

Long-run Firm Responses to Minimum Wage and Employment Protection; Slovenia 2009-2015

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We examine the long-term effects of minimum wages and mandatory severance pay on firm employment, investment, wage bill, sales, output, rate of return, and likelihood of survival. Thus, we examine firm responses to multiple labor market policies at once, in line with the argument of Pries and Rogerson (2005) that the effects of a given policy depend on its coexistence with other labor market policies. Matched worker-employer data on the universe of workers and firms in Slovenia enables us to measure the heterogeneous effects of common minimum wage and severance policies on the wage bills of each firm. Our identification comes from the asymmetric effects of common policies on otherwise similar firms.

We have access to the universe of all workers employed in the universe of all firms that existed in Slovenia in 2009. We follow all the firms rather than a sample through 2015, so our results are not biased by selection problems due to firms sorting into or out of the sample based on firm performance or profitability. Our results control for other relevant firm information including firm size, age, market share, competition, exposure to international markets, and ownership type.

For both minimum wages and mandatory severance, identifying the effect of the policy from that of other contemporaneous shocks is a challenge. In the employment protection literature, a common strategy has been to measure the differential impact of the policy on the firm, whether by the extent of legal exposure to unfair dismissal lawsuits (Autor et al., 2007); technologically driven differences across sectors in the ability to adjust labor stocks (Haltiwanger et al., 2014; Cingano et al., 2010; Bassanini and Cingano, 2017); or differences in the enforcement of employment protection for different sized firms (Bauer et al., 2007; Kugler and Pica, 2008). For minimum wages, the common identification was the differences in the level of mandated minimum wages across states, although the more compelling identification strategy is to estimate how the common policy affects individual firm costs (Draca et al., 2011; Hirsch et al., 2015; Bell et al., 2018). Our study builds on these strategies by estimating how national minimum wage and severance policies alter each firm's wage bill over time and to examine how these compliance costs alter firm employment, investment, wage bill, sales, operating costs, rate of return, and likelihood of survival.

Our results are as follows. On the minimum wage front, we find, first, that firms experiencing larger minimum wage shocks had lower employment growth, with an effect that persisted over time. Second,

evaluating the effects of minimum wage shocks on wage bills show that larger firms are able to substitute away from the rising cost of low skill workers, but smaller firms have to absorb the costs. Third, we find evidence of capital substitution following the increase in the relative price of labor. In small firms experiencing larger minimum wage shocks capital investment rises immediately; larger firms, on the other hand, initially decrease their capital investments in order to moderate the cost of the minimum wage shock, but they eventually also increase their capital investments. Fourth, both large and small firms experiencing larger minimum wage shocks had lower rates of return, and the lower returns became larger in magnitude over time.

On the severance pay front, we find that, consistent with the Lazear (1990) prediction, firms facing greater severance costs cut back on employment growth. The effect gets larger over time as it becomes more difficult for firms to avoid severance costs over the longer horizon. Moreover, consistent with the effect of severance costs on hiring, higher severance costs lower wage bill growth. Selection matters negatively, meaning that firms that were more likely to survive expanded their wage bills at a slower rate. Firms facing higher severance costs seem to be able to avoid the costs in the short term, but they also cut back on sales in the longer term. Interestingly, firms facing larger severance costs experienced rising raises rate of return, meaning that their costs fell more than their sales.

Keywords: minimum wages, severance pay, firm-level responses