The Role of Governance in Inter-Organizational Networks
A Longitudinal Study in the Dutch Paper and Pulp Industry

Abstract

This research project depicts a longitudinal, multi-method and multi-level network analysis on how network-level objectives are reached in inter-firm networks. The three inter-related research studies comprising this PhD project, which is carried out in the Dutch paper and pulp industry, will further the knowledge on agency and network structure influences on network-level outcomes by deploying the concepts of network governance and network horizon. A contribution to the recent debate on network evolution in network theory as well as theory of networks is made through (1) assessing the relation between network governance and reaching network objectives, (2) understanding network governance change through actor-level agency as well as structural factors and (3) supplementing the findings of the secondary-data analyses with a qualitative study on inter-individual trust.

Problem statement

“A network is a set of actors connected by a set of ties. The actors (often called ‘nodes’) can be persons, organizations, concepts, etc.” (Stephen P. Borgatti & Halgin, 2011, p. 992). This definition of networks has previously served as a basis for implementing findings on network structure and evolution (cf. Ahuja, Soda, & Zaheer, 2012). Building forth on this definition, the objective of this PhD research project is to investigate the relation between inter-organizational network evolution and network outcome at both actor and network level. The studies’ contribution lays in understanding this relation by accrediting the role of network governance and horizon, thereby filling an enduring gap in the Social Network Analysis (SNA) literature. The project will seek to answer the following research question:

How does network governance affect achieving inter-firm network objectives and how is this relation affected by the firms’ network horizon over time?

Study 1
How does network governance affect reaching the collectively agreed upon objectives in goal-oriented, inter-firm networks?
- Longitudinal data on the Dutch paper and pulp industry – project/team level
- Exponential Random Graph Models (ERGM or P* Model)
- Social circuit modeling: viewing tie variables as dependent on triangulated collaborations, but also as partial conditional dependent (including the presence of other network edges)

Study 2
How do governance modes of inter-firm networks change over time? How do governance modes diminish and/or enhance firms’ ability to initiate relevant, successful inter-firm networks in the future?
- Longitudinal data on the Dutch paper and pulp industry – project/team level
- Tie based network dynamic models based upon a continuous time Markov process
- Actor-based modeling through SIENA (Simulation Investigation for Empirical Network Analysis) using R

Study 3
How does trust affect the relation between network governance and achieving objectives in inter-firm networks, and vice versa?
- Case study data collected from the Dutch paper and pulp industry
- Explorative approach towards understanding the role of trust in inter-firm networks
- Multi-method control design in regards to the findings of the secondary data analyses of the previous two research studies