

Directed Search, Minimum Wages, and Worker Characteristics: Evidence from an Online Job Board

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A long-standing debate in labour economics concerns the theoretical prediction that minimum wages suppress aggregate employment through an increase in labour costs for affected firms. However, a large body of empirical evidence finds only limited support for this prediction. In this paper, we explore a new mechanism that may help rationalize this finding: the "application effects" of the minimum wage. The increase in the minimum wage may attract more applicants, making it easier for firms to fill vacancies with qualified candidates. This may attenuate the increase in labour costs.

Exploiting frequent and detailed sectoral collective bargaining agreements in Uruguay, we test for "application effects" based on data from the largest online job board in the country. The data contains rich information on vacancies, applicants, and applications for years 2010 through 2020. We combine it with industry-by-occupation information on minimum wage hikes. We start descriptively and then employ two difference-in-difference frameworks that rely on minimum wage adjustments as quasi-experimental variation, at the industry-by-occupation and vacancy-level, respectively.

We observe a positive correlation between posted wages and applications within those broad occupations that are more substitutable between industries: clerical support workers, sales workers, and elementary occupations. We do not find such a correlation in a second group of occupations, although the economic significance of minimum wages is comparable for these (i.e., among professionals, technicians and associated professionals, craft and related trades workers). The descriptive pattern is corroborated in the two difference-in-difference frameworks.

To better understand underlying mechanisms, we are currently expanding this analysis to consider the role of amenities. For example, it is possible that firms compensate minimum wage hikes by decreasing the amenities that they offer. This could rationalize why "application effects" are absent in certain occupations.

As described above, this paper aims to contribute to the empirical literature on minimum wages (e.g., Clemens 2021, Manning 2021), focussing on "application effects" as a new a novel channel through which minimum wages affect employment outcomes. We also build on existing studies on the determinants of job search, some of which analyse job board data. This literature has covered wages and non-pecuniary factors (e.g., Banfi and Villena-Roldán 2019, Le Barbanchon et al. 2020). To our knowledge, however, this literature does not exploit minimum wages or analyse their interaction with amenities. In addition, those papers do not focus on differential patterns by occupation, while our paper suggests that these can be significant.

References

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