Welfare Programs, Taxation and Labor Supply in the Presence of High Unemployment: The Case of Puerto Rico

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Two important factors affect the labor supply of low income households. First, their labor supply is likely to be adversely affected by economic downturns. Second, many of these households are subject to the high implicit tax rates of welfare programs. Understanding the relative importance of labor market conditions, taxation and welfare programs on their labor supply is crucial in order to predict the effect of economic and social policies on the well-being of low income households.

The case of Puerto Rico presents an excellent opportunity to study these effects. Two Nutritional Assistance Program (NAP) reforms and one income tax reform were implemented during the 1980s. Traditionally, economist have been confronted with the problem of selecting a set of exogenous instruments to identify the wage and income elasticities. Using this type of reforms as a source of identification has emerged as a promising alternative.

Economic conditions may influence the responsiveness of labor supply to taxes and welfare program changes. Studying the case of Puerto Rico offers an opportunity to measure the effect of taxation in the presence of high unemployment.

Chapter one uses a natural quasi-experiment framework to analyze the effect of reducing the NAP gross income limit on the labor supply of married couples. In 1982, the maximum amount of gross income that a family is allowed to receive and still be eligible for the program was reduced. The expected reaction of the households affected by this reform is ambiguous. On the one hand, these households may decide to reduce labor supply in order to maintain program eligibility. On the other hand, they may opt to exit the welfare rolls. For households that exit the program, both the substitution and income effects predict an increase in labor supply. The analysis shows that the reform did not increase labor supply. In fact, it may have decreased wives total hours worked. The decrease in hours worked indicates that some households reduced labor supply in order to maintain eligibility for the program.

The reforms implemented during the 1980's produced variation in average net wages. The most important change comes from the tax reform implemented in 1988. Marginal tax rates were reduced and deductions were increased, substantially lowering the tax liability of many households. The 1982 NAP reform decreased the marginal tax rates of those households that exited the program by approximately 57 percent. Finally, in May 1988, the NAP earning deduction was increased from 20 to 40 percent, decreasing the implicit marginal tax rate of the program. Chapter two uses this variation to measure the labor force participation responsiveness of low income married couples to changes in average net wages. Because the labor supply decisions of husbands and wives are likely to be correlated, a bivariate probit model is used to account for the possible correlation between wives and husbands’ labor force participation. The estimated wives’ labor force participation elasticity with respect to the average net wage is between 0.27 and 0.69. Husbands are not responsive to changes in average net wages.

Chapter three studies the impact of labor market conditions on NAP’s caseloads, using monthly caseload and unemployment data by municipality. This chapter attempts to explain the evolution of caseload over time using current and past changes in unemployment rates. Changes in unemployment rates are found to have a small positive effect on caseload growth. When yearly or quarterly averages are used instead of monthly measures, the estimated effect is substantially larger.

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