Estimating Female Labor Supply using Quasi-experimental Variation

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Abstract

Married women tend to spend fewer hours on market work than men or single women. In several countries married women face high marginal tax rates due to joint taxation with full income tax splitting. The size of these effects heavily depends on the labor supply reactions of married women towards changes in working incentives. However, estimating the causal effect of marginal tax rates is fundamentally difficult and requires convincing exogenous variation.

In this paper we propose an identification strategy which exploits the series of tax reforms in 2000-2005 in Germany. In this context Germany is of particular interest, a country where income tax splitting is applied and in which married women traditionally work few hours. A goal of various changes in family policy in the last years in Germany was to increase female labor supply.

The German tax reform of 2000 led to large changes in post-tax wages for higher incomes. We exploit these remarkable changes in post-tax wages as variation to analyze female labor supply closely related to a natural experiment setup.

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Our estimation uses a generalized Wald estimator proposed by Blundell et al. (1998). Women are grouped according to cohort and education. These groups are affected differently by the tax reforms because older and more educated women tend to have higher pre-tax earnings and also tend to be married with husbands who earn more.

The estimation uses data from the German Socio-Economic Panel (SOEP). For the calculation of marginal wages, we implement a tax and transfer simulation model of the relevant policies of the German tax and social security system.

Using the estimated elasticities from the quasi-experimental analysis, we simulate the effects on female labor supply of a counter-factual switch from the income splitting system to a completely individual income taxation system.

References