Orientation for sustainable supply chain management: 
practices in Brazilian experiences

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Abstract

The present paper aims to analyze how sustainability practices were introduced in two supply chain of Brazilian cases. Thus, it is used the ‘Strategic Orientation’ perspective as main category. It was conducted a qualitative research using basically four criteria of analysis. The findings demonstrate that each company have dedication for the Triple Bottom Line as well as for the supply chain management (SCM). However, related to SCM it is incipient the practices about integration and cooperation. The contribution of each case are based on new theoretical inputs which should to facilitate a deepen approach on the sustainable supply chain concept.

Keywords: Strategic Orientation; Sustainability; Supply Chain Management.

Introduction

Previous discussions between sustainability and supply chain management (SCM) have been focused on the sustainable supply chain management (SSCM) concept. Many different definitions are (Ahi & Searcy, 2013), but few empirical results to achieve effectively the sustainability in the supply chains. In the literature it is possible to identify many papers in the topic (Ashby et al., 2012; Carter & Easton, 2011); however it is necessary to conduct more researches in different ways to study and understand the phenomena in a practical perspective.

As stated by Pagell and Schevchenko (2014, p.1), despite being broadly accepted and significant set of researches, “our present knowledge is not sufficient to create truly sustainable supply chains”. According to this view, studies are still needed to provide in-depth knowledge on SSCM. Especially, new research approaches have been required
to explain how sustainability can be adopted in supply chain management. Therefore, Beske and Seuring (2014, p.323) argue that “every company would have the chance to transform their supply chain (SC) into a (more) sustainable one”.

Considering this perspective, this paper aims to analyze how sustainability practices were introduced in two Brazilian supply chain cases. Thus, it is used the ‘Strategic Orientation’ which was presented by Beske and Seuring (2014) as main category into SSCM approach. This topic is interesting to be studied, because sustainable perspective has to be incorporated by company before disseminate sustainability values and practices throughout supply chain (Pagell & Wu, 2009).

Therefore, if companies had introduced the sustainability in their core business, it is “easier” to re-conceptualize (including other members) the supply chain and also to improve the supply chain performance. After this introduction we present four sections in order to understand this argument. First, we present the theoretical perspective which have been supported this research. Afterwards the research method will be showed. After that, two companies’ cases and some discussion about the topic are presented. Finally, we seek to highlight some final thoughts and contributions of this research.

Theoretical Background

Sustainable Supply Chain Management (SSCM) concept has been supported for two theoretical approaches. First, the Sustainability view in Management research normally emphasizes Triple Bottom Line (TBL) perspective. According to Elkington (2002), TBL is a group of corporative actions that involve social, economic and environmental dimensions. Second, Supply Chain Management (SCM) studies usually focus Mentzer’s et al. (2001) concept. Their definition of SCM stresses inter-functional and intercorporate coordination aim to improve firm and supply chain performance.

Despite its bases, the SSCM objective is not enough clear. According to Beske and Seuring (2014), SSCM and SCM concepts are similar whereas that the first as being an extension of the second. Moreover, as given by Halldórsson et al. (2009), the similarity levels between sustainability and SCM need to be considered. This analysis can follow three ways: (1) an integrated strategy; (2) an alignment strategy; and (3) a replacement strategy. In addition, Pagell and Wu (2009) proposed others aspects such as re-conceptualization, continuity and orientation for sustainability.

This background provides a set of possibilities to deal with the subject even though it gives more abstract issues than concrete ones. In order to this, Ahi and Searcy (2013) identified at least 11 different definitions for SSCM. In spite of that, the definitions from Carter and Rogers (2008), Seuring and Müller (2008) and Pagell and Wu (2009) have been mostly used. For this research its uses the Seuring and Müller’s (2008, p.1700) definition:

[…] the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environmental and social, into accounts which are derived from customer and stakeholder requirements.

These studies have highlighted the performance of SC in order to analyze not only economic aspects but also consider social and environmental issues (Beske, 2012). Regarding to Pagell and Shevchenko (2014, p.47), the future of SSCM research “will have to explicitly recognize the claims of stakeholders without an economic stake in the
chain, treat these claims as equally valid to economic claims”. Furthermore Beske and Seuring (2014) propose some categories and practices to analyze sustainable supply chain both internal and externally. As reported by the authors, with these categories (i.e. orientation, continuity, collaboration, risk management, and pro-activity) the SSCM can be structured on three hierarchical levels (see Figure 1).

According to Giunipero’s et al. (2008) the majority of the SCM studies focused on strategy perspective. Therefore, the ‘Strategic Orientation’ category is a main focus in this research. Thus, Beske and Seuring (2014, p.324) argue that the “orientation is the most basic category and can be viewed as an imperative for engaging in SSCM”.

This category initially presented by Pagell and Wu (2009) can be used to identify sustainable evidences, values and routines in the business model. Beske and Seuring (2014) considered two possible paths to deal with the issue: 1) Dedication to TBL; and (2) Dedication to SCM. Such categories (see Table 1) must be used to apply the SSCM concept. However, the practical perspective probably results in new criteria.

As shown at Table 1, specific points are presented to orientation analysis (i.e. Inclusion in the Strategy; Dissemination of the practices; and Integration among the members; Cooperation among the members). Such criteria has been used to determinate the categories of analysis of this empirical research. Thus, it is possible to identify the
strategic level of the sustainability application throughout the supply chain activities. In order to explain how this research was carried out, the method is presented bellow.

**Research Method**

This research is based on qualitative approach. To develop this study we used the case study strategy. The case study is considered a good strategy to understand the approach between sustainability and SCM (Pagell & Schevchenko, 2014; Seuring, 2011). To achieve our proposal, two Brazilian cases were analyzed: (1) a family company that manufacture mainly educational and health products, and in the last years are changing its practices in relation to sustainability; and (2) a cooperative that in the last years are improving its production of organic products in both fruit and derivatives.

The data collection was conducted from April until September of 2014. The analyses were based on website information, online publications about the companies and personal interviews. Some interviews were conducted with sustainability’s spokesmen and other employees that are considered key informants about these topics in both organisations. It is important to highlight that this study was conducted from the each focal organisations perspective. Despite these cases present different profiles, they contribute to find empirical research to promote consistent results related to the theory.

To analyse the data, we conducted a content analysis. Initially, we were used two categories defined by Beske and Seuring (2014) (i.e. Dedication to TBL and Dedication to SCM), In addition, the criteria of analysis were inserted according to many authors in the literature (i.e. Inclusion in the Strategy; Dissemination of the practices; and Integration among the members; Cooperation among the members). From these analyses, it was possible to develop a diagnostic of the sustainability applied in the supply chains and its potential contributions to the field.

**Findings**

To get the results we have analyzed two case studies. The proposal was to identify if orientation contributes directly to change some practices towards sustainable supply chain. Therefore we present each case before begin a discussion about the findings.

**Orientation for Sustainability: Case 1**

First, we analysed a family company located in Southern region of Brazil. Founded 90 years ago, its operations include Brazil and countries in South America. Nowadays the company operates on educational, health, coverage and hand craft sectors, through diverse manufactured items. The company directly employs about 700 employees and has approximately 1.000 outsourced. It has importance in the sectors in which is operating and in the community where it's located as well as an organisational posture that incorporate of environmental and social issues into the business model.

According to the sustainability’s spokesmen, the inclusion of sustainability into business strategy happened in 2009. The strategy established was related with well being, it was defined as “a way that the world is great for everyone”, from individual to gathered. Thus, company assumed that cooperation and collective construction are essential to develop (welfare) relevant products and services to society. Therefore
company established an institutional compromise in order to get people together and to create sustainable solutions.

Aiming to accomplish this institutional proposal, a new organisational structure was adopted that reduce hierarchical levels and promote internal changes and cooperation. Thus, the strategic decisions was adjusted and evolved as the new values and the new business proposals. According to the interviews, might understand that the role of company’s managers and shareholders was crucial to the success of sustainable strategies and practices in the company.

These guidelines and directions help company to disseminate good practices through the supply chain. The company's employees believes that suppliers must insert into sustainability practices and strategies and stimulated dedication to TBL. However, despite its incentives, they believe that must be find a way to increase stakeholders commitment.

Its strategic changes toward sustainability reflect on supply chain’s members relationships. Frequently, they realize meetings with suppliers and customers aiming to engage their partners into sustainable practices in the companies and the supply chain. Such meetings a variety of questions are discussed regarding to environmental, social and economic dimensions. Some employees, that work in transportation and outsourcing companies, contribute to provide positive results in the meetings. This can be presented because it was recognized the role of suppliers in the consolidation of a supply chain that effectively contribute to a more sustainable development in dedication to SCM category.

As interviews, the sustainability has become part of relationship and dialog with supply chain members. The R&D coordinator explains that “since the company has changed its profile, (...) we started to bring more suppliers to work with, share this moments and establish moments of integration (...))”. This situation can be resulted from a SCM consolidation that effectively contribute to a more sustainable development and dedication to SCM category. Thus, it was verified a stakeholder engagement in relation to integration and cooperation toward a more sustainable supply chain.

Sustainability’s spokesmen understands that the company improvement their suppliers integration. When, he says that “we let them to show their complaints and we gave them our reasons, so we started to have a different relationship. Having a bigger partnership”. Beyond just only working together, the coordination related development product, a process or a service, but also reflect in adoption of sustainable practices.

Moreover, it was identified that the participation of stakeholders from the integration between the parties seems to be a path that can collaborate with the adoption of sustainability practices in the supply chain.

**Orientation for Sustainability: Case 2**

Second, it was studied a farmers’ cooperative of fruit. This association was created in 1994 to introduce ecological principles on farms and commercialize organic fruits. Since the beginning, sustainability has been related to the core business of the organisation especially due to their organic and familiar agriculture orientation¹, which have been introduced by fourteen founders members. Besides producing organic

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¹ Stamps and Certification: Organic Product of Brazil and the IBD certification (international organic), Ecovida seals (participatory certification of products) and IFOAM (International Federation of Organic Agriculture Movements), Fairtrade and Demeter (biodynamic products).
products (fruits, juice and essential oils) the cooperative has a composting plant and more recently, it started to produce a biogas from waste.

Nowadays, the organisation have around of 100 members who drive their actions in according in two principles that are sustainable agriculture and cooperative. These principles were explicit in organisation’s philosophy, view and mission. And also, they are addressed and reinforced on the internals and externals processes and relations of the cooperative. For instance, the manager of institutional area said that a new member is always inquired if it understand what are environment, cooperative and organisations, and “if it is clear to them what is agro ecologic production”. Regarding the service offered by composting plant and others, the controller said that “everything which is done here is comply to farmers’ need, and not comply to cooperative’s business, […], else it would not be a cooperative, but a company.” Thus, agro ecologic production became a way to worth farmer’s interests, in which a cooperative tries to promote valuable business opportunities to its members.

Over time, the external cooperation, especially in the partnership relations, supports the cooperative products and services development. Initially, they was looking for environmentalists’ support and knowledge in order to introduce the agro ecologic culture of citrus. In 1995, the composting plant activities started from the partnership with a tannin industry that provided waste (Black Acacia log) to fertilize fruit farm. Afterwards, besides produce organic compost to associates with no additional cost, the plant has became an environmental solution to solid waste from others companies. This new business increase cooperative’s profit.

During the license process of composting plant, the cooperative got technical support from environmental government institutions. Second, these plant receive three different waste (except urban waste), which are used to organic production, gardening use and, more recently, biogas production. The gas generation is a resulting project from the partnership between the cooperative and other local company. This initiative have been decreasing the transportation costs because there are using biogas on cooperative and members’ vehicles. Recently, an investment announcement was done in Brazil Green Consortium (i.e. Consórcio Verde Brasil) which has the support of federal government, as well as Vehicular Natural Gas (VNG) distributors. However, there is the necessity of regulations to allow the commercialization of Green VNG.

Regarding the organic products, the juice and essentials oils production have allowed farmer to have an increase in profitability. The interviewee A emphasized that local supermarkets, at the time, do not pay extra for organic fruits, arguing that “nobody asks for organic here at store, it does not sell”. This reinforced the cooperative’s search for products with a bigger aggregated value and, subsequently, quitting contracts with these retailers. As result, in 2003, the organisations hired a outsource company to produce juice, also resulting new opportunities to extract essentials oils from fruit’s peel. As gaining good market acceptance, the essentials oils ended up in a sharply comparative’s profitability.

However, as finding that the outsource company paid a lower price to market for the fruit’s extracted oil, the cooperative decided internalize the production activities and sell juice and essential oil directly to the market. As said by the manager of institutional relationship they strived “to eliminate tiers in the supply chain”. They decided to do all the process, being “a way to aggregate value” (interviewee A) to the products. Then, they stated the agro industry's production, providing juice and essential oil, mainly, to European market. To domestic market, they worked to provide juice in some specialized
retailers that worth organic products. Also provide condensate juice to public schools, resulted opportunity from public policies to promote familiar agriculture and organic products, particularly, addressed by the Law number 11.947 which define the adoption of healthy food at Brazilian primary schools.

Moreover, they looked for other retails and markets (governmental and international) that shared their sustainability values. In order to introduce new technologies and offer new products and services, the associates have been helped by partners such as universities and research centres, governmental and international institutions and other companies and also competitors. These relationships changes can be understood as re-conceptualization of the supply chain, which results from a dedication to TBL that include sustainability in their core business (sustainable products and services). Especially in dedication to SCM, the organisation has been expanding cooperative efforts among supply chain members, sharing resources and information.

Discussions and conclusions

This paper brings some empirical evidences to validate the discussion of sustainability orientation in the supply chains. As presented previously each case studies emphasizes some characteristics that represent their sustainability practices. More than a dimension of the SSCM analysis, the 'strategic orientation' can be considered an important topic to introduce other aspects such as collaboration and continuity in the supply chain relationships. The Table 2 aims to summarize the introduction process of sustainability through the supply chain. For this purpose it use Beske and Seuring (2014) categories (TBL and SCM dedication).

<table>
<thead>
<tr>
<th>Categories and Criteria</th>
<th>Case 1</th>
<th>Case 2</th>
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<tbody>
<tr>
<td><strong>Dedication to TBL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusion of sustainability in the strategy</td>
<td>Focus: social well being (&quot;Good for everyone&quot;)</td>
<td>Focus: Sustainable Agriculture (family and ecological); Cooperativism</td>
</tr>
<tr>
<td></td>
<td>Responsible: Managers and Shareholders</td>
<td>Responsible: Cooperative Members</td>
</tr>
<tr>
<td>Dissemination of the practices</td>
<td>Meeting and partnerships to discuss the strategies and routines</td>
<td>Reduced tiers in SC to facilitate sustainable values alignment with stakeholders</td>
</tr>
<tr>
<td><strong>Dedication to SCM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration among the members</td>
<td>Improve supply integration after change activities and evaluate criteria</td>
<td>SC restructured (retailers and customers) due to internalization of some activities by cooperative</td>
</tr>
<tr>
<td>Cooperation among the members</td>
<td>More dialogue, commitment and cooperation in dyad supplier-client</td>
<td>Stakeholders partnerships to develop new products and services</td>
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</table>

Despite different approaches presented above, the both cases adopted Triple Bottom Line Dedication and introduced sustainability issues in a strategic level. In the first case, the sustainability was stimulated by company management whereas in the second was
promoted by founders members. Regarding to SCM values and practices the company develops and encourages some actions with suppliers. In turn, the cooperative has aimed to share sustainable values with stakeholders, specially retailers and clients. The Case 1 demonstrated the relevance of dialogue and discussions about sustainable strategies and practices with the SC members. The Case 2 showed the importance of partnerships to develop new products and services that was enhanced by an internalization process of productive and commercial activities.

In the Supply Chain Dedication, the Case 1 reinforces integration and cooperation between SC members. This perspective it is clear along the interview when the sustainability’ spokesmen show a satisfactory result between the company and suppliers. On the other hand, the Case 2 represents a SC re-conceptualization which includes partnerships with different stakeholders. In addition, this case can bring an alternative perspective in relation sustainability strategies that include short supply chain adoption to accumulate knowledge about their activities.

From all these discussions, it is possible to identify some similarities in both cases mostly in the introduction of sustainability in the strategies and practices. However, a more deepen discussion about cooperation and integration must to be created. Each case study reveals new theoretical inputs which should to facilitate a SSCM comprehension. One limitation of this research was investigate only a dyad in SC relations listening just one part of the evolved. Other restriction involves the use of a specific dimension (Strategic Orientation) despite can contribute for new insights and new relation to other dimensions. The main recommendation is increase the empirical data about the topic, using more quantity of companies and at the same time deepen the discussion on the topic to create a clear and consistent perspective of research.

Acknowledgements

We would like to acknowledge at National Counsel of Technological and Scientific Development for the support to our research project.

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