

# Are workers aware of the minimum wage level?

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baua: Focus

**Compliance has emerged as a major policy issue regarding minimum wages. We analyze data for approximately 6,000 workers from a representative survey to investigate awareness of the minimum wage among employees in Germany. We find that less than one-fifth of workers know the exact level of the statutory minimum wage. In particular, low-wage workers are less likely to be aware of the minimum wage level, even though the legal threshold should be a highly relevant reference point for them. To enhance compliance, information about the minimum wage should be improved, particularly in this labor market segment.**

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## 1 Introduction

Theoretical studies on the labor market usually discuss compliance with minimum wages based on a model trading off the net effect of gains from underpaying employees and the risks of detection (Ashenfelter and Smith 1979). Recently, minimum wage compliance has received increasing policy attention (see, for instance, ILO 2017; Low Pay Commission 2020). Policy papers identify several soft factors in addition to government enforcement that can help increase compliance, e.g., sufficient information and knowledge about the minimum wage or clarity and transparency about the applicable regulations (Benassi 2011).

This paper focuses on knowledge about the minimum wage among workers. We provide evidence based on a representative sample of 6,000 face-to-face interviews with employees in Germany. Germany introduced a statutory minimum wage, for the first time in its history, in 2015.

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The views expressed in this paper are those of the authors, and do not necessarily represent those of the Minimum Wage Commission.

At the time of its introduction, the minimum wage was set at a level of 8.50 euros and has been increased in four steps to its current level of 9.60 euros. The statutory minimum wage covers all employees, with few exceptions. These are youths under 18 years of age, apprentices, certain categories of trainees and interns, the long-term unemployed in their first 6 months after starting a new job and nonprofit and/or voluntary workers (see Bosch 2018 for a discussion of the institutional framework; Caliendo et al. 2019 and Bruttel 2019 for an overview on the economic effects of new minimum wage).

In working relationships, employees in the low-wage sector need to have basic knowledge about minimum wage regulations, in particular the minimum wage level, to be able to claim the wage to which they are entitled. To some extent, one can draw a link to the financial literacy literature (Lusardi and Mitchell 2014). The more individuals know about economic and financial issues, the better their individual decision-making and their economic outcomes. One can think of two opposite effects. On the one hand, formally higher educated employees might be better informed given their generally higher general knowledge. On the other hand, one should expect low-wage earners to be more informed about the minimum wage level because it is more relevant for them.

Empirical findings on employees' awareness of the level of the minimum wage and the determinants influencing such awareness are rare. There are only two studies from the United Kingdom based on surveys that explicitly included questions on the minimum wage (Meager et al. 2002, Casebourne et al. 2006); some more general studies examined the awareness of employment rights (e.g., Fischer et al. 2015 for Germany, Masso and Kadarik 2014 for Estonia). Against this backdrop, our paper adds to the literature by providing evidence on a rarely studied but highly relevant topic for labor market policy based on a representative survey among German employees that also allows beyond descriptive statistics econometric analysis.

## 2 State of the literature

The awareness of employees about the minimum wage has been analyzed in two older studies from the United Kingdom. Meager et al. (2002) and Casebourne et al. (2006), as a follow-up study, conducted surveys on the awareness, knowledge and exercise of individual employment rights covering a broad range of topics. Their surveys included approximately 1,000 employees each. They generally found that knowledge is higher among white, male, better qualified, white collar employees with permanent full-time jobs (Meager et al. 2002). Accordingly, Casebourne et al. (2006, p. 4) conclude: "The analysis suggests that it is the groups that might be expected to be more vulnerable and to have low knowledge levels of their rights at work that do in fact have lower knowledge".

If the focus was on the awareness of specific legislation, however, the employment rights were often better known in those groups of employees for which they were particularly relevant. For instance, Meager et al. (2002) report that low-paid workers were more likely to be aware of the rate at which the National Minimum Wage was set. Overall, in 2001, 96 percent of all employees knew that there was a National Minimum Wage in the UK, and 51 percent were able to tell the correct value of then £3.60 to within a 10 pence range. From employees with an hourly wage below £ 5.00 66 percent were able to name the correct value.

This share decreases constantly with higher wages to 39 percent for those who earned £ 10.97 and more per hour. The follow-up study by Casebourne et al. (2006) showed that 10 percent of all employees were able to name the then exact value of £ 4.85; a total of 56 percent were able to specify a value within a 10 percent range (i.e., £ 4.37 to £ 5.34). They only provide a

breakdown by annual earnings that shows that 67 percent of employees with annual earnings of less than £ 5,000 are able to recall the exact value within a 10 percent interval, while for higher earnings groups, the share was approximately 54 percent. Both the studies of Meager et al. (2002) and Casebourne et al. (2006) provided descriptive statistics but no further econometric analyses to explain the determinants of awareness with the minimum wage.

Further studies deal with the awareness of employment rights more generally but do not cover minimum wage levels in particular. Fischer et al. (2015) conducted a representative survey of 7,600 employees in Germany, investigating, among other things, their awareness of employment rights, e.g., rules regarding paid vacation or sick pay. They found that people in marginal employment (so-called “Minijobs”) had been significantly less informed than people in part-time or full-time jobs. Marginal employment is a specific form of employment in which employees can earn 450 euros per month free of income tax and social security contributions, though they receive no health insurance and only optional pension insurance.

Masso and Kadarik (2014) report results from a representative survey of 1,300 employees and jobseekers in Estonia. The study evaluates the awareness of employment rights in these two groups of the labor force. The authors conclude that awareness of employment rights is higher among better qualified workers. Pollert (2005) reports findings from a random survey of 476 people’s awareness of general employment rights in shopping centers in the West Midlands (UK). The study denotes that women, ethnic minorities, young people and the low paid were the least likely to be aware. Furthermore, 97 percent of the respondents were aware of the National Minimum Wage, which is in line with the findings from Meager et al. (2002) and Casebourne et al. (2006) for the UK. However, there was no further question on the knowledge of its actual level.

In addition, two studies have examined the link between awareness of employment rights and receiving specific entitlements. Fischer et al. (2015) found a positive correlation between respondents’ awareness and entitlements in their quantitative survey. Moreover, their qualitative research identified awareness and knowledge about the specific entitlement as a key driver of compliance. Further key drivers were their bargaining position, their perceived contribution to the economic success of the company and individual sociodemographic characteristics. Qualitative research from the UK that actually focused on the situation of workers earning less than the minimum wage supports these findings (Department for Business, Innovation and Skills 2014). Thus, knowledge about employees’ rights had an impact on their ability to ask their employer about their entitlements. Other key drivers for (non)compliance include informal working arrangements allowing them to save taxes or claim state benefits illegally, emotional and psychological issues such as low self-confidence and self-worth and the fear of losing their job.

### 3 Data and methodology

Our analyses on employees’ awareness of the level of the minimum wage and the determinants influencing awareness are based on three representative employee surveys conducted on behalf of the German Minimum Wage Commission (Ipsos 2020). In the 4th quarter of 2018, the 2nd quarter of 2019 and the 4th quarter of 2019, approximately 2,000 employees at each point in time were asked about the existence and level of the statutory minimum wage. The interviews were conducted as personal interviews (CAPIs) in multitopic surveys (omnibus surveys).

During the survey, interviewees were first asked, “Do you know whether there is a statutory minimum wage in Germany, i.e., a minimum wage that employees must receive?” Then, a follow-up question was queried: “Do you perhaps also know how high the statutory minimum wage currently is?” This means that awareness of the minimum wage was investigated in two steps. From a methodological point of view, this can lead to a selection problem since the respondents could only provide information about the value of the minimum wage if they were aware of the existence of the minimum wage. Systematic differences between the respondents who were aware and those who were not aware of the minimum wage would lead to biased and inconsistent estimates in standard regression procedures (Heckman 1979).

A test on random distribution showed that a two-step estimation is necessary. Thus, we perform a two-step probit estimation with sample selection on the binary variable if the interviewee was aware of the existence of the minimum wage (0 = unknown, 1 = known) and if the exact value could be stated (0 = exactly known, 1 = not known). To check the robustness of the results, we additionally replace the latter binary indicator with a variable indicating whether the respondent was able to name the value of the minimum wage within a 50-cent interval, i.e., plus and minus 25 cents, around the exact figure.

## 4 Results

Approximately 95 percent of the respondents knew that there was a statutory minimum wage in Germany (Table 1). However, only 17 percent could state the exact level of the minimum wage, and 50 percent could state a value within a 50-cent interval around the exact figure. A comparison of employees who earn less than 11 euros and those who earn 11 euros and more shows that the former are somewhat less likely to know that there is a minimum wage.<sup>2</sup> Only 13 percent of low-wage earners could state the exact value of the minimum wage. Among those earning more, 19 percent were able to name the exact value. Regarding the approximate level of the minimum wage, the figures were 45 and 52 percent, respectively.

**Tab. 1** Descriptive results on the awareness of the minimum wage

Item	All employees			Employees earning less than 11 euros			Employees earning 11 euros and more		
	N	Mean	Std.	N	Mean	Std.	N	Mean	Std.
Is there a minimum wage in Germany? (1=yes)	6144	0.947	0.225	1147	0.904	0.295	4709	0.964	0.186
Exact value of the minimum wage stated (1 = yes)	5816	0.173	0.378	1037	0.131	0.338	4540	0.187	0.39
Approximate value of the minimum wage within a 50 cent interval (1= yes)	5816	0.496	0.5	1037	0.447	0.497	4540	0.519	0.5

Notes: All descriptive results are weighted.

Source: Representative survey by Ipsos on behalf of the Minimum Wage Commission, own calculations.

<sup>2</sup> 11 euros marks the low-wage threshold in Germany. The respondents were asked about their hourly wage, i.e., whether it was above or below 11 euros.

Table 2 presents our results of the two-step probit estimations on the influence of workers' characteristics on their knowledge about the minimum wage.<sup>3</sup> In the first column, the selection model, and in columns 2a and 2b, the main estimates are depicted.

The results indicate that low-wage earners are statistically significantly less aware of both the existence of a minimum wage in Germany (coefficients in the first column) and the exact or approximate level of the minimum wage (columns 2a and 2b). Thus, the probability of knowing that there is a minimum wage in Germany is approximately 6.5 percentage points lower for low-paid workers than for higher-paid workers. The probability of being aware of the exact level (approximately 5.3 percentage points) or the approximate level (approximately 4.6 percentage points) is lower among low-wage earners.

Regarding other sociodemographic characteristics, the picture is less clear-cut. However, the results suggest that lower, middle and senior civil servants, skilled workers, self-employed craftsmen, junior and middle clerks, unskilled or skilled workers and part-time employees more often know that there is a minimum wage in Germany. In case internet usage is a proxy for the general interest in information, we tested whether less informed workers might also be less aware of the existence of the minimum wage. Employees who have obtained a secondary school degree but no additional vocational qualification are less likely to be aware of the exact and approximate levels of the minimum wage. Overall, the results show that the employees to whom knowledge about the minimum wage should be highly relevant are not more likely than other employees to be aware of its level.

Moving beyond the influence of sociodemographic factors, our analyses show that following the increase from 8.84 to 9.19 euros on the 1<sup>st</sup> of January 2019, the exact and approximate values are less well known. However, in autumn 2019, i.e., a few months after the uprating, the awareness of the minimum wage is similar to that in the year before.<sup>4</sup>

**Tab. 2** Awareness of the minimum wage (probit estimation with sample selection)

Items	1)	2a)	2b)
	Selection estimation: Is there a minimum wage in Germany? (1=yes)	Main estimation: Exact value of the mini- mum wage stated (1 = yes)	Main estimation: Approximate value of the minimum wage within a 50-cent interval stated (1=yes)
<i>Sex (1 = male)</i>	0.002 (0.007)	0.012 (0.012)	0.027 (0.017)
<i>Age</i>	-0.000 (0.000)	0.001* (0.000)	0.001* (0.001)
<i>Marital status (Ref.: Married), Single, Divorced or widowed</i>	-0.002 (0.008)	0.020 (0.014)	0.009 (0.019)
	-0.007 (0.010)	0.014 (0.017)	0.026 (0.022)

<sup>3</sup> We performed a test on sample selection. The null hypothesis that there is no selection bias was rejected:  $\rho$ , which represents the correlation of the error terms of the selection and main equations, was 0.942. The corresponding Wald test showed a  $\text{Chi}^2$  value of 161.58, which was significant ( $\text{Prob} > \text{Chi}^2 = 0.000$ ).

<sup>4</sup> We additionally estimated the two-step probit models using a 20-cent interval, i.e., plus and minus 10 cents around the exact figure. The figures only slightly deviate from those depicted in Table 2 and, thus, confirm the described findings.

Items	1)	2a)	2b)
	Selection estimation: Is there a minimum wage in Germany? (1=yes)	Main estimation: Exact value of the mini- mum wage stated (1 = yes)	Main estimation: Approximate value of the minimum wage within a 50-cent interval stated (1=yes)
<i>Highest school-leaving certificate and professional degree (Ref.: Lower school leaving certificate than general qualification for university entrance and polytechnical degree)</i>			
Secondary school degree, but no vocational qualification	0.002 (0.022)	-0.097** (0.038)	-0.099* (0.059)
Secondary school degree and vocational qualification	-0.003 (0.014)	-0.030 (0.023)	-0.046 (0.033)
General certificate of secondary education and vocational qualification	0.001 (0.013)	0.004 (0.022)	-0.017 (0.031)
General qualification for university entrance and polytechnical or university degree	0.009 (0.014)	0.020 (0.025)	-0.031 (0.033)
<i>Occupational status (Ref.: Senior official (council and more), managing director)</i>			
Lower, middle and senior civil servant, skilled worker, self-employed craftsman	0.026* (0.014)	0.024 (0.018)	0.017 (0.026)
Simple and middle clerk, unskilled or skilled worker	0.029*** (0.014)	0.025 (0.016)	0.041* (0.024)
<i>Form of employment (Ref.: Full-time)</i>			
Part-time	0.020*** (0.007)	0.017 (0.015)	-0.039** (0.020)
Marginal employment	0.021 (0.013)	0.041 (0.034)	0.055 (0.040)
<i>Employees earning (Ref.: 11 euros and more)</i>			
Less than 11 euros	-0.065*** (0.011)	-0.053*** (0.012)	-0.046*** (0.019)
I do not know	-0.119*** (0.023)	-0.115*** (0.016)	-0.140*** (0.029)
<i>Survey period (Ref.: Autumn 2018)</i>			
Spring 2019	0.002 (0.007)	-0.053*** (0.012)	-0.056*** (0.016)
Autumn 2019	0.003 (0.007)	-0.002 (0.013)	0.008 (0.016)
<i>Place of residence (Ref.: East Germany)</i>			
	-0.010 (0.007)		
<i>Use of internet (Ref.: several times per day/daily)</i>			
At least once a week	-0.022** (0.011)		
Less than once a week	-0.124*** (0.028)		

Items	1)	2a)	2b)
	Selection estimation: Is there a minimum wage in Germany? (1=yes)	Main estimation: Exact value of the mini- mum wage stated (1 = yes)	Main estimation: Approximate value of the minimum wage within a 50-cent interval stated (1=yes)
Rho	0.942		
Wald-Test	86.96		
Prob > chi <sup>2</sup>	0.000		
Log pseudolikelihood	-4024.796		
AIC	8125.592		
BIC	8379.561		
Observations	5904		

Marginal effects; robust standard errors in parentheses; \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.  
 Source: Representative survey by Ipsos on behalf of the Minimum Wage Commission, own calculations.

## 5 Discussion and conclusion

This paper provided insights into the factors influencing employees' awareness of the minimum wage. While the vast majority of workers know that there is a minimum wage in force in Germany, comparatively few employees know the exact amount of the minimum wage. Interestingly, most sociodemographic determinants, such as sex, age, education, marital status, or form of employment, are barely correlated with this knowledge. However, both aspects of awareness of the minimum wage are found less often among employees in the low-wage sector, for whom the statutory minimum wage is likely to be of particularly high relevance, than among employees with higher wages.

From a policy perspective, this means that the affected group of employees is less likely to be aware of the minimum wage regulation and might thus be more prone to underpayment. While knowledge about employment rights is not the only factor that enhances compliance, it is an important element to strengthen employees' bargaining position in the labor market (Fischer et al. 2015, Department for Business, Innovation and Skills 2014). Knowledge about employees' rights is a prerequisite for their ability to ask their employer about their entitlements. To increase awareness of the exact minimum wage level, one-size-fits-all campaigns or measures are unlikely to successfully address awareness shortfalls among specific groups of employees. Instead, campaigns or measures targeted specifically at low-wage earners may be better suited to address the fundamental differences in their labor market knowledge.

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