

Second Evaluation Report*

Since 1 January 2015, a general statutory minimum wage has been in force in Germany. Decisions on adjustments to the minimum are made by the Minimum Wage Commission. In addition to the decision regarding adjustments, the Minimum Wage Commission is required by law to prepare a report on the effects of the minimum wage on worker protection, on competitive conditions and on employment with regard to specific industries and regions as well as on productivity. The present report documents both scientific research findings concerning the effects of the introduction of the minimum wage and the developments since the first raise of the minimum wage to 8.84 Euros on 1 January 2017. Regarding the introduction of the minimum wage, this report takes causal effect analyses into account for the first time, as the data necessary for this analysis were only available with a delay of one to two years and, consequently, the analyses for the First Report were not available to the Minimum Wage Commission at that time. With respect to the effects of the first adjustment only descriptive analyses are available for the time being.

When looked at from a theoretical perspective, the effects of the minimum wage are ambiguous. Depending on the chosen model or model assumptions, minimum wages may have negative, positive or neutral effects. By now a number of empirical analyses are available, which are primarily based on research projects initiated by the Minimum Wage Commission. These analyses empirically examine the effects of the minimum wage introduced in 2015 on various target values, such as wages, employment and the companies' competitive parameters based on data available for the first two or three years since the introduction of the minimum wage. In this short period of time, both the descriptive and causal analyses suggest that the effects of the statutory minimum wage mainly concentrated on the time immediately following its introduction and less on the years 2016 and 2017. At this point in time, long-term effects cannot yet be analysed. The overall economic climate was favourable when the minimum wage was introduced and when it was raised for the first time.

Minimum wage and worker protection

The introduction of the statutory minimum wage resulted in a significant increase of hourly wages at the bottom of the wage distribution scale. On the one hand, this applies to employee groups that earned less than 8.50 Euros gross per hour at an above-average frequency before the introduction of the statutory minimum wage. These employee groups include in particular employees in Eastern Germany, marginally employed persons, persons without professional training, employees working in small companies and women. On the other hand, industries with high shares of employees earning less than 8.50 Euros gross an hour showed an above-average increase of hourly wages after the introduction of the minimum wage. As regards monthly gross wages, there are considerably weaker effects or no effects at all. Among other things, this development can be attributed to the fact that after the introduction of the statutory minimum wage, the contractually agreed working hours were reduced in some cases, which completely or partially levelled the hourly wage effects. Considering how little is known about the connection between hourly and monthly wages, further empirical research is necessary.

* English translation of the management summary of the German Minimum Wage Commission's Second Evaluation Report to the Federal Government on the effects of the statutory minimum wage, for the full report (in German) see Mindestlohnkommission (2018), Zweiter Bericht zu den Auswirkungen des gesetzlichen Mindestlohns. Bericht der Mindestlohnkommission an die Bundesregierung nach § 9 Abs. 4 Mindestlohngesetz, Berlin.

After the introduction of the minimum wage, a substantial wage bracket at and/or slightly above the minimum wage emerged, which led to decreased wage differentials at the lower end of the wage distribution. Descriptive findings also indicate so-called spillover effects, which means that above-average wage increases in the range slightly above the minimum wage could be observed after the introduction of the minimum wage. Qualitative studies and company surveys suggest that at least in parts wage adjustments above 8.50 Euros were made as a result of the statutory minimum wage.

When interpreting the results of the empirical studies on the effects of and compliance with the provisions of the Minimum Wage Act, the methodological challenges and potential measuring errors in the data must be kept in mind. One of the main methodological challenges is the measurement of the causal effects resulting from the introduction of the minimum wage. Measuring errors are liable to occur mainly because the major part of the data used is generated through employee and company surveys. This implies that the data collected varies around the actual values and hence does not allow accurate measurements.

The estimate of persons or employments that still earned less than 8.50 Euros after the introduction of the statutory minimum wage varies depending on the data source. The Federal Statistical Office's earnings survey (*Verdienstenerhebung*, VE) is based on information rendered by companies and reports around 750,000 employments with earnings below the minimum wage in 2016. The German Institute for Economic Research (DIW) found around 1.8m employees earning less than 8.50 Euros per hour in 2016 when referring to the contractually agreed working hours. The institute bases its findings on the German Socio-Economic Panel (GSOEP) that uses information rendered by employees. On the one hand, wages below the statutory minimum wage do not automatically constitute violations of the Minimum Wage Act, but on the other hand possible violations are not recorded. Both data sources, VE and GSOEP, have their respective limits (which are addressed in detail in the present report) and can lead to the specified numbers becoming larger or smaller. These concrete methodological limitations concern, for one, how the circle of eligible persons is specified. This includes in particular the recording of temporary exemptions from the statutory minimum wage for certain industries and the appropriate consideration of marginal employments (so-called *Minijobs*). For another, the calculation of hourly wages based on weekly working hours and monthly earnings is a challenge. It concerns especially the question which wage components, such as certain types of allowances and overtime pay, can be counted as parts of the minimum wage as well as the registration of paid and unpaid hours of extra work. In addition, the companies surveyed in the VE may tend to avoid providing information that indicates non-compliance with the minimum wage. In the GSOEP's survey, there is always the possibility of employees providing inaccurate information, in particular regarding their working hours. Despite the methodological shortcomings of the VE and GSOEP surveys, both databases find evidence for minimum wage implementation deficits. Even after the introduction and raise of the minimum wage, a substantial number of employees continue to earn less than 8.50 Euros or 8.84 Euros, respectively. This circumstance also has implications as regards the interpretation of the causal effect studies, such as the minimum wage effects on employment or on the risk of poverty. These studies are limited to detecting effects resulting from the actual implementation degree, but do not show effects that would result if the minimum wage was implemented completely and in full compliance with the law.

For 2017, i. e. after the raise of the minimum wage to 8.84 Euros per hour, data on employments with hourly wages below this new minimum wage threshold are only available through the VE database. For April 2017, the VE shows 830,000 employments with remuneration below the new minimum wage, and 500,000 employments earning less than 8.50 Euros an hour. The aforementioned limitations when interpreting these figures need to be kept in mind here as well.

The implementation of the statutory minimum wage is monitored by the customs authorities within the scope of *Finanzkontrolle Schwarzarbeit* (Financial Monitoring Unit for Illicit Employment). In the last few years, inspection rates have developed as follows: In 2014, the year before the statutory minimum wage was introduced, the customs authorities inspected around 63,000 companies; in 2015, the year in which the minimum wage was introduced, around 44,000 companies were inspected; in 2016, the inspection covered around 40,000 companies and around 52,000 in 2017. The Minimum Wage Act is primarily applicable to approximately 31,000 companies inspected in 2017 while the others fall mainly in the scope of the *Arbeitnehmer-Entsendegesetz* (Act on the Posting of Workers) or the *Arbeitnehmerüberlassungsgesetz* (Law on Temporary Employment). In 2017, these inspections resulted in the opening of 5,442 preliminary investigations on the violation of the Minimum Wage Act, with about half of them opened because the minimum wage was either not paid at all or too late (2,521 cases) and because of violations of documentation obligations (2,842 cases). From the viewpoint of the Minimum Wage Commission, customs authorities should concentrate their inspections more on those industries, company sizes, employment types and regions for which the statutory minimum wage is particularly relevant. Closely monitoring those industries, companies, employment types and regions that are particularly affected by the minimum wage significantly contributes to uncovering violations of the Minimum Wage Act quickly and lastingly and to ensuring that they can be punished. Customs inspections as well as qualitative studies shed light on the various approaches of circumventing the minimum wage, whereby the incorrect recording of working hours is considered particularly relevant.

The Federal Ministry for Labour and Social Affairs has installed an online information platform and a telephone hotline for questions employees and companies may have regarding the minimum wage. On average, the hotline receives about 300 phone calls per week, with about half of the calls coming from companies or tax consultancies, and one third from employees. Most callers request information on how to handle internships, how to comply with documentation requirements and to what extent the Minimum Wage Act applies to the callers themselves.

When looking at the persons who despite being employed are eligible to collect supplementary *Arbeitslosengeld II* (Unemployment Benefit II), also known as "*Aufstocker*", their numbers decreased only marginally more than in the years prior to the introduction of the minimum wage. That the number of people falling into this group did not decrease more notably can be attributed to the fact that many *Aufstocker* have relatively few weekly working hours and that their households also comprise non-working household members, mostly children. In addition to this, high rents especially in urban areas may result in neediness despite the minimum wage. Only about three per cent of all employed Unemployment Benefit II recipients are full-time employed singles for whom the minimum wage suffices so that they no longer depend on supplementary Unemployment Benefit II. Accordingly, the decline in the number of *Aufstocker* in single or couple's households without children is stronger than that of single parents and of couple's households with children after the introduction of the statutory minimum wage. The pattern of poverty risk is similar and illustrates the limits of the minimum wage as an instrument suitable to reduce the risk of poverty. In addition to directly influencing dependence on social benefit payments and the risk of poverty, the minimum wage can indirectly influence the social security systems. This is particularly true as regards the adjustment of statutory pensions in line with the development of wages.

Minimum wage and employment

Since 2015 overall employment has continued to develop positively. This is especially obvious for employment subject to social security contributions and can be observed in particular in industries that were characterised by a high share of employees earning less than 8.50 Euros an hour before the introduction of the minimum wage. But regarding people working exclusively in marginal employment (*Minijobs*), there was a decrease in numbers in early 2015 amounting to 100,000 people compared to the beginning of 2014. Roughly half of those employees moved into an employment subject to social security contributions, the other half withdrew from the labour market or registered as unemployed. All causal analyses come to the conclusion that the share of persons only marginally employed shrank due to the introduction of the minimum wage compared to a situation without the statutory minimum wage. With respect to employment subject to social security contributions, the results of the studies differ, pointing to both negative and positive effects which, compared to the total number of employments liable to pay social security contributions, are minimal though. The negative effect results from a slower employment growth than it would have been without the minimum wage. Existing employments subject to social security contributions were not cut back. Regarding overall employment, the majority of the studies detected a slightly negative effect due to the introduction of the minimum wage, attributing that trend to the reduction of the number of marginal employments. The analyses also indicate a higher level of employment stability on the one hand and restrained staff recruitment and restaffing of vacant positions due to the minimum wage, an effect especially pronounced in 2015.

Since 2015 unemployment has continued to decline. Industries particularly affected¹ by the minimum wage did not record an increase in unemployment numbers nor did causal effect analyses yield statistically significant effects of the minimum wage on the development of unemployment rates.

One of the strongest effects that could be observed following the introduction of the minimum wage concerned the average weekly working hours. The contractually agreed weekly working hours of employees that earned less than 8.50 Euros before the introduction of the statutory minimum wage decreased immediately and notably after the Minimum Wage Act took effect. The hours actually worked, according to answers given by employees in the GSOEP, showed little to no changes to the prior situation. This development requires more detailed analyses. Findings from company surveys and qualitative studies also revealed that the adjustment of working hours and/or the increase of workloads is one of the essential adjustment responses of companies to the introduction of the minimum wage.

The number of vacancies reported has also continued to develop positively. In Eastern Germany, vacancies in industries seriously affected by the minimum wage increased a lot less strongly compared to the overall trend. Initial findings indicate that employers have increased their qualification and proficiency requirements for the engagement of new personnel that is paid minimum wages.

According to data presented by the Federal Institute for Vocational Education and Training, the minimum wage has so far neither had a discernible effect on the vocational education segment nor on in-company training. As regards further training in companies, hardly any changes have been identified so far. Systematic analyses regarding the effects the statutory minimum wage has had on internships are not available. Two studies point to a decline in internships, but they do not allow any conclusions to be drawn about the influence of the statutory minimum wage on this trend. It does seem though, that compensation for interns has

¹ The term “affected” is widely used in minimum wage research and is always used when employees or employments are remunerated by wages below the minimum wage. It does not mean a value judgement nor does it have a negative connotation.

increased since the introduction of the minimum wage. The different rules and regulations applying to the different internship types in the Minimum Wage Act have led to an increase in uncertainty among employers, employees as well as students and to a growing need for assistance in deciding, for instance, which internship falls into which category.

In the context of refugee migration it has also been discussed how the minimum wage may affect the refugees' employment opportunities. Their schooling and professional education levels suggest that refugees will frequently find employment in the minimum wage and low-wage sectors. This assumption is confirmed by the remuneration of those refugees already employed. In view of the considerable problems concerning methodology as well as available data, the effects of the statutory minimum wage can hardly be adequately assessed with the commonly used evaluation methods. The extent and contents of the surveys and findings available so far suggest that the minimum wage is rather a minor barrier to the refugees' integration into the labour market compared to factors such as language skills and qualification levels. Since refugees often have limited command of the German language and know little about Germany's legal system, their risk of having to deal with attempts to circumvent legal requirements and violations of the Minimum Wage Act is higher than average.

Minimum wage and competition

In 2014, around twelve per cent of German companies employed at least one employee at less than 8.50 Euros per hour. In those companies on average almost half of the staff earned less than 8.50 Euros per hour. The gross wage total per employee in these companies consequently increased significantly more strongly than in companies that were not affected by the minimum wage. Furthermore, a number of other specific adjustment responses become obvious in these companies. On a macro-economic level, the introduction of the statutory minimum wage did not show any measurable effects on standard competition indicators such as labour costs, unit labour costs, productivity and profits. This is mainly owed to the fact that the statutory minimum wage only has limited impact on the aggregate wage bill. The German Federal Office of Statistics estimates that, under the condition that all eligible employees actually do receive minimum wage, the total wage bill in 2015 increased by 0.43 per cent as a result of the introduction of the minimum wage and that in 2017 it increased by 0.07 per cent after the minimum wage was raised to 8.84 Euros.

Employers' documentation obligations for recording working hours were expanded along with the introduction of the statutory minimum wage. All employers of the 6.7 million marginally employed persons and those in selected industries must comply with additional documentation obligations. Regarding the selected industries, the Institute for Employment Research (IAB) estimates that an additional 1.9 million employments subject to social security contributions are now subject to the new documentation requirements, which amounts to approximately 6.3 per cent of all employments subject to social security contributions in Germany. The German Federal Office of Statistics' earnings surveys in 2015 and 2016 included questions related to the extra efforts induced by the new documentation requirements. 13 per cent of the surveyed companies in which the minimum wage triggered operational adjustment measures reported that they did not consider the documentation obligations to be extra efforts; 43 per cent of the companies reported a slight increase in extra efforts and 42 per cent reported a considerable increase in extra efforts. In the discussion of the efforts taken to comply with the new obligations, the documentation obligation under the Minimum Wage Act needs to be separated from the regulations of the *Arbeitszeitgesetz* (Working Hours Act), which was in effect before the Minimum Wage Act. It seems that the new documentation requirements have put the traditional requirements of the *Arbeitszeitgesetz* more into the spotlight of companies, e.g. when it comes to complying

with maximum daily working hours and documenting overtime. Customs argues that the new documentation requirements are necessary so that they can fulfil their legal monitoring mandate. In addition, they can contribute to making the assertion of claims regarding payment for the work done easier for employees.

The available data does not indicate a measurable impact of the minimum wage on the volume of real capital investments in companies affected by the minimum wage; this holds true for both total investments and expansion investments. In general, the investment level of companies affected by the minimum wage is considerably lower than in other companies. Neither in 2015 nor in 2016 was the productivity, defined as turnover per employee, influenced by the new law. But studies based on employee surveys do show that employees who benefitted from the introduction of the minimum wage reported a slight increase in their subjectively perceived job satisfaction but also that the requirements and workload of these groups had increased.

Since 2014 the development of company profits has been positive on the macro-economic scale. The situation for companies affected by the minimum wage shows a different trend. From 2014 to 2015 their profits, defined as the difference between turnover and the main cost components of advance performance as well as labour costs (measured as gross wage total) dropped by nine percentage points compared to companies not affected by the minimum wage. This decrease can be explained by increased labour costs as a result of the minimum wage.

Consumer prices in some of the industries especially affected by the minimum wage have increased above-average without having notably impacted the overall price index. The industries with an above-average increase of consumer prices include in particular taxi rides, newspapers and magazines, gastronomy and lodging. Price increases in the industries especially affected by the minimum wage, however, cannot only be attributed to the minimum wage but also to price developments in general.

In the short term, both company dynamics and competition intensity did not show noteworthy signs of change on the level of the economy as a whole or in the industries particularly affected by the minimum wage. Neither did market exits in the form of businesses deregistering or insolvency cases increase nor did the number of business registrations. What should be kept in mind, though, is that changes in the competitive environment tend to show effects in the medium to long term only.

Research perspectives

The Minimum Commission's Second Report could for the first time furnish reliable impact analyses on the effects of the minimum wage. In the coming years, these analyses will have to be deepened and expanded. In its report, the Minimum Wage Commission has sketched out what it considers to be especially relevant topics and matters of interest. On the one hand, this includes continued and more in-depth research on the central research questions in this report and on the other that unanswered questions such as whether the minimum wage impacts employment fluctuation, (solo)-self-employment and the competitive situation in selected industries should be addressed.

The Minimum Wage Commission considers it especially important to further improve both data availability and data quality. This includes the regular and timely availability of official data on earnings and working hours. In the process, it should also be considered how the Structure of Earnings Survey (*Verdienststruktur-erhebung*) and the Quarterly Earnings Survey (*Vierteljährliche Verdiensterhebung*) can be interlinked in a better way in order to provide a unified and annual data base for analysing the development of earnings

and working hours. The linkage of different data sets should be expedited, to the extent permitted by data protection law, to improve the calculation of hourly wages. What is further crucial, also in view of the evaluation of the Minimum Wage Act by the Federal Government in 2020, are improvements in the ability to empirically measure non-compliance with the statutory minimum wage.