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ALLIANCE NETWORK STRUCTURE AND R&D OUTCOMES IN HEALTHCARE DIGITAL NETWORKS

Abstract:

The aim of this study is to quantitatively analyse the impact of the inter-organisational alliance network structure on R&D outcomes in healthcare digital networks. The impact of inter-organisational alliance network structures on R&D is diverse, depending on product characteristics and other factors. In our previous study, we analysed the inter-organisational collaboration relationships between pharmaceutical manufacturers and bio-venture companies, and found that different network structures enhanced R&D outcomes, depending on the differences among conventional small molecule drugs, biopharmaceuticals and formulation development. In this study, the analysis focused on healthcare digital networks, which are expected to be useful not only in combating the recent novel coronavirus but also in improving the efficiency of healthcare resources in the long term.

As an analysis method, the method of social network analysis was used to analyse inter-organisational collaboration data and patent data of 100 major companies in the world.

The results of the analysis showed that the size and between centrality of the network may promote R&D, and the results differed depending on the area of R&D. On the other hand, cohesiveness and closeness were not significantly related to R&D outcomes. Future work should include country-specific and long-term comparisons.

Keywords:

alliance network, social network analysis, healthcare digital network

JEL Classification: M11, O32, M19