“THE LIGHT SIDE AND THE DARK SIDE OF INTER-FIRM
COLLABORATION:
HOW TO GOVERN DISTRUST IN BUSINESS NETWORKS”*

Valentina Della Corte**

Abstract

In front of globalization, hypercompetition and turbulence (D'Aveni, 1994, 1995), it’s more and more frequent to see inter-firms relationships increase exponentially: alliances, partnerships, social groups, clans. Networks are becoming a prevailing organizational form in the 21st century (Cravens, Piercy, 1994). The unit of analysis, in this article, is the strategic systems and more precisely the strategic network that develops within a territory (business districts, destinations) or a virtual set and that is even denser and more complex than ordinary networks: local resources can be relevant for the whole aggregate and relations are also physically or virtually particularly closed. Strategic networks and inter-firm collaborations have often been analysed with respect to their main success factors. Less attention has been paid to the more obscure and less satisfying aspects that someway explain why, in some cases, they fail or at least do not take off. Even theoretical frameworks usually adopted as Resource-Based Theory (Rumelt, 1982; Wernerfelt, 1984; Barney, 1991, 2007) Transaction Cost Economics (Williamson, 1975, 1981) and Social Network Theory (Granovetter, 1973, 1982; Lieberskind et al., 1996, Wasserman, Faust, 1999) are used according to a positive approach, aimed at finding and analyzing mainly successful initiatives. The aim of this article is to analyse, in particular, situations of distrust, that can either continue pushing firms not to cooperate or rather evolve towards more trustful situations and therefore with more chances of really developing business networks. A specific model is proposed, to manage distrust and to evolve towards trustful situations. The process, however, requires a specific intervention of a network governance actor, that can stimulate it. This actor must have distinctive capabilities and competences to manage the process. The proposed model is developed with the help of Game Theory (Fudemberg, Tyrole, 1991; Gibbons, 1992; Myerson, 2002, 2006) and can be applied empirically to verify what prevents actors from cooperating and how the governance actor can lead the process towards trust situations. Game theory is also used to study the possible level of co-operation (Brandenbruger, Nalebuff, 1996), that is the collaboration that can be put forward among competitors. Firms involved in these processes vary their own approaches both in terms of realizing the opportunities brought about by collaboration and of assuming a positive vs opportunistic behaviour. But the latter often prevails...The results offered by the model will also have some managerial implications since they should be able to give useful hints to decision makers on how to govern distrust. The model will be tested empirically on a sample of firms operating in tourism sector in Southern Italy, involved in local networks. In tourism industry, cooperation between players operating in the same destination is something needed to compete against global destinations. It will be then applied to other industries characterized by small and medium enterprises that have invested in the same area/district, with a high potential for collaboration.

Keywords: strategic networks, trust/distrust, governance

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1. Introduction: preliminary research and unit of analysis

This article comes out of several previous researches on strategic networks in different industries, among which tourism sector. During these researches, in order to verify the degree of inter-firm collaboration, strategic systems (Della Corte, 2000; Franch, 2002; Tamma 2002, Pencarelli 2003, Della Corte, Sciarelli, 2006, Della Corte, 2009) emerged as a possible configuration that goes even beyond strategic networks. Systems are more complex and intense than strategic networks, are usually characterized by local or virtual proximity and by strong relationships. Some contributions (Franch, Martini, Tamma, 2007) point out that, in order to have a system, a strong collaboration is needed, characterized by at least two of the following variables: product, project, territory.
The first refers to some sort of complex offers, co-designed by the firms of the industry belonging to the network; the project refers to the presence of initiatives aimed at favouring local development (both through a bottom-up or a top-down process); the territory refers to a specific area within which firms cooperate in order to verify whether there is an effective joint use of local resources. Findings (Della Corte, Migliaccio, Sciarelli, 2007) suggest that in these specific networks' management two main factors are needed: a) active entrepreneurs, in order to make the system more robust and structured, and b) an efficacious governance system, either based on shared values or characterized by the presence of leading actors, with a configuration and a role linked to the stage of development of local area. This governance can develop through:

1) a bottom-up process, in situations where there are active firms, with clear entrepreneurial and managerial capabilities, that spontaneously constitute aggregate configurations that lead territorial or systemic strategies. There may also be a party that tends to dominate (Lorenzoni, Baden Fuller, 1995) and this can be due to pragmatic and/or psychological situations (it’s the main producer in the setting, the promoter of collaboration): it’s important, however, that this dominance is recognized and agreed. In such situations of spontaneous processes, public organizations generally play a supportive role for private organizations’ proposals and projects;

2) a top-down process, when there is not a good entrepreneurial “humus” at a local level and a pivotal actor is extremely important to develop strategies, create consensus and shared values and implement co-joint programs with an adequate coordination. In these situations, either public organizations or ad hoc entities (with both private and public entities) prevail.

The implications that come out of the analysis are shown in Exhibit 1.

Exhibit 1. Systemic logic and governance forms

<table>
<thead>
<tr>
<th>ENTREPRENEURSHIP /MANAGEMENT LEVEL (market knowledge)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
</tr>
<tr>
<td>Hostile context</td>
</tr>
<tr>
<td>strategic vision</td>
</tr>
<tr>
<td>Yes = difficult but it can be created</td>
</tr>
<tr>
<td>No = difficult to be created</td>
</tr>
<tr>
<td>Marginal System</td>
</tr>
<tr>
<td>strategic vision</td>
</tr>
<tr>
<td>No = difficult to be created</td>
</tr>
<tr>
<td>Yes = high effect</td>
</tr>
<tr>
<td>LOW</td>
</tr>
<tr>
<td>Spontaneous System</td>
</tr>
<tr>
<td>strategic vision</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Need of leadership</td>
</tr>
<tr>
<td>strategic vision</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Della Corte, 2009

In this article, the attention is mainly concentrated on contexts where a spontaneous process does not take place in order to check the main reasons and to evaluate how to move from more difficult situations (i.e. hostile contexts) to more manageable ones. The main literature on strategic alliances and networks is examined, in order to specify the concept of local strategic system. Thereafter the problem of initial distrust and partners' selection is examined, in order to study the role of network governance actor in this process. The proposed model has been set using RBT for its qualitative aspects and Game Theory to explain the process.

2. Main literature on inter-firm collaboration

Cravens, Piercy and Shipp (1996) affirm that a network paradigm appeared first in the European International Marketing and Purchasing (IMP)
research group studies of interaction in business relationships during the mid-70s and was only later acknowledged by US scholars in the 90s, following the need for SMEs to cooperate to strengthen their defence against global players.

Several other scholars have highlighted the link between the rising intensity of competition in global markets and managerial decisions of cooperation with other firms (Sciarelli, 1996). This strategy allows firms to reach a higher degree of effectiveness through resources and competences specialization while reinforcing the overall competitiveness through the network (Hannan and Freeman, 1984). The theoretical prescriptions have been confirmed by OECD’s findings (2007) that reveal positive trends in almost any form of cooperation. Many studies tend to analyze inter-firm collaboration in terms of strategic alliances and networks as synonyms and, in particular, consider both dyadic and plural relationships as similar processes. The attention on strategic systems requires an analysis of strategic alliances and networks, with specific reference to strategic and long-term relationships.

2.1. Strategic Alliances’ main models

As known, strategic alliances are inter-firm relationships, usually built with a specific, definite purpose or more generally to increase firm’s performance (Barney, 1996; Sciarelli M., 1996; Gulati, 1999 and ss, Della Corte, Sciarelli, 2006). They can be either symmetric (with partners’ common interests), asymmetric (with differentiated roles and power), or mixed (Barney, 2002). Besides, they can develop horizontally (in the same market, with geographically expansion), vertically (i.e. in case of relationships between suppliers and clients), and/or at a territorial/aggregated level, with a set of relationships, both horizontal, vertical and even among different sectors (Della Corte, 2009).

Different studies have analysed the concept of alliances’ governance. An interesting contribution is that of Alliance Architecture Model (exhibit 2), that can be used to understand how strategic alliances can be governed, controlled and managed.

Observing the relationship between the structure of leadership (single entity or coalition) and the number of alliance roles (one or several), four models of alliances come out: franchise, portfolio, cooperative and constellation-based. Each of them has a different set of implications for governance.

Franchise Model is used to fill a functional gap and to facilitate business growth, because it’s characterized by a single alliance role that can be refined and quickly replicated to create a very quick scale effect, thereby producing an alliance growth corridor for the alliance initiator.

Portfolio Model is used by firms that aim at adding value maximisation, controlling every needed competence to reach a sustainable competitive advantage. This alliance model is built around relationships created by a focal firms, that can achieve meaningful strategic actions to build innovative capabilities, while keeping under control the network of relationships.

With the Cooperative Model, the attention focuses more on a cooperative role: in the center there is the alliance itself, rather than one partner. Even customer relationships are often entitiled to the alliance itself rather than to each partner. In this model, partners are considered as equal at the point of intersection (the specific product or service provided to the marketplace) even when their relative size differ; all firms work together towards the same goal.

Finally, in the Constellation Model, firms develop breakout strategies which leapfrog the competition and put industry competitors on the defensive. The model stems from the need to compete on a global scale through standardization and players’ substantial capital.

Exhibit 2. Alliance Architecture Model

Source: Harbison, et al., 2000
This analysis conducts from strategic alliances to networks and systems, that represent more complex entities, made of numerous actors, even territorially or virtually connected in case of strategic systems.

### 2.2. Theoretical interpretation of Networks

The literature on networks has developed in different areas of study, that can be gathered in two main blocks: the first one is in social sciences, including contributions in strategic management, organization, economy and sociology; all these approaches have inevitably had an impact on the theories of the firm, as a basis for explaining enterprises’ choice of competing through systems and networks (Ohmae, 1989; Contractor and Lorange, 2002). Another important set of contributions regards in particular quantitative approaches and more precisely mathematical perspective (Exhibit 3).

**Exhibit 3. Theoretical frameworks’ in the studies of networks**

Source: Della Corte, Micera, Tani, 2008

Quantitative studies have been carried out within mathematics and in particular Graph Theory and Game Theory. The former is based on the abstraction of diagrams made of points and lines that can be considered respectively as nodes or actors and as ties and relationships. On the other hand, game theory is a branch of applied mathematics to other disciplines, such as social sciences. With specific reference to strategic management, it’s based on the assumptions that firms’ strategic decisions are often intertwined. If in a first phase it referred to classical competition situations where a firm’s success is at the expense of another (zero sum games); later on it has been used to analyze and interpret different types of inter-firm relationships, with several developments.

As regards social sciences, in Sociology three main approaches have dealt with networks: the Institutional Theory, the Organization Sociology and the Resource dependence Theory.

Within Institutional Theory, network is mainly studied as a certain set of relations (ties) that connect some nodes or actors (people, firms or events). The purpose is to draw these nodes and ties, in order to analyze the structure of the network. Some scholars (Di Maggio and Powell, 1983) underline how environment influences organizations to legitimate and conform to prevailing social norms. Networks and their structures are identified and measured through connectedness (Laumann, Galaskiewics and human players (computers, animals, plants)”, (Aumann 1987).

21 Wasserman and Faust (1994: 132) define 4 types of connectedness between two nodes: weak connectedness, when the nodes are joined by a semipath; unilateral
Marsden, 1978) and structural equivalence\(^{22}\) (White, Boorman and Briege, 1976): these two concepts allow firms to position themselves in their own environment, avoiding isolation and safeguarding their survival (Baum and Oliver, 1991).

Organizational Sociology follows the seminal works by Granovetter (1983, 1985, 1992), identifying the legitimation of the organization in the environment, according to its embeddedness. In this stream of research there are two kinds of embeddedness: cultural embeddedness (Granovetter, 1983) and social embeddedness (Boisot, 1986).

Resource dependence Theory is based on a framework which prescribes the firm to start flows of resources with environment, in order to foster its survival (Pfeffer and Salancik, 1978). The evolution of a network is explained (Stern and Reve, 1980) by the interaction between these flows. Moreover, this approach investigates the breadth of relationships as a predictor of the complexity of the network (Alter and Hage, 1993) and distinguishes horizontal interdependence, based on resource-pooling and complementarity, from vertical interdependence, based on resource-transferring from one firm to another (Pfeffer and Salancik, 1978). While this theory is a good explanation of the factors that can induce a firm to collaborate, originating ties with selected partners (Pfeffer and Salancik, 1978; Jarillo, 1988), it somewhat neglects the difficulty firms face in selecting their partners (Gulati, 2007). Besides, it takes for granted that information is free and accessible for all partners.

Industrial Economics research on horizontal and vertical integrations has studied network organizations as a way to face incomplete or mixed forms of quasi-integration (Blois, 1972); networks were considered as one of the market failures configurations, as a sort of second best choice, and they could be explained by optimization of production costs, i.e. economies of scale, scope, specialization and experience (Teece, 1980). This approach initiated an understanding of network as an optimal hybrid form between markets and hierarchies (Williamson, 1981), seen as a separate logic distinct from the Market-Hierarchy dyad (Thorrell, 1986; Powell, 1991): it’s Transaction Cost Economics (TCE) theory, developed by Williamson (1979) who carried on the seminal work by Coase (1937). According to these scholars, a network organization is a way for reducing transaction costs accounting for the risk of partner's opportunistic behaviour (Williamson, 1975; Kogut, 1992). It is explained as function of asset specificity, context uncertainty, frequency of transactions (Williamson 1981) and agents’ opportunistic behaviours (Davis, 1991). In order to get maximum benefits from this organization, the network structure has to:

- acknowledge property rights (Poppo and Zenger, 1998);
- create incentives mechanism for cooperation (Zajac and Olse, 1993; Dyer, 1997);
- limit the unbalance in transaction specific investments (Williamson, 1979).

Within Economics, studies in Industrial Organization start from the industry structure and see inter-firm collaboration as strictly bound to the industry’s overall competition (Richardson, 1972; Teece, 1980; Porter, 1981).

On the other hand, another important stream of research has examined the theme of inter-firm collaboration, starting from the firm as unit of analysis and examining its relationship with external environment: this has been labelled as Resource-Based Theory (Penrose, 1959; Wernefelt, 1984; Barney, 1996, 2002, 2006). According to RBT, the strategy of the firm must be based on the resources it has access to (Arikan, Barney, Della Corte, Sciarelli, 2008); Barney (1991) defines resources as a bundle assets, capabilities and organizational processes, firm attributes, information and knowledge. A strategy can sustain a competitive advantage only if it is based on resources that are Valuable, Rare, Inimitable and fully exploited by the Organization (VRIO framework).

A resource is difficult to imitate when there are mechanisms to protect it (Dierickx & Cool, 1989; Hooley et al., 2005; Lippman & Rumelt, 1982; Reed & DeFillippi, 1990) such as: (a) causal ambiguity (difficulty in identifying how the advantage was created), (b) complexity (arising from the interplay of multiple resources), including social complexity, (c) casualty intended as tacitness (intangible skills and knowledge resulting from learning and doing), (d) path dependency (the need to pass through critical time dependent stages to create the advantage), (e) legal barriers (such as property rights and patents).

An alliance is based on valuable resources when the resources’ coordination creates new value that the firm could otherwise not reach. Similarly, a strategic alliance is rare when there are only sparse competitors that have a similar relationship considering the frequency of the interplay and the benefits obtained from it too. The main organizational objective of an alliance is that to assure partners benefits’ maximising and the minimising of probabilities of deceptive behaviours. Organizational skills required in alliances management are almost unique. Often it is necessary some time because firms can develop attitudes and

\(^{22}\) Two actors are structurally equivalent if they have identical ties to and from all other actors in the network (Wasserman and Faust, 1994: 356).
reach a complete use of their alliances’ potential. An alliance can lead firms towards unique resources and competences, specific assets and processes efficiently, without necessarily adopting a fusion or purchase strategy. Firms can therefore use external resources in order to reinforce internal resources in different ways (Hamel, Prahalad 1994):
- concentrating on a limited number of resources and using partnership/supply relations as a further source of competitive advantage;
- creating a system of distinctive resources, that can be rare and difficult to imitate;
- reducing investment’s turnover, in order to develop and maintain strategic resources, widening the scope of the firm well outside its internal boundaries.

Applying RBT analytical framework (VRIO) to inter-firm collaboration strategies, sustainable competitive advantage can derive from a rare whole of shared resources. The system of complementary and shared resources can itself become an imitation barrier (Freer et al, 2002) only if involved partners succeed in managing the collaboration over eventual frictions (Das e Teng, 2000). From this point of view, inter-firm collaboration either in the form of strategic agreement or of strategic alliance or network or system can create itself a barrier to entry, social complexity (Barney, 1991), that is the whole of relationships and connected resources among partners, in order to get a sustainable competitive advantage, even if the degree of complexity, in terms of relation, increases.

RBT suggests to involve in a strategic collaboration when there is:
- resources complementarity (Hitt, Bierman, Shimizu e Kochar, 2001);
- interdependence of each firms’ competitive advantages (Ireland, Hitt e Vaidyanathan, 2002);
- management support in developing synergies both at a strategic and at an operation level.

In this direction, some specific streams of research have been originated within Resource-based theory (Barney, 2002):
- Knowledge-based view (Grant, 1996);
- Relational view (Dyer and Singh, 1998).

The first one is focused on the firm as a repository of knowledge, mainly concentrating on the cognitive aspect of inter-firm relations (Langlois 1992; Dosi 1992; Kogut, Zander, 1992; Foss, 1993, 1996; Nonaka 1994, Teecé, 1998), and deals with organizational learning (Cohen and Levinthal, 1990; Levinthal and March, 1993; Zahra and George, 2002). In this approach, strategic alliances are an important part of the learning process for firms; in fact, they generate a process in which it’s possible to discover new opportunities in a flexible setting of multiple partnerships (Foss, 1993; Leonard-Burton 1995; Grant and Baden-Fuller, 2002). Two main approaches regard the learning process connected with inter-firm collaboration: the exploration/exploitation model (March, 1991) and that based on absorptive capacity (Cohen e Levinthal, 1990). According to the former, firms try to manage knowledge balancing between the acquisition of new knowledge (exploration phase) with the profitable use of that which already exists within firms (exploitation - Boisot, 1998). The exploration phase is necessary to sustain firms’ competitiveness in highly competitive markets (Wiig, 1997) but it requires riskier costs. In this optic, external relations can help reducing risks and developing usable knowledge, through the successive exploitation phase.

The absorptive capacity model, on the other hand, sees inter-firm relations as a source of knowledge endowed of its own generativity (Donald, 1991), useful to develop new resources (competence building) or rather to better exploit those already controlled by the firm (Post, 1997).

Since generativity derives from relations, as the number of alliances the firm can manage increases, there are new opportunities of reaching and generating new knowledge (Weitzman, 1996; Moran, Ghoshal, 1999).

Another important approach is the so called Relational View (Gulati, 1998; Dyer e Singh, 1998; Kale e Singh, 1999, 2007; Kale, Dyer e Singh, 2002), that underlines the social content of the relationship between the firm and its environment. This approach, whose main supporters are Dyer and Singh (1998), gives an explanation of the existence of inter-firm networks and of how the network itself can manage strategic resources and competences, able to generate an overall sustainable competitive advantage, shared by participating companies even if at different levels, according to their own resources and capabilities. Such a network can therefore produce its own rent - an above normal profit jointly generated in an exchange relationship that cannot be generated by each firm individually. Even more, a certain relation can only be built in the light of the overall set of relations the firm has put forward over time (Koka e Prescott, 2002). This recalls another important contribution to network theory, which is social network.

Relational-cognitive studies have enriched resource-based theory: collaborating in order to get a stronger market power, to have access to others’ resources and competences or to foreign countries or to other sectors, as well as sharing learning economies (Sciarelli M., 1996) are some of the prevailing reasons for inter-firm collaboration, also at a territorial/aggregated level. This can also take place between networks characterized by the presence of competitive firms (the so called “cooperitiveness”), where typical aspects of collaboration and competition coexist (Nalebuff, Brandeberger, 1996; Dagnino e Padula, 2002): some firms can cooperate in some markets and compete in others (Lado, Boyd, Hanlon, 1997); some interact on the basis of common interests that do not completely diverge ("partially
overlapped“); some others, operating in the same businesses and in the same markets, both compete and collaborate (Della Corte, Sciarelli, 2009).

When these processes regard more firms and involve more value chains or systems, we are in front of complex network cooperation.

This is typical of local or virtual networks, where relations’ management and governance acquire a primary importance in the overall process of value generation and reachable competitive advantage. A right governance can be the key to get efficient results and to enlarge the set of strategic options for the whole network. When networks fail, therefore, this can be ascribed to several reasons. And yet literature has always been more easily concentrated on the reasons for success. The aim of this article is exactly that of developing a theoretical model, in order to verify what can be the main reasons for network’s failure or lacked development, and to check what’s the role of governance choices in this process.

2.3. Networks, systems and their governance

There are several definitions of networks in literature, some of them are listed in exhibit 4; examining their overlaps, four main characteristics of the network concept have been singled out:

- there is a network only if there are more than two actors;
- relationships between nodes are long lasting;
- governance choices can vary and influence the path of the network;
- performance of the nodes of the network depends also on the effectiveness of network actions.

These characteristics can be compared to those of the concept of strategic alliances in order to better understand the relationship between this two similar concepts.

Strategic alliances are long term voluntary arrangements between two or more firms to coordinate (Contractor and Lorange, 2002; Park, Mezias and Song, 2004; Barney, 2007) independent organizations for developing, manufacturing or marketing a given set of products or services in order to reach a better positioning in the marketplace (Kogut, 1988; Gulati, 2007).

An enterprise can enter a strategic alliance to procure assets, competencies, or capabilities not readily available in competitive factor markets, particularly specialized expertise and intangible assets, such as reputation (Dyer and Singh, 1998; Park, Mezias, Song, 2004). Moreover, strategic alliances are not spot transactions as their long run perspectives requires constant flows and a continuous process of alignment control between partners (Khanna, Gulati, Nohria, 1998).

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Definition</th>
</tr>
</thead>
</table>
| Hertz, Mattsson             | 2006 | Strategic action in one particular part of a network affects and reconfigures larger parts of the international network. When two competitors start to cooperate, a chain of actions is triggered and spreads throughout the network in a “domino effect”.
<p>| Wiley, Sons                 | 2006 | Integration arises when a firm sources inputs externally from independent suppliers as well as internally within the boundaries of the firm, or disposes of its outputs through independent outlets in addition to company-owned distribution channels. |
| Potgieter, April, Cooke     | 2005 | Social networks are complex systems that are characterised by high numbers of interconnected component entities, and a high degree of interaction between these entities. The interrelationships in such a network are dynamic and evolve over time. A social network is a complex adaptive system, in which people are agents interacting with each other. |
| Braga                      | 2004 | ... a group of different organisations, with convergent (similar or interconnected) goals, which share an identity and develop a singular definition of trust and power and pursue repeated exchange relations, subjected to the existence of a critical mass. |
| Hicklin                    | 2004 | A central organization and its relationships with multiple external “nodes” that have some responsibility or stakeholder status in the central organization. |
| Scott-Kennel, Enderwick    | 2004 | Collaborative forms of organisational structure, such as networks and alliances, involve the simultaneous management of both internal (intra-firm) and external (inter-firm) activities and resources |
| Rumyantseva and Tretyak    | 2003 | A mode of regulating interdependence between firms which is different from aggregation of these units within a single firm and from coordination through market signals (prices, strategic moves, etc.). |
| Borgatti and Foster        | 2003 | Organizational forms characterized by repetitive exchanges among semi-autonomous organizations that rely on trust and embedded social relationships to protect transactions and reduce their costs |</p>
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varamaki and Vesalainen</td>
<td>2003</td>
<td>Certain co-operative groups which may consist of firms with a vertical or horizontal relationships and whose member firms have a common interest and together seek some means to achieve an higher level of performance by using multilateral group design.</td>
</tr>
<tr>
<td>Jenssen and Koenig</td>
<td>2002</td>
<td>Patterns of lasting social relationships between people.</td>
</tr>
<tr>
<td>Achrol and Kotler</td>
<td>1999</td>
<td>A network organization is an interdependent coalition of task- or skill-specialized economic entities (independent firms or autonomous organizational units) that operates without hierarchical control but is embedded, by dense lateral connections, mutuality, and reciprocity, in a shared value system that defines “membership” roles and responsibilities.</td>
</tr>
<tr>
<td>Gulati</td>
<td>1998, 2007</td>
<td>Strategic alliances and networks are voluntary arrangements between firms involving exchange, sharing, or codevelopment of products, technologies, or services.</td>
</tr>
<tr>
<td>Podolny and Page</td>
<td>1998</td>
<td>Any collection of actors (N ≥ 2) which pursue repeated, enduring exchange relations with one another and, at the same time, lack a legitimate organizational authority to arbitrate and resolve disputes that may arise during the exchange.</td>
</tr>
<tr>
<td>Grandori and Soda</td>
<td>1995</td>
<td>A mode of regulating interdependence between firms which is different from the aggregation of these units within a single firm and from coordination through market signals (prices, strategic moves, tacit collusions, etc.) and which is based on a cooperative game with partner-specific communication.</td>
</tr>
<tr>
<td>Anderson, Hakansson, and Johanson</td>
<td>1994</td>
<td>A set of two or more connected business relationships, in which each exchange relation is between business firms that are conceptualized as collective actors.</td>
</tr>
<tr>
<td>Nohria and Eccles</td>
<td>1992</td>
<td>Generally, an inter-firm network is a mode of regulating interdependence between firms which is different from aggregation of these units within a single firm and from coordination through market signals (prices, strategic moves, etc.).</td>
</tr>
<tr>
<td>Powell</td>
<td>1990</td>
<td>...an arrangement [which] is neither a market transaction not a hierarchical governance structure, but a separate, different mode of exchange, one with its own logic... [There is a network when] we find companies involved in an intricate latticework of collaborative ventures with other firms, most of whom are ostensibly competitors.</td>
</tr>
<tr>
<td>Jarillo</td>
<td>1988</td>
<td>A long-term, purposeful arrangements among distinct but related for-profit organizations that allow those firms in them to gain or sustain competitive advantage vis-a-vis their competitors outside the network.</td>
</tr>
<tr>
<td>Thorelli</td>
<td>1986</td>
<td>As consisting of ‘nodes’ or positions (occupied by firms, households, strategic business units inside a diversified concern, trade associations and other types of organizations) and links manifested by interaction between the positions.</td>
</tr>
</tbody>
</table>

Source: Our elaboration.

Strategic alliances are usually designed as dyadic relationships (Duysters, De Man and Wildeman, 1999) between actors which depend on each other for reaching a competitive advantage through these long lasting relationships or even involve more actors. But they are usually set for a specific purpose. Networks always regard more than two actors, with a complex set of different relations at different levels. In any case, trust and shared values are important success factors: even when firms use contracts for alliances’ governance modes, trust is needed to overcome the paradox of incomplete contracting (Tirole, 1999; Barney, 2007).

Using a broader perspective, let us consider all actors’ positions and relationships in the whole systems in which they are embedded. Hakansson and Ford name this situation of reciprocal influence the second network paradox (2002: 136). Moreover, network implies more actors and a more complicated set of relationships. If these relations are also characterized by physical or virtual proximity and involve local resources as possible sources of competitive advantage for the whole firms’ aggregate, then the network can be defined as a “system”. This can even be described as a “system of value co-creation within constellations of integrated resources” (Spohrer, 2007), up to consider the “application of competences (including knowledge and skills) by one entity for the benefit of another” (Vargo, Lusch, 2006; Vargo, Maglio, Akaka, 2008: 2).

Networks and more precisely strategic systems (based on networking relationships) are widespread in several industries, like tourism, for several reasons (Scott, Baggio, Cooper, 2008). First of all, it’s a quite...
fragmented industry (Palmer and Beijeau, 1995; Wang, Fesenmaier, 2007), made of firms of different size, with a prevalence of small and medium enterprises in Europe. Collective action (Ouchi, 1986, Dollinger, 1990) is therefore a quite natural response to compete with global firms and acquire a higher competitiveness on the market. Another important aspect is that tourism firms are not just selling their own services but also local attractive factors, i.e. local resources. These can be of different nature (historical and cultural rather than man-made or natural) but are somehow community owned and strictly bound to the territory where they are located. Therefore, different stakeholders’ interests can concentrate on the issue, since they are also located where resources are. This is a typical feature of the sector, which differentiates tourism from other businesses, where groups of firms can decide where to set, even when they start a business district.

In tourism industry, for example, networking does not only regard the relationship between different firms operating in tourism chain but also the relationships between tourism destinations. Therefore, with regard to strategic systems, some important observations can be pointed out:

1) networks can develop through the strategic alliances’ logic and can therefore develop either horizontally or vertically or at a local/aggregated level (in case of tourism industry, at a destination level) and they can have alliances among factors that can be of different nature: symmetric, asymmetric or mixed. However, in case of networks that are able to give way to real inter-firm systems, they are based on the assumption that not belonging to them can be a serious disadvantage for the single firm. This pushes firms to collaborate, even when they are traditional competitors. In this direction, a coopetition logic prevails. It is based on the assumption that firms that compete can also decide to collaborate, either on other markets or even on the same markets where they compete. This interpretation sets the concept of cooperation advantage together with that of competitive advantage. The coopetition advantage comes out of a net of strategic interdependences between firms with overlapping interests (Contractor e Lorange, 1988) and it has been initially developed as a way to explain vertical interdependence rents (Håkansson & Ostberg, 1976);

2) such a complex system, based on coopetition, requires coordination and more precisely forms of governance able to strategize for the whole system, as well as to coordinate and manage the network. Network governance can become itself a source of competitive advantage and vary significantly according to the structure and the dynamics of the network itself. Far from being just a “mode of organizing transactions” (Williamson, Ouchi, 1981), or an expression of the institutional framework by which contracts are initiated and managed, the main characteristics of networks, especially when the develop in a systemic optic, is that of managing a lot of social relationships (Pavlovich, 2008) among partners and with other networks. These can be social more than contractual, based on a self-organized rather than guided process, and characterized by resource-exchanges, generation of new and common resources, definition of the rules of the game, safeguarding meanwhile actors’ independence (Rhodes, 1997). Networks’ and systems’ governance can in fact even be conceived as the coordination of different economic and strategic activities, put forward by different actors. According to some scholars (Jones, 1997), some facts that mainly influence network’s governance are: demand uncertainty and unstable supply (that is hypercompetitiveness), a key role of human skills in the whole value creation process23 and competencies connected with blended skills and knowledge. Other scholars (Della Corte, Migliaccio, Sciarelli, 2007), through a case studies’ analysis conducted in Italy in tourism industry, pointed out some important factors, among which: a common strategic vision and shared values and interests, a widespread entrepreneurship in the area, the efficacy and efficiency of local tourism organization, the relationships among actors and between the systems and other territories, the presence of a governance or at least a coordination actor. As said, according to the different contexts there can be more spontaneous, bottom-up processes, that develop according to a clan logic (Olsson, 1983; Barney, Ouchi, 1986) or top-down ones, with some pivotal actor guiding the process. This can be either public or private or public and private and even an ad hoc organization created with the specific aim of leading the network.

However, the literature on strategic alliances and networks has almost concentrated on networks’ structures, density, constraints and hierarchies, or on the main reasons for their success, trying to analyze the main links between the roots of this success (both in terms of process and of resources) and their relative

23 Customer him/herself is considered to be a co-producer of value, with his/her knowledge and background that influences the value in use he/she can get from any product/service acquired (this is the so called service-dominant logic. See Vargo, Lusch, 2004, 2006, 2008, Gummeson, 2008; Della Corte, Savastano, Storlazzi, 2009).
performance. Little attention has been paid, instead, to the dark side of these inter-firm connections. It is therefore interesting to understand the main reasons for inter-firm collaboration failure, the role of the lack of trust, reaching a new vision of distrust as a possible matter to manage and overcome, and the impact of governance choices on this process.

3. The theoretical model

Some important research questions come out with reference to networks’ failures:

1) what are the main relational problems in strategic networks’ failure?
2) is the trust/distrust relationship linear as extremes of a continuum or are there more complex connections?
3) what are possible managerial decisions and actions in order to govern distrust and make the system work.

In order to answer these research questions, it’s important to take into account that at the basis of inter-firm collaboration there is often a failure in the counterpart’s trustworthiness and in the lack of trust between partners. It could be argued that TCE had already conceptualized these problems in the concepts of moral hazard, adverse selection and hold-up. Even literature within RBT (Barney, 2002; 2006b) takes into account typical TCE problems in strategic alliances’ cheating. But these features mainly refer to situations in which parties specifically have to exchange resources and competences. In case of strategic networks, there may not be tight operational interactions: they are usually created more for purely strategic purposes, that is to get higher competitiveness on the market and to develop initiatives not manageable by individual firms. Besides, the relationships among involved actors can be more direct with some and less with others, according to their own specific strategies, resources and competences. Therefore, provided that there can be the risks evidenced by TCE logic, the analysis here concentrates on strategic networks and systems (such as business districts, rather than tourists destinations), where parties have to decide whether to cooperate within the system or not.

On this regard, it is necessary to define some key concepts to understand the process that conducts to inter-firm collaboration’s success or failure.

Trust can be conceived as the positive belief that a person will act in both parties’ interest in different situations. Some authors define it as “confident positive expectations regarding another’s conduct” (Lewicki et al, 1998, : 439), where for conduct they intend the whole of words, actions and decisions and ads confident positive expectations a belief of the other’s positive intentions and a willingness to act on the basis of that conduct). According to Rousseau, Sitkin, Burt and Camerer (1998, : 395) trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another”. Some authors (Mc Alisster, 1995, : 25) point out two different kinds of trust: the cognition-based trust, that refers to a positive idea of the counterpart in cognitive terms, with reference to the other’s competences and reliability; the “affected-based trust”, almost due to affective bonds.

Untrust refers to situations where even if there is a basic trust on the counterpart, there is not enough trust on the counterpart to behave trustfully in a specific situation.

Mistrust is misplaced trust (Marsh, Dibben, 2005, : 10), in the sense that it has been misplaced but not betrayed; in other words, there wasn’t an intentional behaviour of the counterpart not to behave trustfully.

Distrust: According to some authors (Barney, Hansen, 1994), the concept of trust has to be confronted with the opportunism issue, in the sense that when there is distrust it is very costly for partners to evaluate the quality of resources and assets the other takes to the exchange (adverse selection – Akerlof, 1970), and/or the quality of the resources and assets brought to the relation (moral hazard – Homstrom, 1979): besides, they often have to make specific investments, subject to hold up vulnerabilities (Klein, Crawford, Alchian, 1978)24. In this direction, Sabel (1993) underlines that there is trust when parties share a mutual confidence that the other will not exploit any adverse selection, moral hazard and hold up vulnerabilities in the exchange (Barney, Hansen, 1994, : 176). Therefore a partner is trustworthy when it is worthy of trust from the counterpart and trustworthiness is an individual attribute. This view brings to a scheme where opportunism and distrust are the opposite of trust. This opinion differs a lot from Barney and Hansen’s for a simple reason: opportunism is made of behaviours and facts while trust depends on the party’s trustworthiness which is something in part exogenous to the exchange structure, as they themselves emphasize. Trust expresses the values, believes and principles a party has and brings to the relationship. These values reflect a firm’s history, its culture, the personal values of the people in charge of it (Barney, 1986; Arthur, 1989; Dierickx and Cool, 1989).

According to this view, distrust is considered to be a very difficult concept, that refers to a lack of trust on the counterpart, leaving out of consideration specific situations. In other words, it’s bound to the belief that a person’s values and motives lead them to behave in an unacceptable manner (1993, : 373). The process is by far more difficult when there is a higher number of actors.

The idea in this article, however, is that distrust is not the negation of trust but a negative trust.

In spite of the fact that most of literature (Luhmann, Marsh, Dibben (2005), Carole Smith,
2005) considers the concepts of trust and distrust, even if not as opposite, at least as two separate concepts, distrust does not have to be conceived as the opposite of trust until the main reasons for trusting, distrusting as well as trustworthy/untrustworthy attitudes are adopted. The idea of separate concepts stands in the sense that low trust does not necessarily coincide with high distrust: when expectations of beneficial actions from others are absent it seems to be a question of lack of hope; on the other hand, situations where expectations of unlikely actions are absent are due to the absence of reasonable “fear” (Lewicki, Mc Allister, Bies, 1998).

Lewicki et al (1998, : 439) define distrust as a confident negative expectation regarding the other’s conduct, while trust is a confident positive expectation but they both represent an attempt to simplify the social context, enabling individuals to move their environment according to their expectations.

Trust and distrust paradoxically can coexist: they can be the basis (Lewicki et al, 1998) for “hot groups” (Leavitt, Lipman, Blumen, 1995) and “good fights” (Eisendhart, Kawai, Bourgeois, 1997); ambivalence has to be managed. Game theory contribution to the concept of coopetition helps in this direction. According to Granovetter (1985) the weaker relations are the more different values and preferences can be and therefore the higher is the probability of distrust in the relation. On the other hand, as interpersonal relationships are closer and become more complex, the level of ambivalence between the two concepts increases.

In general, inter-firm collaboration’s success depends on partners’ expectations that are on their turn bound to the perceived risk of both uncertainty and opportunism.

Inter-organizational failure can be measured in terms of: formal agreements/alliances closure; dissatisfaction with partners’ behaviour (trustworthiness) and/or overall network behaviour (with regard to coordination and communication processes); process that prevents or limits the potential overall value that can be created through collaboration.

In this case, the attention is mainly concentrated on the role of network governance organization in the process of distrust’s management.25

This process develops in two main phases: the selection phase and the management one.

In the selection phase, the idea is that there are some “external factors”, that regard partners’ features and individual paths and that can someway influence their reciprocal level of distrust. They in fact can influence partners’ behaviours but depend on their own backgrounds and experiences, apart from the network. Several studies have dealt with the issue of how much trust and distrust between partners imprints the development of inter-firm relationships (Vlaar, Van den Bosch, Volberda, 2007) in later stages of collaboration. Starting from the idea that potential partners in strategic networks do not necessarily trust each other, the objective is on the contrary to check what determines initial distrust and if the governing organization can facilitate the process of converting the vicious circle into a virtuous one. From previous research data and owing to previous studies on this matter (Kogut, Shan, Walker, 1992; Gulati, 1995b; Powell, Koput, Smith, Doerr, 1996), the perceived risk and, on the other hand, the attitude towards the counterpart/s may depend on the following variables:

1) partners’ leaders personal attitudes and moral approaches;
2) partners’ history and reliability;
3) parties’ experience in inter-firm collaboration;
4) partner’s awareness of the need of network or other parties’ resources and competences.

These aspects conduct to proposition 1:

Focal firms’ leaders personal attitudes and moral approaches, their own history and reliability, as well as their own experience in inter-firm collaboration can help reduce initial distrust in interorganizational relationships. This recalls two important topics (Granovetter, 1992): the exogenous aspects that lead an actor to collaborate within the networks and that depend on its own experiences and learning processes even in inter-firm collaboration, as well as the need for other resources and competences of the network or of some actors within the network. These endogenous aspects can refer either to the single firm’s social capital, depending on an actor’s social relationships in which it is embedded or, at a network level, to the social organization that favours coordination and mutual benefit (Putnam, 1993: 35-6; Gulati, 2007: 33).

Only the fourth aspect can refer to a situation where the firm can even have opportunistisch behaviours and just be interested in trying to appropriate external resources and competences. This means that in the set of potential actors that have to decide whether to initiate a network or better a system, there may be some potential partners with cheating ideas and behaviours.

On the other hand, there may be a trustworthy behaviour, that depends on the awareness of the opportunities and benefits the firm can get from entering the network. These variables, therefore, depend on the level of partners’ entrepreneurship attitude (or myopia, according to the situations), in terms of insight and heuristics (Wright, Hoskisson, Busenitz, Dial, 2000), as well as on their managerial capabilities of starting and governing relationships.

Several studies (Brouthers, Wilkinson, 1995; Medcof, 1997) underline that in long term coalitions with more than two parties there must be a sort of strategic fit, according to which each single partner accrue overall strategic value, justifying the associated costs. There may also be a totally new
strategy for some of the partners, which requires them a change that, however, increases their value as well. What can happen is that a new partner that wishes to join the system may reveal disruptive for some extant partner, whose contribution to the coalition was essential before the new entrance. Governance actor should convince partners that in the long run there is a higher value for all parties, with a solid network strategy.

Another relevant factor regards partners’ capabilities’ complementarity and relevance for the system. From this point of view, collaboration can also be a way to compensate partners’ weaknesses, contributing to reinforce them. Compatibility, especially in operations, with reference to networks, seems less important, in the sense that incompatibility of course prevents from collaboration but even if parties are not so operationally compatible in the starting phase, this problem can be overcome over time, through a learning process. On the other hand, the lack of initial commitment can be detrimental for future development. These considerations explain why there can be initial reticence towards collaboration.

The point is to verify whether network governance can help passing from distrustful to trustful situations. If up to now literature on this topic has regarded possible and more appropriate forms of alliances or networks’ control, here the issue is not that of controlling actors with opportunistic behaviours. These have to decide whether to cooperate or not, by valuing this opportunity they have. The process succeeds only if the best actors are involved and behave trustfully. So the governance organization has to select the right partners or to be so charismatic to make it clear that opportunistic behaviour can’t find place in that network and that there opportunities and benefits. This can be favoured by resources ad competences and knowledge-based trust and the whole process can be explained with the help of game theory.

As shown in figure 4, distrust implies negative confidence on the possibility of obtaining a net positive value through collaboration with partners. In this case, according to the factors previously shown, it can persist, conducting to a situation where almost all partners lose, or at least don’t win or where maybe just a very few of them win something but more for chance that for their own ability. This situation can also take place when one party, not accompanied by shared authoritativenss, tries to have a dominant position in the coalition, without having the necessary resources and competencies to govern the process. In other words, this pattern can seldom give hope to more intense collaboration.

Therefore, proposition 1 regards the situation where actors don’t trust each other and prefer not to cooperate, continuing getting their own individual value: \( v(i) \). Each of them will therefore get its own value and the whole of non-cooperating firms will generate a total value equal to the simple sum of their own individual values. Some may lose, other may gain but not more than what they can obtain by cooperation.

\[26\text{ To some extreme, compatibility can push firms to relax and in strategic networks and systems, as seen, cooption is a vital factor. When it’s accompanied by trust, it can happen that too much trust finishes to prevent innovation (Zahra, Yavuz, Ucbasaran, 2006).}\]
Another important aspect to take into account is the role network’s governance can play in this process, that leads to proposition number 2:

**Network’s governance actor can influence the process of distrust’s overcoming, increasing the awareness of the necessity of counterparts’ strategic resources/competences and even favouring knowledge transfer processes, reciprocal relations as well as**

These aspects are in part “structural”, because close proximity can reduce moral hazard approaches and increase awareness of respective resources and competences. This refers to situations when, at least for some time, distrust and trust can coexist: even if there is initial distrust, the process starts with the awareness of other parties’ resources and competences’ complementarity. When this process is scarce on the firms’ side, network governance actor’s role is just that of favouring this process, even between competitors, activating the previously described coopetition mechanisms. So in this case parties can start the network just because they now other parties’ capabilities are complementary to gain sustainable competitive advantage. Also a more relational process can develop, since it refers to the information available and knowledge transfer and to any other social element that can increase the likelihood of trustworthy behaviours. Some authors define knowledge based-trust as that connected with social element that can increase the likelihood of trustworthy behaviours. Some authors define knowledge based-trust as that connected with mutual awareness and deterrence-based trust as that which results from firms’ reputation, creating a sort of self-enforcing safeguard (Gulati, 2007: 101; Bradach, Eccles, 1989; Powell, 1990). This deterrence trust not only refers to each firm’s reputation but mainly to the authoritativeness of the network governance actor itself. The trust so generated should allow to reduce risks and connected coordination costs, giving way to more informal information flows and resources’ exchange. In this optic, a good governance system not only favours resources and competences (including knowledge) exchange but also the development of specific network competences, connected with coordination and strategic development, that create value for the system and for each party, even if with different intensity.

The basic assumption is that in these situations the network governance actor has a precise view of the total value of the net, namely \( v(N) \), that is of course major than the single values’ sum owing to the synergies obtainable by parties and the new resources and competences created at the network level.

In order to study this process, it’s possible to proceed with the help of the Theory of Cooperative Games, according to which the optimal result obtainable through the network is a reallocation \( x = (x_1, ..., x_n) \) of \( v(N) \), called core allocations, whose components \( x_i \) are major or equal to the single value of the actor \( i \) in hypothesis of non collaboration and no distrust situations are possible, as it will be explained in the next subsection.

Any other aggregation form among some of the partners of the network will never be able to generate a higher value for the single parties. And yet there can be attempts, moved by distrustful, moral hazard and adverse selection-moved behaviours. The task of the governance actor is that of making single actors understand that they will never be able to gain more than through the system.

### Exhibit 5 - Trust / Distrust Framework

<table>
<thead>
<tr>
<th>Prop. 1: Persists</th>
<th>Prop. 2: Consideration of partners’ strategic resources and competences</th>
<th>Awareness of positive value creation through collaboration</th>
<th>Decision of collaboration even in presence of distrust towards partners</th>
<th>Probability of positive results even if not “K” for all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome 1</td>
<td>x 0 y 0 y 0</td>
<td>y 0 x y 0</td>
<td>0 y y 0</td>
<td>0 y x</td>
</tr>
<tr>
<td>Outcome 2</td>
<td>x x 0 0 y</td>
<td>y 0 x y 0</td>
<td>0 y y 0</td>
<td>0 y x</td>
</tr>
<tr>
<td>Outcome 3</td>
<td></td>
<td>y 0 x y 0</td>
<td>0 y y 0</td>
<td>0 y x</td>
</tr>
<tr>
<td>Outcome n</td>
<td></td>
<td>y 0 x y 0</td>
<td>0 y y 0</td>
<td>0 y x</td>
</tr>
</tbody>
</table>
Another important aspect is to verify if, starting from a distrustful situation, reciprocal knowledge can take to more trustworthy behaviours and, therefore, generate trust. This brings to proposition 3:

The governance actor can favour the level of reciprocal knowledge of the strategic resources and competences each of them possesses, controls or can manage. In other words, the increase in reciprocal knowledge can reduce distrust and favour trust; in such situations there is a lower level of distrust, compared with the previous one.

If firms agree to be in the network, since the value $v(N)$ of the network is greater than the sum of the single firms, in order to apply a rule to share $v(N)$ according to the expectation of firms, the governance actor can use the Shapley value (Shapley, 1953), where the situation in which firms agree to trust with a part of the network: details are in the next subsection.

The model is of course based on the fundamental assumption that network governance organization has a cognition of the coalition value that can be created as well as of the contribution to that value by any single actor. In such situations, network governance actor has a strategic vision and an organizational view that are wider than the horizon of each single firm participating to the coalition, is well informed and can estimate each actor’s contribution to the overall value.

The two underlined propositions can also overlap, because the first step of the process indicated in figure 4 and referred to proposition 2 can lead to proposition three. In these cases, it is necessary to make a double level analysis, through core allocations and Shapley value as well.

### 3.1 Some recalls on cooperative games (by V. Scalzo)

The Theory of Cooperative Games gives some reason to encourage agents to have a trust behaviour in the sense that if all agents subscribe a common agreement, which is characterized by a certain value, there is the possibility to share this value in an “efficient” way. The concept of efficiency to which we are interested refers to the possibility that there is no party of agents who look profitable to work out of a cooperation policy which involves the whole society (network).

First of all, assume that $N = \{1, \ldots, n\}$ is the set of agents ( $N$ represents the society) which supply services (facilities) and let $v(i)$ be the profit (that we also call worth) that agent $i \in N$ is able to get alone, without any cooperation policy with other ones. We suppose that agreements among agents are possible. When an agreement is reached by a party, we say that a coalition $S$ is formed, where $S$ is the subset of $N$ of all agents who have subscribed the agreement; we denote by $v(S)$ the worth of the coalition $S$: for instance, the sum of the profits that such agents are able to obtain under cooperation among themselves. We suppose that any coalition knows its own worth.

Let us assume that the best result for every one is when all the agents subscribe a common agreement, that is when the great coalition $N$ is formed (that is the case of a network in which cooperation is profitable for all firms involved and they all know its worth). So, the best situation has the worth $v(N)$ to be shared among agents. Obviously, we are interested in sharing $x = (x_1, \ldots, x_n)$ of the value $v(N)$ such that: $x_i \geq v(i)$ for any $i \in N$. So, in the following, we assume such a property to be satisfied by every redistribution of $v(N)$.

An “efficient” sharing of the aggregate gain $v(N)$ is through reallocations $x = (x_1, \ldots, x_n)$ such that:

$$
\sum_{i=1}^{n} x_i = v(N) \quad \text{and} \quad \sum_{i \in S} x_i \geq v(S) \quad \text{for all } S \subseteq N \setminus \{i\}
$$

where any $S$ is non-empty. Such reallocations $x$ are said core allocations and the set of core allocations is called core of the TU-game $v$, denoted by $C(N, v)$; see Gillies (1953) and Bondareva (1963).

We look at the core allocations - which are profiles of gains for the agents - as an “efficient” sharing of $v(N)$ since, if $x \in C(N, v)$ and a coalition $S$ is formed, the aggregate gain $v(S)$ that such a coalition is able to get working alone, without cooperation with the other agents, is not greater than the sum of the gains that each agent of $S$ obtains form $x$, when all agents cooperate. Hence, if a core allocation is reached, no trust $S$ smaller than the whole society $N$ could give gains greater than those which come from the core allocation. So, a trust against a core allocation is not profitable.

Another approach for an “efficient” sharing of $v(N)$ is the Shapley value $\Phi[v]$ (Shapley, 1953).

The value $\Phi[v]$ is given, for example, by the following formula, where $s$ denotes the number of members of the coalition $S$ and $i \in N$:

$$
\Phi[v_i] = \sum_{s=0}^{n} \left[ (s-1)! (n-s)! \right] \frac{1}{n!} [v(S) - v(S - \{i\})]
$$

Let us emphasize that the share of $v(N)$ obtained by agent $i$ is calculated from the marginal contributions that $i$ gives to any coalition in which he/she can get in: $v(S) - v(S - \{i\})$ is the gain that $i$ can require if the coalition $S$ is formed. So, $\Phi[v_i]$.
is the expected gain of \( i \) with respect to all possible coalitions (agreements). In this way, the efficiency means that any agent \( i \) accepts \( \Phi(v) \) as its own share of the aggregate gain \( v(N) \) just because it coincides with its expectation.

We remark that the core of a TU-game may be the empty set, while the Shapley value can be calculated in any case. Moreover, if the core is non-empty, the Shapley value may not be a core allocation: this means that the Shapley value may be not robust against trust smaller than the whole society. However, if \( v \) is convex, the Shapley value is also a core allocation (see, for example, Branzei, Dimitrov and Tijs, 2005).

4. Final considerations: implications for theory and future research and managerial implications

Payoffs’ patterns affect both the creation and the prosecution of cooperation and depend on the net positive value expected as collaboration outcome, on the stability of cooperation, on the continuing relationship and on the eventual shifts in preferences that can come out, as well as on the prospects of future interactions: when the relationship is connected to one single objective and therefore develops through an alliance more than a network scheme, distrust can more probably persist. The point is that in strategic networks there are multiple players, with different attitudes and of different nature (private, public). In such cases, the attitude of each single partner is not the same as in a two parties game (this may reduce or increase distrust) and there can also be a double level of analysis: among individual firms and between private firms and public actors (for example, in a certain local area). Especially in contexts like business districts (included tourism districts) the trust/distrust issue has to be examined among private actors as well as between private actors and public actors.

When there is however awareness of counterparts’ resources and competences, as well as of the overall advantage that can derive from the collaboration to the network and its members, this can lead to the decision of collaboration even if in presence of distrust. Even more: the awareness of distrust and its institutionalization (even in strategy and organizational decisions) can sometimes be essential for building trust.

The proposed model just tries to explain and analyze the governance of collaboration processes. A further development can regard a deep analysis of resources and competences of the network governance organization. However, in spite of the literature developed even within RBT logic, trust itself cannot be conceived as a resource because it is a situation, a setting, determined by each single party’s characteristics, by their reciprocal knowledge and by network governance actor’s competences.

In order to keep coalitions alive and innovative, coopetition has to be intended from different perspectives: there can be low competition and low collaboration (rather marginal aggregations), low competition and high collaboration (especially in supplier-client trustful relationships), high competition and low collaboration (that can be rather hostile in front of inter-firm collaboration perspectives) or high competition and high collaboration (that can be may be even the most productive situation). It’s important to check the ability of the network governance actor to manage and leverage diversity, reducing overall risk and favouring a dynamic process that can lead to trust development. Governance choices for the network can help the process, leading coopetition and becoming themselves sources of competitive advantage. Therefore, trust and distrust can not be the opposite of a continuum because they both reduce risk in inter-firm relationships.

The model is based on the assumption that network governance actor has the information and competences to manage the process. When it is tested empirically, this actor has to be analyzed in detail as a source of the system’s competitiveness. More precisely, it’s important to check whether its resources and competences are valuable, rare, difficult or costly to imitate and used in organizational terms.

This approach can be useful for decision makers in managing complex systems of firms, since competition is changing its boundaries and even its actors: in face of globalization the “glocalism” (think global, act local) path seems to be the only possible way to compete not only for small and medium enterprises but also for larger organizations, that anyway have to develop business networks.

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