Influencers of Collaborative Management in Supply Chains

Mauro Vivaldini

Abstract

Collaborative supply chain management has proven to be a way for organizations to improve their relationships in order to achieve better results in their business. This management model is relatively complex because it involves different interests of the organizations, but it can provide new knowledge capable of contributing to the results of the companies. It is the objective of this study, using the literary revision method limited specifically to the theme, to know how values and organizational capacities are generated through collaborative actions, relating them to influencers that contribute or do not contribute to this management model. The research emphasize the importance of all supply chain actors in building collaboration, points out influencers that contribute or not to this management model, and highlights the organizational values and capabilities generated, concluding that the potential generated by collaborative management in the supply chain is based on the knowledge acquired and the competitive advantage that the organization obtains.

Keywords: Collaborative Management; Supply Chain; Performance.

Resumo

A gestão colaborativa em cadeia de suprimentos tem se mostrado um caminho para as organizações melhorem suas relações de forma a obter melhores resultados em seus negócios. Este modelo de gestão é relativamente complexo por envolver diferentes interesses das organizações, porém pode proporcionar novos conhecimentos capazes de contribuir com os resultados das empresas. É objetivo desse estudo, utilizando o método de revisão literária limitada especificamente ao tema, saber como valores e capacidades organizacionais são geradas por meio de ações colaborativas, relacionando-as com influenciadores que contribuem ou não com esse modelo de gestão. A pesquisa enfatizar a importância de todos os agentes da cadeia de suprimentos na construção da colaboração, aponta os influenciadores que contribuem ou não para esse modelo de gestão, e destaca os valores e capacidades organizacionais geradas, concluindo que o potencial gerado pela gestão colaborativa na cadeia de suprimentos reside no conhecimento adquirido e na vantagem competitiva que a organização obtém.

Palavras-chave: Gestão Colaborativa; Cadeia de Suprimentos; Performance.

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Introduction

Fundamentally, companies engage in collaborations to access knowledge, resources needed, and improve performance. Studies point out that collaborative involvement in supply chain (CS) is typically reserved for CS partners and tends to be long term. However, to stay competitive, companies need to be able to collaborate and have access to knowledge and cutting-edge capabilities that can reside outside the CS they are in as well as take short-term actions. Companies that recognize the opportunity and invest the effort to engage deeply in collaboration, with or without long-term partners, will be more flexible and adaptable in a rapidly changing technical environment. These companies tend to sustain a competitive advantage (NIX, ZACHARIA, 2014).

Along the same line, however, with an approach on collaboration and integration in CS Wiengarten and Longoni (2015), point out that expanding the collaborative relationship is an effective way by which performance benefits can be achieved. However, for them, the formula for integration and collaboration of CS agents is not simple, and organizations intending to become part of an integrated chain should expect that this will require dedication and resilience.

In addition to dedication and resilience, this relationship involves questions and sharing of informations that need to be restricted to the market, a concern raised by Le et al (2013) in asserting that confidentiality among chain agents is an important issue in corporate management when data are shared by the collaborative management adopted in CS. Hiding information can prevent risks, which are caused by the leak of information or sensitive knowledge, it is up to the company to remove them before sharing.

Considering the moment when new considerations are raised in the discussions about collaborative management, such as ensuring competitive advantages, resilience and maintaining confidentiality, it is noticed that there are opportunities in the literature to discuss and better understand this topic, answering the question of how values and organizational capacities are generated through collaborative actions, relating them to influencers that contribute or do not contribute to this management model.

The objective of the study is to explore the theme in order to answer the above question and presents the theoretical vision regarding collaborative management. Through this approach, we establish an understanding of how organizations can overcome
barriers and create solutions in this management model, identifying which complicators and influencers are present.

According to Kumar and Banerjee (2014) the CS partners’ collaboration is being recognized in business as an evolution management model. Therefore, the number of collaborating companies will increase in the future. In this sense, the moment is opportune for researchs exploring this theme. In addition, Kähkönen (2014) argues that, furthermore, collaboration has been little examined in the context of CS, and there are many gaps for research in this area. For these authors investigations should focus especially on the view on value creation of network collaboration, such as understanding the role of collaboration in the generation of complementary capabilities for agents involved in the chain.

The article was organized from this introduction, which contextualizes the theme and presents the problem and objective of the research, besides emphasizing the importance of the research. In a second chapter presents the methodology and the organization of the research. In the third is presenting the most classic understanding of collaborative and consolidated management in the literature. In the fourth, to present a more up-to-date view with new factors put by the researchers. In in the fifth the analysis, discussion and contribution of the study presenting the complicators and influencers of the collaborative management in CS, and finally the the research.

**Methodology and Research Organization**

It is the objective of this study, through a literary review, to analyze the concepts about the collaborative management in CS, identifying the theoretical vision about this theme to analyze through it how values and organizational capacities are generated through collaborative actions, relating them to influencers that contribute or do not contribute to this management model. In this search the authors relied on international journals related to collaborative management, focusing on supply chains.

The research has a limited focus on CS collaboration view, and for this reason the author focused his search on the indexing bases of main journals in the area, such as Elsevier, Emerald-Insighth and Taylor & Francis. In turn, journals such as International Journal of Physical Distribution & Logistics Management, Supply Chain Management: An
International Journal, The International Journal of Logistics Management, International Journal of Operations & Production Management, Journal of Business Logistics, form the main basis of the research. Collaborative management and collaboration with the supply chain were used as key words to locate the publications. This restriction was due to the fact that the subject was poorly explored by other journals, and the searches added little, clarifying that this occurred in the last two months of 2015 and the first of 2016.

Figure 1 below illustrates the steps and organization of the research.

![Figure 1: Research Organization](image)

Source: Prepared by the author.

In order to achieve its objective, the research discusses the understanding of collaborative management in CS based on a classic view, between the years 2000 and 2010, when the understanding about CS collaboration wasn’t still consolidated, explores concepts about CS advantage obtained through collaboration, and, finally, seeks understanding of the importance of communication in CS collaboration, issues still in the development phase. After that, we discuss the theory presented, in an attempt to support the analysis that supports the definition of the influencers and complicators of collaborative management in SC.
The Classical Understanding of Collaboration in the Supply Chain

The research conducted by Caoa and Zhang (2011) points out that the benefits of CS collaboration are achieved when suppliers to customers cooperate, creating an information sharing base together. This benefits the synchronization of activities, what can reduce the inventory excess, avoiding the costs of lashing effect, improving synergy and quality of business, offering greater flexibility to companies, and encouraging innovation.

The research results highlighted the importance of CS collaboration and the amplifying role of collaborative advantage in corporate performance. Also, the results confirm that the advantage gained through well-executed collaborative management directly improves performance. Previous research pointed to the collaboration directly to the performance of the company, without considering the collaborative advantage obtained. This is an important finding, since there is doubt among researchers and professionals about the economic justification of CS collaboration, particularly if collaborative advantage can bring financial benefits to the focal company.

According to the authors’ research collaboration and collaborative advantage really do have a fundamental influence on the company’s performance. Implementing CS collaboration by generating competitive advantage will improve a company’s long-term financial performance.

The relationship of collaborative management in CS with the achievement of collaborative advantage favoring company performance, appears in more recent studies on the subject, making clear the evolution of the concepts when compared to the position of Lambert et al. (1996) and also Cooper et al. (1997), in studies on CS management, partnerships and logistics, which discussed the importance of organizations establishing collaborative relationships in order to maintain leadership and market growth. The concept gained a larger dimension years later when Lambert et al. (2000) mentioned in their studies the importance of recognizing customers to suppliers in business performance.

Later, studies by Simatupang et al. (2002 and 2004), Barratt (2003, 2004a, 2004b), Wilding et al. (2006), Cousins (2005) and Min et al. (2005), went deeper into the theme and brought more definite positions on the collaborative concept in SC. In
order to summarize the view on collaborative management presented by these authors, Table 1 below indicates the main factors that favor this management, as well as the results and consequences obtained by it.

Table 1: Overview of the collaborative process in supply chains

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<thead>
<tr>
<th>Fatores que favorecem</th>
<th>Fatores que dificultam</th>
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<tbody>
<tr>
<td>Troca de informação</td>
<td>Relacionamento mecânico e falha</td>
</tr>
<tr>
<td>Decisões sincronizadas</td>
<td>Discordar das estratégias comerciais</td>
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<tr>
<td>Incentivo e divisão de ganhos alinhados</td>
<td>Mentalidade limitada à operação</td>
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<tr>
<td>Performance atualizada e compartilhada</td>
<td>Tamanho das organizações</td>
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<td>Políticas integradas</td>
<td>Falta de confiança</td>
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<tr>
<td>Objetivos e metas comum</td>
<td>Falta na acurácia das informações</td>
</tr>
<tr>
<td>Planejamento e soluções em conjunto</td>
<td>Não haver identificação dos benefícios</td>
</tr>
<tr>
<td>Recursos alinhados</td>
<td>Falta de visão da cadeia e dos processos</td>
</tr>
<tr>
<td>Relação de confiança interna e externa</td>
<td>Fluxo de informação falho, incompleto e desatualizado</td>
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<tr>
<td>Abertura e comunicação honesta</td>
<td>Diálogo franco e aberto</td>
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<td>Interdependência</td>
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<th>Resultados e consequências</th>
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<tr>
<td>Eficiência e Eficácia</td>
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<tr>
<td>Expansão, renovação e estabilidade no Relacionamento</td>
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<tr>
<td>Melhoria na comunicação</td>
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<tr>
<td>Qualidade nos processos</td>
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<tr>
<td>Maior confiabilidade na relação e nos processos</td>
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<tr>
<td>Maior criatividade para os processos</td>
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<td>Melhoria no desempenho</td>
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Source: Prepared by the author.

Analyzing the information in Table 1, it is possible to perceive that the factors and results converge towards a vision of respect and joint work among the agents, seeking to strengthen the relationship, the business for each agent, providing results favorable to SC.

With the technological advance, in the mid-1990s, technological tools related to collaborative management in CS were highlighted with the emergence and recognition of the CPFR (Collaborative Planning, Forecasting and Replenishment). Before it, companies used other collaborative tools, such as VMI (Vendor Management Inventory), CR (Continuous Replenishment) and CRP (Continuous Replenishment Programs), but without the comprehensiveness and importance that the concepts derived from CPFR collaborative practices in CS management. (BARRATT, 2004a).

Analyzing the evolutionary question of technological practices in relationship support Figure 2, proposed by Barratt (2003), establishes an idea of the gaps between them and the collaborative plan.
Figure 2: Comparison between VMI, CR and CP - Gaps in CS

![Diagram showing comparison between VMI, CR, and CP in CS]

Source: Barratt (2003)

Considering the importance of technological tools in the historical evolution of collaborative management in CS, Barratt’s (2003) framework helps to visualize the impact on inventories from the producer to the retailer. It can be noticed that the gap, which can symbolize the lack or excess of inventory, is higher in IMV than in CR (Continuous Replaneshiment) and much smaller in CP (Collaborative Planning). The latter is a reflection of actions related to collaborative management, in which demand is worked in real time, with the help of information technology. Despite the importance of these technologies, they alone do not constitute the collaborative management process in SC.

With the evolution and greater use of the media through the Internet, the systems have advanced to corporate relationship portals favoring the exchange of information at high speed, helping the process of collaboration between agents. However, initial studies by Min et al. (2005) and Cox (2004a and 2004b) advocated the idea that collaborative management in CS occurs independently of technological tools. For them, the collaboration is constituted of values that must be incorporated by the companies and if practiced, tend to favor the results.

In a more recent discussion of the topic, Caoa and Zhangb (2011) point out that a clear view of the advantages of CS collaboration helps managers to define specific actions to be taken to share processes that benefit all members. This action, clearly defining the measures taken, can serve as a powerful tool for managers to form effective collaborative relationships.
The relationship implies that, for a CS as a whole, to work well, companies should create advantages for collaborative participants, and from that business synergy to obtain differentials to compete with other chains. Normally, competitive expectations often lead individual companies to promote their own interests at the expense of others. This is very detrimental to collaboration and will worsen and destroy relationships. Long-term relationships, such as CS collaboration, should be motivated by reciprocity of intent, goal congruence, and benefit sharing. Thus, managers need to align goals and benefits with CS partners to create collaborative advantage.

In a line of more prudence with regard to the results obtained with collaborative management, Golic and Mentzer (2006) say that the different types of relationships between companies arise from different situations, and each relationship requires different types and degrees of investments, which produces divergent results. Many companies are apprehensive about investing time and resources in improving relationships because they see no return on this action. For the authors, this in practice does not reflect the reality, since a high value is perceived with the improvement of the relationship, besides the companies can obtain positive results if, patiently, they develop the collaborative relationship.

The collaborative advantage is generated by the management of the relationships in the chain in which the collaboration guides the actions. However, Kähkönen (2014) notes that the closer the company is to the consumers, the more power it has. This can also be demonstrated through the role of actors in which buyers who are closest to end customers are less willing to form collaborative relationships with suppliers, but when they are in the role of a supplier their willingness to collaborate increases.

Thus, it can be argued that the role and position of the actor in the chain can determine the character of the power relationship. However, power is only one factor that influences the depth of buyer-supplier collaboration, and there may be other factors that influence it as well. Precursor of this concern, Min et al. (2005) propose a collaborative relationship structure supported by three pillars:

Background - that positions companies in relation to strategic interests, internal alignment, the orientation they have for the relationship, the willingness to invest in the
relationship and to have a free flow of information and communication. This prepares companies to move to the next step.

Collaboration - At this stage the company must work sharing information, planning, solving problems and measuring results together with its partners, in order to leverage resources and skills to improve the business.

Consequences - Within this collaborative position, the company must offer greater efficiency and effectiveness, improve profitability, besides continuously be able to strengthen and expand the relationship between partners. At this point, if situations occur that do not reflect this advance, we return to the previous step in which the relationship is worked.

In order to clarify these three pillars, in order to organize collaborative processes, companies must work together in the planning, implementation and monitoring of the activities that integrate the operations between them. Also, partners should work on the information in order to help the operation of the business, and it is important to divide and maintain them confidentially. In a more current but complementary view, Ramanathan and Gunasekaran (2014) argue that successful CSs must have planning, decision-making and execution as key elements of collaboration.

Poor performance on any one of these three key elements will result in failure or short-term collaboration. Their research shows that future collaborations are significantly influenced by the success of current CS collaborations. To continue this relationship in a collaborative manner over the long term, it is essential that the executions take place in CS.

According to them, it is possible to interpret this result in such a way that CSs who collaborate with short-term actions may not have a sustainable long-term partnership, this will only change if there are valid results sustaining relations in a positive way between these three constructions. This result highlights the importance of the partners’ collaboration in the CS to execute the processes effectively in order to obtain sustainable future support among the agents in the chain.

The collaboration process should be formalized, detailing performance metrics and objectives. Allied to this, it creates a new environment and a new operational culture. It is a process typically done to serve the client, since it is the one who usually initiates efforts to do so, as a result, tend to benefit more than others (MIN et al., 2005).
Corsten and Fede (2005) in a research on suppliers’ collaboration point out that collaboration tends to be more favorable for those who buy, or even for the company that has the coordination of the chain. Also, the authors emphasize the validity of collaboration in the chain, but highlight the complexity of implementing it, citing that this process includes a controlled relationship, monitoring dependency and building trust. In a more current view, Hofer et al. (2014) point to the central principle of the relational view that both parties in an exchange relationship will gain benefits, perhaps not in the same way and at different points in time.

Cox (2004b) is one of the authors who has questioned part of the idealism, inherent to the concepts of the relationship in CS, in which many authors defend the win-win relationship. Not that this can not happen, nor that the collaborative relationship is fiction, but the idea is that if this applies to one market, segment or company, it may not necessarily work in another. As well, the gain of one, may not be reflected in the same proportion in another supplier or layer of the chain and, not for that reason, the relation can be broken. In this case, according to Simatupang et al. (2004). This is probably because the partners tend not to have a dimension or vision of the performance of others in the chain, nor a total view of the results sought by the company that is the focus of the chain.

Still, for Cox (2004a), many companies are only able to manage the relationship in CS in the first tier. This means that, despite CS’s concept of management, present the idea of contribution to business, its scope still shows many limitations. In order to overcome these limitations, companies need internal resources and operational capabilities capable of practicing and gaining this breadth, as well as overcoming internal inefficiencies, and being able to eliminate obstacles that impede the implementation of collaborative practices in the management of CS.

For Cassivi (2006), using new methods and technological tools, activities such as planning, forecasting and replenishment are administered much more fair, facilitating the exchange and distribution of information through CS. But each member of the chain is forced to rethink the way to leverage their relationship with their trading partners, especially customers and suppliers.
Collaboration in CS is not synonymous of technological information. Technological information is a separate structure that helps promote internal and external collaborative relationships. It is noted that, occasionally, companies presume that, because they have technological information, there is collaboration. In short, collaboration is a result of human interaction, which can be supported by ICT, but not replaced (SANDERS; PREMUS, 2005).

This thinking clearly portrays the importance of the relationship between the agents of a CS, as well as clarifying the need to find instruments that signal or define ways so that companies can, in fact, share results through well-aligned positioning and goals in CS.

According to Sahay (2003), the vision of the collaborative process is to have suppliers, producers, distributors and customers aligned in a cooperative relationship, so that benefits can be provided to the chain and to each agent. That is, to adopt an external perspective, in which the decision of the companies must consider, not only the individual result, but of the whole chain.

The Evolution to Collaborative Advantage

With global business and competition increasing, companies demonstrate that they are motivated to collaborate, but need to be more focused on implementing collaborative activities (KUMAR; BANERJEE, 2014). In some cases, this practice becomes relatively more complex, as observed by Caoa and Zhangb (2011), because it states that in small companies collaboration in CS helps them to create value together with their partners, but learning and knowledge are difficult to internalize or transfer to other business areas because of their small scale and scope of operations.

Thus, this relationship tends to generate little benefit to the organization, that is, it obtains almost no benefit that is not related to the collaborative advantage and, therefore, does not have a direct impact on the company’s performance. For medium and large companies, it is easier for them to internalize and transfer what they have learned from CS collaboration to other related business areas because of their diverse business and wide scope of operations. These effects can generate benefits with direct impact on the performance of the company, as well as indirectly creates joint value with its partners.
In a study on the theme Caoa and Zhangb (2011), the process of adopting or even conducting collaborative management in the organization is complex, requiring managers to posture, knowledge of concepts and possible benefits. They also state that collaboration is good, but companies should invest efforts to make it work, because most of the time, failures occur because they are not well executed. Therefore, the chain needs active coordination, and the inflexibility of managers causes imbalance, and an optimal level of collaborative efforts must be found to avoid the benefits becoming costly.

In turn, organizations involved in a collaborative chain achieve greater visibility, greater flexibility and reduced cycle times, and these benefits are relevant in a scenario marked by strong competition. Consequently, collaboration does not lead directly but indirectly to a more resilient CS, as Scholten and Schilder (2015) point out in their research, stating that information sharing and collaborative communication help to improve CS visibility by providing the transparency needed to detect and respond to interruptions that may occur both upstream and downstream.

At the same time, knowledge of processes and procedures is created together, which increases visibility, ensuring trust in CS, thus avoiding excessive reactions, unnecessary interventions and ineffective decisions in a situation of risk. According to these same authors, the synchronization of decisions through the solution of resource sharing increases the speed in the response to interruptions (future). In addition, speed is supported by the anticipation of good quality, complete and reliable information, since the knowledge of the processes within the chain allows anticipation, promptness and rapid response to eventual problems. At the same time, however, organizations often delay the release of information about possible failures and disruptions in CS, and this can have serious and long-term implications, since one does not have an aligned response to the required speed.

Nix and Zacharia (2014) point out that an auxiliary benefit of collaborations, often less appreciated and appreciated, is the learning and knowledge gains that occur. Recognizing the opportunity to gain this knowledge not only through long-term relationships but also through episodic collaborations with companies outside the existing supply network can broaden organizational learning. A better understanding of the importance of collaborative engagement and the adoption of measures to ensure
appropriate individual and organizational behaviors and attitudes will lead to better results
and greater learning.

This recognition and the commitment to be deeply involved in a collaborative
effort can help managers improve the likelihood of capitalizing on opportunities. Another
implication for managers is the value of engaging deeply in collaboration from the
standpoint of improving performance results.

Demonstrating a willingness to openly share information and learn from the
knowledge and experience of the other company has a direct effect on the results of a
project. Openness to new ideas and the willingness to make decisions based on combined
business knowledge not only improves performance but also demonstrates a level of trust
and respect that strengthens the relationship with the collaborative partner and creates
opportunity for a productive relationship in the future.

By understanding the value of deep involvement, a company can make informed
decisions about selecting a collaborative partner, selecting individuals within the company
to participate, and behaviors and attitudes that will lead to successful outcomes.
Collaboration can provide a synergistic effect that is greater than simply adding the
capabilities of the individual companies involved.

To achieve the potential benefits of collaboration, companies must be willing to
have frequent face-to-face meetings, participate in joint decision-making with their
partner, openly share information and exchange ideas, and be receptive to new ways of
thinking and discovering the knowledge.

As a result, collaborative companies will be able to see issues from different
perspectives and access the unique knowledge, capabilities, skills, and resources needed
to complete the project. The learning will be improved, the knowledge gains will be
greater and the collaboration itself will be more successful. Project timelines should also
be shortened and the desired results in terms of cost, quality and customer service
capability are likely to be improved. At the same time, the ability to work effectively with
the collaborative partner is enhanced, creating opportunities for future benefit through
collaboration.

However, in spite of the view that the client is the major beneficiary of the success
of the collaboration, collaborative planning and decision making does not decide the
success of CS unless all plans are effectively executed in a collaborative way. This is an important point in CS’s collaborative management. Based on this position, managers can collaborate with other partners in the chain to execute the plans. In assessing the success of current collaboration, company management can decide on future investments in CS collaborations and thus have a successful long-term collaboration (RAMANATHAN; GUNASEKARAN, 2014).

Barratt (2003) already discussed the fact that collaborative management in SC requires the involvement of agents in demand planning. This only happens if there is real-time information and data management among chain members. Understanding this practice is not simple. In both the chain and the individual aspects, the conflicts and difficulties are pertinent to the collaborative process, and the coordination of the actions, through a committee led by the company that coordinates the chain, can then contribute to the success of demand management. In a more updated line, Scholten and Schilder (2015) point out that lack of information or receiving the right information too late (information sharing) reduces the flexibility needed to respond to an interruption.

The main consequence of this is that, when the information is received late, the production schedules are formalized and the stocks of raw / processed raw material, being more difficult to stop the processes that are already in progress, generating subsequent interruptions. Studies of these same authors indicate only positive relationships between collaborative activities and CS resilience: the more companies engage in information sharing, collaborative communication, joint relationship efforts and mutual knowledge creation, the greater the visibility, speed, and flexibility levels.

For them, mutual dependence between two organizations within a chain or on the same third party (for example, a client) indirectly increases CS resilience. Organizations that depend on each other make their success interdependent, share information freely, work together when they try to solve common problems, or when they design new products and plan together for the future. Also the longer companies have worked together, the tougher they become because of greater visibility and speed.

This theoretical insight is particularly relevant to managers as provides important guidance on issues related to outsourcing: another supplier may offer better value; however, even when engaging in the same level of collaborative activities with the new
vendor, resilience will be reduced. This can ultimately lower the initial value promised by the new vendor.

Although the research by Nix and Zacharia (2014) has demonstrated that gains in learning and knowledge occur even at low levels of collaborative engagement, high levels of collaborative engagement offer greater learning and knowledge gains. Many companies fail to recognize this opportunity and, as a result, fail to dedicate the time, energy and resources needed to realize the full potential of collaboration. When companies engage in collaboration at a high level, the result will be greater knowledge and gains that can improve the present as well as future performance.

Usually, companies consider only the operational, economic, and relational benefits of collaboration in their assessments. Given the importance of knowledge as a resource for competitive advantage, evaluations that do not consider knowledge as a benefit can result in a missed opportunity. In fact, the knowledge gained not only benefits companies in terms of operational and relational results, but is also likely to benefit the company in future business operations and thus can be a potential source of long-term competitive advantage. When companies have more knowledge, they have more options for finding new paths that occur in an unexpected and turbulent environment. Even if the collaborative effort fails to achieve the desired operational and relational results, it can still be a valuable investment if there are gains in knowledge.

**Theory Analysis - Influencers and Complicators**

Based on the literature discussed above, and in the position presented by the authors studied, figure 3 below illustrates the points that highlight which values and capabilities the collaborative management is capable of creating, as well as which points may be considered as complicating or influencing process in organizations.

The understanding of these terms in this research would be:

**Complicators:** Factors that are seen as difficulties for managers and do little to contribute to the development of collaborative practices in CS.

**Influencers:** Factors that justify the decision to adopt collaborative practices in CS, even considering that this management is not equitable.
The potential generated by Collaborative Management in CS lies in the acquired knowledge and the competitive advantage that the organization obtains. This occurs through the balance provided by the relationship and in building a broad view of the chain, the importance of aligned processes, the sharing of information and a conscious management of the possible implications. For this to occur, managers must overcome barriers and create solutions in CS, working on understanding the complicators and influencers arising from this management, as discussed below:

Sustaining the competitive advantage comes from the ability to act with the vision of collaborative management even in the short term (NIX, ZACHARIA, 2014). This advantage generates benefits to CS (CAOA and ZHANG, 2011).

In order to avoid failure to perform the collaboration, management requires active coordination, constant dedication and flexible managers (CAOA; ZANGB, 2011; WIENGARTEN; LONGONI, 2015), since the process is complex to be implemented (CORSTEN; FEDE, 2005).

Collaboration provides greater visibility and flexibility in the chain, generating greater resilience to firms (SCHOLTEN; SCHILDER, 2015); however, it requires that agents have greater confidentiality (LE et al, 2013).

Collaboration tends to occur only in the first layer of CS (COX, 2004a), and tends to generate more power for companies that have a relationship with the final consumer (KAHKONEM, 2014). Usually, companies do not recognize the importance of suppliers and customers in business performance (LAMBERT et al, 2000).

![Figure 3: Complicators and Influencers at Collaborative Management in CS](image-url)

**Source:** Prepared by the author.
CS agents do not always have the vision of results (SIMATUPANG et al., 2004), because companies act for their own interests at the expense of others (CAOA and ZHANG, 2011).

The benefits do not occur in the same proportion and in the same time interval for CS companies (HOFER et al., 2014).

Hiding information (Le et al., 2013) or receiving it too late (SCHOLTEN; SCHILDER, 2015) does not fit the collaborative concepts.

Failure or short-term collaboration is related to poor performance in planning, decision making and execution (RAMANATHAN; GUNASEKARAN, 2014).

- Companies do not recognize the potential of collaboration and do not consider knowledge acquired as an opportunity (NIX; ZACHARIA, 2014).

**Final Considerations**

A point of convergence in practically all the discussions from the diverse researched authors is the fact that working collaboratively in SC is not a simple task, nor something that is easily implemented. The reason for this position to be present in most studies on the subject is that collaboration comes from the relationship between the managers of the companies in the chain. This relationship brings different and divergent interests, usually more focused on the organization itself than on the broad vision of CS, unrelated to the possible benefits that could be obtained when the agents work on the improvement of the product. Considering, in this view, that this challenge is not only the focus of the company responsible for the sale to the final consumer.

In this sense, it can be said that the research achieves its objective by emphasizing the importance of all CS agents in the construction of collaboration, pointing to influencers that contribute or not to this management model, and highlighting the organizational values and capacities generated, such as:

The improvement of this relationship in the construction of differentials that favor the final product in the market, tends to generate values to the agents of the chain that provide competences such as flexibility and resilience (SCHOLTEN, SCHILDER, 2015) capable of helping the company to improve its learning and its relationship with the market, thus obtaining a competitive advantage for its business in other chains.
The fact that the chain needs to have visibility of the demand, the management of the information in speed capable of balancing the needs, requires of the agents position in which there is negligence with transmission of information, avoiding concealment of data and the reflexes caused by the demand. Also, the management of this information based on confidentiality principles contributes to avoiding problems that affect the relationship in the CS.

The participation of CS agents, regardless of what they can obtain in short term, tends to contribute to the relationship, since it is pointed out that benefit generation does not occur at the same time and in the same proportion for each participant (HOFER et al, 2014). This factor related to the expectation of companies to obtain advantages in short term, or in the same proportion of the company focus is an important point and well pointed out by the authors, since this anxiety of being able to assess benefits quickly collapses against the collaboration.

These points that have arisen in the literature regarding collaborative management in CS, especially those related to competitive advantage and possible results and benefits appear as opportunities for future research. Also, this study brings points that can be seen as advantages generated, as well as possible complicators that do not contribute to the collaboration, that can be better studied in practice. In other words, one can try to understand what kind of competitive advantage an agent obtains, or even the reasons why the complicators of the collaboration are not perceived and corrected by the managers, and the reason for the difficulty of perceiving the points that contribute with this model of management.

On the other hand, it is worth highlighting the limitations of such research, based on the fact that it is a bibliographical review, focused specifically on the proposed theme. Therefore, although we discuss the values and capacities generated by collaborative management, as well as influencers, it is understandable that there are issues and contradictions about what has been pointed out, or even other factors that complement the discussion and this work. Also, we highlight that research confronting what was presented with organizational practice will tend to contribute to the theme and generate new positions.
References


