Tutorial for Microeconometrics University of Freiburg Summer term 2011

Problem Set 5

Minimum Wage in a Natural Experiment

Read in the data set minwage.raw into TSP. It contains data on a very famous natural experiment in which the minimum wage in New Jersey was set to \$ 5.05 in April 1992. However, in the neighboring state of Pennsylvania the minimum wage remained at \$4.25. The effects of this natural experiment were investigated by Card and Krueger whose research can be found in the following publications:

Card, D. and A.B. Krueger (1994) Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. *American Economic Review.* Vol. 84 (4), pp. 772-793.

Card, D. and A.B. Krueger (1995) *Myth and Measurement: The New Economics of the Minimum Wage.* Princeton University Press. Princeton. Chapter 2.

The data set contains wages, employment, and prices of fast food restaurants in these two states from February and November 1992. It contains the following variables in the given order:

Psoda1	Price of medium soda, Feb 1992
Pfries1	Price of small fries, Feb 1992
Pburger1	Price of a burger or chicken burger, Feb 1992
Wage1	Average wage, Feb 1992
Emp1	Number of employees, Feb 1992
Psoda2	Price of medium soda, Nov 1992
Pfries2	Price of small fries, Nov 1992
Pburger2	Price of burger or chicken burger, Nov 1992
Wage2	Average wage, Nov 1992
Emp2	Number of employees, Nov 1992
Compown	Dummy = 1 if company owned
BK	Dummy = 1 if chain is Burger King
KFC	Dummy = 1 if chain is KFC
Rogers	Dummy = 1 if chain is Rogers
Wendys	Dummy = 1 if chain is Wendy's
State	Dummy = 1 if state is New Jersey, = 0 if Pennsylvania

- 1. Show the distribution of wages in both states, before and after the reform. Is the minimum wage increase visible in the data?
- 2. What is the difference in the evolution of employment between the restaurants located in New Jersey and in Pennsylvania? Conclude.
- 3. Calculate the average employment at fast food restaurants in New Jersey and Pennsylvania before and after the change in the New Jersey minimum wage. What is the difference-in differences estimator?
- 4. Focusing on restaurants located in New Jersey, what is the difference in the evolution of employment between the restaurants giving a wage equal to \$4.25, a wage between \$4.25 and \$5.05 and a wage larger than \$5.05 before the minimum wage increase? Conclude.
- 5. Do restaurants that were imposed a wage increase raise their prices? (Use a t-test.)