An Electricity Big Data Application of the Sequential Interindustry Model â€“ The Case of Chongqing

Topic: Input-Output Theory and Methodology - VI
Author: Kehan He
Co-Authors: Zhifu Mi

Regression emerges as a powerful econometric tool. However, it often overlooks the underlying economic theories. Good integration and compromise between the two are hard to find in the current literature. Here in this research, we propose an algorithm based on a variation of the Inputâ€“Output (IO) model, the sequential interindustry model (SIM), to introduce time domain into IO modelling. Using the electricity consumption data of Chongqing municipality of China as a proxy for economic activities, we quantitatively analysed its chronological interactions among industrial sectors. We discovered that changes in demand consumption induce unproportionally larger demand variations in other sectors. It serves as quantitative evidence for the chronological economic multiplier effect.