Puente, Sergio

Article

Efficiency vs. Equity: Does This Trade-Off Hold for Minimum Wage Policy?

ifo DICE Report

Provided in Cooperation with:
Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

Suggested Citation: Puente, Sergio (2019) : Efficiency vs. Equity: Does This Trade-Off Hold for Minimum Wage Policy?, ifo DICE Report, ISSN 2511-7823, ifo Institut – Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol. 16, Iss. 4, pp. 27-30

This Version is available at:
http://hdl.handle.net/10419/199045

Terms of use:
Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.
Sergio Puente

Efficiency vs. Equity: Does This Trade-Off Hold for Minimum Wage Policy?1

INTRODUCTION

Minimum wage policy is often seen as a tool to ensure lower income inequality. From a theoretical point of view, raising minimum wage has costs in the form of employment losses and unemployment, as labour supply for those jobs with equilibrium wages below the minimum cannot find enough labour demand. However, there is also a theory supporting minimum wages. Those workers losing their low-wage jobs could find it profitable to increase their human capital, in order to find a new, better job that complies with the new minimum level, and hence increases the productivity of the economy. If labour demand takes the form of very few agents with some monopsony power, then setting a higher minimum wage could also partially offset the market power of those few employers.

Which effect dominates is therefore an empirical question. Applied literature has approached this problem from two different angles. One stream uses some sort of macro data, and estimates the effect on aggregate2 employment after an increase in minimum wages. This tends to find little or no effects on employment trends after the increase in minimum wage3, usually concentrated on young people. The problem with this approach is that it is difficult to disentangle the true effects of minimum wages from the fact that very few workers are usually affected because of the low level of minimum wages. Not surprisingly, the results are more negative among those groups with a higher share of affected people, i.e., the young.

The other approach uses individual micro data to assess individual employment prospects after an increase in minimum wage. Here, the share of affected people is not an issue, since the focus is on individuals. Findings in this literature are much more negative4: minimum wage increases are often followed by lower employment prospects among those workers affected by the new minimum, in terms of lower employment probabilities and/or higher unemployment incidence.

The remainder of this article provides a non-technical summary of Galán and Puente (2015), who estimated the effects of an important minimum wage increase that occurred in Spain in the late 2000s. These estimations are then used to provide an assessment of recent and projected increases, both in terms of efficiency and equity. The bottom line is: minimum wage increases actually could do harm on both fronts.

DATA AND METHODOLOGY

The Spanish government made a substantial increase (11.4%) in the minimum wage5 in January 2005. There were further, smaller increases in the subsequent years up until 2010, all of which were higher than inflation. By 2010, the minimum wage cumulative increase reached 37.5% (more than 18% in real terms), rising from 537.3 euros/month in 2004, to 738.9 euros/month in 2010. This important increase within a relatively short time span makes it possible to analyse the effects of minimum wage increases on employment.

Data used for such a task are individual labour histories, available in Spain thanks to Social Security6. These micro data make it possible to focus on particular workers, affected by the minimum wage increase, and follow their working careers after the increase to properly estimate its potential effects on employment prospects.

The methodology used to estimate these effects is based on the comparison of workers affected by the increase in the minimum wage (called “affected group”), with other, similar workers, not affected by the increase (called “control group”). If employment prospects in the affected group are worse than those observed in the control group, then we can say that minimum wages have a negative effect. Workers in the affected group are defined as those whose current real wage7 is below the real minimum wage twelve months later. It is precisely for these workers that employers have to make the choice of either raising their wages to comply with the new minimum, or firing them.

Table 1 shows the observed probability of losing employment status, depending on whether the individ-

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16.7%</td>
<td>16.6%</td>
<td>15.3%</td>
<td>18.2%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Others</td>
<td>8.6%</td>
<td>9.1%</td>
<td>8.6%</td>
<td>8.6%</td>
<td>8.6%</td>
<td>8.5%</td>
<td>8.7%</td>
<td>11.0%</td>
<td>15.1%</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations (2018).

1 The views expressed are those of the author, and do not necessarily coincide with those of Banco de España or the Eurosystem.
2 This aggregation could be at the level of states, counties, or even firms. But these studies always share an interest in aggregate employment, without looking at each individual’s labour market performance.
3 See for example Card and Krueger (1994), Dube et al. (2010), or Dolado et al. (1996).
4 See, for example, Neumark et al. (2004) or Galán and Puente (2015).
5 The minimum wage in Spain has been common for all workers, irrespective of age, since 1999.
6 In particular, we have complete employment histories for each worker since 1980, with monthly information about wages, days worked, and personal and job characteristics, for a 4% sample of all workers.
7 Both observed and minimum wages are deflated by standard CPI.
have increased the wage of a particular worker by more than this amount, then the expected effect should be zero. This is what is happening for those middle-aged workers. They are in the steepest part of their life-cycle profile of wages, with strong productivity increases each year, as they accumulate experience. On the other hand, the elderly typically enjoy much slower increases, which are not enough to compensate for the rise in the minimum wage, and hence they are more prone to be fired.

Finally, it should be noted that the approach used here only takes into account job losses after the introduction of a higher minimum wage. The possible effects on job creation are therefore absent. This is especially important for those groups with typical high wage growth for the following reason: let’s suppose that most 30-year-old workers earning low wages among young people, the aggregate effect seems to be higher for the young.

Why are elderly workers more intensively affected?

The reason is fairly intuitive: the firing probability is related to the wage increase needed to comply with the new minimum, but also to the typical real wage increase observed for a particular gender and age group, in normal years when minimum wages are not increasing. If the minimum wage rises by $X$, but the employer would

### Recent Increase in Minimum Wage in Spain: Predicted Effects

After the above-mentioned increases, the real minimum wage remained stable during the first part of the 2010s. But in recent years, the minimum wage returned to growth (8% in 2017 and 4% in 2018). Moreover, the public debate is strongly biased towards further increases. Indeed, it has already materialised in a Framework Wage Agreement between main social agents, which suggests a minimum bargained wage of 14,000 euros/year, and Spain’s new government stated their intention to enforce it by setting a minimum legal wage very close to the current minimum wage. Then, we can obtain an aggregate effect by adding up all these individual effects.

This is what is done in this section. In particular, we take the wage distribution of 2016 (the last year available in our sample), and compute individual predicted probabilities of losing the job, based on individual characteristics, and on the distance between the current individual wage and the new minimum wage. We make three different exercises, each assuming a different new minimum:

- Scenario 1 assumes a new minimum of 825.5 euros/month, which is the level in force in 2017, after the first 8% increase.
- Scenario 2 uses an intermediate figure (933.3 euros/month).
- Finally, scenario 3 is close to the suggested minimum bargained wage (1108.3 euros/month).

The share of total affected workers ranges from about 0.1% in the first scenario, to ten times higher in the third one (1.2%). This illustrates the danger of extrapolating elasticities, as the effect in the last scenario is disproportionately high in comparison with the associated minimum wage increase. Indeed, if we had instead extrapolated the effect of scenario 1 to the increase in the third one, we would have obtained approximately half of the effect.

These employment effects are also unequal among age groups. Young workers, being the most affected, also concentrate most of the employment effects. The figure below shows the wage bill changes for different age groups and minimum wages.
elders are as affected as the young. The different number of affected people is behind this difference.

We estimate that some workers lose their job, but other do not. Consequently, it is interesting to see whether the total employment bill actually decreases or not in each of the scenarios. This is done in Figure 1.

The result is that the total wage bill actually increases for all age groups but the oldest one. However, this increase is quite small in comparison with the amount of the increase in the minimum wage necessary to achieve it. Moreover, the wage bill actually decreases for the last age group, precisely the group least affected by the bias mentioned before. All these results illustrate the reduced role of minimum wages as an income policy.

Finally, we have estimated the effect for each particular individual. This allows us to obtain not only aggregate effects, but also to analyse changes in the whole income distribution. This is useful when we try to assess whether minimum wages are a good inequality tool or not. In this respect, there are two competing forces. On one hand, workers losing their job are worse off. But on the other hand, those managing to keep working actually earn a higher wage. Therefore, the effect on inequality is uncertain. We present results in this respect using the variation in the Gini coefficient resulting from each of the scenarios described above. The results are shown in Figure 2.

As it can be seen, the total Gini index presents a negligible variation, suggesting that the two previous effects compensate each other. However, for both young and elders, the increase in the Gini index is quite apparent. Again, elders are the least affected group by the previous bias. Hence, these results point to a reduced, or even adverse, effect of minimum wages on inequality.

CONCLUSIONS

Macroeconomic effects of minimum wages are uncertain in the economic literature, mainly due to the small number of affected people. However, microeconomic evidence is much clearer, pointing to significant adverse effects of minimum wages on employment, especially among low skilled people. We presented estimations of this effect, finding it more intense among elder affected workers. We also applied the estimations to current and future minimum wage increases. Our finding is that the more intense the increase is the more employment destruction it implies, in a more than proportional way.

Finally, our results also point to a reduced, or even adverse effect of minimum wages as an income or inequality policy tool. Hence, the trade-off between efficiency and equity seems to be not present in the case of minimum wages: They actually decrease efficiency (employment) without improving equality.

REFERENCES


