

NETWORK GOVERNANCE: ORGANISATIONAL AND LEGAL PROFILES

Raffaele Trequattrini*, Giuseppe Russo**, Rosa Lombardi***

Abstract

In the study of company networks the concept of governance includes the set of tools utilised in managing their complexity. This paper investigates the governance of company networks, starting with their organisational models and proceeding to an analysis of the contractual models selected for their coordination. More precisely, this research seeks to investigate network organisational modalities of an innovative character and thereby identify governance models which in turn stimulate business innovation. In this direction, the research question is the following: Which are models of governance that promote growth and business innovation? *****

Keywords: Governance, Network Governance, Relational Capital, Business Network

* University of Cassino and Southern Lazio, Via S. Angelo, Loc. Folcara, 03043 Cassino (FR), Italy

E-mail: trekraf@tiscali.it

** University of Cassino and Southern Lazio, Via S. Angelo, Loc. Folcara, 03043 Cassino (FR), Italy

E-mail: giuseppe.russo@unicas.it

*** University of Cassino and Southern Lazio, Via S. Angelo, Loc. Folcara, 03043 Cassino (FR), Italy

E-mail: rosa.lombardi@unicas.it

**** This paper is the joint work of the three Authors: paragraph 4 is by Raffaele Trequattrini, paragraphs 2 and 5 are by Giuseppe Russo and paragraphs 1 and 3 are by Rosa Lombardi.

1. Introduction

In the study of company networks the concept of *governance* defines the set of tools used to manage their complexity.

This begins with a consideration of the importance both of the companies in the network responsible for making decisions for ensuring the network's survival, as well as the decision making process itself.

Recently, research in business literature investigating this process has focused on the study of the ways groups think (Johnson, 2009), or *groupthink*, with the goal of understanding the decision-making models used by the network's system of *governance*.

In general, group processes affect the information flow necessary for making competitive decisions the most.

Gathering useful information for making decisions depends on two factors:

- an instrumental factor which derives from the necessity of acquiring knowledge needed to make decisions of various kinds.
- an emotional factor, which reassures the decision makers of the adequacy of their knowledge level. From this perspective uncertainty means lack of information. Information can eliminate or increase uncertainty depending on whether it leads to additional alternatives in the decision-making process.

The complexity of the decision making process depends on the number of available alternatives: in this sense, cohesive and dense networks tend to reduce uncertainty arising from the possession of certain information, while looser networks, characterised by weaker links, increase it.

The research on the relationship between the information load and the decision-making process has shown that often the decision-makers seek more information than necessary. This causes an informational overload which on the one hand reduces the quality of decisions, and on the other hand, within the network both increases satisfaction with, as well as confidence in the decision makers (O'really, 1980).

In practice, network members share information, discussing and making planned and improvised decisions. Planned decisions are formalized and repeated over time, following *ad hoc* rules: companies in the network develop a precise *iter* based on computer and quantitative tools to disseminate them (Simon, 1960). Improvised decisions are new and not derived *a priori* from established rules: their adoption can be complicated since the companies in the network must agree on how to decide (Cyert, Simon, Trow, 1956). In these cases the decision can be based on instinct or even be irrational in nature (Mintzberg, 1975).

In general, when the governing body of the network makes decisions based on a *set* of pre-established rules, it is possible to make a further

distinction: the rules derive either from the context or the interaction.

The rules of context define the nature of the network by determining positions, behaviours and results: they essentially define the nature of the game (Searle, 1971).

The rules derived from interaction more or less determine behavioural norms within the network. An example of this is the procedure used for selecting network nodes.

Typology aside, the rules of the network are constantly evolving since the network represents a dynamic entity, generated and changed by forces both exogenous and endogenous to its structure.

Thus the predisposition of a set of useful procedures in the decision making process, planning and programming, and control processes, permit the network to preassign tasks to nodes and determine expected results *a priori*.

In light of this, the present study aims to investigate the *governance* of company networks beginning with the organisational model that they themselves adopt.

Regarding this subject an analysis of the contractual models for network coordination will be made, following which the chapter will conclude with an analysis of an innovative network organisational system: models of *governance* which promote growth and business innovation will be presented.

2. The governance and models of coordination of the network

Part of the literature contends that the company network is one of the modalities for performing *governance* (Cafaggi, 2005), giving particular importance to governing the network and knowledge management.

Governing the *network* implies on the one hand monitoring and controlling the opportunistic behaviour of member companies; on the other, the possibility of an interactive environment which promotes the exchange of knowledge and resources.

From this point, knowledge management seeks to increase network competitiveness in the long term. To this end, it is necessary to adopt mechanisms which facilitate dialogue between companies. This implies encouraging coordination between member businesses. By systematically working through the decision and control processes this function can be carried out within the framework of the hierarchical authority relationships of the network; or, in a more spontaneous fashion, by the company filling the role of the natural leader of the network.

In any case, the interdependence which is created between companies of the network forces them to evaluate mutual decisions together. This observation emerges from one of the definitions of the network: “ *that set of cooperative and basically stable, even cyclical, relationships, between two or*

more companies which are formally and legally distinct, and between whose activities exists or evolves a type of interdependence and consequently a need for coordination to which the network responds using diverse, formal and informal, tools of government, both contractual and not.” (Cafaggi, 2004).

If on the one hand *governance* must take into account the complementarity of resources, making decisions in the interest of all member companies; on the other hand the coordination, or rather the interdependence, of resources appears influenced by the autonomy of the member companies. From this point of view, it is possible to distinguish four types of interdependence:

- mutual interdependence. The companies of the network contribute independently to the attainment of common goals. Coordination is manifested, for example, in the creation of rules for directing the operation of the various entities.
- intensive interdependence. The network companies contribute to the attainment of common objectives by providing their *know-how*;
- sequential interdependence. The activity of one company of the network influences, or rather activates, the operation of another member company;
- reciprocal interdependence. The activity of two nodes of the network is conditioned jointly by the activity of the individual parts involved.

It follows that the concept of interdependence implies the concept of coordination.

From the business point of view, coordination assumes three configurations:

- industrial and financial coordination. In this case production and financial activities are coordinated by the network companies;
- normative coordination. This configuration implies coordination of activities even by means of certain types of contracts such as that for the incorporation of a consortium (Perlingieri, 2007);
- coordination of government in the strictest sense. Such configuration, beyond the possible inclusion of the preceding ones, contemplates coordination of network governing activities.

Some forms of coordination are found in contracts of exchange and association. The former are connected to negotiations between network nodes: an example is the consortium model. The latter are traceable to organisational sales agreements between nodes: for example, the *franchising* contract (Ciambotti, 1989).

In some contracts the function of coordination is ensured by the negotiating mechanism connecting the several parts of network. For example, in the value chain model this connection is seen in the individual supply contracts which are part of the production chain; while in the radial model it can be seen in

the *franchising* contract where a single network node draws up contracts with all the others.

In light of this, network coordination can be further defined and understood in terms of the coordination and the stability of its entrepreneurial nodes.

Cooperation protects companies from opportunistic behaviour through the adoption of contractual rules. However the importance of the role played by fiduciary resources in the management of complex relations should also be noted (Luhmann, 2002). In regard to which, the rules and negotiations combine with the establishment of node relations: this guarantees the stability of the network in the long term.

Moreover, the concept of stability differs from that of flexibility: the first follows from the attainment of common objectives; the second, in a broad sense, has to do with the organisational model of the network.

The coordination of the network cannot be realised when decisions are not formalised by contract. This causes structural changes in the network which distinguish a hierarchical grouping from a network of coequals (Lamborghini, 2008).

From this perspective, one can detect characteristics of the network relative to a particular company group such as the following:

- coordination and decision making responsibility is shared among the companies;
- coordination can be general or specific;
- sharing of resources is crucial to achieving the goals of the network.

3. Contractual and corporate models of network coordination.

Company networks take on different legal configurations: there are contractual, corporate, and mixed coordination models.

Starting with contractual models, one can distinguish three forms of coordination:

- coordination of practicable control in the hierarchy. Control derives from the contract stipulations regarding the constitution of the group. Authority to direct and control are defined by the contract itself;
- coordination of dependence typical of hierarchical networks. This model follows from the economic dependence that exists between the companies of the network. This does not imply contractual control, but rather a dependence which is objectified in the economic potential contained within each network connection;
- coordination of interdependence found in networks of coequals. Interdependence derives from financial and industrial collaboration between network members. Often coordination contracts are used to regulate network *governance*.

Instead, in the case of corporate coordination models, coordination of activities carried out by member entities of the network is sought through the constitution of companies or consortia in the *multistakeholder* approach. Companies are motivated by profit, whereas consortia and other types of associations (foundations, associations, etc.) are not.

Basically, networks of coequals are usually recognized by this last organisational type, even if they sometimes link themselves with capitalistic, innovative corporate *business* models.

Finally, mixed models of coordination between companies combine forms of contractual and corporate collaboration: these coordinate both the economic activity of the network and the governance of the member companies.

4. Innovative models of network governance

The emerging phenomenon of company networks lends itself to an analysis of the capacity of member companies to manage knowledge and innovate in order to achieve elevated *performance* over the long term.

From this analysis, innovation (Gollin, 2008) seems like a result achieved by multiple companies or entities working together using new productive processes. Moreover, this characteristic is underscored, by recent changes in contractual norms for networks. Regarding this development, the constitutions of networks aim at maximizing exchanges of information and knowledge between members without neglecting innovation or the process of internationalization, both of which foster the development of the *network*.

Although innovation concerns processes, products, the market, supply, and the organisational structure, the opportunity for the network to innovate no longer depends on the network's opportunity to exploit tangible internal resources, but rather on its capacity to form a network of knowledge utilizing those resources able to contribute to achieving the sought after competitive advantage.

To this end *network centric* logic makes progress (Nambisan, Sawhney, 2008) in creating new ideas through the synergistic interaction of the companies and the network..

The literature concerning this phenomenon looks at certain communities and ecosystems: the latter are defined as economic communities supported by organisational foundations which interact to implement innovative business strategies in the marketplace.

This phenomenon is similar to the *open source* community concept which promotes commercial innovation. This approach is based on the ability to exploit network resources and skills to support and improve knowledge management and achieve

innovative results. In this context *network centric* innovation is determined by four factors:

- the shared objectives of the network nodes;
- the world vision shared by the network nodes is based on common presuppositions and on mental models focused on innovation;
- the creation of social conscience concentrates on the interactions between network links as a foundation for creating;
- the participatory architecture identifies systems, mechanisms and processes to facilitate the work of the nodes and promote value creation.

Depending on the nature of innovation and the *leadership* (Burns, 1978; Collins, Montgomery, 1997; Porter, 1996) network, Nambisan and Sawhney have identified four current generation organisational models of *network-centric* business nets (Nambisan, Sawhney, 2008): The Orchestra model; the Creative Bazaar Model; the Jam Central model; and the Mod Station model.

The Orchestra model is inspired by the organisation and structure of a symphonic orchestra which is composed of a group of musicians specialized in the use of different musical instruments and directed by a conductor who conducts them by waving his baton (Tapscott, Williams, 2008).

In practice, a group of companies can exploit, through diverse potentials, a market opportunity deriving from the innovative potential and strength of the dominant company. This business *leader* (Schein, 1985) is concerned both with integrating various contributions to create a central nexus of innovation, and with marketing the innovative output thus achieved.

The Creative Bazaar model is conceived of as analogous to a musical production where the record company, as the dominant player, makes all critical decisions of a creative, technical and commercial character. This occurs in the context of assessing all the different music of various provenance offered for purchase in a bazaar.

The purchase process includes *ad hoc* intermediaries, competitions and music agents, and auditioning of performers who have a proven fan base. In this way, the company network is structured in the manner of a Creative Bazaar: The dominant company identifies the innovation to be introduced to the market using its own infrastructure to develop and/or market it. To accomplish this a diversified complex of innovators is set up who provide original ideas to the dominant companies of the network.

The dominant business can decide to acquire innovative products and ideas already ready for market. However, intermediaries or market specialists are needed to decide whether the innovations are commercially viable for the target market.

In essence, the involvement of business innovation specialists ensures the delivery to the *leader* of original ideas it can readily adapt for the market.

The Jam Central Model is patterned after the *jam session* of a group of musicians who gather to perform improvised pieces of music.

In a *jam session* there is no *leader*: all the participants share responsibility for coordinating the music in terms of rhythm and tempo. The network model sets up of the member companies who use an improvisational approach to produce innovation.

In this way the companies belonging to the network produce innovative results without any prior planning. There is no company *leader*; all member companies interact and share their knowledge, working toward a common goal. Thus together the companies create innovations improvisationally.

Finally, the Mod Station model originates in the way in which modifications are made to *computer games*: the business producing the game makes a source code available to the computer game playing public, the *modders*, so that they can make complete or partial modifications to the games they are exploring.

These *modders* represent innovation catalysts. In this model existing innovation is modified or improved by the changes effected. The community members decide on shared norms and values. There is no *leader* company managing innovation.

In the same way, in the company network there is no dominant node and the users perform the function of improving products which are made available to them by the companies.

5. Conclusions

In the light of the analysis made to this point, the transfer of information and knowledge appears to be determined by the type of organisation adopted by the company network.

In this line of thought, the selection of one of the foregoing models of *governance* implies the existence of cooperative behaviours between the companies which are aimed at achieving a common objective. In other words the networks create a foundation of stable and lasting collaborative relationships established between its nodes.

This brings about a change of scenario beginning with those variables which affect impact business competitiveness, and, more broadly, the configuration of the network; both converge in exploiting the strategic potential of intellectual capital.

If governance of the network seems tightly linked to knowledge management, not less important are the issues related to management of intellectual property.

To this point *governance* has been discussed in terms of contractual and organisational models; of norms and emergent models able to stimulate business innovation, in so doing omitting a problem which networks are often faced with..

Network businesses engage in innovative planning and consequently find they must clarify their

position with respect to intellectual property and dealing with issues surrounding intellectual property rights.

In legal terms, the area of intellectual property is regulated by *copyright*, patents, brands and protocols for managing company secrets.

The *copyright*, or author's right (Corapi, 1994) protects an new literary or artistic product. It is acquired without any formal procedure by the creator and is a semi-universal right. This right protects the writer or songwriter from pirated distribution of his or her work.

The patent (Ascarelli, Mangini, 1987) protects a new product of a productive process. Its creator seeks recognition from an organisation qualified to grant it. To qualify the protected product and/or process must represent a real innovation. This right is time and space limited.

Business brands include words, symbols, colours, phrases, and drawings. They serve to identify the good or service offered by the business and distinguish it from the products of competitors. The brand raises expectations in the customer concerning quality of the product of service offered. In order to be registered the brand must possess originality and novelty. It has no time limit although it must be renewed every ten years. Illegal use or alteration of a brand is a punishable crime.

Company secrets represent a type of information received and held by businesses for commercial purposes. They are usually protected by measures which are administered by the company itself. An individual who violates a company secret is subject to criminal prosecution. In practice, such violations can range from the theft of documents or information; disclosure of information obtained confidentially, to the violation of professional secrets.

In this vein, inventions can be realised through the combined or joint work of several companies: when this occurs, it is necessary to prescribe the rights of each network member company.

In operational terms, the businesses of the network receive a part of the *performance* proportionate to the exploitation of the intellectual property in question, viewed as a function of the "appropriability" (Riccaboni, 2005): profitability depends on the "appropriability", or rather on the conditions which determine the distribution of profit deriving from the innovation.

However, in the case of networks recourse to alternative forms of intellectual property rights management might reduce certain problems of a practical nature.

One solution is the underwriting of agreements among several companies: such entities, as owners of

innovations or parts of innovations, can decide to hold property rights either jointly or separately.

References

- 1 Ascarelli T., Mangini V. (1987) *Delle invenzioni. Dei modelli di utilità e dei disegni ornamentali. Della concorrenza*. Comm. c.c. Scialoja e Branca, Bologna-Roma.
- 2 Burns J.M. (1978) *Leadership*. Harper & Row, New York.
- 3 Cafaggi F. (2005) *Corporate Governance, Networks e Innovazione*. Cedam, Padova.
- 4 Cafaggi F. (2004) *Reti di imprese tra regolazione e norme sociali. Nuove sfide per diritto ed economia*. Il Mulino, Bologna.
- 5 Ciambotti M. (1989) *Il franchising nell'economia delle imprese minori*. Franco Angeli, Milano.
- 6 Cyert R.M., Simon H.A., Trow D.B. (1956) *Observation of a Business Decision*, in *Journal of Business*. vol. 29, pp. 237-248.
- 7 Collis D.J., Montgomery C.A. (1997) *Corporate Strategy: Resources and the Scope of the Firm*. Irwin, Chicago.
- 8 Corapi D. (1994) *Il diritto d'autore di fronte alle nuove tecnologie*. Edizioni Scientifiche Italiane, Napoli.
- 9 O'really C.A. (1980) *Individuals and information overload in organizations: is more necessarily better?*. *Academy of Management Journal*, vol. 23, pp. 684-696.
- 10 Simon H.A. (1956) *The New Science of Management Decision Making*. Harper & Row.
- 11 Mintzberg H. (1975) *Impediments to the Use of Management Information*. National Association of Accountants.
- 12 Searle J.R. (1971) *The Philosophy of Language*. Oxford University Press, London.
- 13 Perlingieri P. (2007) *Manuale di diritto civile*. VI edizione, Edizioni Scientifiche Italiane, Napoli.
- 14 Gollin M.A. (2008) *Driving Innovation. Intellectual Property Strategies for a Dynamic World*. New Intellectual Property Strategies for a Dynamic World, Cambridge University Press, New York.
- 15 Lamborghini B. (2008) *L'impresa web: Social Network e Business Collaboration per il rilancio dello sviluppo*. Franco Angeli, Milano.
- 16 Luhmann N. (2002) *La fiducia*, Il Mulino, Bologna.
- 17 Nambisan S., Sawhney M. (2008) *The global brain. Creare innovazione nel mercato aperto*, Wharton School Publishing, Milano.
- 18 Porter M.E. (1996), *What is strategy?*. *Harvard Business Review*, november-december.
- 19 Riccaboni M. (2005) *Cambiamento tecnologico e reti di imprese*. Franco Angeli, Milano.
- 20 Tapscott D., Williams A.D. (2008) *Wikinomics. La collaborazione di massa che sta cambiando il mondo*. Etas, Milano.
- 21 Schein E. (1985) *Organizational Culture and Leadership*. Josey-Bass, San Francisco.