Metatheory of network management: A contingency perspective

Timo Järvensivu *, Kristian Möller [1]

Department of Marketing and Management, Helsinki School of Economics, P.O. Box 1210, FI-00101 Helsinki, Finland

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ABSTRACT

This paper introduces a metatheoretical, contingency-based framework of inter-organizational network management. We define four basic network management functions and suggest that they are universal to all inter-organizational networks. We argue that management tasks, derived from more general management functions and contingent upon network characteristics, differ according to network type. We further argue that the roles that different actors in a network can adopt depend on their resources and capabilities. The framework contributes to the emerging theory of network management by clarifying the connections between its different conceptualizations and layers. A clear implication of the framework is that it is fundamentally useless to argue that networks cannot be managed. Networks are being managed, all of the time. However, we agree that the extent to which networks can be managed differs from one network to another along with the managerial tasks employed.

1. Introduction

The focus of network research has shifted from the structures, functions, and dynamics of networks to the management of networks (Jones, Hesterly, & Borgatti, 1997; Möller & Svahn, 2006; Ritter, Wilkinson, & Johnston, 2004). Network management has been studied in several, often overlapping, fields, including industrial and business networks (Ford et al., 2003; Möller & Halinen, 1999), strategic networks (Jarillo, 1988; Möller & Rajala, 2007; Gulati, Nohria, & Zaheer, 2000), innovation and development networks (Dhanaraj & Parkhe, 2006), health care networks (Provan & Milward, 1995; Provan, Isett, & Milward, 2004), and public policy networks (Klijn, Koppenjan, & Termeer, 1995; Agranoff & McGuire, 2003). The broadness of the contexts in which networks have been studied is matched by the variety of background disciplines applied. These include institutional economics, economic sociology, industrial network theory, organizational studies, and strategic management (Araujo & Easton, 1996; Ebers, 1997; Grandori & Soda, 1995).

The cited studies, among others, have contributed valuable ideas and viewpoints to network management. Some focus on networks with a limited number of actors (i.e. strategic networks) and argue that hub companies should be able to exert relatively strong coordination among the actors (Jarillo, 1988); others argue that individual firms have limited control over networks (Ford & Håkansson, 2006). Some studies look at the different levels of management, ranging from dyadic relationships to relationship portfolios, strategic nets, and macro-level networks (Möller & Halinen, 1999). Research has addressed the management of innovation networks (Dhanaraj & Parkhe, 2006); the differences in the management of more stable supply nets and emerging networks (Möller, Rajala, & Svahn, 2005); capabilities to manage networks (Möller & Svahn, 2003; Ritter & Gemünden, 2003); as well as the different roles that firms can adopt in managing networks (Heikkinen, Mainela, Still, & Tähtinen, 2007; Mattsson, 1985).

While network scholars have generated valuable insight into network management, the research field remains quite fragmented. The problem with the network management literature is that the approaches are based on different underlying assumptions about the ontological characteristics of networks. The fragmented nature of theories pertaining to the evolution and management of networks creates several problems. We are facing multiple research approaches that are partly independent and partly overlapping, provide partial views of the network management phenomenon, employ different conceptual frames of reference, focus on issues at different aggregate levels, and employ different units of analysis. In brief, we lack a metatheory of network management.

We address this gap by providing a metatheoretical framework of network management. Through this framework, we conceptually describe and link together the basis, functions, tasks, and roles of network management. We analogically follow the metatheory approach to general organizational management set forth by Tsoukas (1994). Using this framework, we reinterpret and reorganize the various perspectives and definitions of network management found in the literature.

This paper has ambitious goals. Taking into account the vast and diversified extant literature on networks (see the seminal review articles by Grandori & Soda, 1995; Araujo & Easton, 1996; Ebers, 1997;

* Corresponding author. Tel.: +358 50 3832483.
  E-mail addresses: timo.jarvensivu@hse.fi (T. Järvensivu), kristian.moller@hse.fi (K. Möller).
  [1] Tel.: +358 50 3836190.

Brass, Galaskiewicz, Greve, & Tsai, 2004; Provan, Fish, & Sydow, 2007), we recognize that this work is based on a limited review. The goal is not to offer a comprehensive review of network literature in general but rather to focus on the core dimensions and constructs of network management.

The paper starts with a discussion of management as an area of research. We present a metatheoretical approach to this field introduced by Tsoukas (1994). This metatheory guides Section 3, the core section of the paper, which presents the contingency framework of network management. We introduce and discuss each of the sub-elements of the framework: the basis, functions, tasks, and roles of network management. The paper concludes with a discussion of the implications and limitations of the framework.

2. Management and its contingencies

2.1. General business management

Watson (2006, 167) defines management broadly as the "overall shaping of relationships, understandings and processes within a work organisation to bring about the completion of the tasks undertaken in the organisation's name in such a way that the organisation continues into the future." Thus, management is a function that by definition must be carried out in every organization that wants to exist in the future. Managerial work is the "activity of bringing about this shaping," and managers are responsible for carrying out this work, although the function of management can also be carried out by "unofficial" managers (Watson, 2006, 167–171).

The above definition implies that strategy-making is an inherent part of managerial work, since management takes responsibility for completing tasks to ensure organizational continuation into the future. The definition also assumes that the organization has undertaken to complete some specific tasks; however, these tasks may not be self-evident or consciously chosen. It is also the function of management to clarify the goals and tasks that the organization strives to achieve.

Fayol (1949, as cited in Watson, 2006, 172–173) has classified five elements of management: planning, organizing, commanding, coordinating, and controlling. Nearly all contemporary textbooks of management can be summarized in terms of these functions. Tsoukas (1994) has identified three other major research perspectives that go beyond this classical management functions perspective: management task characteristics, management roles (Mintzberg, 1973), and management control.

The management task characteristics perspective follows a sociological line of inquiry that seeks to study the distinguishing characteristics of the tasks that managers must perform as well as the skills that these tasks imply (Whitley, 1989). The nature of these tasks arises from the organizational nature of management activities and the discretionary nature of management in the allocation, control, and use of resources. Whitley (1989) suggests that management tasks are highly interdependent, context-dependent, relatively unstandardized, developing, fluid, oriented towards both the maintenance and innovation of administrative structure, and characterized by the lack of visible outputs that can be directly linked to individual inputs. This perspective focuses on the characteristics of management tasks instead of their content. We are particularly interested in the contingencies that give rise to particular divisions of required management tasks. Following Whitley's analysis, if the nature of management is context-dependent, then different tasks are required in different organizational contexts.

Mintzberg (1973) criticizes the functions perspective of management and advocates the management roles perspective, arguing that the universal prescriptions for what managers *should* do are not characteristics of what managers *actually* do. In his work, Mintzberg shows that managers do not seem to follow the classical categoriza-

tion of managerial work but rather engage in interpersonal, informational, and decisional roles.

The management control perspective advocates an institutional, macro-level analysis of management, building on the neo-Marxist approach (Armstrong, 1989; Willmott, 1984). This perspective looks at the institutional structures of managers and those that are managed, emphasizing "the centrality of management control in securing the transformation of labour power to actual labour in the context of capitalist relations of production" (Tsoukas, 1994, 297). From this perspective, Tsoukas (1994) conceptualizes the causal powers of management that make the existence of certain management functions possible. Thus, "[by] virtue of being part of the [socio-economic] industrial structure, management is vested with a set of causal powers that defines its nature" (Tsoukas, 1994, 297). These causal powers are *control*, the ability to elicit *cooperation* from others, and the drive towards *efficiency* and *effectiveness* (Tsoukas, 1994). This perspective is essentially informed by the critical realist perspective of management and organization theory (Bhaskar, 1978; Bhaskar, 1989; Dobson, 2002; Easton, 2002).

Tsoukas points out that there are apparent tensions between the four major perspectives related to their rather dichotomous conceptions of managers in either universal terms (as in the function and control perspectives) or through individual managerial activities (as in the task and role perspectives). In the next section, we look at how Tsoukas (1994) has linked the different management perspectives into a metatheory.

2.2. A metatheory of general business management

Tsoukas (1994) draws linkages between the four major approaches to management by building a four-level framework (Fig. 1); each upper level is made possible by the immediate lower level. Different levels "exhibit different dynamics (i.e. rate of temporal change): the closer to the surface, the more likely it is that changes occur (depending on changes of various contingencies)." In Fig. 1, these differences in dynamics are denoted by different line shapes. Tsoukas' view corresponds to the description of the social world as a layered system proposed by Sayer (2000).

The first level—management roles—is the most fluid and context-dependent layer. Tsoukas (1994, 296) argues that the key question is what contingencies are "systematically associated with how particular managerial roles emerge, demise or gain importance," for example, hierarchical position, management strategy, or industry. According to Tsoukas, in order to understand why management roles are what they are, one needs to look for an explanation at a deeper layer of management, in this case, the second level.

The second level of management looks at the nature of management tasks. This level has the power to explain differences in roles at the first level. For instance, the interdependence of some managerial tasks gives rise to certain managerial roles. In other words, particular
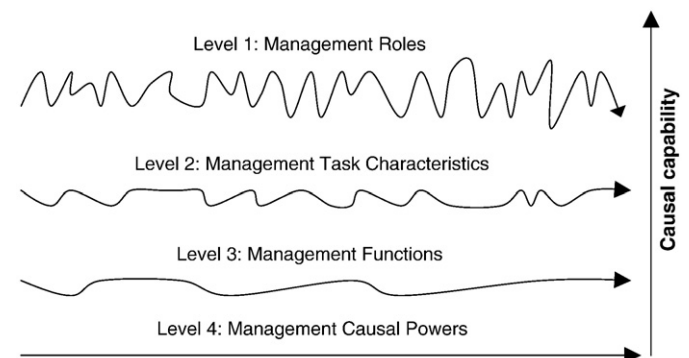

Fig. 1. A metatheory of different perspectives to management (modified from Tsoukas, 1994).