

EC317 Labour Economics

Problem Set 2

Computer exercise: estimating labour supply

Download the dataset called “labor1.dta”. It has 11 805 observations on women aged 30-40 who work in the private sector and are not covered by union contracts (the data are from the 1991 U.S. Current Population Survey, a dataset often used for research and policy analysis). The dataset contains variables on hours worked per week, wages of workers paid by the hour (paidhr=1) and earnings per week for salaried workers (paidhr=0). You can construct a wage variable from earnings and hours for salaried workers. To allow for backward-bending labour supply you should estimate labour supply functions of the form:

$$hours_i = \beta_0 + \beta_1 wage_i + \beta_2 wage_i^2 + \varepsilon_i$$

(a) Estimate the labour supply function for women paid by the hour and interpret your results. Does the

labour supply curve bends backwards for the range of wage rates in the data? If it does, at what wage rate does it bend backwards?

(b) Calculate the labour supply elasticity $(\partial h / \partial w) * w / h$ at the wage of \$5 and at the wage of \$15.

(c) Estimate the labour supply function for salaried women ($\text{paidhr}=0$). How do the labour supply elasticities compare to your results in (b) at a wage of \$5 and a wage of \$15? How do you explain the differences? Do you think the labour supply model makes more sense for hourly or for salaried workers?

(d) What other variables do you think might belong in the labour supply equation and why?

(e) There are a number of other variables in the dataset. Add one or more of them to your preferred regression and interpret your new results.