

Report on “Can Reducing Carbon Emissions Improve Economic Performance? Evidence from China”

April 23, 2019

The paper studies the effect of China’s Low-Carbon Pilot (LCP) policy in 2010 on economic growth. It uses the DID method and finds the LCP policy stimulates the economic growth of the pilot cities and provinces. It also uses firm-level data to study the sources of economic growth and finds the regulation on carbon emissions increases firm revenues and efficiency. I suggest a major revision of the paper before it is published. My comments are as below:

1 Strength

- The paper evaluates the LCP policy on economic growth and firms’ performances. It contributes to the literature on regulation and firms’ performances. It also finds empirical support for the “Porter hypothesis”.
- The paper has a thorough robustness check such as a parallel trend test, PSM test, Removal of samples with regional heterogeneity, Counterfactual Test, Elimination of policy interference, and Adding Covariates Test. These robustness checks increase the credibility of the results.
- The paper also studies the source of economic growth using a large firm-level data.

2 Weakness

- What kind of actions does local government actually take after the LCP policy? This paper discusses the mechanism through which the policy works in section 3.2. However, they are the central government's requests. Do the pilot cities and provinces actually follow these requirements?
- I'd like to see a graphic illustration of the differences between the treatment group and the control group's GDP with time before the regression results. Similarly, I'd also like to see a figure about the comparison of firms' profits between the treatment group and the control group with time.
- The treatment group includes both provinces and cities. The paper pools them as a treatment group. Are they comparable with the control city group? In addition, the pilot cities such as Tianjin and Chongqing are centrally administered municipalities. Shenzhen, Xiamen, and Hangzhou are highly developed cities. I think it is better to keep the provinces and the centrally administered municipalities and use other provinces as the control group.
- on page 11, the authors mention existing studies about the variable selection. What are the studies? I think it is common to control the industry in the regression. Similarly, for the macro analysis, are there reference studies for variables selection? How many firms are in the data?
- p12 the descriptive statistics for education is not right as this variable is defined as "Number of students in the general colleges and universities/Total population of the region) 100". It can not range from 17.246 to 926,660.3.
- in the abstract and line 2 of the literature review, the authors use "ecological economics". It should be environmental economics.
- on page 26, the "pollution paradise hypothesis" should be "pollution haven hypothesis".