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## Estimating the Effect of Carbon Tax on CO<sub>2</sub> Emissions of Coal in China

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### ABSTRACT

Using the co-integration model and the VAR model, this article estimates the effect of carbon taxes on CO<sub>2</sub> emissions of coal in 2020. The estimation for the long-run price elasticity of coal in China is -0.34, which shows more elasticity than those of previous studies. The main reason lies in the fact that none of the previous studies considered the structural breaks of Chinese energy consumption in 2006. The levy of 100RMB, 150RMB and 200RMB on per ton of standard coal from 2012 in China will decrease the consumption of coal by 4.88%, 7.31% and 9.75% respectively in 2020, which will further lead to the decrease of CO<sub>2</sub> emissions in 2020 by 8.69%, 13.02% and 17.36% respectively. This observation implies that the use of carbon tax scheme is one of the most practical policies that can mitigate the challenge of climate change. However, the implementation measures should be deliberately designed in such a way that making heavy impact on economic development of China is avoided.

### KEYWORDS

Carbon Tax, CO<sub>2</sub> Emissions, Coal Consumption

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