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Authors: Francesca Riccobono, Manfredi Bruccoleri, Giovanni Perrone – University of Palermo, Faculty of Engineering, Viale delle Scienze Ed. 8, 90129 Palermo (ITALY) – +39 091238618070

francesca.riccobono@dtpm.unipa.it, manfredi.bruccoleri@unipa.it, giovanni.perrone@unipa.it,

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How firms are using networking decisions to achieve strategic objectives: Building theories from four case studies

Francesca Riccobono, Manfredi Bruccoleri, Giovanni Perrone

University of Palermo, Faculty of Engineering, Viale delle Scienze Ed. 8, 90129 Palermo (ITALY) – +39 091238618070 francesca.riccobono@dtpm.unipa.it, manfredi.bruccoleri@unipa.it, giovanni.perrone@unipa.it,

Abstract

Many research studies in OM literature have investigated how different kinds of focal firm decisions regarding business vertical relationships (i.e. with both suppliers and buyers) can positively affect firm's operations performance and thus improve its competitive position. In this paper we extend this genre of study by also considering business horizontal relationships (i.e with competitors and firms that own complementary capabilities) and by considering the impact of business relationships not only on focal firm's operations performance but also on its resources endowment. We present four cases that describe what are the strategic manager intents (in term of operations performance and resource endowment) when make decisions about both vertical and horizontal business relationships (i.e. networking strategy). Using theory building through case studies, we identify four archetypes of networking strategy. Each type of networking strategy is a unique configuration of the set of networking decisions adopted and the set of strategic objectives pursued.

1. Introduction

It is abundantly evident that inter-firm agreements, such as outsourcing, partnerships, alliances, and joint ventures are a key business trend that has become increasingly important in recent year. With the advance of such tendency even research focus moved from viewing firms as autonomous entities striving for competitive advantage, to networks of relationships in which firms are embedded and that profoundly influence their conduct and performance (Gulati et al., 2000). Also

the IMP group suggests that relationships make it possible to access and exploit the resources of other parties and to link the parties' activities together (Ford et al., 2003).

Once a focal firm defines its business relationships, both vertical (with suppliers and customers) and horizontal (with competitors and firms that own complementary capabilities), its network context emerges.

Two main streams of literature face with such issue: the operations and supply chain management literature and the strategic management literature. The first stream is manly focused on vertical relationship and explores how a buyer establishes and manages different types of relationship with (e.g. Ellram and Hendrick, 1995; Heide and John, 1990; Helper, 1991; Holm et al., 1999; Youssef, 1992) and between (Choi et al., 2002 (a); Kamath and Liker, 1994) the suppliers, and the impact that such relationships have on their operations performance, such as cost, flexibility, innovativeness, quality and time (Paulray et al., 2008; Swink et al., 2007; Krause et al., 2007; Choi et al., 2006; Droge et al., 2004; Rosenzweig et.al, 2003). On the other hand the strategic management literature focus more frequently on horizontal relationship and investigates why firms decide to collaborate with competitors (Garrette et al., 2009), the main drivers (the level of resource complementary between firm resources and partners resources) that lead to the choice of the governance structure (i.e alliance, merger and acquisition, joint venture etc.), the governance mechanisms (formal/relational) and the impact that such choices have on the performance of the agreement itself (Hoetker et al., 2009; Li et al., 2009).

By reviewing these two streams of literature it emerges that both horizontal and vertical agreements can allow a firm to achieve a competitive advantage. The operations and supply chain management literature suggests how to manage vertical relationship in order to obtain a competitive advantage by improving specific operations performance. On the other side the strategic management literature is more focused on understanding how specific governance choices regarding horizontal agreements can allow a firm to obtain a competitive advantage by having access to partner resources and capabilities and by succeeding in the management of the relationship.

Thus, while there is a large body of literature that gives managers suggestions on how decisions of a specific form of vertical or horizontal agreement can positively impact on different strategic objectives (resources obtainment, performance improvement and so on), to our knowledge no studies exist in the literature that relate the "set" of strategic objectives that managers are willing to pursue, with the "set" of networking decisions that they consider and that, in fact, lead them to adopt a specific form of agreement. To contribute to this gap, this paper adopts a managerial perspective and examines if and how firms are using networking strategy to achieve strategic objectives. In other words, we would like to investigate whether organizations make networking decisions by adequately conducting a strategic analysis of the long-term competitive impact of their decisions.

Using a grounded theory-building approach, we collected and analyzed the qualitative data from four cases. We identified four archetypes of decisions regarding business relationships.

This paper starts with a review of literature regarding the main school of though for competitive advantage creation, networking decisions and the impact of such decisions on competitive advantage. Then it discusses the case data collection and analysis, and provides a within case description, followed by cross-case comparisons. Finally the archetypes are presented and conclusions are drawn.

2. Literature review

To the best of our knowledge, no studies exist in the literature that relate the "set" of strategic objectives that managers are willing to pursue, with the "set" of networking decisions (i.e. Networking Strategy) that they consider and that finally lead them to adopt specific form of agreements

2.1 Business agreements and strategic advantages and intent

Both the Operations Management (OM) and the Strategic Management (SM) literature investigate how different forms of business relationships can allow firm to obtain strategic advantages. The

OM literature mainly expresses such strategic advantage in terms of Operations Performance (OP) achievement while SM usually considers the Resources and Capabilities (R&C) acquisition as the strategic goal of a business relationship.

Specifically, there is a relevant amount of studies in OM that investigate the impact that specific characteristics of buyer-supplier relationship have on operations and business performance. It has been demonstrated that long- term relationship orientation, network governance and information technology facilitate the creation of inter-organizational communication as a relational competency that enhances buyers' and suppliers' performance in a supply chain context (Paulraj et al., 2008). Results based on Japanese manufacturing industries data from 1994 to 2002 indicate that core business-related outsourcing, offshore outsourcing, and shorter-term outsourcing have positive effects on outsourcing firms' market value. In contrast, non-core business-related outsourcing, domestic outsourcing, and longer-term outsourcing are not found to enhance firm value (Jiang et al., 2007). Also, strategic integration with both suppliers and customers positively affects operations performance, expressed in term of cost efficiency, quality, delivery, process flexibility and new product flexibility. Such performance improvement positively affect business performance, expressed in term of market value and customer satisfaction (Swink et al., 2007). Moreover analysis of buying firms from the U.S. automotive and electronics industries provides support for the theory that buyer commitments to long-term relationships and social capital accumulation (values and goals sharing, buyer dependency, supplier dependency) with key suppliers can improve buying company performance (in terms of cost, quality, delivery and manufacturing flexibility performance) (Krause, 2007). Also supply base decisions (i.e: number of suppliers, differentiations and inter- relationships) impact on transaction cost, supply risk, supplier responsiveness and innovation (Choi and Krause, 2006). High-level of coordination between a firm and its suppliers and customers effectively support product design and development activities (Droge et al., 2004). Such "external integration" with both suppliers and customers improves time-based performance

(time to market, time to product and responsiveness), which in turn has a positive impact on firm performance (market-share and financial performance).

On the other hand SM literature goes beyond the supply chain boundaries and investigates how the choice of a specific characteristic of horizontal agreements(in term of governance mechanism, governance structure and so on) can ensure agreement performance better than an other one. Moreover such stream of literature emphasises how horizontal agreements enable firms to acquire, access, or develop specific desired resources and capabilities. Additionally, firms may form strategic partnerships to access or acquire unique and valuable resources that they lack, or leverage ‘‘social’’ resources, such as reputation, status, and legitimacy (Eisenhardt and Schoonhoven, 1996). The aspect of resource orientation in a horizontal agreement can be found in Mitchell et al., 2002 when they say that “alliances allow firms to pool imperfectly tradable resources in order to gain greater efficiency in the use of existing resources as well as opportunities to create new resources”. Garrette et al. (2009) argue that firms turn to horizontal alliances with competitors to implement projects that require greater resources than those available to them. In particular, regarding strategic alliances, it was found that the optimal configuration of formal and relational governance mechanisms in strategic alliance depends on the assets involved in an alliance, with formal mechanisms best suited to property-based assets and relational governance best suited to knowledge-based assets (Hoetker and Mellewigt, 2005). Also it has been investigated how different international joint venture structures affect the productivity of such strategic agreement (Li et al., 2009). The selections of firms’ alliance partner also affect the performance of firms involved in the alliance and depend on resource complementarity and institutional associations (reflected through both societal and network status) between the firm and its partners (Lin et al., 2009).

2.2 Networking decisions and networking strategy

We refer to networking decisions as decisions related to business relationships. Many of these are cited in the previous section. These are related to the duration of the relationship (short-term vs. long- term), the partners geographical localization respect to the focal firm (domestic vs. offshore),

the number of partners (low vs. high) and their inter-relationships, the strategic level of the business activities involved in the agreement (non-core vs. core business-related), the level of cooperation between partners (competitive vs. cooperative relationship) (Choi et al., 2002). Moreover there are issues related to the level of coordination between involved partners (low vs. high level of coordination), the level of agreement formalization (formal vs. relational governance mechanism) and the governance structure orientation (market vs. hierarchy oriented governance structure). There are many literature approaches that face with such issues. Regarding the governance structure orientation, for example, the Transaction Cost Economy (TCE) (Williamson, 1975) theory states that the higher the specificity of the asset involved in the relationship and the higher the environmental and behavioural uncertainty and the higher the frequency of the transaction, the more a hierarchy-like governance structure has to be preferred respect to market-like solution.

Also regarding make or buy (i.e. hierarchy vs. market) issues evidences emerge suggesting that organizations rely on vertical disintegration by reducing their direct ownership of 'non-core' activities in order to focus on innovation, product strategy, and the highest value-added segments of manufacturing and services (Sturgeon, 2002). Concerning governance mechanism issues, the Relational school suggests that a relational governance mechanism with partners should be preferred to arm's length market relationships (i.e formal governance mechanism) because such relationships are incapable of generating *relational rent.* This is defined as ''a supernormal profit jointly generated in an exchange relationship that cannot be generated by either firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partners'' (Dyer and Singh, 1998). Moreover the complementary of capabilities, strategic relatedness and cooperative experience between partners have been individualized as the three main characteristics that ensure the success of the business relationships (Holcomb and Hitt, 2007).

Concerning the partners geographical localization, Nelson and Winter (1982) assess that the knowledge and the level of learning of the firm is highly affected both by the context where it acts and by the network in which it is embedded. Accordingly the partners localization choice should be

influenced by the resources and capabilities that the partners local context can offer and the focal firms is looking for. The industrial district are a very good example to explain how the location of a firm can play a strategic role in developing its know-how and capabilities.

In order to individualize the main set of networking decisions that both academicians and practitioners generally consider when addressing business relationships issues, we grouped such issues into three main set of decisions, that we refer as to Networking Strategy (NS) decisions dimensions. These dimensions, which are an extension of those considered by Nordin (2008) for service sourcing, can be described as follows.

- *Make/Buy/Make together dimension* concerns the extent to which different operations are internally made (Make), externally sourced (Buy), or made with somebody else (Make together). Decisions along this dimension depends on whether operations are part of a core or non-core business process, whether they are part of firm distinctive capabilities, their degree of complexity, specialisation, standardization, etc. (Sturgeon, 2003). Different forms of agreements exist as results of such decision: takeover, merger and internally development (make decision); outsourcing (buy solution); joint venture, alliance, supplier and/or customer integration (make together solution).
- *Governance mechanism dimension* concerns the intensity of the relationship between the firm and its partners/suppliers: the more intensive the bound is, the more relational the governance mechanism will be (Johnston and Staughton, 2009); the less intensive the bound is, the more transactional the governance mechanism will be (Hoetker and Mellewigt, 2009). A relational governance mechanism is characterized by a long term contracting relationship, by a strategic nature of exchanged information, and by an informal control mechanism (low degree of standardization) based on trust, reciprocity, reputation, and peer pressure.
- *Network base-structure dimension* concerns the partners' choice, the dimension of the network, its topography, its international expansion, the eventual existence of a focal firm and its degree of leadership (Wu and Choi, 2005). The more the number of suppliers/partners that execute the

same economic activity and the more international are their location the more extended and globalized the network-base structure will be. Moreover, the more the focal firm is connected with the other firms and the less the other firms are connected with each other, the more centralized the network-base structure will be.

3. Methods

In order to investigate and build theories about networking strategy case study-based theory building approach has been often adopted (Eisenhardt, 1989; McCutcheon and Meridith, 1993; Miles and Huberman, 1994; Yin, 1994). In this paper we use such a research methodology and case study data come from interviews conducted over four manufacturing firms from the mechatronic sector but from two different industries: industrial vehicles and medical equipments. Table 1 gives an overview of the firms included in our study. Fictitious names of companies have been used to ensure anonymity. We tried to use name that refer to their business product.

Focal firm	**Focal firm sector**	**Business product/services**	**Busienss activities**
Industrial Vehicles Equipments	Industrial vehicles	Sub-systems and maintenance services for industrial vehicles	– Production of sub-systems for industrial vehicles – Final assembly of subsystem to the basic truck – Maintenance service of industrial vehicles
X-ray	Radiology	X-ray equipments for medical purpose	– Production of customized x-ray equipments – After sales services
Collective Transport Vehicles	Industrial vehicles	Components and inside furnishings for collective means of transport	– Design and production of most of the components and inside furnishings for collective means of transport
Industrial Vehicles	Industrial vehicles	Industrial vehicles	– Design and production of industrial vehicle

Table 1. Overview of sample firms

3.1 Sampling

The four firms considered in the empirical study were selected among others that belong to the mechatronic district in Sicily (Italy). The first extracted sample was composed by all the firms of the mechatronic district that decided to participate to the research project, entitled "Sicilia Meccatronica". The objective of such project was to identify the firms networking needs to collaborate with the others district members firms starting from their strategic goals. Thus, the choice of this first sample selection was leaded by the fact that the intent of the project was directly connected to our research question (i.e. "if and how firms are using networking strategy to achieve strategic objectives"). The final selection was made based on the intensity of firms agreements adoption, so that among all the district firms that participate to the "Sicilia Meccatronica" project, we selected the companies that at the moment of the interview had more networking contracts (alliances, joint ventures, consortia, and other partnership contracts) respect to the others.

3.2 Data collection

Semi-structured face-to-face interviews were held with senior managers and CEO that hold the primary responsibility for setting strategic decisions connected to business networking. Data were also gathered through public information sources such as Internet site, observation and documentation. The semi-structured interviews lasted between 1 and 2h and were mp3 file recorded and transcribed in detail. The interviews were conducted by two investigators in order to increase confidence in the findings by the convergence of observations (Eisenhardt, 1989). The role of each of the two investigator was different; in particular one was to conduct the interview by direct making questions to the respondent, while the other was to transcribe in detail all the information given. The information transcribed was then reviewed by the two interviewers and checked with the recorded interview.

3.3 Data analysis

Following the procedure suggested by Miles and Huberman (1994), we first conducted within-case analysis, where the case studies were built based on data and key constructs were derived. Specifically, we identified the focal firm strategic intent when making networking decisions and the characteristics of such networking decisions. Then, the cross-case analysis was conducted. The results of within-case and cross-case analyses are presented in the next two sections. Finally archetypes were identified from the empirical data (Doty and Glick, 1994). The agreements were independently grouped by each researcher that participated in such study. Then, discrepancies between each research findings were discussed and archetypes were derived.

4. Within-case descriptions

The within case analysis allowed us to formulate the within-case descriptions of the four cases study presented in this section. The details of each case study have been obtained through data triangulations and the description of each case has been formulated as objectively as possible with minimal subjective interpretations.

The cases begin with a brief description of the firm, then they proceeds with a description of each business agreement presented by the respondent. Specifically, for each agreement we present the content of the agreement itself, the characteristics of the relationship declared by the manager and the strategic intent of such characteristics when it does exist.

4.1 Industrial Vehicles Equipments: a producer of equipments for industrial vehicles with focus oriented strategy

The company, located in Palermo (Sicily), is a manufacturer of sub-systems for industrial vehicles, in particular equipments for collecting, handling and compacting materials, for street washing, etc. Its business activities regard both the manufacturing of equipment carpentry components (the mechanical components are externally sourced) and the final assembly of the manufactured

equipment within the basic truck; also the company offers industrial vehicle maintenance services both for its products and for third party industrial vehicles. Its customer are spread over Sicily except for one of them, localized in the north of Italy. The strategy pursued by the company is to serve a restrict market by customizing its product on customer requirements. The general manager declared to have four kinds of relationship agreements with others firms: sourcing, outsourcing, alliance, and industrial district membership. A brief description of each of these agreements for each kind of relationship follows.

- *Sourcing*: the company has several sourcing agreements for mechanical components with local and non-local suppliers, and for mechanical processing and vehicle washing services with local suppliers. The company is in a trust relationship with its selected suppliers and has been collaborating with them since its beginning. Moreover for each kind of sourcing (mechanical components, mechanical processing on existing components, washing services) the company has more than one supplier in order to reduce the supply risk and specifically, regarding the mechanical components and processing, having several suppliers ensures the company to increase/decrease the requested volume in case it would need it. Finally the manager declared to prefer local supplier to reduce the lead time and the time to product.
- *Outsourcing*: the company outsources maintenance services to companies located in different part of Sicily (other than Palermo) with whom the company has a trust-based relationship. The aim is to have multi-site facilities that supply the maintenance service close to the final customer. By this way, the company increased its responsiveness to customer needs, by exploiting the outsourcers geographical proximity to customers, and reduced the cost of post-sale services, both in terms of operating costs (due to managing non-local operations) and capital expenditures (due to investments in different facilities). Finally the manager declared to have chosen and selected small companies in order to reduce the market entry risk.
- *Alliance*: the company has two alliance agreements with two big companies that produce industrial vehicles located in the north of Italy, that were previously suppliers of components for

Industrial Vehicles. According to this agreements, Industrial Vehicle offers maintenance services for vehicles that are produced by the two companies and sold in Sicily. Thanks to these alliances, while the two companies increased their responsiveness to Sicilian customers, Industrial Vehicles increased its market share and penetrated a new market segment (maintenance services for different kind of vehicles). Moreover the manager declared that by increasing maintenance service business, the service "unit cost" decreases as a consequence of sharing "common costs" among a larger production volume.

- *Industrial district membership*: The general manager, that is the promoter and legal representative of the Sicilian mechatronic district, described the reason that pushed him to constitute the district. He stated that in a time of economic crisis, disadvantages for small and micro enterprises increase because, respect to medium and large companies, they are under-capitalized, have less purchasing power, low bargaining power with suppliers, and obtaining credit becomes even more difficult. Integration between firms (through alliances and partnerships) can enable the firms to have advantages in terms of bargaining powers respect to banks, but also to customers (such as Public Administration in "call for tenders") and suppliers. This advantage can indirectly reduce the working capital expenditure by three ways. Firstly, it enables firms to obtain a lower rate of interest on loan. Secondly, it facilitates bargaining conditions (such as obtain higher credit delay to suppliers) in the buyer-supplier relationship. Indeed according to manager, district firms awareness to belong to the same district, could facilitate firms to build trust relationships. Thirdly, it reduces the lead time and consequently inventories by exploiting suppliers geographical proximity. Finally the manager viewed in the district the opportunity to involve the firms to collaborate in a way that can enable them towards innovation, research and industrialization. He assessed that, especially for micro enterprises, being in a district represents a source of competitive advantage and that, from its practical experience, the higher the level of cooperation between the firms the higher their performance will be.

4.2 X-ray: a quality-oriented x-ray equipment provider

The company has been operating for more than 25 years in the radiology industry. Its business products are x-ray equipments for medical purpose. The company business activities regard: the pre-sale consulting that aims at individualizing the type and the model of equipment suited to both customer and prescriptive law needs; the design of customized x-ray equipments; the production and assembling of equipments on customer location, and finally the subsequent technical support during the warranty and post-warranty period. Both the company manufacturing plant and its research and head offices are located in Palermo. The leading strategy of the company is focused on the quality of the products throughout all their life cycle. Customers are public and private hospitals and radiology centres. The company market is located at a national level and the company CEO wishes to broad its market at an international level through the introduction of new customized products. Specifically, the company is developing a new product to be produced and commercialized in the emerging countries, especially the ones localized in the Mediterranean basin. Indeed the CEO has already several contacts with companies located in Marocco which, he declares, "represent excellent opportunities for collaboration not just from a market point of view but also for product development and especially for production, given the low labour costs of this country". Regarding this intention the director individualized two main advantages: the geographical proximity and the cultural affinity. The company director declared to have four kinds of relationship agreements with others firms: sourcing, agency, alliance, district. A brief description of each of these agreements for each kind follows.

- *Sourcing*: the company has several sourcing agreements for mechanical components with national and international (Japan, Germany and France) suppliers that have been selected based on price, quality and technological level criteria, with whom the firm is in a transactional relationship, but has high trust in them because their well known reputation at international level. The company has always produce in-house the electrical components and has never being

willing to externally source them because, concerning this type of components, it has achieved high quality standard that well fit with its business strategy focused on quality. Concerning the mechanical components it buys, because of their high level of standardization, the suppliers are able to eventually modify firm order delivery time and to replace that initial orders to other customers. Finally the manager declared that sourcing the mechanical components from specialized firms allowed its company to rapidly modify existent products or introduce new products by exploiting the suppliers mix flexibility.

- *Agency*: The company (principal) has an agency contract for two years with a Russian company (agent) for product promotion and commercialization in Russia. The manager declared that the agency contract with the Russian company allowed its firm to penetrate the Russian market by ensuring to customers high level of responsiveness at lower costs. Indeed, by this way, X-ray customers can be supported, during both the pre and post purchasing phases, by a company with similar cultural endowment and thus more comprehensive of their requirements and complaints. Moreover such agency contract allowed the company not incurring in capital expenditures, due to offshore sale and distribution facilities. Finally the manager stated that it was its first agency contract for product commercialization, and that he never have had antecedent experiences with this Russian company, but he was satisfied about the results until now.
- *Alliance*: the company has an alliance agreement with a global service supplier, located in north of Italy, for maintenance service of biomedical equipments. The partner supplies the maintenance service for X-ray equipments of two public hospitals (one located in Palermo and the other in Rome). The CEO declared that the strategic intent of the alliance was to exploit the customers global network of this partner. On the other side, the partner was interested in acquiring the company know-how and skill. Also, the company is nowadays negotiating an alliance agreement with a manufacturer of mechanical components, located in Palermo, for collaborative development of a new x-ray equipment to be launched in the market next year. The partner has been selected in order to deliver the mechanical part on the basis of the company

designs. The CEO declared that this choice has been leaded by the objective of pooling different types of know-how: from one side the electronic, electrical and computer based competences of X-ray, and from the other side mechanical based competences of the partner. The firm wants to exploit the specialization of the supplier mechanical know-how with a double intent: to obtain a decrease in costs by exploiting the partner economies of scales and learning, and to acquire more expertise in the mechanical field. The CEO declared he wishes to build a long-term and deep relationship with this partner.

- *Industrial district membership*: The CEO said that the main reason that pushed him to participate to the mechatronic district is that collaboration among district partners can help to improve the quality of its product/process by combining the expertise of different and complementary professional experiences. He declared that participating the district represents one of the most powerful weapon for micro and small companies to penetrate foreign markets. Indeed, due to the competitive price of products/services from emerging east countries, firms should focus in technological innovation. Thanks to the district, even the smallest companies can act as big ones.

4.3 Collective Transport Vehicles: a mean of transport vehicles firm with differentiation and quality oriented focus strategy

The company operates in the market of components and interior designing for collective means of transport. Dating back 1990 when Collective Transport Vehicles was established, the company's production specialized towards the rolling stock field. Nowadays Collective Transport Vehicles is included in the suppliers panel of the most important domestic and international rolling stock manufacturers. The market to whom the company refers are firms that operate in the transport industry at national and international level. The company business activities regard both the design and the production of most of the components and inside furnishings for collective means of transport. The production is carried out in two sites located in a Sicilian industrial area (Italy). The strategy pursued by the company is to serve a restrict market by customizing its product on

customer requirements, with a focus on the quality of the products. The manager declared to have four kind of relationship agreements with others firms: sourcing, alliance, consortium and industrial district membership. A brief description of each of these agreements for each kind follows.

- *Sourcing*: the company has several sourcing agreements for mechanical and non-mechanical components needed for the production of the final good (i.e: aluminium profiles and sheets , mechanical bellows and springs, paints, window glasses, textile fabric and so on), for mechanical processing (e.g. zinc plating process) and for the logistic service. In particular the manager specified that for the core component, i.e aluminium component, they do the design and commit to the suppliers just the production. The most of the suppliers are from the north of Italy, others from the centre and the south and just two from foreign country (one from Spain and an other from Germany). The choice was initially based on reputation (the company looked for suppliers with high capability and preferably located in Italy) and then from the efficacy and efficiency of the collaboration. In particular regarding the aluminium component suppliers the selection was based on the product quality certification. The company is now in a trust relationship with all its selected suppliers since past collaboration have being demonstrated efficacy and efficiency. Moreover for almost all components (i.e aluminium profiles and sheets, textile fabric, gaskets, paints and so on) the company has minimum two different suppliers in order to reduce the supply risk and specifically, regarding the aluminium profiles and sheets, having several suppliers ensures the company to increase/decrease the requested volume in case it would need it.
- *Alliance*: the company has had different kind of alliances in the past. All of these were call for tender driven. Indeed depending on the product requested by the call for tender the company choose the partners (that were almost always their direct competitors) that owned the complementarities competencies needed for the fulfilment of the product/service requested by the call for tenders. The duration of these alliances is call-for-tender driven: the relationship

stops with the end of the call-for-tender. The manager declared that each of this kind of collaboration increased the company know-how.

- *Consortium*: The company created a consortium with other two companies that operate in the rail transport sector as well. The product offered by the consortium regards the design and the production of railway vehicle interiors under commitment. The manager declared that the main objective of the consortium is to acquire more commitments on one hand by achieving certain dimension (in term of turnover, number of employees and so on) required by some customers, and on the other hand by acquiring new technical, technological, and complementary competences that allow the company to be more responsive to different customer requests.
- *Industrial district membership*: The manager said that the participation to the mechatronic district was led by the expectation to easily find local and complementary partners with who pool their capability in order to respond to new customer requirements.

4.4 Industrial Vehicles: an industrial vehicles firm with differentiation focus strategy

The company has been operating for 30 years in the industrial vehicles sector. Initially as a manufacturer of components for industrial vehicles and subsequently as a producer of the final product. Today its business products are industrial vehicles for both building trade and public urban service purpose. In particular the company has differentiated its product by offering different kind of engine: diesel and electrical, and by adapting the motor characteristics to the changing market requirements, such as Euro 3, Euro 4 etc. The market to whom the company refers are both firms that operate in the building industry and firms that operate in the public services sector. At this time its installed market is at national and european level. The company business activities regard both the design and the production of the vehicles. The sale and post-sale technical support functions are demanded outside. The company owns two production facilities, both located near Palermo, Sicily; in one of this there are also located its R&D centre and its head offices. The leading strategy of the firm is to focus on a restricted market niche to whom offer a product customized on its

requirements. The operations manager declared to have at the moment two kind of relationship agreements with others firms: sourcing and district. Moreover the manager stated to create occasional outsourcing, alliances and partnership agreements. The company externalizes part of the production when customers order cannot be fulfilled just by the company its-self. Moreover it makes occasional alliances with complementary firms that own capabilities that are complementary with the company's one for the development and production of product/service requested by a call for tender, while either externalizes some R&D activities or makes occasional partnerships with firms that own electrical competences (that the company miss) for R&D activities requested to be competitive through the product innovation.

Finally the manager declared to have tried to constitute in the past both an alliance with a national company located in the North of Italy (that aimed to develop a new product) and a partnership with a French company (that aimed both to committee the sell of the company products at the partner sale point in France and to develop a new product). The operations management director said that the both two agreements failed. In the first case because of the management of the R&D activities through the ICT technology, due to the geographical distances between the two partners, was difficult and not effective and so the two partners decided to stop the relationship agreement. In the second case the partnership failed because of the incompatibility between the two partners in collaborating. A brief description of each of these agreements for each kind follows.

- *Sourcing*: the company has several sourcing agreements for three different kind of product/service: motors, mechanical process and logistic services. Regarding the sourcing agreement for motors the company choose a global supplier, located in Japan, that is very well established in the Engine & Machinery sector. The supplier was selected because of its high reputation for product quality and reliability that the company requested for such a core component, that the company is not able to produce at the same quality level of the supplier. Moreover despite of the different supplier culture and the high distance with the company location, the company is now well coordinated with the supplier thanks to the formalization of

the order processing. Finally, regarding the sourcing of logistic service the supplier changes over year depending on cost and geography proximity.

- *Outsourcing*: the company outsources the production of industrial vehicles equipments (equipments for collecting, handling and compacting materials, such as chest, flatcar and so on) when customers order cannot be fulfilled just by the company its-self. The outsourcers are companies located in Sicily; indeed the manager stated that they always search for local suppliers because the same cultural endowment and geographical proximity allow them to better manage the relationship. The company outsources the production of these components just when it is not able to produce all the requested products in the requested time. Indeed through the outsourcing process they re-use the human resources firstly employed to the production of vehicles equipments, for the production of the components that cannot be outsourced because need the moulds that just the company own. vehicles. The manager stated that by this spot relationship they achieve volume flexibility and reduce the time to product, and so the company is always able to fulfil all the customer orders in the requested time. Finally, in recent time, when the company began no more able to face with the level of innovation requested by the market, they began to externalize some R&D activities to a very specialized and qualified company.
- *Alliance*: The company creates spot alliances in order to attend call for tender. The aim of creating this kind of alliances is twofold. Firstly to acquire complementary in term of capacity and capabilities requested to respond to the object of the call for tenders. Industrial Vehicles often looks for industrial vehicles equipments manufacturers because it produces just a restricted kind of such component. Secondly the manager stated that the higher the number of participants to the call for tender the higher the bargaining power to participate to the call for tender.
- *Partnership*: The company creates spot partnership agreements for R&D activities with R&D labs and companies. Such agreements are spot because depend on the specific product requirements that the company decide to develop in order to innovate its products or to create new ones. Innovation for industrial vehicles in Europe is fundamental and constant because such

vehicles have always to be adapted to the changing European emission standard (i.e. Euro 4, Euro 5 etc.). The company owns it-self a R&D centre and initially it owned all the mechanical and electrical know-how needed to innovate its mechatronic products. Problems came out when mechatronic products became always more electrical driven than mechanic driven. Indeed the company born as a metal mechanical company and so its main know-how has always mainly concerned mechanical capabilities; moreover, as the manager stated and as in our knowledge, the electrical sector is characterized by a very high level of innovation and so the company suffered a lack of electrical capabilities for the innovation of its products and for the development of new product. In order to by-pass such a problem the company began to collaborate with external R&D labs and they acquired from such collaboration the capabilities needed to design such innovative products but not to produce it. The manager stated that such agreements allow the company to enhance the product flexibility by pooling complementary capabilities. Anyway, when the level of innovation requested is too high, they externalize the R&D activities for the fulfilment of specific requirements to specialized firms very well qualified in the market.

- *Industrial district membership*: The manager said that the participation to the mechatronic district was led by the expectation to be supplier, customer or partners with others companies that own to the district. Indeed the manager stated that the company always prefers to be in business relationship with local partners because such relationships are easier to manage because of the cultural affinity and the geographical proximity. Moreover because the company often look for spot agreements, it is convenient to have a pool of known partners to whom refer in case of need because it reduce the partner searching phase when the company decide to collaborate for sourcing or partnership reasons.

5. Cross-case descriptions

For each agreement analysed in the case studies, two main constructs emerged, that respectively refer to the focal firm strategic intent when making networking decisions and the characteristics of

networking decisions themselves. Table 2 lists and compares across all the eighteen agreements the networking decision and the corresponding strategic intent. In this section we discuss how each of these areas of comparison is nested in our cases.

5.1 Strategic intent

The focal firm strategic intent is the strategic objective that the manager is willing to pursue when defines a specific characteristic of the business relationship. Ten kinds of strategic intents emerged from the cross-case analysis. All of these intent are listed in Table 2 starting from the most until the less frequent.

Strategic intent	**Occurrences**
Increasing market share	9
Reducing costs	5
Rising innovation and know-how	4
Achieving high quality	3
Increasing volume flexibility	3
Increasing responsiveness	3
Ensuring delivery dependability	2
Reducing the supply risk	2
Reducing time to product/service	2
Reducing coordinating costs	2
Reducing the market entry risk	1

Table 2. Strategic intents emerging from cases study agreements

Starting from the most recurring, the first strategic intent pursued by companies when making business relationships is to increase market share. Such intent occurs in eight agreements and is pursued through different networking decisions. In the Alliance of *Industrial Vehicles Equipments* it regards the acquisition of maintenance services commitments requested by customers that own to the partners of the agreement and that compete in the same sector with the company. On the contrary in the Alliance of *X-ray* such commitments are demanded to a partner that has a very extended customers network that the company is willing to access through the agreement. Also the strategic intent of increasing market share refers to the penetration of foreign markets by rising innovation through collaboration (i.e. Industrial district membership of *X-ray*). Finally such intent

regards the acquisition of more commitments by being stronger in terms of dimension and resources and competences (i.e. Industrial district membership of *Industrial Vehicles Equipments* and Consortium of *Collective Transport Vehicles*) or by entering in a network of companies that own to the same sector (i.e. Industrial district membership of *Industrial Vehicles*).

The strategic intent of reducing costs occurs in five agreements and is pursued by using different networking decisions. It mainly refers to the reduction of operating costs, capital expenditure and working capital. In the Outsourcing agreement of *Industrial Vehicles Equipments* such intent regards the reduction of operating costs and capital expenditures for non-local post sales services by externalizing such services to companies that own facilities near the customer location. Exploiting such facilities allow the company to reduce operating costs due to managing non-local operations and capital expenditures due to investments in different facilities. The third networking decision is to demand product promotion and commercialization to a company localized where the customer is (i.e. Agency contract *X-ray*) allowing the company not incurring in capital expenditures, due to offshore sale and distribution facilities. Fourthly the strategic intent of reducing cost is pursued by exploiting the partner economies of scales and learning (i.e. Alliance *X-ray*). Also in the Industrial district membership of *Industrial Vehicles Equipments* strategic intent of reducing cost specifically regards the working capital. Finally the networking decision regarding the choice of logistic service provider is based on cost minimization (i.e. Sourcing *Industrial Vehicles*). The strategic intent of rising innovation and know-how occurs in four different agreements (i.e. Industrial district membership of *Industrial Vehicles Equipments*, Alliance in negotiation and Sourcing of *X-ray*, Partnership *Industrial Vehicles*) and it mainly refers to the ability to develop new product or to modify existing ones by creating new knowledge and capabilities by pooling different and complementary competences and capabilities. The strategic intent of achieving high quality occurs three times and is pursued by different networking decisions. In the Sourcing agreement of *X-ray* such intent regards the achievement of high standard for product components and design. Accordingly, *X-ray* decided to buy mechanical components and make the electrical ones and the

final product design and manufacturing. Also through the Industrial district membership, *X-ray* is willing to collaborate with district members in order to improve the quality of its product/process by combining the expertise of different and complementary professional experiences. Finally *Industrial Vehicles* pursues high quality standards for core components that it is not able to produce in house. Accordingly the networking decision that it made to pursue such objective was to select a supplier of core component with high reputation. The strategic objective of increasing volume flexibility occurs three times and it refers to the ability to change the level of operation's aggregated output . Two times such intent is pursued by having several suppliers for the same sourcing (i.e. Sourcing of *Industrial Vehicles Equipments* and *Collective Transport Vehicles*) and by externalizing the production of components that ensure the firm to respond to the customers orders (i.e. Spot outsourcing of *Industrial Vehicles*). The strategic intent of increasing responsiveness refers to the firm ability to quickly respond to its customers needs. Such intent occurs in three agreements and is pursued by different networking decisions. In particular in the Agency contract of *X-ray* such intent refers to the ability to service the non-local customers during both the pre and post purchasing phases and is pursued by demanding such phases to partners that are localized where the customers are. Also the strategic intent of increasing responsiveness refers to the ability to design and manufacture products that respond to specific and different customers requirements. Such intent is pursued by pooling new technical, technological, and complementary competences with companies that compete/operate in the same sector (i.e. Consortium and Industrial district membership of *Collective Transport Vehicles*). The strategic intent of ensuring delivery dependability occurs two times and it refers to keep delivery time promises. Such intent is pursued by keeping suppliers with who the company had past cooperative experience for sourcing agreement (Sourcing of *Industrial Vehicles Equipments* and *Collective Transport Vehicles*) or by having commitments with suppliers with high reputation (i.e. Sourcing of *Industrial Vehicles*). The strategic objective of reducing the supply risk occurs just in two sourcing agreements (i.e. Sourcing of *Industrial Vehicles Equipments* and *Collective Transport Vehicles*) and it refers to the firm willing to reduce the possibility that

suppliers of the supply base are not able to meet its demand. In both the two agreements it occurs, such intent is pursued by using the same networking decision that is to have several suppliers for the same sourcing. The strategic intent of reducing time to product/service occurs two times and in the cases study it specifically concerns the delivery lead time. Thus is pursued by the same company by using two different networking decisions emerge in two different agreements (i.e. Sourcing and Outsourcing of *Industrial Vehicles Equipments,* Sourcing of *Industrial Vehicles*), both regarding suppliers/partners localization. Specifically such choice is based on the objective to minimize distance between the focal firm and its suppliers (i.e. Sourcing of components of *Industrial Vehicles Equipments* and sourcing of logistic service of *Industrial Vehicles*) or between the focal firm and its customers (i.e. Outsourcing maintenance service of *Industrial Vehicles Equipments*). Finally, the strategic intent of reducing the market entry risk occurs one time (i.e outsourcing of *Industrial Vehicles Equipments*) and refers to the firm willing to reduce the possibility that partners to who it externalizes maintenance service in order to increase responsiveness, can capture its customers. The intent of reducing the market entry risk is supported by the networking decision of selecting small companies as partners.

5.2 Strategic Networking decision

We refer to strategic networking decision as a decision that implies a business relationship with one or more firms and that aims at pursuing one or more strategic objectives. Seventeen kinds of strategic networking decisions emerged from the cross-case analysis. All of these decisions are listed in Table 3 starting from the most recurring until the less frequent one.

Networking decision	**Networking decision objective**	**Occurrences**
Being part of an industrial district	− Reduce working capital − Obtain credit easier − Obtain more commitments (be able to respond to more call for tender) − Rising innovation, research and industrialization − Improve the quality of its product/process by	4

	combining the expertise of different and complementary professional experiences. - Penetrate foreign markets by rising innovation through collaboration - Increasing responsiveness Increase market share	
Choose local supplier for product/service sourcing	- Reduce time to product/service - Facilitate coordination with partners	3
Collaborate for the design and production of product/services that respond to under-commitments requests.	- Increase market-share - Acquire complementary in term of capacity and capabilities requested to respond to the object of the call for tenders	3
Demand R&D activities to very specialized and qualified company	- Rising Innovation - Acquiring capabilities and Know-how	2
Choose several supplier for the same sourcing	- Reduce the supply risk - Increase Volume flexibility	2
Demand maintenance services for non-local customers to partners that operate in the same business and are localized near to customers	- Exploit partner's facilities - Reduce costs (both operating and capital) - Increase after sales customer service responsiveness (the ability to service the customer in providing product support after the sale of the product to ensure continuing customer satisfaction) - Increasing market share	2
Make together R&D activities for new product development	- Rising innovation - Acquire know-how and competences - Reduce costs	2
Select high number of partners to collaborate with	- Acquire more commitments	2
Sign spot collaborative agreement for participating to call for tender	- Acquire complementary capabilities - Increase responsiveness	2
Keep suppliers with who you already have past cooperative experience	- Exploit trust in terms of delivery dependability	1
Select small companies as partners that have to supply after sales services to your customers	- Reduce the market entry risk	1
Offer maintenance services for partner's customers	- Increase market share - Reduce costs	1
Buy components with high level of standardization	- Increase delivery and product flexibility	1
Demand product promotion and commercialization for non-local customers to a retailer localized where the customer is.	- Reduce costs (both operating and capital) - Exploit partner facilities - Increase overall customer responsiveness	1

Buy core components basing supplier selection on high level of reputation	- Ensure product quality and reliability	1
Buy logistic services basing supplier selection on low cost and geography proximity to the focal firm	- Reduce cost and time to service	1
Spot outsourcing of components production	- Respond to fulfil customer orders in the requested time. - Increase volume flexibility	1

Table 3. Networking decision emerging from cases study agreements

Starting from the most recurring until the less, the first strategic networking decision listed in Table 3 refers to the willing of managers to facilitate collaboration between firms that own complementary capabilities. Such kind of decision occurs in five agreements and aim at pursuing different strategic objectives. In particular such decision is get in action by all the four case studies companies through the industrial district participation. In the Industrial district membership of *Industrial Vehicles Equipments* collaboration refers to integration between firms (through alliances and partnerships) in order to 1) increase bargaining power respect to bank that allow the firm to both to obtain a lower rate of interest on loan and obtain credit easier, 2) increase bargaining power in call for tender because in such kind of competition the higher the number of partners the higher the possibility to win, 3) increase bargaining power respect to suppliers and obtaining as a result of objective 1) and 2) a reduction of the working capital. Also in the Industrial district membership of *Industrial Vehicles Equipments* collaboration refers to collaborative R&D activities for rising innovation, research and industrialization. In the Industrial district membership of *X-ray* collaboration refers to combining the expertise of different and complementary professional experiences in order to improve the quality of its product/process in order to develop technological innovation, that is seen by *X-ray* manager as the key enabler for penetrate foreign markets.

In the Industrial district membership of *Collective Transport Vehicles* the decision to facilitate collaboration mainly refers to easily find local and complementary partners with who pool capability in order to respond to new customer requirements. Finally in the Industrial district membership of *Industrial Vehicles* the decision to facilitate collaboration refers to the willing of

manager to be supplier, customer or partners with others companies that own to the district and thus own complementary capabilities and have cultural affinity and geographical proximity with the focal firm.

The second strategic networking decision listed in Table 3 concerns the decision to choose local suppliers for product/service sourcing. Such kind of decision occurs in three agreements and aim at pursuing two main strategic objectives, that are reducing the time to product/service by exploiting the geography proximity and facilitate coordination with partners by exploiting cultural affinity. The first agreement such decision appears is the *Industrial Vehicles Equipments* sourcing, where the manager stated to choose local supplier in order to reduce the lead time for mechanical components sourcing. Also, in the *Industrial vehicles* Spot outsourcing and Industrial district membership local suppliers are preferred because, according to manager statement, the same cultural endowment and geographical proximity allow the firm to better manage the relationship.

The third strategic networking decision listed in Table 3 regards the willing of managers of designing and producing product/services that respond to commitment requested in collaboration with firms that own complementary capabilities. Such kind of decision occurs in three agreements and aim at pursuing different strategic objectives. In the *Collective Transport Vehicles* spot Alliance such decision refers to a call for tender driven collaboration with partners that own the complementary capabilities needed to participate to the call for tender. Thus such kind of decision enables the firm to acquire more commitments and consequently increases its market share. Also in the *Industrial Vehicles* Alliance the same decision is concerned and it is underlined that increasing the number of participants in such collaborative activities increases the bargaining power to participate to the call for tender. Finally in the *Collective Transport Vehicles* Consortium the decision to collaborative design and produce refers to a specific product to be developed under customer's commitment (i.e. railway vehicle interiors). In particular the strategic intent of creating such consortium is to increase the firm technical competences and dimension. Indeed such two requirements allow the firm to be able to acquire more commitments.

The fourth strategic networking decision emerging from the cross-case analysis is to demand R&D activities to very specialized and qualified company. Such kind of decision occurs in the *Industrial Vehicles* spot Partnership and outsourcing agreements for R&D activities. Specifically the aim of such spot agreements is to rise innovation by acquiring the capabilities that the firm lack.

The fifth strategic networking decision concerns the choice of several suppliers for the same sourcing. Such decision occurs in two sourcing agreements of two case study companies and aim at pursuing two main objectives. In the *Industrial Vehicles Equipments* sourcing having several suppliers for mechanical components and processing sourcing ensures the company to both reduce the supply risk and increase the volume flexibility by increasing/decreasing the requested volume in case it would need. Also in the *Collective Transport Vehicles* sourcing the choice to have minimum two different suppliers for all kind of component ensures the firm to reduce the supply risk and for the specific case of aluminium profiles and sheets also to increase the volume flexibility, that is requested for such components.

The sixth strategic networking decision regards the demand of maintenance services for non-local customers to partners that operate in the same business and are localized near to customers. Such decision appears in the *Industrial Vehicles Equipments* Outsourcing and in the *X-ray* Alliance.

The strategic objectives declared by the two managers are different. In the *Industrial Vehicles Equipments* Outsourcing such networking decision aims at exploiting partner's facilities to increase firm's after sales service responsiveness for non-local customers and reduce both operating and capital expenditures. On the other side in the *X-ray* Alliance the intent of manager when making the same decision of outsourcing after sales services for non local customers was to exploit the customers global network of the allied partner .

The eight strategic networking decision listed in Table 3. regards the choice to make R&D activities for new product development in collaboration with specialized firms. Such decision occurs in the *X-ray* Alliance in negotiation and in the *Industrial vehicles* spot Partnership agreement. In the first agreements such decision regards the development of a new x-ray equipment to be launched in the

market next year. The strategic objective of such decision is to exploit partner's mechanical knowledge and competences and its economies of scale and learning. By this way the focal firm can rise innovation with a low increase in costs. On the other side in the *Industrial vehicles* spot Partnership agreement the decision specifically regards the collaboration with R&D labs and companies for R&D activities for product radical or incremental innovation. The strategic intent is clearly to rise innovation and acquire new know-how and competences.

The ninth strategic networking decision of Table 3 regards the selection of an high number of partners with who collaborate. Such decision occurs in the *Industrial Vehicles* Alliance and in the *Collective Transport Vehicles* Consortium agreement. In the first agreement it regards the selection of an high number of participants to participate to the call for tender because in such kind of competition the higher the number of participants the higher the bargaining power and thus the possibility to acquire the commitment. In the *Collective Transport Vehicles* Consortium such decision specifically concerns the choice to join with other complementary companies in order to achieve certain dimension (in term of turnover, number of employees and so on) required by some customers.

The tenth strategic networking decision of Table 3 regards the choice to make spot collaborative agreement for participating to call for tender. Such decision occurs in the *Collective Transport Vehicles* and *Industrial Vehicles* Alliance. In both the two agreements such decision regards the spot collaboration between the focal firm and other specialized firms that own the complementary capabilities to develop the product/service requested by the specific call for tender. Such agreements are spot because the partners with who the firm cooperate for such objective change depending on call for tender product/service requirements. The strategic objective is clearly to acquire the complementary capabilities requested as responsive as possible to call for tender.

Then there is the strategic decision that regards the choice to keep suppliers with who the firm already had past cooperative experience. This is the case of *Industrial Vehicles Equipments*

sourcing, that specifically regards the choice to keep old suppliers in order to exploit the trust relationship developed in term of delivery dependability.

Following, there is the strategic networking decision that concerns the selection of small companies to who the focal firm demands to supply after sales services to its customers. Such decision appears in the *Industrial Vehicles Equipments* Outsourcing agreement, where the manager decided to demand such services to companies that are their direct competitors but are smaller in term of capacity.

On the other hand the strategic networking decision of offering maintenance service for partner's customers is pursued in the by *Industrial Vehicles Equipments* Alliance, where the manager adopted such decision in order to increase its market share and decrease the service "unit cost" by increasing the number of service commitments and thus sharing common cost among a large production volume.

Then there is the strategic networking decision that concerns the firm choice to buy components with high level of standardization. Such decision is adopted in the *X-ray* sourcing agreement and regards the sourcing of mechanical components characterized by an high level of standardization. Such decision allow the company to increase delivery and product flexibility.

An other strategic networking decision concerns the choice to demand product promotion and commercialization for non-local customers to a retailer localized where the customer is. Such decision appears in the *X-ray* Agency contract and concerns the decision to demand the product promotion and commercialization to a Russian company in order to serve the Russian market in a more responsive and economic way.

Following, there is the strategic networking decision to buy core components basing supplier selection on high level of reputation. Such a choice is made by *Industrial Vehicles* in the sourcing agreement for motors, that are the core components for the final product. For this kind of components the firm choose suppliers basing selection on supplier reputation in order to ensure product quality and reliability.

On the other hand the strategic networking decision of selecting suppliers basing on cost and geography proximity criteria is made for the sourcing of logistic service. Such decision appears in the *Industrial Vehicles* Sourcing and aim at reducing the cost and the time of service, for which low cost and geography proximity are considered the two most important requirements.

Finally the last strategic networking decision listed in Table 3 regards the choice to spot outsourcing the production of specific components. Such decision appears in the *Industrial Vehicles* Spot outsourcing agreement and is adopted when the company is not able to fulfil all the customers order in the requested time. In such cases *Industrial Vehicles* outsources the production of the components that also intermediate markets are able to produce. By this way the company achieves volume flexibility that enables it to fulfil all the customer orders in the requested time.

6. Results

6.1 Networking strategy archetypes

Starting by the definition of a networking strategy as a set of strategic networking decision related to specific strategic objectives, we identified four different types of networking strategy that we refer to as networking strategy archetypes. Such archetypes are listed in Table 4 where in the first column the name of the archetype is reported, in the second the cases from which the archetype was derived are listed, in the third the definition of the networking strategy itself is proposed, and in the fourth illustrative descriptions from cases are reported.

The archetypes, empirically identified, aim at classifying managers practices related to business agreements.

- *Archetype 1*: The *Multi-decision* archetype identifies a specific networking strategy type where each networking decision concerning a specific business agreement, is directly related to one or more specific strategic objective; on the other side, each strategic objective related to that business agreement is pursued by only one networking decision.

- *Archetype 2*: the *Multi-solution* archetype identifies a specific networking strategy type where there is just one networking decision that constitutes the agreement and that is able to create different networking practices, each of whom is related to one or more specific strategic objectives.
- *Archetype 3*: the *Multi-objective* archetype identifies a specific networking strategy type where there is just one networking decision that constitutes the agreement that is directly related to more than one specific strategic objective.
- *Archetype 4*: the *Mono-objective* archetype identifies a specific networking strategy type where there is just one networking decision that constitutes the agreement that is directly related to just one specific strategic objective.

Archetypes	**Applicable cases**	**Networking Strategy definitions**	**Description from case(s)**
Multi-decision	1. Industrial Vehicles Equipments Sourcing	Each networking decision concerning a specific business agreement, is directly related to one or more specific strategic objective; on the other side, each strategic objective related to that business agreement is pursued by only one networking decision.	The networking decision of choosing several suppliers for the same sourcing aim at pursuing two different strategic objectives (i.e. reducing supply risk and increasing flexibility). On the other hand the decision of choosing local suppliers and keeping relationships with suppliers with who it had already cooperated are related to just one strategic intent (i.e. respectively: reducing time to product/service, and ensuring delivery dependability).
	2. Industrial Vehicles Equipments Outsourcing		The Networking choice of outsourcing maintenance services aim at reducing both capital and operating costs. Also the decision of choosing partners localized near to customers aim at increasing responsiveness and reducing time to service. Finally the selection of small companies as partners is related to just one strategic

			objective, that is to reduce the market entry risk.
	3. X-ray Agency Contract		The networking decision of demanding product promotion and commercialization to a company localized nearby to customers, is related to two strategic objectives: achieving high level of responsiveness, reducing the costs to achieve such responsiveness.
	4. Collective Transport Vehicles Alliance		The networking decision to collaborate with competitors aim at obtaining complementary capabilities necessary to design and produce the call-for-tender driven product/service. Also the choice to make spot and variegate collaboration with different partners with different capabilities aim at being agile respect to the call-for tender markets.
	5. Industrial Vehicles Sourcing		Regarding the sourcing agreement for core component supply, the networking decision regards the choice of manufacturer with high reputation in order to achieve the two strategic objectives of achieving product quality and ensuring reliability. On the other hand the sourcing agreement of logistic service involves the networking choice of selecting service provider according to cost and geography proximity criteria. Such a choice is directly related to the strategic objectives of reducing both costs and time to service.
	6. Industrial Vehicles Spot Outsourcing		The decision to spot externalizing the production of components aim at increasing volume flexibility enabling by this way the company to fulfill customers orders in the

			requested time. On the other hand the spot externalization of R&D activities to very specialized and qualified companies enable the firm to be responsive to product innovation requested by the market. In both the two cases the choice of local suppliers aim at better managing the relationship with partners by exploiting the same cultural endowment and the geographical proximity.
	7. Industrial Vehicles Alliance		Three networking decision are involved that aim at pursuing three different strategic objectives respectively. The first one regards the collaboration with competitors for developing call for tender driven product/service in order to acquire complementary in term of both capacity and capabilities requested to respond to the call for tender. Also the choosing of an high number of partners aim at achieving more bargaining power in the call for tender. Finally the choice to make just spot agreement aim at achieving agility in the call for tender market.
Multi-solution	1. Industrial Vehicles Equipments Industrial district membership	There is just one networking decision that constitutes the agreement and that is able to create different networking practices, each of whom is related to one or more specific strategic objectives.	The participation to the Industrial District enables the company to form different kind of collaboration in order to pursue a variegate set of strategic objectives (i.e. enhancing bargaining power respect to bank customers and suppliers, reducing working capital, rising innovation, increasing competitive advantage).
	2. X-ray Industrial district membership		Be a member of the Industrial District get it easier collaborate with district members that own complementary and different professional expertise. By this way different strategic objectives can be achieved (i.e. improving the quality of product/process,

			penetrate foreign markets through rising innovation).
	3. Collective Transport Vehicles Industrial district membership		The participation to the mechatronic district should lead the company to easily build different kind of relationships with local and complementary partners with who pool resources and capabilities in order to respond to new customer requirements.
	4. Industrial Vehicles Industrial district membership		Be a member of the industrial district is seen as a way to easily create and manage spot relationships with complementary partner in order to achieve specific and different strategic objective that will depend on the firm needs.
Multi-objective	1. Industrial Vehicles Equipments Alliance	There is just one networking decision that constitutes the agreement that is directly related to more than one specific strategic objective.	The networking decision of offering maintenance services for partner's customers aim at increasing market share and reducing costs.
	2. X-ray Agency Contract		The networking decision of demanding product promotion and commercialization to a company localized nearby to customers, is related to two strategic objectives: achieving high level of responsiveness, reducing the costs to achieve such responsiveness.
	3. X-ray Alliance in negotiation		The networking decision to potentially develop a new product with specialized partners aim at acquiring partner competences that the firm doesn't own and to decrease production costs by exploiting partner's economies of scale.

	4. Collective Transport Vehicles Sourcing		The decision of having several suppliers for the same sourcing aim at both reducing supply risk and increasing volume flexibility.
	5. Collective Transport Vehicles Consortium		The networking decision of collaborating with competitors for the design and production of tailored products aim at acquiring more commitments and acquiring new technical, technological and complementary capabilities.
Mono-objective	1. X-ray sourcing	There is just one networking decision that constitutes the agreement that is directly related to just one specific strategic objective.	The choice to make in house components for which the company achieved high quality standard while buying from specialized intermediate markets the others is related to the strategic objective of ensuring the final product high quality standard.
	2. X-ray Alliance		The networking decision of demanding customers services to external partner aim at exploiting the partner customers global network.

Table 4. Summary of Networking strategy archetypes

The classification of networking strategy gives an overview of how manager are using networking decision to achieve strategic objective. The classification underlines that there is not a prefixed set of decisions that manager consider when they build business relationships. They just make decisions that enable the firm to achieve strategic objectives; and according to such decisions they adopt specific agreements. Thus a path of relationships emerges between strategic objectives, networking decisions and agreements. It is a linear path where networking decisions play an intermediate role between strategic objectives and agreements.

6. Conclusions

This paper adopts a managerial perspective in order to investigate if and how firms are using networking strategy to achieve strategic objectives. Specifically we explored the existence of linkages that relate a "set" of strategic objectives with the "set" of networking decisions.

We started by reviewing OM and SM literature arguments regarding from one side business agreements and strategic advantages and intent, and from the other side networking decisions and networking strategy. Then, by adopting a case study approach with theory building purpose we analyzed eighteen different agreements collected by four different case study companies. For each agreement two main constructs emerged, that respectively refers to the focal firm strategic intent when making networking decisions and the characteristics of networking decisions themselves. Finally, we identified four archetypes of networking strategy. These archetypes capture the intricacies of the relationship between networking decision related to a specific business relationship and strategic objectives pursued by each of this decision.

The study has both theoretical and practical implications. It contributes to theory in two ways. First, it extends OM literature by considering not just vertical relationship (i.e. buyer-supplier relationship) but also horizontal agreements (i.e. agreements with competitors) as a source for achieving specific operations performance objectives. The second contribution concerns networking strategy archetypes. Each archetype shows different way of matching different "set" of networking decisions and strategic objectives, and the related cases describe the content of such two constructs by revealing how managers actually make strategic considerations when building business relationships.

The practical contribution is two-fold. First, the list of the strategic intents emerged by the four cases studies (section 5.1), and the real managerial practices described to achieve such objectives (section 5.2) can help practitioners aiming at pursuing specific strategic objectives. Second, the archetypes suggest managers to think strategically when building agreements, and lead them to think to the strategic objectives they are willing to pursue when making each decision related to the business relationship they are going to build.

Starting from this work future research can be conducted in order to identify different networking practices to adopt in order to pursue specific strategic objectives. Such a guide could be consulted by managers when considering different options to achieve pre-defined strategic intents; indeed it would provide them with the "networking" option.

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