

How does fertility affect labor supply? That is, how much does a woman's labor supply fall when she has an additional child? In this exercise, you will estimate this effect using data for married women from the 1980 U.S. Census. In the file **Fertility** and described in the file **Fertility_Description**. The data set contains information on married women aged 21–35 with two or more children.

- a. Regress *weeksworked* on the indicator variable *morekids*, using OLS. On average, do women with more than two children work less than women with two children? How much less?
- b. Explain why the OLS regression estimated in (a) is inappropriate for estimating the causal effect of fertility (*morekids*) on labor supply (*weeksworked*).
- c. The data set contains the variable *samesex*, which is equal to 1 if the first two children are of the same sex (boy–boy or girl–girl) and equal to 0 otherwise. Are couples whose first two children are of the same sex more likely to have a third child? Is the effect large? Is it statistically significant?
- d. Explain why *samesex* is a valid instrument for the IV regression of *weeksworked* on *morekids*.
- e. Is *samesex* a weak instrument?
- f. Estimate the IV regression of *weeksworked* on *morekids*, using *samesex* as an instrument. How large is the fertility effect on labor supply?
- g. Do the results change when you include the variables *agem1*, *black*, *hispan*, and *othrace* in the labor supply regression (treating these variable as exogenous)? Explain why or why not.