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Recent research on minimum wages – evidence from a virtual seminar series

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Minimum wages are often discussed with respect to whether they lead to job loss or not. While this question is undoubtedly very important, minimum wages can also have implications for various other outcomes, such as consumer prices, firms' decision-making, or the extent of wage inequality. In a recent seminar series, research from different countries on the consequences of minimum wage policies for these and other topics was presented and discussed.

How minimum wages affect labour markets and, in particular, the level of employment continues to be a widely discussed topic. In Germany, this discussion gained prominence in academia, politics, and the general public alike as a national minimum wage of 8.50 euros per hour was introduced in 2015. Most recently, the proposal of different political parties to raise the minimum wage to a level of 12 euros per hour (or even higher) received particular attention during the build-up to the general election at the end of September 2021 and is now part of the coalition agreement between the leaders of the Social Democratic, the Green, and the Liberal Democratic Party. The IAB has regularly contributed to the discourse about and the evaluation of minimum wage policies and has implemented a minimum wage working group for this purpose. In light of the constantly evolving field of minimum wage research, the IAB and the Labor and Socio-Economic Research Center (LASER) organised a virtual seminar series which took place between May and July 2021. Renowned national and international researchers contributed to the seminar series by presenting current work on the topic. In addition to the question about the employment effects of minimum wage, contributions also focussed on questions concerning how firms respond to minimum wages as well as implications for economy-wide wage structures and inequality. This article provides a brief overview of selected results.

A change in perspective: minimum wages need not reduce employment

While many early contributions to the literature concluded that minimum wages unambiguously reduce employment, this view was challenged by a ground-breaking study by David Card, who was recently awarded the Nobel Prize in Economic Sciences, and Alan Krueger. Card and Krueger compared the development of employment in fast-food restaurants in New Jersey (where the minimum wage had been increased) and Pennsylvania (where the minimum wage stayed unchanged). Contrary to the conventional expectation, they found no evidence of negative effects on employment in the fast-food industry in New Jersey as compared to Pennsylvania.

These results, though challenged by other authors, gave rise to a discussion about how labour markets actually function and how wages and employment are determined. In particular, the notion of competitive labour markets in which firms are price-takers (and therefore reduce employment as soon as wages are forced to increase) has come under pressure. Alternative models propose that firms can, to a certain extent, set wages below the level that would prevail in a competitive labour market. In such a so-called monopsony model, the effect of minimum wages on employment is ambiguous. While in some cases employment might decrease, it can increase in other circumstances. This might explain the absence of negative employment effects in the original study by Card and Krueger.

Minimum wages may increase employment in concentrated markets

Till von Wachter, who gave the first keynote presentation of the seminar series, and his co-authors addressed the question of why the employment responses to minimum wage policies differ. The authors believe that whether the labour market in question is concentrated, i.e. few firms employ a large share of workers, influences whether there is a positive or a negative effect on employment. Their empirical analysis, which is based on US data, suggests that the higher the degree of concentration in a labour market, the more likely it is that an increase in the minimum wage leads to an increase in employment. This finding is in line with the reasoning behind why minimum wages might positively affect employment. Firms that employ a large share of the workers in a market tend to have the ability to set wages below the level that would prevail in a competitive market. In such a market, a minimum wage can reduce wage-setting power, and the best response for these firms might be to increase employment.

Holger Stichnoth and co-authors argued that the employment effect of a minimum wage is ambiguous because it has two effects. First, a higher wage might induce unemployed workers to seek employment. On the other hand, firms react to the increase in the cost of labour by creating fewer job vacancies. Which of these two effects prevails is essentially an empirical question. Within the context of the introduction of a statutory minimum wage in Germany, the authors argue that the net effect of this policy was to lower the unemployment rate of full-time workers.

Employment effects can be negative

As outlined above, how minimum wages affect employment need not be clear a priori. In certain market environments, minimum wages can have negative impacts on employment. In line with this traditional argument, David Neumark and Peter Shirley showed that most studies on minimum wages in the United States find negative employment responses when minimum wages are increased. While the results differ between studies, on average, they still suggest a negative employment effect. In line with this interpretation of the empirical literature in the United States, Piotr Lewandowski presented an evaluation of recent minimum wage hikes in Poland, which showed that while wages grew in response to the policy, increases in the minimum wage were associated with a lower growth rate of employment in regions with the lowest wage levels.

Using data from New Zealand, Conny Wunsch and co-authors compared the effects of two separate reforms that both resulted in a higher minimum wage (by a similar magnitude). The effect that these policies had on employment differed significantly. In their paper, they showed that in one case, the negative effect on employment coincided with unfavourable economic conditions, while in the other case, the economic environment was more favourable when there was no adverse employment effect.

Minimum wages and youth employment

Minimum wages are often discussed with respect to the consequences for young workers. It is argued that these workers have low levels of education and labour market experience and, hence, represent the most vulnerable group of employees if firms have to reduce employment. A study by Emiel van Bezooijen and co-authors suggested that changes in the minimum wage for workers aged between 20 and 22 in the Netherlands did not result in a reduction in the number of jobs for the respective group. A study by Toni Juuti and co-authors analysed the effect of a policy in Finland that allowed paying workers aged under 25 below the regular minimum wage. However, the authors showed that most firms did not take advantage of the subminimum wage and instead continued to pay the regular minimum wage, which suggests that the original minimum wage regime did not constrain firms.

How do minimum wages affect firms' decision-making?

Another set of presentations looked at various ways in which firms might respond to minimum wages. One implication of a minimum wage policy is that it raises the production costs of firms that hire minimum wage workers. In response to the introduction of a minimum wage, firms may decide to pass on parts of the increased production costs to consumers by raising output prices, or they might decide to lower production costs by replacing minimum wage workers with technology.

Firms partly pass on the costs of minimum wages to consumers

Two contributions to the workshop addressed the question of whether firms adjust their prices and thereby pass on parts of the costs that arise from a higher minimum wage to consumers. In both cases, the analyses are based on the fast-food industry in the United States. While the results are therefore not generalisable to the whole economy, the fast-food industry serves as an interesting case to study for two reasons. First, the share of minimum-wage workers employed in the fast-food industry is relatively large. Second, output, i.e. the various food items, tends to be produced according to a standardised procedure, for which prices can be compared quite easily.

In their paper, Orley Ashenfelter and Štěpán Jurajda used data on prices from fast-food restaurants. They assessed how prices change in restaurants that are located in regions where the minimum wage was raised compared to similar restaurants in regions without a rise. Their key finding is that an increase in the minimum wage is indeed followed by an increase in prices, though this adjustment is less than proportionate. Interestingly, the authors did not find any evidence that higher minimum wages are also associated with increased use of labour-saving technologies, such as touch-screen ordering systems.

The paper of Kerry Papps and Michael Strain, who also used data from fast-food restaurants, analysed how price adjustments differed between food items. In particular, they assessed whether the size of the price increase for a specific food item is related to the amount of labour input that is required to prepare that item. They conclude that such a relationship exists and that labour-intensive food items tend to experience a larger price increase when the minimum wage rises.

Firms may choose to replace labour with technology

As minimum wages increase the price of labour at the lower end of the wage distribution, firms may not only choose to adjust output prices but may also consider adjusting their production process. Specifically, firms may decide to substitute workers with machines or other forms of technology. This question is difficult to evaluate empirically because it requires information about firms’ expenditure on technology. To do so, Xin Dai and Yue Qiu collected data on the IT budgets of firms in the United States. Though they do not provide direct evidence for the replacement of workers, their results are consistent with the substitution hypothesis as the IT budgets of firms in areas that experienced an increase in the minimum wage expanded compared to firms located in areas without a minimum wage increase.

One firm’s minimum wage might raise wages paid by other firms

The second keynote speaker of the series, Ellora Derenoncourt, and her co-authors analysed the consequences of company-specific minimum wage policies for other companies in the same market. For example, Amazon announced that it would implement a minimum pay of 15 dollars per hour from 2018 onwards. One reason for firms to implement such a policy is to attract employees and, potentially, increase their market share. The analysis, which was based on online job advertisements from the United States, convincingly showed that such a self-imposed policy induces other companies to also raise their wages, potentially, to remain competitive in attracting workers.

Increased mobility, access to better jobs, and a lower racial wage gap

Other presentations highlighted the effect that minimum wage policies can have on economy-wide wage structures. Michael Reich and Jesse Wursten showed that minimum wage increases have contributed to reducing the racial wage gap, i.e. the difference in pay between black and white workers, in the United States. Crucially, this finding does not just reflect that black workers at the bottom end of the wage distribution initially earned less than white workers and therefore experienced a proportionately larger wage increase. Instead, the authors argue that one possible explanation for their finding is that the higher wage led to increased regional mobility among black workers, which in turn provided access to better-paid jobs.

Wages tend to increase

While the consequences for the development of employment may be controversial, the literature widely agrees that wages increase in response to minimum wages. This is true for monthly wages as well as hourly wages, as suggested by a presentation from Clemens Ohlert who analysed data from an employer survey that was collected in the course of the German minimum wage introduction in 2015. The data also suggest that hours of work fell in some groups in the first year after the minimum wage introduction. Recent results from a study by Alexandra Fedorets and Cortnie Shupe showed that not only wages increased after the German minimum wage introduction but also reservation wages of non-employed job-seekers.

How the minimum wage has affected income inequality among workers in the lower part of the wage distribution in Germany was the topic of the presentation by Mario Bossler and Thorsten Schank. They provided evidence that the introduction of the minimum wage in Germany not only reduced hourly but also monthly wage inequality, where the increase in earnings was not compensated by decreasing social benefits (top-up benefits) for the working poor. Their results also show that the earnings differential between eastern and western Germany narrowed in the course of the minimum wage introduction.

Conclusion

The various contributions to the seminar series emphasised three broad points. First, even if the existing evidence does not suggest that the introduction of a national minimum wage led to substantial job loss in Germany, there is a need for a continued evaluation of its employment effects – overall as well as for specific groups of workers, regions, and sectors. This will be especially relevant should the national minimum wage be increased to 12 euros per hour, as is currently planned by the new government. Second, to what extent employment will be affected by minimum wage laws will also depend on how firms adjust to them. Better understanding the relationship between minimum wages and firms' decision-making is therefore very important. Moreover, these adjustments may not only be relevant for employment but may also materialise along other margins, as evidenced by the contributions on price changes. Third, minimum wages affect a society's wage structure and potentially contribute to reducing inequality. Knowing about the extent to which this is possible might be relevant for the process of setting the minimum wage.

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