A Study on Interprovincial Economic Networks in China (Summary)

MINAMIKAWA Takanori
Lecturer, Department of Management, Okayama University of Science

This paper bids to clarify the structure of economic networks in China's thirty-one provinces, provincial-level municipalities, and autonomous regions (hereinafter referred to as province). The economic network applied here is represented by the movement of people, including travelers and the trading of goods, which exists between two target provinces. To pinpoint the structure of this network, we employ data by province on the number of people infected with Covid-19, the pandemic currently sweeping across the globe and severely hampering economic activity. In modeling the relationship between the number of new infections in a selected province and the count of people infected in a second province, it is possible to identify the relationship between the two provinces via estimation of small specimen high-dimensional data. Spatial weight derived from the estimated route of infection reflects not only proximity, namely physical distances and the sharing of provincial boundaries, as well as the number of people infected, a factor unique to Covid-19, but also the overall network lineage, including economic size and base. From this, the network information indicated in this study is considered to encompass the information on the network of goods and human movement described in the gravity model.