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Happy Birthday, You're Fired!

The Effects of Age-Dependent Minimum Wages on Youth Employment Flows in the Netherlands

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Many countries use age-dependent minimum wage systems to facilitate the entry of young workers into the labor force. The age dependency turns the minimum wage rate into a stepwise increasing function of workers' calendar age, rendering young workers comparatively cheaper than older workers. Being subject to the reduced minimum wage, younger job seekers become more desirable for firms and therefore are more likely to find a job that fits their skills and experience. Indeed, several studies find positive effects of an age-dependent minimum wage on youth employment. However, what they fail to address is that, apart from its effects on employment stocks, this policy design changes the youth labor market flows, introducing new dynamics into the decisions of both employers and employees.

First, the age dependency motivates employers to discriminate against their own employees on the basis of age. Since the costs of minimum wage labor increase with a worker's age, employers face the incentive to periodically replace their older, costlier employees with younger ones. Accordingly, more workers will get fired when they are close to the eligibility threshold for a higher minimum wage.

Second, the age dependency is likely to affect the timing of people's labor market entry. The stepwise increases of the minimum wage rate suggest that more people should enter the labor market shortly after becoming eligible for the higher minimum wage (provided the new rate is above their reservation level). Both job separations and job accessions are therefore likely to reflect the variation of labor costs that is inherent in the age-dependent policy design.

My research investigates how pronounced these effects are among Dutch workers, who are subject to nine age-dependent increases of the youth minimum wage. The Dutch minimum wage increases in annual steps, with the lowest rate being assigned to workers aged 15 and the adult rate attained on workers' 23rd birthday. A convenient feature of the age-dependent system is that increases of the minimum wage are discrete and fixed by a worker's calendar age. The resulting changes in labor market flows are therefore easy to analyze by focusing on the behavior of workers and firms around workers' birthdays. My work analyzes these sharp discontinuities in labor costs, and it is the first to estimate the effects of age-dependent minimum wages on labor market flows.

The analysis rests on an administrative dataset covering the entire population of the Netherlands over the years 2006 to 2012. The data contain detailed information on individual labor market histories, including starting dates and (if available) end dates of every employment spell observed. When linked with information on individual birthdays, I can then quantify how far the workers were

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from their next birthdays at the time of their job accessions and job separations. In this way, I can assess whether proximity to birthdays (and hence to the minimum wage discontinuities) impacts employment flows in the Dutch labor market.

The employment duration analysis shows that for workers aged 16–23, the probability of job separation increases by 1.1 percent in the three months preceding their birthdays. This increase translates into 2,275 youth employment spells terminated on an annual basis. The size of this effect varies with age, exhibiting a sawtooth pattern that peaks at workers' 16th and 19th birthdays and falls in the following years. The second peak occurs in the year following high-school graduation, coinciding with the entry of many inexperienced workers into the labor force. The gradual attenuation of the effect is suggestive of better screening of older/more experienced workers and possibly also of changes in the job mix applicable to the older workforce (lower substitutability of personnel in "adult" jobs).

The effects also exhibit sectoral dependence, being particularly large in the supermarket sector. The effects are shown to be stronger in the employment sectors that offer jobs that do not require extensive training. The job accessions are shown to increase in the month immediately following the workers' birthdays. This spike seems to be driven partially by the labor market entry of individuals with higher reservation wages, and partially by re-employment of those workers who have lost their jobs due to the minimum wage discontinuities.

This work contributes to the voluminous literature on the labor supply-and-demand effects of minimum wages by exploiting policy variation that has been largely overlooked. Until now, the majority of minimum wage studies analyzed U.S. state-level changes of minimum wage rates using either a difference-in-difference or panel designs. However, despite the amount of work done in this area, no consensus exists on an estimation strategy that can ensure consistent estimation of the minimum wage's effects. Further, since minimum wage changes in the United States tend to be small, it is not clear whether the effects found by analyses that exploit such variation would be informative for evaluating more pronounced policy changes (such as those being considered by the current U.S. administration).

These difficulties in determining the minimum wage's impact contrast starkly with the policy variation exploited here. The age-dependent minimum wages in the Netherlands induce substantial (up to 17 percent) year-on-year variation of individual labor costs for a sizable share of the youth workforce. These changes are dependent only on a worker's age and are therefore not confounded by business cycles, political factors, spatial heterogeneity, spurious trends, or other issues commonly discussed in the minimum wage literature. Further, since the Dutch system exhibits multiple increases of the minimum wage rate, it can be verified that the estimated effects are not driven by other age-dependent policy changes that are specific to certain ages.

NOTE

This research brief is based on Jan Kabátek, "Happy Birthday, You're Fired! The Effects of Age-Dependent Wages on Youth Employment Flows in the Netherlands," Institute for the Study of Labor (IZA) Discussion Paper no. 9528, November 2015.