

An Econometric Analysis of the Interdependence among Economy, Energy, and Environment in China

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We construct a multi-sectoral econometric model of Chinese economy, and discuss two issues. The one is to predict the growth of Chinese economy until 2020, and the other is to evaluate the effect of two possible projects on Chinese economy and environment. According to our prediction, China will continue to grow at relatively high rate, through the growth rate will decline gradually to less than 5 percent per year. The amount of real GDP in 2020 will enlarge to 2.78 times of the amount in 2000. The overall energy demand in 2020 will increase to 1.95 times, and CO₂ emission will grow to 1.91 times in volume. The impact analyses of the pipeline project shows that the investment of the project induces positive impacts on the economy, which is limited for the period. However, the energy shift brings slightly negative impact on the production as a whole. Though CO₂ emission is increased through the expansionary period, the demand shift from the coal to the natural gas has the effect of reducing CO₂ emission. A similar effect is basically expected as for the natural gas thermal power plant project, though the scale of impacts differs.

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