the level of the individual and the workplace. Longitudinal data and methods that account for selection bias are needed.

The present study further indicates that the reasons for not working from home are linked to gender inequality. Stigmatization of employees who make use of flexible work arrangements is more prevalent for women than men (Leslie et al. 2012; Lott/Chung 2016; Munsch 2016), and, as a consequence, women work from home less often, because they fear career penalties and/or experience that their supervisors expect physical presence in the workplace. The descriptive analysis further showed that women stated far more often than men that working from home was technically feasible but not allowed. Thus, women experience inequality in two ways: for them, working from home is either not allowed or, if it is allowed, they often forgo this option because they fear stigmatization and impairment of their promotion prospects. These results indicate not only that flexibility is gendered in the way that women and men make use of flexible work arrangements for

different purposes (Kim 2018; Kurowska 2018; Lott 2019), but also that the non-use of flexibility is gendered at least in the case of working from home.

The present study also has political implications. In Germany, the right to work from home is currently being discussed. Some political parties and the German Trade Union Federation have expressed the view that employees should be granted a statutory right to work from home (or elsewhere) in order to support them in achieving a better work-life balance. The results of the present study support the implementation of such a right. A right to work from home (or elsewhere) would be beneficial for those employees for whom working from home is currently not allowed. According to our analyses, this group though not a majority still constitutes a considerable percentage of the working population. Moreover, such a right could support those employees who forgo the option to work from home because of cultural barriers. A right to work outside the workplace would help to legitimize flexible working and strengthen employees' bargaining position vis-à-vis their supervisors or employers. It would also support gender equality because it is mainly women who are not allowed to work from home or who forgo the option to work from home because of cultural barriers. As women are still responsible for the lion's share of housework and childcare, the right to work from home is important also with regard to the unequal allocation of unpaid work between women and men. Women are particularly in need of support for work-life balance, and working from home (or elsewhere) can help them to combine work and family. Finally, legitimizing working from home as a work-life balance policy by making it a statutory right could also encourage men to work from home for work-life balance purposes instead of using it to work longer and more intense hours, which again contributes to gender inequality (Lott 2019; Lott/Chung 2016). In order to avoid a situation where a statutory right to work from home creates "new" inequalities for employees whose work cannot be performed outside the workplace, employers could offer these employees compensation, for example, in the form of more flexible schedules.

The limitations of the present study should be briefly mentioned. Because small establishments (with less than 50 employees) are not represented by the LPP data, and flexible working is accessible to employees in small establishments less often than in larger establishments, not working from home due to restricted access or other barriers might be even more prevalent in the whole population in Germany. Future research should use data that are also representative of small establishments. Moreover, longitudinal data are needed in order to account for time-constant unobserved heterogeneity and to control for employees' selection into the group of individuals who do not work from home. In addition, cross-country comparisons would allow researchers to analyze whether the institutional context is crucial for the reasons for not working from home. Germany has relatively strong labor protection and collective bargaining, which strengthens employees' bargaining position. Moreover, regulation of working from home exists in many larger establishments in Germany. Thus, not working from home due to restricted access or cultural barriers might be even more pronounced in countries with liberal labor markets, where employees' bargaining position is weak.

Despite these limitations, the present study shows that, besides technical barriers, employees perceive cultural barriers to working from home. This is due to the ideal worker culture, and is especially pronounced in a high-performance work culture. The present study also shows that the reasons for not working from home is gendered, and that it is mainly women for whom working from home is not allowed or who perceive cultural barriers to working from home. Strengthening employees' opportunities to work from home (or elsewhere) therefore contributes to social equality in general and to gender equality in particular.

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Appendix

Table A1: Variables included in the analyses

	Percent/Mean(*)	SD	Min	Max
Working from home not allowed, but technically feasible	15.98		0	1
Working from home unsuitable for the job	76.53		0	1
Working from home technically unfeasible	57.17		0	1
Presence in the workplace important to supervisors	70.39		0	1
Working from home not used because of fear that promotion prospects would suffer	7.37		0	1
Promotion independent of professional criteria/performances	27.79		0	1
Promotion of particularly high performers	54.41		0	1
Managerial support	7.54(*)	1.80	2	10
Auditing/certification processes	76.70		0	1
White-collar worker	53.79		0	1
Leadership position	28.08		0	1
Functional areas			0	1
Production	50.37		0	1
Sales/marketing	7.87		0	1
Cross-divisional function/administration	11.98		0	1
Services	29.76		0	1
Contractual working time	36.12(*)	6.15	4	90
Overtime hours	3.29(*)	5.22	-50	40
Non-collective pay scale employees	17.72		0	1
Monthly wages	3511.54(*)	11900.31	399	500000
Fixed-term contract	1.03		0	1
Sector				
Manufacturing industries	32.86		0	1
Metal/electronics/automotive industries	41.19		0	1
Retail/transport/media sectors	10.69		0	1
Business services/financial services	10.35		0	1
Information, communications, other services	4.89		0	1
Region				
North	14.97		0	1
East	22.90		0	1
South	28.75		0	1
West	33.37		0	1

Note: N = 1,777.

Source: Authors' calculations based on data from the second wave of the Linked Personnel Panel (LPP) 2014–15.

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Authors:
Dr. Yvonne Lott
Hans-Böckler-Straße 39
40476 Düsseldorf
yvonne-lott@boeckler.de

Jun. Prof. Anja-Kristin Abendroth
Universität Bielefeld
Universitätsstraße 25
33615 Bielefeld
anja.abendroth@uni-bielefeld.de

Layout:
Daniela Buschke

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