Proposal: Local minimum wages and spatial equilibrium

Jorge Eduardo Pérez Pérez
Brown University

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I propose to explore the impact of local minimum wages in a spatial equilibrium framework with worker mobility. I build a theoretical model of the labor market , with several key features: workers have different skills, and firms use both high skilled and low skilled labor for production. Workers are mobile, so the land and labor markets must be in spatial equilibrium, and there are labor market frictions, so unemployment is possible in the labor market. With this model at hand, I study the impact of local minimum wages on employment for both affected and unaffected markets. In spatial equilibrium, minimum wage increases do not need to have a negative impact on employment as in a simple partial equilibrium framework. Increased minimum wages may induce higher land rents and migration, which alters the net impacts on employment. My model will provide a theoretical framework to explain these impacts, and address the implications for empirical estimates of the effects of minimum wages. I validate my model by looking at skill composition changes in areas affected by local minimum wages.

This research is crucial for public policy, and contributes to our understanding of labor markets. Minimum wage policies have been in the spotlight of public policy debate recently, due to a proposal of the U.S. federal government to raise the federal minimum wage to $ 10.10 dollars an hour by 2017. Several local governments have enacted their own minimum wage policies, despite the fact that the welfare effects of these policies are not clear. While the consensus of current empirical research suggests that increases in the minimum wages translate into higher wages for the groups that earn minimum wages (e.g. teenagers and fast food restaurant workers), the effect of increases of the minimum wage on employment has proved a more elusive question (Belman and Wolfson, 2014). A better understanding of general equilibrium effects may provide guidance for future policy decisions.

Within the labor economics literature, this research attempts to provide an explanation of conflicting empirical findings. Applied research on the effects of the minimum wage can be broadly categorized into three categories with different research designs: state level panel data approaches, which use the variation of the minimum wage across U.S states and across time to estimate the effects in a panel data model; individual panel data approaches, which use individual data but use country wide variation; and border discontinuity approaches, where labor markets are compared in a narrow band across state

borders. The latter type of design tends to find insignificant effects of the minimum wage on unemployment, while the other designs tend to find negative effects on employment. Explaining why these approaches differ has been a focus of recent debates in the topic (Allegretto, Dube, Reich and Zipperer, 2013; Neumark, Salas and Wascher, 2013). This research suggests that in spatial equilibrium, minimum wages induce changes in rents and migration across county borders, which may explain differences in the findings if these effects are stronger for spatially close labor markets.

I build on the frameworks of Moretti (2011), Moretti (2013) and Kline and Moretti (2013) to build a theoretical model of local labor markets. The first two papers build models of local labor markets with worker heterogeneity and preferences for location, and the third paper builds a model of spatial equilibrium with search in the labor market. I combine these frameworks to build a model with skilled and unskilled workers, several cities, and a binding minimum wage that applies to unskilled workers. I solve for the comparative statics of the model with respect to the minimum wage, and relate the effects I find to other parameters, such as the elasticity of land markets, the complementarity of different types of labor, and the degree of worker mobility. These relationships should have implications for differences in the impact of minimum wages across different labor market settings.

Validating the implications of the model will require data on wages, employment, rents and locations for an area affected by a local minimum wage and unaffected neighbouring areas. This is difficult, but should be done in a companion project. For this project, I intend to obtain some evidence on changes of skill labor market composition in local labor markets in response to the minimum wage, using data from the Quarterly Census of Employment and Wages. I will confirm if the observed skill composition changes match the implications of my theoretical model.

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