

Relationship between Governance Instruments and Quality on Supply Networks: A Theoretical Proposal

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Abstract. This paper aims to present a theoretical proposal on the impact of governance instruments in the result of quality in supply networks. From a review of the literature on the quality management in supply networks, formal and informal governance, we used the process of developing theoretical constructions, through which were formulated theoretical propositions about the impacts of governance instruments. It was observed that, in isolation or concomitantly, formal or informal governance instruments have an impact on the outcome of quality in supply networks, and that this impact is associated with the environmental context in which the supply network operates. This theoretical model proposal aims to collaborate with the explanation, from the point of view of governance instruments, of the practice of quality management in supply networks and provide a framework for future research deepening.

Keywords: governance instruments; supply chains; networks; quality.

1. Introduction

Supply networks have received much attention in the literature once these combine the advantages of both the vertical integration as the market exchanges [1]. The term Supply Chain Management (SCM) appears in the 80s, catching and surpassing the concept of integrated logistics, and becoming the integration of the activities of the supply chain - covering the flow of goods from raw materials to the end-user through improved relationships in the chain and seeking sustainable benefits. The management is characterized by practices flexibility and the adequacy to meet the collective strategic needs and delimited by the governance, with less transient nature, since this consists in the definition of rules, criteria for decision making, responsibilities and breadth action limits of participants [2].

In supply networks, the governance is confirmed as a topic that has recency and gradual attention in the literature, demonstrating a substantial progression of articles published in the last five years [3][4][5][6][7][8]. However, issues related to governance are not new. The assumptions of [9] formed the basis for [10] to define a governance structure in coordination of the production, which is between the market, through pricing system; the hierarchy, through the full internalization of resources by the organization, also called vertical integration; and hybrid which combines the two previous aspect-structures. This article focuses on the latter, used in the governance in supply networks and which consists of formal instruments, comprising contracts, formal structure, standards for participation and systems of control and coordination; and informal arrangements that involve norms, values, social structure and information sharing among other means involved in both instruments. Such instruments of governance, albeit mostly identified in researches involving dyads, as observed by [7], have not been studied systematically from their connection with specific results in different environments of supply networks. From this point of view, it is formulated the following research problem: Based on certain context of supply networks, can governance instruments ensure positive results in quality in the supply network? Several authors that researched the concept of governance in supply networks converge to establish governance arrangements appropriate to their management and integration between the organizations involved. Therefore, the aim of this study is, from the literature review, to elaborate theoretical propositions to build a structure that represents the impact of governance instruments in quality performance among supply networks.

In the following sections, it is shown the methodological approach of the research, the perspectives of studies involving governance in supply networks. It is reviewed concepts concerning quality management

and formal and informal instruments of governance, on which are founded and developed three propositions. It concludes with a discussion of the theoretical and practical implications of the approach and the presentation of the proposed conceptual model, based on the propositions.

2. Theoretical Base

2.1 Quality management in supply networks.

As stated by [11], the quality of a product or service, when it reaches the consumer, it is a function of quality performance of each chain operation that supplied it. This definition simply and objectively demonstrates what quality is in supply networks. The authors state that errors at each stage in the chain can multiply its effect on service to the end consumer, which is why only the responsibility of all operating stages for its performance and its suppliers can provide to the supply chain to achieve high quality for the end consumer. There is, in this approach, the closed implicitly relevance of governance mechanisms in generating quality supply networks.

According to [12] there are significant gains to strategically lead the supply network by implementing quality management processes because the end result will be the satisfaction of end users. Coordination of quality in production chains is defined as a set of planned activities and monitored by a coordinating agent, with the purpose of improving the quality management, assisting in assurance processes and improving the quality of products throughout the chain. This must be done through a process of acquisition, management and distribution of information, helping to improve customer satisfaction and to reduce costs and losses in the chain [13].

Although much attention is being given recently to the supply chain management (SCM), as mentioned by [14], its interconnection with the perspective of quality management is often with a limited and tangential nature. In their study the authors define the concept of supply chain quality management (SCQM) as the formal coordination and integration of business processes involving all partner organizations in providing channel to measure, analyze, and continuously improve products, services and processes in order to create value and achieve satisfaction of intermediate customers and end market [14]. According to [15], quality management in supply chains is defined as an approach based on a performance improvement system that leverages opportunities created by connections upstream and downstream with suppliers and customers. Using as an example the agri-food supply chains [16] point out that the integrated quality assurance means agreements on specifications, information exchange, coordination and control or even redesign the supply chain in order to realize customer value at less cost at the organizational level, emphasizing the aspect of cooperation involved.

Researching eight practices such as management leadership, training, relationships of employees, customer focus, quality data and reports, supplier quality management, product or service design and process management, [17] assert the need to implement a quality management in the supply chain, rather than the application of a set of quality practices. The authors highlight the need for managers to think beyond their companies within the supply chain to manage quality, providing integrated management processes upstream and downstream to provide quality products and services to the supplier.

2.2 Formal Governance

The work of [18] points out the main mechanisms of organizational coordination in inter-organizational network, through which cooperation is achieved. Among these the hierarchy and authority relation in which a hierarchical supervision is present with formal plans for various organizational systems, similar to those found in companies, as a consortium, shows formal coordination means.

[10] identifies uncertainty, frequency of exchanges and the degree to which the investments are specific transactions, as key dimensions for describing transactions, noting that the effective organization of economic activities entails matching governance structures with these transactional attributes on a discriminative way, highlighting the formal contracts as a better safeguard control of specific assets against opportunism. [19] confirms his proposal to set formal contracts and financial commitments as formal governance mechanisms, which establish the reciprocal obligation bonds. Realizing such statements, [20]

emphasize these mechanisms, stating that suppliers may require from manufacturing companies some kind of compromise that ensures they will not end their relationship in the short term, only based on their own interests. To [21], the formal controls help to clarify the rules in the establishment of the partnership and generated expectations, clarifying procedures to the different terms. For [22], formal contracts are documents that have legal binding, in which the parties agree on the rights and obligations involved in the transactions made. The greater the complexity of such contracts, according [23], the greater the specification of promises, obligations and dispute resolution processes, and it may detail roles and responsibilities to be met, monitoring procedures and appropriate sanctions for non-compliance and especially determining the results delivery.

[24] point out that while many deficiencies are evident in the contracts, as a formal control mechanism to govern the terms of trade, there is a wide acceptance of this mechanism due to its control effects, since these provide guidelines to foster adaptation to changes in market and technological conditions, and it is also a means to smooth trade work between the companies. The work of [25] points out that, even though the trust is a prerequisite for signing a contract, it may not exist at the beginning of a relationship, highlighting the need of the same for transactions between buyer and supplier early in the relationship.

The verified formal governance concepts are confirmed by saying that formal mechanisms represent promises and obligations of performance for particular actions in the future, noting that contracts can also specify obligations related to product quality, for example, compliance with certain standards, monitoring and penalties [26]. Thus, the authors state that with the contractual governance, the transaction between partners could be strongly motivated to comply with the agreements on quality specified in the contracts, since the breach would incur upon termination of contract and loss of partnership transactions. Being taken to comply agreements does not necessarily represent something positive for quality in the supply chain, since it is not possible, in a contract, to cover all clauses that in the future could affect the quality. Extremely formal contracts can lead to negative feelings and lead to defensive activities by the contractor, negatively affecting the quality of the network [5]. Based on the above definitions and their implicit or explicit involvement with quality, it is formulated the first proposition:

P1: Formal governance mechanisms can impact positively or negatively on the quality in supply chains.

2.3 Informal Governance

The transactions are carried out between actors who have known each other and interacted over time, so previous experience is relevant when organizations choose their governance mechanisms, since previous knowledge can reduce opportunism. [27][28]. Studies of [28] define relational governance as interorganizational exchanges that include significant specific relationship assets, noting high degree of confidence.

According to Jones, [29], repeated interactions over time create interdependencies, increase mutual informal levels of communication and collaboration, facilitate the transfer of tacit knowledge, raise confidence levels and hence allow the social coordination and control mechanisms to be more flexible and less formal so as to form a single entity in tasks that require coordinated activities. For authors, the governance in enterprise networks is made up of independent organizations that operate as a single entity in tasks that require coordinated activities. Existing network values guide the actors' actions, emphasizing the importance of elements such as character and confidence, and thus can promote cooperative behavior on the network.

Relationships of partnership with suppliers, according to [11] refer to customers who provide long-term relationships with suppliers. The return of the provided demand stability suggests a commitment to high service levels from suppliers, since real partnerships are difficult to sustain, and they support a lot on the degree of trust between the partners.

When the decision-making mechanisms are participatory and informal, according to [30], performance risks are reduced by the participation of partners in sharing their respective skills, being more likely to see it as an exercise in domestic consumption, resulting in a more honest and open communication, which will likely result in good decisions. [20] corroborate the statements that financial contracts and commitments can provide protection against self-interest or unethical behavior, however, they suggest that trust can generate a relational gain, it may moderate the effect of formal governance mechanisms in specific investment transaction. Similarly, [31] show the immersion moderating role in the decrease between transaction risks and formal governance mechanisms.

[32] describe that networks have three key components: the actors, resources and activities. Thus, it is observed that in view of networks the focus is on the interaction of these elements and the adoption of strategies that involve inter-organizational relationships. [25] emphasize the role of trust in relations, deeming it as necessary in relations, especially in the long term, since not all aspects can be controlled, especially in a contract. Recent studies of Huang et al. (2014) conclude that when the formal control is excessively applied due to legal and emotional pressures, managers must develop the same degree of joint socialized actions between buyers and sellers, based on the formal infrastructure of control, so that companies seeking cooperative advantages in its supply chain, can build relationships between buyers and sellers, allowing managers to solidify collective interests and reduce opportunism and conflicts of individual members. [33] assert that trust is only as governance mechanism, due not only by the minimization of transaction costs as the fact of owning a mutually causal relationship with information sharing, which also creates value in the exchange ratio. In this sense, the authors highlight that trust is a tool to reduce the need for monitoring from buyers regarding to the delivery of suppliers and the quality of inputs, so as to reduce any eventual penalties for inputs with lower quality. Considering these statements, it was prepared the second proposition:

P2: Informal governance mechanisms can positively impact quality in supply networks.

It appears, therefore, that the various explicit governance mechanisms, formal (contracts, agreements, etc.) and informal (leadership actions, exchange of information, trust etc.) may take the form to generate results in supply networks. However, according to [5] formal governance mechanisms can have negative or positive impact on the results of a supply network and thus the integration of formal and informal mechanisms must take into account these possibilities. This concept was explained in a third proposition:
P3: The integration of formal and informal mechanisms can affect quality in supply networks, and its impact will depend on the formal mechanisms.

3. Theoretical Framework

In order to determine the theoretical construction on the impact of different governance tools in the quality of a supply network in context, three fundamental propositions were proposed, which can in isolation (P1 or P2) or joint (P3) establish this specific result, as shown in the constant conceptual model in Fig.1. This model aligns with the model proposed by [5] which relates governance tools with cooperative performance. The proposition 1 (P1) states that formal tools can affect positively or negatively the quality of supply networks, also aligns the idea that different governance mechanisms should be used for different relations between clients and vendors in a supply network, since standardized tools can lead to the feeling of imposition and consequent resistance to the achievement of quality goals [34].

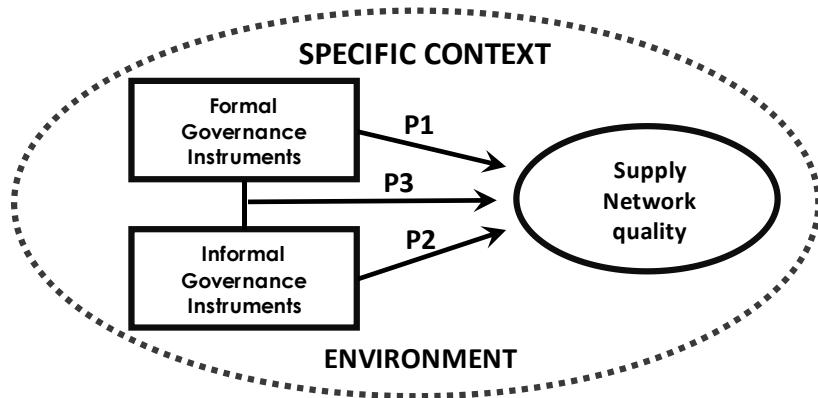


Fig. 1: Theoretical Model for formulated propositions

Proposition 2 (P2) provides that informal governance tools (trust, commitment, partnership, and values, etc.) can positively influence in several aspects. As regards, for example, to cost savings, trust can play a key role because it leads to the contracting company to significantly reduce inspection costs [35]. [34]

reinforce this proposition stating that when informal instruments are used, they can generate safeguards without increasing bureaucracy or costs.

The joint use of governance mechanisms (P3) can amplify the quality results in the supply network if the formal mechanisms are acting positively. If the action of formal mechanisms is negative, the final result will depend on the intensity of informal mechanisms. These governance mechanisms will significantly suffer influence from the environment in which the network is located. For [5], the success of governance mechanisms will depend on exogenous-factor contingencies.

4. Conclusion

The present study seeks to identify and understand through researched literature how governance tools can ensure positive quality results in the supply network in its context. For this reason, theoretical propositions were developed to build a structure representing the impact of these instruments. It is believed through the research that formal governance tools can impact positively or negatively on the quality and results in supply networks. Also, informal instruments can positively impact due to the character and the level of trust between the network actors. It is inferred here that the integration of formal and informal governance tools can provide quality in management of the supply network. As future research, it is proposed to carry out exploratory empirical studies in different organizational segments related to the supply network listing variables for research and processes, information systems and performance of network quality, considering to involve participants at all levels in the network supplies. Noted that the theoretical building process can help to explain the practice or provide a framework for further research. It is expected, therefore, that the propitiation of discerned or even holistic view of the formal governance elements such as contracts, patterns of participation, control and coordination systems and formal structures, among others, and informal governance ones such as social structures (relationships and inserts), values, information sharing, as a means for achieving quality results can provide subsidies that promote adjunction to the subjective analysis. In this way, the systemic vision of governance in supply networks would be accomplish in its different environments.

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