

Genuine Output and Genuine Productivity of China's Provinces: A Big Data Based Interregional Input-Output Accounting

Topic: Tracing Carbon Emissions in Global Value Chains II

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This paper recalculates value added, capital formation, capital stock, and related multi factor productivity in China's provinces by further developing the genuine savings method of the World Bank. In particular, time series inter-regional input-output tables were constructed to adjust the natural resource depletion and environment damage that affect the genuine output considering the inter-provincial trade. The transaction matrices used to format these tables are aggregated from 30 billion value added tax invoice data between 2003 and 2013, which was for the first time appeared in the existing research. The results show that although the loss of natural capital of China's provinces in terms of value added and investment has declined, the impacts on their productivity during the past decades is still quite significant and even diverged during the past decade.