

Does Income distribution affect environmental emissions in China?

Topic: Income Distribution

Author: Jing LI

Current evidences suggest that the vast majority of growth in CO₂ emissions comes from the developing world, and that China plays a major part in that growth. Residential consumption has significant potential to affect environmental emissions, including direct and indirect emissions, while income is an important determinant of residential consumption. This paper examines the impact of the income distributions on China's residential consumption and environmental emissions. To measure the effect of the income distribution on residential consumption, we use panel data analysis to evaluate the partial marginal effect and then calculate the contribution of the income distributions. To evaluate the relation between the consumption pattern and the CO₂ emissions, we combine input-output tables, CO₂ emissions factors, and the regression results obtained from the above step into a new variation of environmental input-output model.

We use the data from national statistical survey and Chinese input-output tables for 1987, 1990, 1992, 1997, 2002, 2007, and 2010 to calculate the emissions caused by the shape of income distribution through consumption structure. Moreover, we simulate scenarios and evaluate the environmental emission changes considered the option consumption structure. The results show that the residential income has a relatively strong impact on the residential consumption and the consumption contributes to reduce the environmental emissions. Specifically, the environmental emissions will reduce compared with the income distribution changes in the future.