Are Minimum Wage Policies Consistent with Economic Growth? Relating a Frictions Model of the Labor Market to the Effects of Minimum Wages

Principal Investigator: Michael Reich
Co-PI: Arindrajit Dube (U. Mass. Amherst)

In a largely non-unionized and deregulated labor market, the minimum wage is nearly the only policy lever for affecting the pre-tax wage distribution. It is therefore critical to know both what its effects are on the labor market, and also how to explain those effects.

In our previous research on minimum wage impacts--Dube, Lester and Reich (REStat Nov. 2010), we found that minimum wage increases do not generate disemployment effects, contrary to the purely competitive supply and demand model of the labor market. Our results suggest that a more equitable distribution of income is compatible with economic growth. But for these results to be more persuasive, we need to explain *why* there is no disemployment effect. To do that, we draw upon an alternative conception of how labor markets function.

The main theoretical alternative to the purely competitive model recognizes the importance of frictions in the labor market. The frictions model has very important consequences for the equity/efficiency tradeoff for minimum wages - especially when the labor market is slack and employers are able to recruit workers without facing wage pressures. Although the frictions model has gained adherents and visibility in the past two decades, including the 2010 Nobel Prize award, it is not well known outside the economics profession. By relating our previous minimum wage results to the frictions model, we hope to bridge the gap between the two topics and to provide important insights on each. We also hope thereby to inform economists and the broader public policy community about this alternative and more realistic conception of the labor market and how it explains why minimum wage increases and economic growth are compatible.

In our work supported by CEG in 2010-11, we took a first step toward addressing our question by providing, for the first time, estimates of the effects of minimum wage policies on labor market *flows*. In our working paper, "Do Labor Market Frictions Matter: Accessions, Separations and Minimum Wage Effects," we find that minimum wage increases are causally related to substantial declines in labor market flows among all teen workers and all restaurant workers. The effect on flows is especially concentrated among low-tenure workers. These results support the idea that minimum wage increases are absorbed by reducing excess labor market churning and the policies are therefore beneficial to employers, workers and taxpayers.

Using the reduced-form estimates in our working paper, we will estimate the parameters and comparative statics of a frictions model of the labor market in which both firms and workers are heterogeneous. Our preliminary estimates suggest a significant degree of labor market frictions as well as a substantial market-level degree of labor elasticity. These results, assuming they hold up with a better methodology (discussed below) not only lend major support to the frictions model over the purely competitive (no frictions)

model. They also contain important insights and policy implications, namely that minimum wage increases are also absorbed in part by attracting more workers into the labor market and by increasing average productivity levels among firms.

We also will extend our work using microdata on firms and workers that we expect to obtain from the California Employment Development Department. We will investigate the extent to which the observed excess churning in the labor market derives from establishment churning (births and deaths) compared to churning among workers.

Existing Literature

Card and Krueger (1995) lay out a dynamic monopsony model, in which separation and recruitment rates are functions of the wage paid. However, their firm-level model does not consider equilibrium interaction among firms, even though a wage mandate will increase wages at a host of firms, and possibly differentially so. At a theoretical level, Burdett and Mortensen (1998) (BM) consider a labor market with frictions. The BM model was generalized by Bontemps et al. (1999), who allow for both workers to vary by reservation wages and firms to vary by productivity level. Flynn and Mabli (2008) and Flynn (2006) estimate search models with binding minimum wages using moment conditions (changes in cross-sectional proportions and transition probabilities in and out of jobs) and the 1996-1997 change in the federal minimum wage.

Research Design

We have already estimated reduced-form minimum wage elasticities of employment level, employment flows and earnings for the low-wage labor market. We plan to use these reduced-form elasticities to find the "most likely" parameters in the BM models.

We will begin with a Bayesian approach in which we posit a range of priors for the key model parameters. We will then use Markov-Chain Monte Carlo (MCMC) to estimate the posterior distribution of the parameters given the empirical minimum wage elasticities. The posterior distribution will be used to determine the likely importance of frictions in helping explain responses to minimum wage increases. We will also use a close cousin of MCMC, called Simulated Annealing, to find the most likely parameter estimate, given the empirical estimates. Using the recovered parameters, we will simulate the fitted model under a variety of minimum wage policy experiments.