

CGE Analysis of the Impacts of a Carbon Tax on China's Economy

Topic: Theory and application of CGE modelling

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This paper introduces carbon tax into a Computable General Equilibrium (CGE) model to quantify the impact of the implementation of carbon tax to reduce carbon dioxide emissions in China. Benchmark data combining physical energy, emissions data and economic data in the form of a Social Accounting Matrix (SAM) in the year 2007 is compiled. The simulation suggests that carbon tax can reduce the CO₂ emission effectively. Meanwhile, GDP, domestic supply and import increases while demand for compound product has an ascending tendency. The shrinking production scale of firms leads to a decline of enterprise and the residents' income, while government revenue climbs up. At sectors level, carbon tax decreases the demand and supply of energy products with high carbon intensity, and affects the non-energy sectors in different ways.