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AT A GLANCE

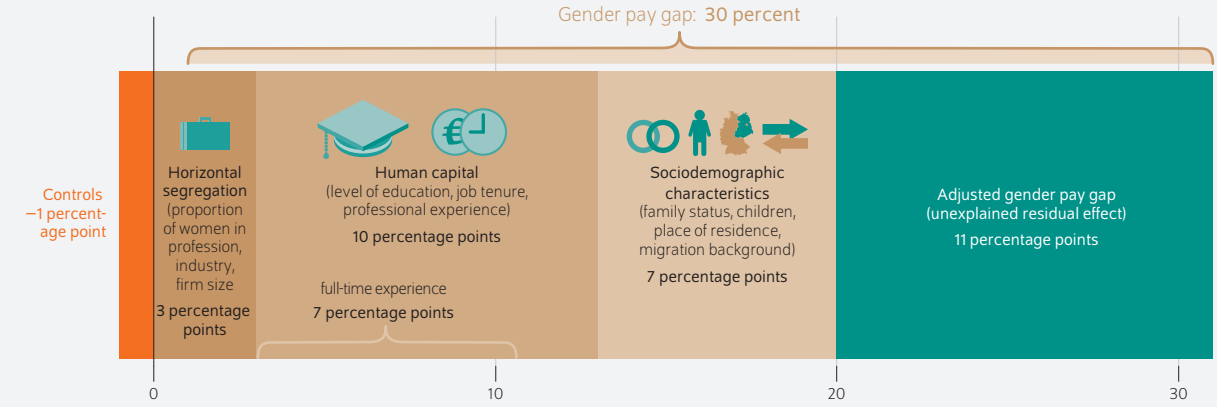
Differences in full-time work experience explain almost a quarter of the gender pay gap in management positions

By Elke Holst and Anne Marquardt

- The gender pay gap for full-time management positions in the private sector was 30 percent on average between 2010 and 2016
- Women in management positions had average gross hourly earnings of 20.60 euros, men 29.30 euros
- Full-time work experience explains seven percentage points—this is almost a quarter—of the gender pay gap
- Taking into account gender-specific differences in relevant wage determinants, an unexplained or adjusted gender pay gap of 11 percent remains
- Women and men need more working time sovereignty in their professional lives and a change in corporate culture to accommodate that

Differences in full-time work experience explain about a quarter of the gender pay gap in management positions

Decomposition of gender pay gap of women and men in full-time management positions in the private sector (2010–2016)



Sources: SOEP v33.1, authors' own calculations.

FROM THE AUTHORS

"Women who advance to management positions earn significantly less than men in those positions, largely due to differing levels of full-time work experience. Many women have worked part-time during their professional lives. Companies can counteract the resulting unequal career and earnings opportunities by giving both genders more time flexibility, especially during the rush hour of life. Doing so requires a real change in corporate culture."

— Elke Holst, study author —

Differences in full-time work experience explain almost a quarter of the gender pay gap in management positions

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ABSTRACT

Women still earn less than men on average in Germany. This applies to management positions even more: between 2010 and 2016, there was an average gender pay gap of 30 percent in gross hourly earnings. If gender-specific differences in relevant wage determinants are excluded, a pay gap of 11 percent remains. With seven percentage points, full-time work experience explains the gender pay gap to almost a quarter according to the present study based on data from the Socio-Economic Panel (Sozio-ökonomisches Panel, SOEP). In order to reduce the gender pay gap, measures are needed to counteract the large differences in working time between women and men throughout their working lives. An important step is more individual time sovereignty for both women and men in their jobs and a change in corporate culture to accommodate that.

In a 2015 European comparison, Germany ranked third last among the EU-28 countries with a total gender pay gap of 21 percent for all employees.[1] The average pay gap in gross hourly earnings in the European Union was 16 percent. This study examines the factors influencing the gender pay gap for those in *full-time management positions*,[2] building on earlier results regarding gender-related advancements in management positions. On average, 28 percent of those in management positions were women during the observation period of 2010 to 2016 in Germany. Management positions are defined using the 1988 International Standard Classification of Occupations (ISCO-88) (Box 1). The gender pay gap is calculated using the gross hourly earnings based on the actual hours worked by the employee, with only the *private sector* being taken into consideration.[3] The empirical evaluations are based on data from the Socio-Economic Panel (SOEP v33.1). In this analysis, the years 2010 to 2016 were pooled and examined in order to increase the number of cases, especially of women.

Women have almost three years of more part-time work experience

During the observation period, women in management positions earned an average gross hourly wage of 20.60 euros while men earned an average of 29.30 euros. The gender pay gap is thus 30 percent (Figure 1). Overall, the gross hourly earnings of both men and women increased during the observation period (Figure 2). The gender pay gap

1 Eurostat, *Gender pay gap* (2017) (available online; accessed July 11, 2018; this applies to all other online sources in this report unless stated otherwise). Here, the phrases "gender pay gap" and "earnings difference" are used synonymously.

2 Numerous studies have already analyzed earnings differences between employees, but only a few explicitly address the gender pay gap for those in management positions. For an analysis of the gender pay gap in management positions in Germany, cf. Elke Holst and Anne Busch, "Geschlechterspezifische Verdienstunterschiede bei Führungskräften und sonstigen Angestellten in Deutschland: Welche Relevanz hat der Frauenanteil im Beruf?" *Zeitschrift für Soziologie* 42, no. 4 (2013): 315–336 (in German). In this study, management positions were defined slightly differently according to seniority.

3 It can be assumed that the wage structures in the public sector deviate significantly from those in the private sector due to stronger collective wage agreements; cf. Bundesministerium für Familie, Senioren, Frauen und Jugend, *Der Verdienstunterschied von Frauen und Männern im öffentlichen Bereich und in der Privatwirtschaft. Ergebnisse des Projekts "Verdienstunterschiede zwischen Männern und Frauen" des BMFSFJ und des Statistischen Bundesamtes* (2009) (available online; in German); Christina Boll and Andreas Lagemann, "Gender Pay Gap im öffentlichen Dienst und in der Privatwirtschaft," *Ökonomische Trends* 7 (2018): 528–530 (in German).

Figure 1

Socioeconomic structure of women and men in full-time management positions in the private sector (2010–2016)
Means of weighted yearly results

Sources: SOEP v33.1; authors' own calculations.

On average, women in management positions are less frequently married, more often childless, and earn less than men.

Box 1

Data, definitions, and key variables

The calculations are based on data from the Socio-Economic Panel (SOEP), a longitudinal study.[1] The SOEP is a representative panel survey of private households in Germany, conducted annually since 1984 among the same persons and households. This analysis uses data from 2010 to 2016.

All full-time employees aged 18 to 64 working in the private sector were included in the study. What constitutes a full-time employee is determined via self-assessment from the persons surveyed. Excluded from the analysis are all marginally- or self-employed workers as well as employed persons in training, apprenticeships, pension, voluntary military service, participating in volunteer work in the social or environmental sector, federal volunteer service, and workshops for disabled people.

Definition and operationalization of management positions

Employees in management positions are defined according to the International Standard Classification of Occupations from 1988 (ISCO-88) in this study. Major group 1 is the only group included in the analysis. According to the ISCO-88 definition, employees in management positions are responsible for planning, directing, and coordinating the policies and strategies of companies and organizations or departments (as long as these departments require at least three or more managers).[2] Some employees in lower management positions could be included in major group 1 according to ISCO-88, partly due to the fact that the ISCO-88 includes supervisors in this group as well as due to the breadth of subgroup 13 "General Managers." Subgroup 13 includes managers of small businesses who run them independently (generally the self-employed). However, because the self-employed were not included in this evaluation, the analysis focuses primarily on senior management positions.[3]

Definition of horizontal segregation

Horizontal segregation was examined using three different variables. The **share of women in an occupation** provides information about occupational segregation—or, how "typically male" or "typically female" a profession is. In the annual sample census, the respective share of women in an occupation was determined per profession using the Federal Statistical Office's occupational classification (version 1992, three-digit). These job classification values were then transferred to SOEP. The share of women in occupations was additionally divided into three categories in the descriptive overview to provide an overall better overview. There are different thresholds for these categories in the literature. The variant from Jerry A. Jacobs was selected for the following analysis.[4]

1 Gert G. Wagner, Joachim R. Frick, and Jürgen Schupp, "The German Socio-Economic Panel Study (SOEP)—Scope, Evolution and Enhancements," *Schmollers Jahrbuch* 127, no. 1 (2007): 139–169.

2 ILO, *ISCO-88, Summary of Major Groups* (2016) (available online).

3 For a more in-depth discussion on the definition and operationalization of management positions, cf. Thomas Körner and Lisa Günther, "Frauen in Führungspositionen. Ansatzpunkte zur Analyse von Führungskräften in Mikrozensus und Arbeitskräfteerhebung," *Wirtschaft und Statistik* (May 2011): 434–451 (in German).

4 Jerry A. Jacobs, *Revolving Doors. Sex Segregation and Women's Careers* (Stanford: Stanford University Press, 1989).

fluctuated considerably during the observation period due to the low number of cases. For this reason, the data for the entire period were pooled in order to raise the number of cases.

Using descriptive findings on the socio-economic structure of women and men working full-time in management positions, the first possible causes of the average pay gap between 2010 and 2016 were identified. First, men in management positions are somewhat more likely to have attained a higher level of education. Additionally, they had worked full-time for around six years longer than women on average and had worked for a single company almost four years longer—three years of which can be attributed to the somewhat older average age of men (45 vs. 42 years old). Women have more part-time work experience with almost three years, whereas men have worked part-time for less than one year. Moreover, employees in management positions are usually expected to be willing to work long hours and at 49 hours per week, the actual working hours of men were three hours longer than those of the comparable group of women. Long working hours restrict time sovereignty, for example for household and family management duties; this may be a reason why women in management positions are less often married than their male counterparts and less frequently live in a household with children under 16.

The gender-specific distribution of full-time employees in management positions across different company sizes is very similar: around one third each of men and women in management positions work for a company with over 2,000 employees. There are obvious differences in economic sectors: almost half of women in management positions work in the trade, transportation, or storage industries compared to just a quarter of men. Men in management positions most frequently work in the manufacturing industries.

The German labor market is generally characterized by high horizontal segregation.[4] In comparison to typical male occupations, there are comparatively fewer management positions

4 Cf. Anne Busch, *Die berufliche Geschlechtersegregation in Deutschland. Ursachen, Reproduktion, Folgen* (Wiesbaden: Springer VS, 2013) (in German); Katharina Wrohlich and Aline Zucco, "Gender pay gap varies greatly by occupation," *DIW Economic Bulletin*, no. 43 (2017): 955–961 (available online).

Accordingly, occupations with a share of women from zero to 30 percent are categorized as "male-dominated occupations" and those with a share of women between 70 and 100 percent are "female-dominated occupations." Occupations with a proportion of women between 30 and 70 percent are considered "mixed-gender occupations."

The **size of the company** is a further segregation variable. Companies are split into four different categories based on the number of employees: fewer than 20 employees, 20 to 199, 200 to 1,999, and 2,000 or more.

Economic sector is the third variable used to represent horizontal segregation. The classification is based on the Statistical Classification of Economic Activities in the European Community (NACE), which is based on the ten national accounts aggregates. Due to limited case numbers, especially for women in management positions, the ten categories are combined into eight: for example, the manufacturing industry includes agriculture, forestry, and fisheries as well as mining and quarrying and other industries. The real estate sector is combined with financial and insurance services.

Dependent variable: gross hourly earnings

Logarithmic gross hourly earnings (ln) were used to measure factors influencing the gender pay gap and thus the earnings of women and men. The regression coefficients show the percentage change when the independent variable changes by one unit. Numerous studies use gross hourly earnings to calculate the gender pay gap. In the SOEP survey, respondents are asked about their gross earnings only for the month before the survey.

The gross monthly earnings were divided by the actual working hours to make use of the gross hourly earnings. An alternative operationalization of the hourly earnings would be possible using the contractual working hours. However, because those working in management positions often work overtime, actual working hours more realistically reflect hourly earnings.[5]

Although overtime payments are included in the figures for gross monthly earnings, special payments are not directly taken into account.[6] The amount of special payments is determined with a different question. Such payments include thirteenth and fourteenth salaries, additional Christmas bonuses, vacation pay, profit sharing, performance bonuses, and other additional payments. As a considerable portion of the earnings of those in management positions is determined by special payments, these amounts were converted to hours and offset against gross hourly earnings.

5 For employees overall, the results using actual or contractual working hours hardly differ. Cf. Christina Boll and Julian S. Leppin, "Die geschlechtsspezifische Lohnlücke in Deutschland. Umfang, Ursache und Interpretation," *Wirtschaftsdienst* 4 (2015) (in German; available online).

6 TNS Infratest Sozialforschung, "SOEP 2016 – Erhebungsinstrumente 2016 (Welle 33) des Sozio-oekonomischen Panels: Personenfragebogen, Stichproben A-L3," *SOEP Survey papers 345: Series A* (available online).

in jobs typically held by women.[5] Thus, promotion opportunities are much more limited. Previous studies have shown that part-time work reduces the chances of holding a senior management position significantly.[6] The question is if occupational gender segregation can contribute to explaining the gender pay gap among full-time employees in management positions.[7]

Full-time professional experience still a key factor explaining the gender pay gap

A linear regression (Box 2) was used to examine to what extent these structures actually contribute to the gender pay gap in management positions. Estimates were calculated separately for women and men (Table 1).

The ability to explain earnings increases significantly when human capital factors, social structure variables, and segregation variables in particular are all taken into consideration—for women as well as men (Models 1 to 6). As a human capital factor, full-time work experience strongly influences the earnings of those in management positions, and even more so for women than men: in the full model, every additional year of full-time work experience increases a woman's gross hourly earnings by a good four percent on average (Model 3), while men's are increased by three percent (Model 6). This suggests that earnings are less determined by having children and more by working or being able to work full-time on a permanent basis. The number of children in a household (up to 16 years old) positively correlates with income (Models 3 and 6).

Furthermore, it is demonstrated that the higher the share of women in an occupation, the lower the gross hourly earnings—to an even greater extent for women than for men.

Women as well as men in management positions at larger companies earn more than those at smaller companies. In a

5 Cf. Elke Holst and Martin Friedrich, "Women's Likelihood of Holding a Senior Management Position Is Considerably Lower than Men's—Especially in Financial Sector," DIW Economic Bulletin, no. 37 (2016): 449–459 (available online).

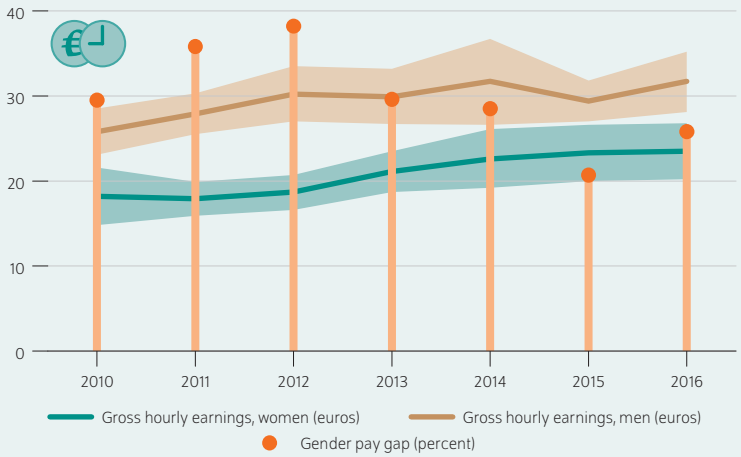
6 Cf. Holst and Friedrich, "Women's Likelihood of Holding a Senior Management Position."

7 Cf. Holst and Busch, "Geschlechterspezifische Verdienstunterschiede bei Führungskräften." No statistically significant effect on the proportion of women in management positions could be determined here.

Figure 2

Gross hourly earnings and gender pay gap of women and men in full-time management positions in the private sector (2010–2016)

Weighted average, in euros and in percent

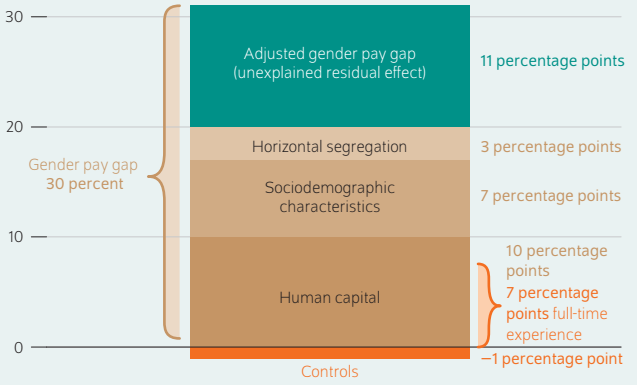


Sources: SOEP v33.1; authors' own calculations.

The gender pay gap in management positions has decreased since 2012.

Figure 3

Decomposition of gender pay gap of women and men in full-time management positions in the private sector (2010–2016)



Sources: SOEP v33.1; authors' own calculations.

Differences in full-time work experience explain about a quarter of the gender pay gap.

multivariate estimation, the trade, transportation, and storage industries are proving to be sectors with pronounced wage disadvantages. In comparison to other industries, those working in the manufacturing industry are paid the most, with the financial and insurance industry a (statistically significant) exception. There, the gross hourly earnings for men are a quarter higher than in the manufacturing industry and for women, 16 percent higher. Only for men the average earnings in professional, scientific, technical, administration and support service activities are statistically higher than in manufacturing industry. It should be noted that men's average gross hourly earnings are still generally higher than women's.

Furthermore, employees in management positions earn less in eastern Germany compared to western Germany. However, the difference of 29 percent is significantly lower for women than for men (43 percent).

Equal full-time work experience for men and women would reduce the gender pay gap by around a quarter

A Blinder–Oaxaca decomposition (Box 2) was used to determine the extent to which individual influencing factors can explain the gender pay gap (Table 2).

Almost a third of the total wage differential in management positions can be explained by differences in human capital endowment between women and men, including almost a quarter due to differences in full-time work experience, around five percent due to seniority, and around four percent due to educational level.

The gender pay gap is also affected by the sociodemographic characteristics: working in eastern or western Germany explains the gender pay gap by almost 12 percent.

Horizontal segregation explains a total of 12 percent of the different wages of women and men in management positions. In the industry comparison, this result is statistically significant for the trade, transportation, and storage industries in particular.

Horizontal segregation, or the share of women in a profession, does not play any statistically significant role in explaining the gender pay gap for those in full-time management positions. Further—unreported—estimates for those in non-management positions, on the other hand, show a significantly negative effect. This suggests that employees in management positions in female- and male-dominated occupations differ less in terms of qualification requirements and typically "female" household and family-based job content (work which usually goes hand in hand with social devaluation). The hierarchy of women and men in management positions is also likely to be less pronounced than among non-management positions. In this sense, the greater similarity between female- and male-dominated occupations in management positions helps to explain the insignificance of the share of women in an occupation.[8]

8 Cf. Holst and Busch, "Geschlechterspezifische Verdienstunterschiede."

Table 1

Determinants of gross hourly earnings (ln) of women and men in full-time management positions in the private sector (2010–2016)

Determinants	Women			Men		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Human capital						
Higher education attained (ISCED)	0.439***	0.485***	0.308***	0.405***	0.393***	0.281***
Full-time experience (in years)	0.0480***	0.0492***	0.0434***	0.0437***	0.0326***	0.0302***
Full-time experience (in years) squared	−0.00103***	−0.000991***	−0.000774***	−0.000831***	−0.000548***	−0.000460***
Part-time experience (in years)	−0.00641	−0.0104	0.00199	−0.0240	−0.0202	−0.000504
Part-time experience (in years) squared	0.00004	0.000147	−0.000553	0.00126	0.000982	0.0000611
Job tenure (in years)	0.00645	0.00823**	0.00379	0.0106***	0.00871***	0.00629***
Sociodemographic characteristics						
Married (reference: not married)		−0.0530	−0.0516		0.0722	0.0584
Number of children in household 16 years or younger		0.0226	0.0501*		0.0417**	0.0430***
Region: Eastern Germany (reference: western Germany)		−0.402***	−0.289***		−0.446***	−0.354***
Migration background (reference: no migration background)		−0.0572	−0.0527		−0.102**	−0.0729*
Horizontal segregation						
Share of women in occupation			−0.352***			−0.132*
Firm size (reference: fewer than 20 employees)						
20–199 employees			0.253***			0.361***
200–1999 employees			0.402***			0.344***
2000 employees or more			0.553***			0.520***
Economic sector (reference: manufacturing industry, etc.)						
Construction			0.0798			−0.0771
Wholesale and retail trade, transportation and storage, accommodation, and food service activities			−0.352***			−0.132***
Information and communication			−0.159			−0.00318
Financial and insurance activities, real estate activites			0.163*			0.249***
Professional, scientific, technical, administration, and support service activities			−0.0294			0.189***
Public administration, defense, education, human health, and social work activities			−0.00450			−0.0791
Other services			0.104			0.0461
Controls						
Imputed wages	✓	✓	✓	✓	✓	✓
Dummyset for years (2010–2016)	✓	✓	✓	✓	✓	✓
Constant	2.082***	2.168***	2.246***	2.313***	2.411***	2.241***
Observations	927	927	927	2.700	2.700	2.700
Sample size	440	440	440	1.128	1.128	1.128
R^2	0.220	0.297	0.503	0.201	0.274	0.403

Note: Cluster robust estimation of standard errors. Levels of significance : *** p<0.01, ** p<0.05, * p<0.1.
How to read this table: The number in row 2, column 3 means that each additional year of full-time work experience increases women's gross hourly earnings by 4.34 percent.

Sources: SOEP v33.1; authors' own calculations.

The gender pay gap of 30 percent (Figure 1) is reduced to 11 percent if, among other things, it is simultaneously controlled for human capital (ten percentage points), social structure (seven percentage points), and horizontal segregation (three percentage points) (Figure 3).

The current findings show that deviations from the ideal of a worker always available to work full-time—for example, by part-time episodes or employment breaks—result in considerable economic disadvantages for employees in management positions. The theory of *gendered organizations* explains this disadvantage by gendered structures in companies. These include typical "male" work time arrangements which shape the norm, especially for management positions (working overtime, constant availability, willingness to travel, and no break in employment history).[9] Furthermore, the *signaling theory* assumes that career-oriented employees signal their commitment to their employer by adhering to these norms.[10] Empirical studies show that high overtime requirements in particular have a positive impact on wages while a high rate of part-time work reduces wages on average.[11]

9 Cf. Joan Acker, "Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations," *Gender & Society* 4, no. 2 (1990): 139–158.

10 Cf. Martha S. Feldman and James G. March, "Information in Organizations as Signal and Symbol," *Administrative Science Quarterly* 26, no. 2 (1981): 171–186.

11 Cf. for example, Kathrin Leuze and Susanne Strauss, "Why do occupations dominated by women pay less? How 'female-typical' work tasks and working-time arrangements affect the gender wage gap among higher education graduates," *Work, Employment & Society* 30, no. 5 (2016): 802–820.

Box 2

Statistical methods

A linear regression was used to calculate the factors influencing the gender pay gap in management positions. A pooled model is estimated for the period of 2010 to 2016, making it possible to obtain a sufficiently high number of cases for the analysis models, especially for women in management positions. Within the pooled models, cluster-robust standard errors are used to check the estimated coefficients to ensure that the same people occur in several survey waves as the SOEP is panel data.[1]

A Blinder–Oaxaca decomposition was used in order to show what share of the gender pay gap overall can be explained by differences in individual characteristics. This divides the gender pay gap into an explained and unexplained part. For this purpose, separated wage regressions were initially estimated for men and women. The difference in average gross hourly earnings of men and women is then divided into two components, the endowment and residual effects. The *endowment effect* (explained effect) is that which is due to the mean differences between the sexes due to the independent variables included in the model. These are weighted with the corresponding regression coefficient of the men. The *residual effect* (unexplained part) is then due to different remuneration of the observed and non-observable variables. This residual effect is weighted with the mean value of the variables for women. As a rule, men are used as the reference category.[2] The remaining effect is also referred to as the "adjusted gender pay gap."

No corrections have been made for possible gender differences in the likelihood of taking on both full-time employment and a management position. As studies show, that can lead to an overestimation of women's earnings and thus an underestimation of the gender pay gap.[3]

1 A random effects regression was also estimated to verify the validity of the results. The results are similar to those in the pooled model.

2 Alan S. Blinder, "Wage Discrimination: Reduced Form and Structural Estimates," *The Journal of Human Resources* 8 (1973): 436–455; Ronald Oaxaca, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review* 14 (1973): 693-709. Cf. Claudia Finke, Florian Dumpert, and Martin Beck, "Verdienstunterschiede zwischen Männern und Frauen. Eine Ursachenanalyse auf Grundlage der Verdienststrukturerhebung 2014," *Wirtschaft und Statistik* 2 (2017): 43–62 (in German); Christina Boll et al., "Magnitude and Impact Factors of the Gender Pay Gap in the EU," *European Commission – Justice and Consumers* (2016).

3 Cf. Claudia Olivetti and Barbara Petrongolo, "Unequal Pay or Unequal Employment? A Cross-Country Analysis of Gender Gaps," *Journal of Labor Economics* 25, no. 4 (2008); Casey B. Mulligan and Yona Rubinstein, "Selection, Investment, and Women's Relative Wages Over Time," *The Quarterly Journal of Economics* 123, no. 3 (2008): 1061–1110.

Measures for reducing the gender pay gap in other European countries

To reduce the gender pay gap in management positions in Germany, it is important that politicians and companies create more time sovereignty for employees in all professions across all industries. Due to the longstanding large gender pay gap between women and men, it is necessary to implement laws which can contribute to long-term gender wage harmonization. Aside from the Act on Advancing the Transparency of Remuneration Between Women and Men (*Gesetz zur Förderung der Entgelttransparenz zwischen Männern und Frauen*, EntTranspG)[12] passed in 2017, the Act on the Appropriateness of Management Board Compensation (*Gesetz zur Angemessenheit der Vorstandsvergütung*, VorstAG),[13] focusing on the remuneration of executive board members, has been in effect since 2009 in Germany. This law should improve public transparency regarding compensation for executive board members. However, according to new studies, transparency alone is not sufficient to reduce the gender pay gap. For example, studies show that women in female-dominated occupations tend to compare themselves to other women, not men, and find their pay unfair less frequently than men.[14] This illustrates the importance of raising awareness of the mechanisms of the gender pay gap and increasing the financial value of work in female-dominated occupations.

Germany can learn from its European neighbors who have already adopted more far-reaching legal reforms concerning equal pay for women and men.[15] In the United Kingdom, companies with at least 250 employees have been required to disclose information on the gender pay gap since April 2018.[16] This information includes average hourly earnings, bonuses, and the share of women in individual income quartiles. In March 2018, the French government adopted a law to reduce the gender pay gap. Companies with 250 or more employees are now required to install a special software that measures the gender pay gap. By 2020, these regulations will gradually apply to smaller companies as well. Non-compliant companies will be required to pay a fine.[17] Since 2018, Iceland has expressly required employers with at least 25 employees to equally compensate women and men. A state certification body examines whether the company's remuneration

12 Bundesministerium der Justiz und Verbraucherschutz, *Gesetz zur Förderung der Entgelttransparenz zwischen Männern und Frauen (EntgTranspG) vom 30. Juni 2017* (2017) (in German; available online).

13 German Federal Gazette, *Gesetz zur Angemessenheit der Vorstandsvergütung (VorstAG) vom 31. Juli 2009* (in German; available online).

14 Cf. Peter Valet, "Social Structure and the Paradox of the Contented Female Worker: How Occupational Gender Segregation Biases Justice Perceptions of Wages," *Work and Occupations* 45, no. 2 (2018): 168–193.

15 For a further overview of legislation on equal pay in a European comparison, see Antidiskriminierungsstelle des Bundes, *Gleiche Arbeit, ungleicher Lohn? Zahlen und Fakten zu Entgeltungleichheit in Deutschland und Europa* (2018) (in German; available online).

16 For information on gender pay gap reporting in the United Kingdom, see Gender pay gap service, *Search Gender pay gap data* (2018) (available online).

17 Cf. Till Eckert, "In Frankreich werden Unternehmen jetzt bestraft, wenn sie Frauen weniger zahlen als Männern," *ze.tt*, March 8, 2018 (in German; available online).

Table 2

Determinants of gross hourly earnings (ln) of women and men in full-time management positions in the private sector (2010–2016)
Oaxaca- Blinder-Decomposition (Endowment effect and in percent)

	Endowment effect	In percent
Human capital		31.7
Higher education attained based on ISCED (=yes)	0.0140*	3.89
Full-time experience (in years)	0.1798***	50.00
Full-time experience (in years) squared	−0.0968**	−26.92
Note: Overall effect full-time experience		23.08
Part-time experience (in years)	0.0011	0.31
Part-time experience (in years) squared	−0.0012	−0.33
Note: Overall effect part-time experience		−0.03
Job tenure (in years)	0.0170**	4.73
Sociodemographic characteristics		24.05
Married (reference: not married)	0.0169	4.70
Number of children in household 16 years or younger	0.0255**	7.09
Region: Eastern Germany (reference: western Germany)	0.0418***	11.62
Migration background (reference: no migration background)	0.0023	0.64
Horizontal segregation		11.46
Share of women in occupation	0.0193	5.37
Firm size (reference: fewer than 20 employees)		
20–199 employees	−0.0026	−0.72
200–1999 employees	−0.0012	−0.33
2000 employees or more	0.0051	1.42
Economic sector (reference: manufacturing industry, etc.)		
Construction	−0.0019	−0.53
Wholesale and retail trade, transportation and storage, accommodation, and food service activities	0.0192**	5.34
Information and communication	−0.0000	0.00
Financial and insurance activities, real estate activites	0.0042	1.17
Professional, scientific, technical, administration, and support service activities	−0.0018	−0.50
Public administration, defense, education, human health, and social work activities	0.0017	0.47
Other services	−0.0005	−0.22
Controls		−3.31
Imputed wages	✓	
Dummyset for years (2010–2016)	✓	
Constant	−0.0055	
Men	3.2590***	
Women	2.8994***	
Wage differential	0.3596***	100
Endowment effect (overall)	0.2298***	63.90
Residual effect (overall)	0.1298***	36.10
Observations	3,627	

Note: Cluster robust estimation of standard errors. Levels of significance: *** p<0.01, ** p<0.05, * p<0.1.

Sources: SOEP v33.1; authors' own calculations.

system meets the state-defined standard and certified companies are listed in a public register.[18] This reversal of the burden of proof is also a step in the right direction for Germany.

Conclusion: More time sovereignty needed for working women and men

This report shows a gender pay gap of 30 percent on average in management positions in the German private sector between 2010 and 2016. A gender pay gap of 11 percent remains even when controlled for differences in wage determinants. Previous full-time work experience proved to be an important factor influencing the gender pay gap in management positions. This indicates that remuneration for management positions is still closely tied to the ideal of a full-time employee.

Therefore, it is essential to increase the flexibility of men's and women's career paths to reduce the gender pay gap in the long term. Corporate culture with regard to more time sovereignty for employees is needed in order to reduce the extreme demands on the time of men and women in

18 Cf. Antidiskriminierungsstelle des Bundes, "*Gleiche Arbeit, ungleicher Lohn?*"

management positions during their "rush hour of life." Temporary part-time work should not be a career killer. Rather, companies and politicians should embrace measures which enable improved reconcilability of career and family or private life in general. Couples dividing household work more fairly could contribute to a reduction in the significant employment differences between men and women as well. DIW Berlin is already headed in that direction with its suggestions for the *Familienarbeitszeit* model (family working-time benefits model),[19] expanding paternity leave,[20] ending joint taxation of married couples with full income splitting (*Ehegattensplitting*),[21] and quantitatively and qualitatively expanding daycare centers.[22]

19 Cf. Kai-Uwe Müller, Michael Neumann, and Katharina Wrohlich, "Familienarbeitzzeit Reloaded: Vereinfachung durch payschalierte Leistung und Flexibiliserung durch Arbeitszeitkorridor," DIW Politikberatung kompakt 105 (2015) (in German; available online).

20 Cf. Ulrike Unterhofer, Clara Welteke, and Katharina Wrohlich, "Elterngeld hat sozial Normen verändert," *DIW Wochenbericht*, no. 34 (2017): 659–667 (in German; available online).

21 Cf. Stefan Bach et al., "Ehegattenbesteuerung: Individualbestereung mit übertragbarem Grundfreibetrag schafft fiskalische Spielräume," *DIW Wochenbericht*, no. 13 (2017): 247–255 (in German; available online). In addition, it can be shown that there is a small difference in employment between men and women, especially when income is taxed separately. Cf. Lena Hipp and Kathrin Leuze, "Institutionelle Determinanten einer partnerschaftlichen Aufteilung von Erwerbsarbeit in Europa und den USA," *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 64, no. 4 (2015) (in German).

22 High-quality daycare centers are of great importance to parents when it comes to reconciling family and career. Cf. C. Katharina Spieß, "Betreuung in Kindertagseinrichtungen: Ein Bundesqualitätsgesetz muss her!" *DIW Wochenbericht*, no. 42 (2017): 950 (in German; available online); C. Katharina Spieß and Pia S. Schober, "Local day-care quality and maternal employment: Evidence from East and West Germany," *Journal of Marriage and the Family* 77, no. 3 (2015): 712–729; Sophie Schmitz, C. Katharina Spieß, and Juliane F. Stahl, "Day Care Centers: Family Expenditures Increased Significantly at Some Points between 1996 and 2015," DIW Economic Bulletin, no. 42 (2017): 411–423 (available online).

Elke Holst is a research director on the executive board and head of the Gender Studies Research Group at DIW Berlin | eholst@diw.de

Anne Marquardt is a student associate in the Gender Studies Research Group at DIW Berlin | amarquardt@diw.de

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www.diw.de
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