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Social Interactions in the Labor Market

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Abstract

We examine theoretically and empirically social interactions in labor markets and how policy prescriptions can change dramatically when there are social interactions present.

Spillover effects increase labor supply and conformity effects make labor supply perfectly inelastic at a reference group average. The demand for a good may also be influenced by either a spillover effect or a conformity effect. Positive spillover increases the demand for the good with interactions, and a conformity effect makes the demand curve pivot to become less price sensitive. Similar social interaction effects appear in the associated derived demands for labor.

Individual and community factors may influence the average length of poverty spells. We measure local economic conditions by the county unemployment rate and neighborhood spillover effects by the racial makeup and poverty rate of the county. We find that moving an individual from one standard deviation above the mean poverty rate to one standard deviation below the mean poverty rate (from the inner city to the suburbs) lowers the average poverty spell by 20–25 percent.

We further consider overall labor market outcomes by examining theoretically the socially optimal wealth distribution. Interdependence in utility can mitigate the need to transfer wealth to low-wage individuals and may require them to be poorer by all objective measures.

Finally, we quantify how labor market policy changes when there are household social interactions. Labor supply estimates indicate positive economically important spillovers for adult U.S. men. Ignoring or incorrectly considering social interactions can mis-estimate the labor supply response of tax reform in the United States by as much as 60 percent.

Keywords: Social interactions, spillover, conformity, inequality, poverty, labor supply, reference group, social multiplier, income tax, PSID.

JEL Codes: D11, J22, Z13 D31, D63.

Contents

1

Labor Markets With Social Interactions

There are two core research questions in the area of social interactions in the labor market. How do theoretical economic models and their associated econometric representations change when there are social interactions among households? How do policy implications change as the result of estimated households' social interactions? We present a unified theoretical and empirical representation of social interactions as they pertain to labor supply and demand and demonstrate the cases where current policy prescriptions are greatly altered by the presence of social interactions.

We begin by examining theoretically in Section 2 the effect of household interdependencies on how a researcher estimates and subsequently interprets labor supply and earnings equations. We consider two cases: (1) a positive spillover from others' labor supplied and (2) a need for conformity with others' labor supplied. Qualitative and quantitative comparative statics results with a Stone-Geary utility function demonstrate how spillover effects increase labor supply and earnings uniformly. Alternatively, conformity effects move labor supplied toward the mean of the reference group so that, in the limit, labor supply

becomes perfectly inelastic at a reference group average labor supplied. When there are un-modeled exogenous social interactions, conventional wage elasticities are still relatively well estimated although structural parameters may not be. Omitting endogenous social interactions may seriously misrepresent the labor supply effects of policy.

Having examined labor supply issues we then turn to the other side of the labor market in Section 3 and give theoretical attention to labor demand. We consider social interactions on the demand side in the context of a two-good economy with the household's demand of one good influenced by either a spillover effect from other consumers' choices or a conformity effect representing a need for making choices similar to others'. A positive spillover effect increases the demand for the consumer good with interactions, and a conformity effect makes the demand curve for the consumer good pivot around the average market demand to make demand less price sensitive. The collateral implication is that spillover in consumption increases the associated derived demand for labor and conformity in consumption makes the associated derived demand for labor less elastic. We also demonstrate how the presence of a good with social interactions affects the demand for the good without social interactions and the associated demand for the labor producing the no-interactions good. The implied results for the derived demands for labor have meaning for demand-based labor market policy such as the minimum wage, payroll tax, or targeted government expenditures underlying jobs creation programs.

As a further demonstration how the presence of social interactions complicates thinking about economic policy we consider overall labor market outcomes and related economic policy further in Section 4 by examining theoretically the socially optimal wealth distribution. We develop the optimal policy within a two-person two-good model with heterogeneous workers and asymmetric social interactions where only one (social) individual derives positive or negative utility from the leisure of the other (non-social) individual. An outcome is that interdependence might mitigate the need to transfer wealth to low-wage individuals and instead lead them to be poorer by all objective measures. In the presence of social interactions policy to minimize wealth inequality may not be an optimum.

An important aspect of labor market outcomes is how individual and community factors may influence the average length of poverty spells in ways that can enhance the poverty fighting effects of income transfer programs. In Section 5 we measure local economic conditions by the county unemployment rate and neighborhood spillover effects by the racial makeup and poverty rate of the county. We find that moving an individual from one standard deviation above the mean poverty rate to one standard deviation below the mean poverty rate (from the inner city to the suburbs) lowers the average poverty spell by 20–25 percent; the poverty spillover effect is equal in magnitude to the effect of changing the household head from female to male.

Finally, we generalize how economic policy issues related to labor market outcomes are changed when there are household social interactions to consider and what we know about the importance of households' labor supply interactions. In particular, in Section 6 we flesh out the econometric details of implementing an empirical model with possible social interactions in labor supply. We look for a response of a person's hours worked to hours worked in the labor market reference group, which includes those with similar age, family structure, and location. We identify endogenous spillovers by instrumenting average hours worked in the reference group with hours worked in neighboring reference groups. Estimates of the canonical labor supply model indicate positive economically important spillovers for adult U.S. men. The estimated total wage elasticity of labor supply is 0.22, where 0.08 is the exogenous wage change effect and 0.14 is the social interactions effect. We demonstrate how ignoring or incorrectly considering social interactions can mis-estimate the labor supply response of tax reform in the United States by as much as 60 percent.

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