

## **A Study on Measurement of Industry Linkage Effect——based on industry complex network**

Topic: Input-output and the network theory

Author: Bing-Xin Zhao

Co-Authors: Guo-Qing Chen, Jiang-Hua Zhang

Industrial linkage, the technical and economic ties between industries, is the essential relationship in the economic and management activities. Industrial linkage effect, divided into forward linkage effect and backward linkage effect, reflects the status and influence of industry. Industrial linkage effect is made up of linkage strength effect, linkage structure effect and the interaction between the two. In this paper, we firstly propose the connotation of industry linkage effect. Then we design an index system and a method to compute industrial linkage effect based on industry complex network (the industry complex network describes industry linkage based on input-output theory, and have been modeled in our previous articles). Furthermore, because structure is the important factor influencing regional competitive advantage, we put forward a compute method of industry linkage effect from the perspective of industry chain and industry subnet, and discuss the feasibility about identifying key industry, key industry chain and key subnet based on linkage effect. Finally, we try to determine the key industry (industry chain, industry subnet), and analyze features of those key industry using input-output data of China.