

Minimum wage vs unemployment rate

[Literature](#)



Minimum wage is the lowest hourly wage that employers can legally pay to workers. The policy makers claim that the purpose of the minimum wage law is to increase the standard of living of workers and reduces poverty. However, there are critics about minimum wage would increases poverty by increasing unemployment rate. This topic has been debated for over 6 decades, there are significant numbers of studies of the minimum wage on employment in the United States have been published.

Most of the studies approached by the employment-to population rate of teenagers with relative level of the minimum wage, hence in this paper, I am attempting to examine the effect of minimum wage on unemployment rate with a new approach by using different control variables, consumer price index (CPI) and treasury constant maturities to create a fixed-effect panel data regression.

Demand & Supply Theory

My hypothesis is that minimum wage affects unemployment rate in a positive way. In other words, when minimum wage increases by a positive amount, one should expect that unemployment rate will also increase. This is based on the basic theory of demand and supply, business owners often make decisions based it. When the demand for certain product increases, companies must increase their production output to meet the demand. Increasing supply usually requires additional labor. When the wages of the employees increased, the employer's demand of hiring employees will decrease. Minimum wage is creating a price floor; the demand and supply will no longer be equilibrium. As the price floor goes up, there will be more

surplus. Therefore, the unemployment rate will increase when the minimum wage increased.

Goal of this Study This research topic is an important one, especially using a different approach. Because it could start a new movement of the study of minimum wage on unemployment rate by provide a new prospective to the scholars who are also studying in this topic. There will be more new ideas and thoughts. The ultimate goal is to have more statistical evidence and studies to assist the policy makers to adjust, modify and improve the current policies, in order to increase the standard of living of the workers and reduce poverty in a more efficient approach.

II. Literature Review In this part, there are literature reviews of the economic concepts of the three main articles. Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania: Reply Card and Krueger (2000) develop a case study of the fast-food industry in New Jersey and Pennsylvania.

Their main assumptions are that the increase in New Jersey's minimum wage in April 1992 probably had no effect on total employment in the state, and possibly had a small positive effect, although there may have been individual restaurants where employment rose or fell in response to the higher minimum wage.

Using a dataset from the Bureau of Labor Statistics's (BLS's) employer-reported ES-202 data file to examine employment growth of fast-food restaurants in a set of major chains in New Jersey and nearby counties of Pennsylvania, their empirical findings are that representative samples show

statistically insignificant and small differences in employment growth between New Jersey and eastern Pennsylvania, which is a complete opposite of my assumption.

Card and Krueger (2000) mentioned at the end of the article that hours grew more at restaurant in the lowest wage areas of the state, where the minimum-wage increase is a binding constraint to counter the view that total hours declined in response to the New Jersey minimum wage increase. I am skeptical about this finding, because by the demand and supply theory [1], the employment rate or total hours of working should be decline.

Time-Series Minimum-Wage Studies: A Meta-analysis

Card and Krueger (1995) purpose is to present a “ meta-analysis” of the published time-series minimum-wage literature. Their main assumptions are that the time-series literature may have been affected by a combination of specification searching and publication bias, leading to a tendency for statistically significant results to be overrepresented in the published literature, and those insignificant or “ wrong-signed” results may be underreported in the published literature. The authors have started the paper by addressing “ One of the best-know predictions of standard economic theory is that an increase in the minimum wage will lover employment of low-wage workers.”

And immediately followed up in part I, academic journals have a publication bias; they have a tendency to publish papers with “ statistically significant” results, it is due to the fact that there is a natural tendency for reviewers and editors to look more favorably on studies with statistically significant results.

From here, this article provided me a clearer direction and an open mind to accept any regression results. From my assumption for my study, I might have fallen in the “ increase minimum wage will decrease unemployment rate” bias.

Minimum Wage Laws: Are They Overrated?

Brown (1988) develops a study of whether minimum wage laws are overrated. His main assumption is very similar to Car and Krueger (1995), that the economists are biased by the minimum wage due to the fact that we have strong theoretical predictions about the direction of the effect of the minimum wage on employment, and fairly widely accepted methods to estimate the size of that impact.

Using a dataset of “ teenage labor market in the 1980s,” included, minimum wage and unemployment rate in different segment (males age 20+, teenagers, and black teenagers) to find out the effects of the minimum wage on employment, his empirical findings are that the effect is small due to the fallacy of the inflated denominator: with incomplete coverage and the fact that most workers in nearly any demographic group earn more than the minimum wage, the effect on any such group’s employment will be smaller than it would be if impacts of those directly affected could be isolated, hence the minimum wage is overrated.

This article addresses the same outcome of my assumption towards the study (minimum wages is not a good thing), and I will use a different approach to test the model. Additionally, if my research could offer a unique point of view towards the study of minimum wage on unemployment rate, I

may be able to provide useful recommendation for policy makers, and improve the efficiency of the economy. III. Data description

The aim of this article is to examine the effect of minimum wage in unemployment rate with the use of panel data. 150 observations (50 states of United States) dated at 1993, 2003 and 2013 are picked to carry out regression analysis. The dependent variable is unemployment rate; the main independent variable is real minimum wage, and the control variable is consumer price index (CPI). Both unemployment rate and minimum wage are at state level, and the consumer price index is at the national level.

Minimum Wage & Real Minimum Wage

Minimum wage is the legal lowest hourly rate that employers can pay to workers. Not every state has its own minimum wage law, but for the states which do not have their own minimum wage laws, employees in these states are still entitled to receive their hourly wages at a rate higher than the Federal minimum. The minimum wage data I utilize is from the United States Labor of Statistics, and real minimum wage is calculated by the inflation calculator in their website, dividing nominal minimum wages with inflation rate. An interesting result I found is that even if the nominal minimum wages of most of the states increased during this period, 8 out of 50 states had their real minimum wage decreased from 2003 to 2013.

Unemployment Rate

The main independent variable used is the unemployment rate. This article follows the definition of unemployed population and unemployed rate of the United States Department of Labor. A person is regarded as unemployed if

all the following conditions are satisfied: they do not have a job, currently available for work and actively seeking for work in the prior 4 weeks. The unemployment rate data I utilize is from the United States Labor of Statistics, and is the amount of unemployment population over the total labor force.

It is expressed by the following equation:

Where u refers to the unemployment rate, U refers to the unemployed population and L refers to the labor force. Treasury Constant Maturities This is one of the controlled variables. Constant maturity yields are often used by lenders to determine mortgage rates. If short term interest rate is low, people can obtain loan from banks at a lower rate of interest, and will be able to expand their business and hire more labor. As a result, unemployment rate will be lower when interest rate is low.

Consumer Price Index (CPI)

This is one of the controlled variables. The consumer price index data are obtained from the Bureau of Labor Statistics (BLS). BLS produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services. In order to calculate the percent of inflation or deflation we have to use the Consumer Price Index as a starting point. When inflation rate increases, nominal wages will follow and workers will tend to work for more hours because of the increased wages. Such increase in labor supply is known as money illusion, as workers are misled by the increased nominal wages which its purchasing power remained constant. However, such illusion will not last long, and labor supply will back to natural rate of

unemployment in the long run. Therefore, we could conclude that inflation rate has a short term effect on unemployment rate.

Descriptive Statistics

Hypothesis to be Tested and Econometric Model My hypothesis is that minimum wage affects unemployment rate in a positive way. In other words, when minimum wage increases by a positive amount, one should expect that unemployment rate will also increase. The econometric model that I am using to test my hypothesis is fixed-effect panel data regression. There are 150 observations, included 50 cross-sectional units; time-series (length is 3) are included in the model.