The Impact of the Minimum Wage on DI Participation

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In the United States, Social Security Disability Insurance (DI) is designed to provide income support for those unable to work because of long-term, severe disability. Over the last three decades, both program expenditures and the number of beneficiaries have expanded considerably, which, in turn, has drawn the attention of policy makers and researchers. Indeed, as of May, 2018, there were approximately 8.6 million DI beneficiaries, and annual expenditures in current dollars were $143B. While well-documented changes in population age composition and patterns of disability are important contributing factors, there has been long-standing interest in the impact of local labor-market conditions on DI participation and payments, in general (Black et al. 2002), and the decline in labor-market opportunities, especially for low-skilled workers, in particular (Autor and Duggan, 2003). Since DI is not designed to protect workers against transitory income (e.g., business-cycle) or permanent labor-demand shocks, evidence that DI participation and payments are counter-cyclical, while latent disability is not, is a key concern in analyzing program growth.

This report provides an empirical analysis of the impact of the minimum wage on DI claims, a topic that has gone unexplored in previous studies. In principle, the minimum wage affects the value of labor-market work relative to DI: higher minimum wages raise the opportunity cost of being on DI for those not truly long-term, severely disabled. Unlike other measures of outside opportunities, however, increases in the minimum wage cut both ways. They raise hourly wages (Lee, 1999; Autor et al., 2016), but may decrease employment/hours for low-skilled workers (Brown, 1999; Card and Krueger, 1994; Neumark et al., 2014). Therefore, unlike local labor-market studies based on booms and busts in resource prices (Black et al., 2002; Vachon, 2014; Charles et al., 2018), in which

hourly wages and employment are expanding and contracting in unison, the net impact of raising the minimum wage on DI participation is theoretically ambiguous. Rather than focus on the separate programmatic channels through which the minimum wage might affect DI participation at a granular level, this report estimates an overall net effect of the minimum wage and provides an answer to the following question: "As a first-order approximation, do changes in the minimum wage find their way in the short run into changes in DI claims and awards?"

The empirical analysis draws on data from the Social Security Administration's State Agencies Monthly Workload (MOWL) Dataset, from which a state-by-time panel of DI claims is constructed for 2002-2017 and matched to state-by-time variation in the real effective minimum wage, defined as the higher of the federal and the highest state minimum wage prevailing in each state. Then two reduced-form estimation methodologies are employed. The first follows studies in the hourly wage-inequality literature (Lee, 1999; Autor et al., 2016) and models log DI claims as a function of the bindingness of the log minimum wage in the state hourly wage distribution. The second follows studies in the minimum wage disemployment literature (Allegretto et al., 2011; Meer and West, 2016) and models log claims (in both levels and first-differences) as a function of a distributed lag of the minimum wage.

Across a wide variety of specifications that control for an array of factors deemed important in previous minimum wage studies, including state-level economic conditions, such as unemployment and economic activity, the Great Recession, and the presence of linear state trends, both estimation methodologies lead to the same primary finding: the minimum wage has had no net effect in the short run on DI claims and awards over the

last two decades. The estimated elasticities of DI claims and awards to the minimum wage are both economically small and not statistically different from zero. Based on the estimates, any policy proposals to increase the minimum wage, would be predicted to have no discernable impact on DI claims and awards.

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