

Networking strategy for competitive advantage

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Abstract

This paper explores the potential of networking strategy as a source of competitive advantage by integrating market-based and resource-based logics. It contributes to operations management literature by considering not just supply chain structures but also others kinds of network that can emerge from horizontal agreements (i.e. alliances, partnerships, joint ventures, etc.). The paper reviews the literature and develops propositions regarding how make/buy/make together decisions, governance mechanisms and network-base structures allow firms both to pursue operations performance objectives and obtain/create valuable resources. A case study supports the propositions and shows a practical application of the presented research framework.

Keywords

Make or buy decision, governance mechanism, operations performance, resource based view

1. Introduction

Production economics as well as strategic and operations management scientific literature on firm networking, mainly refers to the following approaches: 1) Organisational Economics (OE)/Transaction Cost Economy (TCE) [1]; 2) Resource based view (RBV) [2]; 3) Relational [3]; and 4) Operational/Supply chain management [4, 5]. In this paper, we rely on such established approaches to study in which way firm strategic decisions about its boundary and relationships, i.e. its networking strategy, enable the firm to achieve competitive advantage. The strategic management literature stream which is directed to understand sources of competitive advantage, since 70s, suggests networking strategy as a way to exploit their internal resources by shrinking their boundaries and functions and focusing on core specializations [6, 7], through responding to a globalized environment opportunities, such as global strategic resources (i.e. low cost labour, highly qualified suppliers, etc.), while neutralizing external threats and avoiding internal weakness by a decomposed governance structure that responds to volatile markets, shortened innovative cycles, and increasing costs of R&D. Our work wishes to explore how firms make networking decisions and in which way such decisions help achieving competitive advantage. Specifically, we face such issue from two different perspectives: a market-based and a resource-based perspective.

In order to explore linkages among networking decisions and competitive advantage our research investigation started with a review of literature in order to identify, on one hand, the key decisional dimensions along with networking strategy should be defined and, on the other hand, the key variables for competitive advantage creation.

Concerning the first point, we defined networking strategy as the set of long-term decisions which determine the boundaries of the firm value-chain and its relationships with one or more in-shore/off-shore partners/suppliers for the fulfilment of specific business processes. In particular we individualized three dimensions along which networking strategy decisions are made. These dimensions, which are an extension of those considered by [8] for service sourcing, can be described as: A) Make/Buy/Make together dimension concerns the extent to which different operations are internally made, externally sourced, or made with somebody else. Different solutions 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); B) Governance mechanism dimension concerns the intensity (transactional or relational) of the relationship between the firm and its partners/suppliers. 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 based on trust, reciprocity, and reputation [9]; C) Network base-structure dimension concerns partners selection, the dimension of the network, its topography, its international expansion, the eventual existence of a focal firm and its degree of leadership

Concerning the second point, we referred to the two main streams of literature that are: the positioning [10], and the resource-based view school [2]. Thus we identified two main key variables for competitive advantage creation: operations performance objectives and Valuable, Rare, Imperfectly imitable, and Not substitutable (VRIN) resources. From this consideration two main patterns emerged in our research framework (Figure 1). The upper path of the conceptual framework represents the market based perspective and explores whether the networking strategy should be used by the firm to achieve operations performance objectives that it needs in order to achieve competitive advantage. The lower path, i.e. resource-based perspective, explores whether the networking strategy should be used by the firm to obtain/create VRIN resources the it needs in order to achieve competitive advantage. A literature review and analysis approach with theory building purpose was chosen to explore the validity of the two paths individualized. With this focus, we further operationalized the two main constructs for competitive advantage creation through elements of specificity, and explored the linkages existing between each networking strategy decision dimension and each element of specificity. These analysis led us to develop two literature based propositions. We finally adopted a case study approach to support such propositions. Our work contributes to the stream of research on firm’s boundaries and relationships by integrating these two different approaches, and thus it represents an attempt to frame and provide a theoretical understanding of the networking strategy concept in operations management literature using both market-based and resource-based logics. We also make three relevant contributions to the networking strategy literature. First, we offer a precise definition of networking strategy that considers the main relevant decisional dimensions that a manager has to consider when defining a networking strategy. Second, we investigate how firms operations performance objectives and resources needs drivers impact networking choices of the firm. Third, we highlight the strategic role that firm boundaries and relationships serve in the formation of its competitive position.

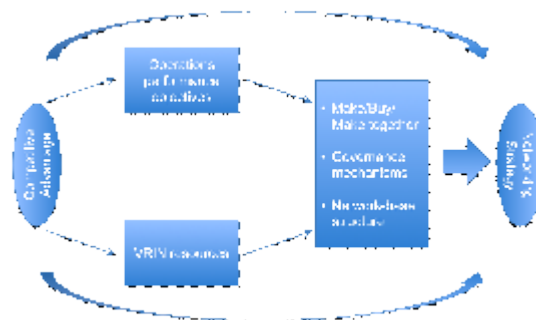


Figure 1: Research conceptual framework

3. Market-based arguments for networking strategy

According to the classical positioning school, once the firm assesses market requirements and competitor positioning, it will be able to define its competitive strategy such as differentiation, cost leadership, and focus [10]. Such strategy should be then operationalised in terms of performance objectives for its operations [11]. Firms in manufacturing industries have four primary competitive priorities in their end-market: cost, quality, time and flexibility [12]. Once the firm established its operations performance objectives that satisfy market requirements, it is likely that new needs for operations, and specifically for networking-related operations [13], will emerge. Summing up, the market-based part of our conceptual model, can be operationalised by decomposing the competitive strategy in operation performance objectives. Such operationalisation allowed us to formulate the following considerations related to each identified operations performance objective.

According to TCE [1], a Buy solution can enable the firm reducing operating **costs** by the attainment of economies of scale when transaction cost due to the externalization to market are smaller than internal production cost. In a different way, also a Make together solution can enable the firm to reduce costs by both horizontal and vertical relationships. In the first case the firm will achieve scale advantages by sharing with selected partner/s overhead costs of activities that are relation specific. In the second case, the objective of cost reduction is obtained by supplier development investments [3]. In the case of buy solution, the objective of lowering costs generally lead firms to build transactional relationship (Governance mechanism) with their suppliers in order to maintain and exploit the competitive market mechanism that lead specialized firm to offer their price as lower as possible. On the contrary, in the case of make together solution, as empirically demonstrated by [14], thanks to horizontal relationships the firm

will likely to build a more relational bond with its partners in order to better manage the relation specific activities that will lead the companies to obtain economies of scale. When the firm decides to adopt the buy solution, it should refer to an high number of suppliers (Network-base structure) for the same activity and build among them competing relationships in order to lead them to keep costs low due to the competitive pressure. On the other side, when the firm adopts a make together approach, the supplier involvement investments lead the firm to build relational bond with a low number of selected suppliers and will build with them as more as possible a peer to peer relationship. In order to improve the **quality** of production process, a Make solution could be adopted by employing high skilled workforce if the process is labour intensive, by investing in more technological machinery if the process is capital intensive. Depending on the kind of workforce/machinery it would be more or less difficult to acquire these in the market. A Buy solution could endow the firm with them. Moreover if the pooling of the firm workforce/machineries resources with other/s firms ones could create a unique synergic effect that improve the production process quality, than a Make together solution is suggested. Also, according to the Total Quality Management literature, manufacturers cannot consistently produce quality products without effective collaboration among supply chain entities (Governance mechanism) [15]. Manufacturing lead **time** depends on the manufacturing process efficiency. Thus if the market can offer a superior performance, in term of manufacturing lead time, a firm should choose a Buy solution, while staying careful to externalizes processes that have a low intellectual property risk [4]. On the other side, if the objective it to reduce the delivery time the company should adopt a Make together solution. Indeed if a firm decides to be closer to its customers in order to reduce its delivery time, such solution could enable it to do that if the partner with whom it decides to collaborate for some activities is located near the customer (Network-base structure). Finally, the more the firm is well coordinated with its suppliers and the nearer they are located, the shorter the procurement lead time will be. Empirical investigations have shown that in complex assembly sectors, such as electronics, one of the main advantages of value chain modularity, characterised by high level of outsourcing (Buy solution) to very competent and independently operating suppliers, is the possibility to reduce the time to market of new products [7]. Moreover the operations management literature suggests that strategic collaboration between a firm and its suppliers during the design phase reduces the product development time by ensuring a match between what the supplier provides and what the firm actually needs (Governance mechanism). Supplier early involvement helps accelerate the process by eliminating steps, preventing delays, presenting opportunities for simplification and parallel processing, and speeding up the times for ramp-up manufacturing [16]. Different networking decisions can affect different dimensions of **flexibility**. For example, the product or service flexibility is a concept very close to the time to market. Indeed when a firm is able to achieve a very small time to market, it will be able to introduce novel product or service in short time. Also, volume flexibility depends on networking decisions. Considering the supply base of a focal firm, its ability to change its production capacity quickly and at low cost will also depend on the production capacity of its suppliers (Network-base structure). The higher the number of suppliers, the more the firm will be able to increase its capacity when needed. Finally, even the delivery flexibility could be enabled thanks to networking decisions. Indeed delivery dates of a standard component can be changed by the customer if the supplier have different customers for the same component. Therefore, the following proposition may be stated:

PI. A Company which wishes to achieve cost, quality, time, and flexibility-related operation performance objectives is expected to make specific decisions along the identified networking strategy dimensions.

4. Resource-based arguments for networking strategy

From a resource-based view a firm will make agreements with other firms in order to exploit new resources and to get advantage from the synergies coming from the pooling of them. [2] classifies resources into two categories: tangible resources are every kind of physical asset that a firm uses to run its operations, such as land, facilities, machineries and systems, technologies and capital; intangible resources are relational resources and capabilities. A firm that aims at achieving a competitive advantage over its competitors will start from the analysis of its resources endowment and will individualize the potential VRIN resources that it needs. Summing up, the resource-based part of our conceptual model, can be operationalised by decomposing the competitive strategy in VRIN resource needs. Such operationalisation allowed us to formulate the following considerations.

Starting with **tangible** resources, production facilities, machineries and systems are VRIN resources if they enable the firm to achieve a competitive advantage. According to [17] if a firm believes that proprietary capabilities in manufacturing are not significant sources of competitive advantage, than a Buy solution should be pursued in order to achieve low cost benefits; otherwise if the firm competes with highly differentiated products that can only be made by proprietary production methods, a Make solution should be adopted. Moreover, recent alliances in the automotive sector [18] suggest that a Make together solution can enable the partners to exploit the production and distribution facilities of each other, “the alliance would also allow Fiat Group and Chrysler to take advantage of each

other's distribution networks ...". Moving to **intangible** resources, the relational school suggests that relationships can be a source of competitive advantage if the firms are able to build a relational rent. [19] individualize three characteristic that partners should have in order to build a successful relationship with the firm. The firm should build a relationship network characterized by partners/suppliers that have complementary of capabilities, strategic relatedness, and cooperative experience (Network-base structure). Complementary capabilities are uniquely and valuable if the information about the capabilities combination is obscured from rivals and when no other combination of firms could produce the same value. They are generally relationship-specific and this suggests that a firm will ally with partners in whom the greatest complementarities exist between the firm's capability endowments and those held by partners that operate either in the same (Make together solution) or in a different market (Buy solution). Strategic relatedness means that the firm should have congruent goal with the partner's ones and share common or similar knowledge-sharing routines. When firms' goals are aligned, a Make together solution not only reduces monitoring and enforcement costs associated with the arrangement by reducing the probability of opportunism, but also increases synergies by reducing conflict and encouraging cooperative behaviour, making the exchange partners more willing to make additional resources available. Finally, cooperative experience means that the partner has had repeated ties, direct and indirect, with the firm. Thus, if the exchange relationship is trust-based (Governance mechanisms), exchange partners are more likely to share resources and consequently to exploit market opportunities [20]. Finally, [21] underlines the strategic importance of firm localization by stating 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 in. Therefore, the following proposition may be stated:

P2. A Company which wishes to achieve specific tangible and intangible VRIN resources is expected to make specific decisions along the identified networking strategy dimensions.

5. Evidence from a case study

The company, fictitiously named X-Ray, has been operating for more than 25 years in the radiology industry. Its business products are x-ray equipments for medical purpose and the company business activities regard the pre-sale consulting, the design of customized x-ray equipments, the production and assembling of equipments on customer location, and the after-sale technical support. 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, even if the CEO declared its intention to broad its market at an international level. The firm has three kinds of relationship agreements with others firms.

Partnership: the company is developing a new product to be manufactured and commercialized in the emerging countries, located in the Mediterranean basin. According to the CEO companies located in Marocco "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 partnerships the director individualized two main advantages: the geographical proximity and the cultural affinity. This agreements can be classified as a networking strategy that adopts a make together approach for production and R&D activities, a relational bond and a network-based structure characterized by partner/s that are localized in low labour cost countries and that are geographically and culturally close to the firm. From a market based view three evidences emerge, supporting proposition P1. The first one regards the reduction of cost. Specifically, according to what manager declared, operating and capital costs could be reduced by cooperating with partners (make together) that own facilities in low labour cost countries, that are geographically and culturally close to the firm in order to better coordinate the relationship (network-based structure). The second evidence regards the reduction of time to product by sharing production (make together) with partners that own facilities that are near to the market that the firm is willing to achieve (network-base structure). Thirdly responsiveness can be increased by commercializing the new product in collaboration with partners (make-together) that have the same cultural endowment of the final customers (network-based structure). On the other side, three evidences emerge supporting the resource based perspective, in line with proposition P2. The first one regards the exploitation of partners facilities that are near to the final customers by choosing partners that have such a strategic location (network-based structure). In particular, these resources enable the firm to reduce cost and the time to product. The second one regards the exploitation of geographically and cultural proximity to partners (network-based structure) in order to obtain relational rent in term of better communication and thus by facilitating the possibility to build a relational bond (governance mechanism) that can facilitate the sharing of strategic information for the pooling of relevant capabilities when adopting a make together approach for R&D activities.

Sourcing: the company has several sourcing agreements for mechanical components with national and international suppliers that have been selected based on price, quality and technological level criteria, with whom the firm has transactional relationships, but has high trust in them because of their well known reputation. Such sourcing strategy

is led by the high level of quality offered by specialized suppliers and by the high level of standardization of requested components which allow the suppliers to eventually modify firm order delivery time and to replace that initial orders to other customers. Finally the manager declared that sourcing mechanical components from specialized firms allowed its company to rapidly modify existent products or introduce new products by exploiting the suppliers flexibility. This sourcing agreements can be classified as a networking strategy that adopts a buy approach for mechanical components, a transactional bond and a network-based structure characterized by both local and international suppliers. From a market based view three evidences emerge, supporting proposition P1. The first one regards the achievement of quality for product components. Specifically, quality of components can be achieved by demanding components for which the firm doesn't own distinctive capabilities, i.e. mechanical components, to whom that own these (Buy), whilst producing in house the others, i.e. electrical components (Make). Moreover reputation has to be considered as control mechanism for quality standards to be ensured (Governance mechanism). Finally the number of suppliers (Network based structure) will depend on the number of "best" suppliers requested to cover all the mechanical components needs. The second evidence regards the achievement of flexibility objectives by externally sourcing (buy approach) the design and production of mechanical components, to suppliers that are able to ensure the firm with delivery flexibility because of the high standardization of components and the high market share of suppliers. On the other side, one evidence emerge supporting the resource based perspective, in line with propositions P2. This evidence regards the exploitation of specialized capabilities that the firm doesn't own by adopting a buy approach and basing the suppliers selection on reputation mechanism (governance mechanism).

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. 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 local manufacturer of mechanical components, 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 design. The CEO declared that this choice has been led 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 CEO declared he wishes to build a long-term and deep relationship with this partner. This alliance agreement can be classified as a networking strategy that adopts a make-together approach for the design of mechanical components of a new product, a relational bond and a network-based structure characterized one specialized partner located close to the firm. From a market based view one evidence emerges, supporting both proposition P1. This regards keeping low the cost while high the quality of mechanical components production by exploiting suppliers specialization (buy approach). On the other side, two evidences, in line with proposition P2, emerge supporting the resource based perspective. The first one regards the firm choice of a local and mechanical specialised partner for product design. Indeed by pooling (make together) its electrical capabilities with the partner mechanical ones (complementary capabilities), the firm is willing to achieve a relational rent to assure the quality of the new developed product. Moreover the deep relationship (governance mechanism) that the firm is willing to built with such a partner aim at maximize the collaborative process performance, even in perspective of future collaboration. This also impacts the choice of one partner that is geography and cultural close (network based structure) to the firm. The second evidence regards the firm willing to acquire mechanical know-how (capabilities) by such a collaboration (make together).

6. Discussion and conclusion

The aim of this paper was to investigate if and how networking strategy (sourcing, alliancing, joint venturing, outsourcing, etc.) enables a firm to achieve a competitive advantage. We referred to both the positioning and the resource based schools of thought to individualize the main variables for competitive advantage creation. On the other side, literature analysis allowed us to identify three major dimensions along with networking decisions are made by managers: make/buy/make-together, governance mechanisms, and network-base structure; major networking strategy schools of thought supported the idea that along these dimensions firms should make their decisions specifically to pursue given operations performance objectives or to obtain specific valuable resources. The case study confirmed such behaviour and showed that when managers decide to undertake a specific networking strategy, they are willing to pursue one or more of the above mentioned objectives. In particular, it emerged that the relational resources and land & facilities play an intermediate role between networking strategy and operations performance objectives. Relational resources, obtained by specific networking strategy decision dimension, impact on more effective-based performance, such as quality and capabilities; whilst land & facilities,

obtained by specific networking strategy decision dimension, impact on more efficiency-based performance objectives, such as cost and time-based performance. On the other side, capital and capabilities resources do not appear to play an intermediate role between networking strategy and operation performance objectives.

This paper has both theoretical and practical implications. First, it contributes to theory development in operations management by supporting the idea that specific inter-firm relationships can allow a firm to achieve specific competitive advantage, expressed by operations performance objectives and/or VRIN resources. Such idea opens new frontiers to network studies whose main approaches (TCE, relational, supply chain management, etc.) support and justify networking strategies for achieving competitive advantage but none of them deals with the problem of determining which networking decision managers make for pursuing specific competitive priorities and/or achieving VRIN resources. Also, this study gives a practical contribution by exploring and describing real practices adopted by managers when making networking decisions. Indeed, the networking practices described in the analyzed case can help practitioners in better understanding how to formulate their networking strategy in order to achieve competitive advantage. Research limitations are mainly due to result testing phase which is compromised by the restrict number of analysed cases. Actually, other cases study have already been conducted but have not been reported here for sake of brevity. A cross case study is planned in order to test the conceptual framework and search for new findings.

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