
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:

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