# Sustainability initiatives and collaborative practices: a study of emerging economy suppliers

**Abstract:** This paper analyses how collaborative practices influence sustainability initiatives and the relational rents of Brazilian coffee companies supplying global supply chains (GSC)s. Multi-case study data was collected via interviews and documentary analysis and examined using the relational view theoretical lens. The results indicate that collaborative practices lead to significant improvements within the supplier's sustainability initiatives and consequently within their processes related to the exportation of goods. Thus this study suggests that collaborative practices generate important relational rents in GSCs (for example through relationship specific assets) and are important facilitators of sustainability for emerging economy suppliers.

**Keywords:** Collaborative Practices. Sustainability initiatives. Emerging Country Supplier. Global Supply Chain. Sustainable Supply Chain Management.

## 1. Introduction

Sustainability has progressively become necessary for companies to operate in increasingly competitive and globalized markets (Mani et al., 2018; Morais & Silvestre, 2018). Thus, businesses have been pressurised into seeking, in addition to better economic performance, better results in the social and environmental dimensions of sustainability (Mani et al., 2018). For the subsequent socio-environmental strategies to be achieved, the adoption of sustainability throughout the supply chain (SC) is needed (Silvestre, 2016). These supply chains, when crossing country borders, extend their reach by integrating organizations from emerging countries (Morais & Silvestre, 2018). For suppliers in these countries, acting sustainably in global supply chains (GSC) can be a challenge (Liu et al., 2019). When supplying to multinational companies or those from developed nations, these suppliers are charged by the legislation and consumers of these countries, which tend to be more rigid and demanding than those of their national counterparts (Seuring & Gold, 2013; Silvestre, 2015).

Thus, operating within GSCs has been suggested to be a key driver for the adoption of more sustainable initiatives by companies in developing countries (Huq et al., 2014; Köksal et al., 2018; Koster et al., 2019). This has aroused the interest of researchers such as Bustos and Moors (2018), Hajjar et al. (2019), Li et al. (2017), Mani et al. (2018) and Tencati et al. (2008).

These researchers have aimed to better understand, empirically, the role of suppliers in GSCs, especially in relation to the mechanisms used in strategies and sustainable practices such as, for example, eco-innovations and sustainable certifications. Despite the aforementioned research findings, other authors such as Huq et al. (2014), Jia et al. (2018) and Liu et al. (2019) point out that there is still little evidence in the literature about these mechanisms. Therefore, it is necessary to carry out further empirical studies from the perspective of the suppliers themselves, so that a voice is given to these agents. In addition, recent investigations by Bustos and Moors (2018), Köksal et al. (2018), Hajjar et al. (2019) and Koberg and Longoni (2019) also provide evidence that inter-organizational relational mechanisms, such as collaborative practices, have been key factors for suppliers in emerging countries in sustainability and value creation strategies. However, as highlighted by Jia et. al (2018) and Koberg and Longoni (2019), it is important to understand the specifics of each context in which the suppliers operate. This will aid in the sustainability development of suppliers and the entire GSC. It is therefore argued here that more specific research is needed on how collaborative practices influence the sustainability of SCs and their members (Azevedo et al., 2018); particularly given that prior research has concluded that such practices involving multiple institutions are crucial for Sustainable Supply Chain Management (Lu et al., 2014). Thus, in this study we are interested in the relational rents that suppliers achieve through their sustainability initiatives as a consequence of collaborative practices involving national and international partners (e.g. inter-organisational cooperation and networks).

Thus this paper aims to answer the following research question: *how have collaborative practices influenced sustainability initiatives and the relational rents of emerging economy suppliers?* It is argued that an appropriate context in which to answer this question is the sustainability initiatives of coffee growing organizations in Brazil, specifically in the Cerrado Mineiro Region, state of Minas Gerais. The intensity of this activity in this region is

representative of the Brazilian economy, and there are producer organizations participating in important GSCs such as Nespresso and Illy. Coffee is one of the top ten products exported by Brazil, which supplies 32% of the world market for fresh beans and, in recent years, Brazil has been the world's largest producer and exporter of coffee (Embrapa, 2018; Conab, 2020). The state of Minas Gerais is the largest producer, responsible for 54% of Brazilian production (Conab, 2020). Coffee production in the Cerrado Mineiro Region represents 25% of the total production in Minas Gerais and its main destination is the international market (Região do Cerrado Mineiro, 2020).

It is important to note that the analysis uses the precepts of the Relational View (Dyer & Singh, 1998), in particular, the sources of relational rents proposed by the theory are used to show how relational rents are generated and sustainability achieved (Touboulic & Walker, 2015).

This paper makes a unique contribution, since, although many studies have shown that the adoption of sustainability initiatives of companies improves corporate performance, there is still no conclusive data on this in the context of suppliers from developing countries (Pakdeechoho & Sukhotu, 2018; Liu et al., 2019). Moreover, studies on sustainability in agrifood chains have received insufficient attention in the literature (Allaoui et al., 2018), and only a few studies have addressed it from the perspective of the suppliers themselves. These studies have considered other contexts, such as those of Bustos and Moors (2018), on the avocado SC in Mexico; Ras and Vermeulen (2009) with grape growers in South Africa; and that of Sjauw-Koen-Fa et al. (2018) on suppliers of soy in Indonesia and tomatoes in India. Therefore, this study contributes to the extant literature by studying empirically how collaborative practices implemented by emerging country suppliers have influenced their sustainability initiatives and relational rents – e.g. increased trust, repeated ties, customized assets (Dyer et al., 2018). The adoption of the relational view in this context is also unique and

appropriate in supporting the discussions regarding horizontal relationships (Touboulic & Walker, 2015) between suppliers working in cooperatives, as well as the relationships between these suppliers and federations who have influenced their sustainability initiatives.

The remainder of this article is structured in a further five sections. First, a theoretical framework is developed, using the extant literature around sustainability and the relational view. Then the research method is described and justified, illustrating how the theoretical framework has guided the research. The findings are then analysed, followed by a discussion that generates propositions from the empirical data. Finally, conclusions are drawn in which both the theoretical contributions and managerial implications are described.

## 2. Theoretical framework

This section reviews the extant literature regarding the sustainability initiatives of suppliers from emerging countries in GSCs and the collaborative practices for generation of relational rents in this context using the lenses of the Relational View (Dyer & Singh, 1998). Then, a theoretical framework is developed that reconciles these two bodies of literature and provides direction for empirical investigations.

### *2.1. Sustainability initiatives of suppliers from emerging countries in global supply chains*

Managing sustainability in GSCs can be considered even more complex than local and national SCs because it includes dynamic elements and greater challenges, mainly due to the particularities and greater number of stakeholders in these systems (Carter & Easton, 2011). In this context, the sustainability and level of development of the countries involved have also been considered to be important factors that explain how companies in developing countries have acted in these GSCs (Silvestre, 2015; Jia et al., 2018; Li et al., 2018). In particular, it has been argued that activities in these countries will soon be responsible for more than half of global emissions and thus there are specific market conditions that require special attention from scholars (Li et al., 2018). Therefore, a better understanding of emerging suppliers'

sustainability is needed because it greatly influences the sustainability of the entire SC (Koberg & Longoni, 2019), given that much of the operations of these GSCs related to extraction, production and manufacturing are carried out in developing countries (Jia et al., 2018; Liu et al., 2019).

Sustainability initiatives are planned and implemented to enhance sustainability in the entire SC (Silvestre et al., 2020; Walker & Jones, 2012) and they may impact also multiple SC stakeholders (Tura et al., 2019). Thus, one of the key benefits of the internationalization of supply chains is that companies from emerging nations have developed knowledge of best environmental practices and sustainable innovations. Given the desire of these organisations to interact with customers, competitors and international partners from developed countries, they are pressurised into acting sustainably to remain competitive (Köksal et al., 2018; Koster et al., 2019; Li et al., 2018; Li et al., 2017; Seuring & Müller, 2008). However, studies have also identified that these suppliers face barriers in their operation (Akbar & Ahsan, 2019; Busse et al., 2016). These have been both internal to their organisation and external i.e. derived from the environment in which they operate (Busse et al., 2016).

Research has shown that internal barriers are related to: low qualifications of employees (Sjauw-Koen-Fa et al., 2018) and managers (Bustos & Moors, 2018; Köksal et al., 2018); lack of financial resources for investments in sustainable innovations (Akbar & Ahsan, 2019; Koster et al., 2019); and differences in managers' understanding of the concept of sustainability (Busse et al., 2016; Köksal et al., 2018; Koster et al., 2019). On the other hand, external barriers are associated with insufficient local community pressure (Koster et al., 2019); socio-economic, cultural and linguistic differences between the operational contexts of buyers and suppliers (Busse et al., 2016; Huq et al., 2014; Koster et al., 2019); non-loyalty of organizational customers (Akbar & Ahsan, 2019; Bustos & Moors, 2018); and weak legislation and poor oversight in the country of origin (Akbar & Ahsan, 2019; Huq et al., 2014; Koster et al., 2019).

In addition, studies have shown that these suppliers, in order to act sustainably and gain competitive advantage, have adopted strategies and practices mainly related to sustainable innovations (Ras & Vermeulen, 2009; Silvestre, 2015); cooperation with other SC members and/or universities, research centres (Bustos & Moors, 2018; Li et al., 2017; Li et al., 2018); and sustainability certifications (Hajjar et al., 2019; Köksal et al., 2018; Sjauw-Koen-Fa et al., 2018).

It can therefore be surmised that, for sustainable innovations to occur, companies need a good knowledge base, and that emerging country suppliers need help in acquiring the knowledge and resources needed to act sustainably (Dou et al., 2015). This underscores the importance of improving relationships and communication between SC partners for knowledge sharing (Busse et al., 2016; Li et al., 2017; Bustos & Moors, 2018); greater cooperation among SC members (Bustos & Moors, 2018; Koberg & Longoni, 2019); and a common understanding of the concepts, processes and objectives of each SC member 's sustainability adoption (Busse et al., 2016).

Inter-organizational cooperation can therefore be argued to be an important facilitator for the adoption and improvement of sustainability related practices by emerging country suppliers. For example, these strategies have led to the adoption of certifications related to sustainability, which have increasingly become one of the tools to address the challenges related to transparency in the relationship between supplier and focal company (Koster et al., 2019; Sjauw-Koen-Fa et al., 2018). In the cultivation of *commodities*, specifically, certifications have emerged as a significant governance mechanism (Hajjar et al., 2019) enabled by collaborative practices. This study by Hajjar et al. (2019) identified that in the Brazilian coffee sector there is a large organization of cooperative producers, which facilitates the visibility of market signals. If the export market requires coffee certificates, for example, cooperatives that sell directly to international markets transmit this information to farmers and help them to obtain

certification through training. Thus, collaborative practices among institutions of this type can be argued to play a key role in developing emerging supplier sustainability initiatives, as further discussed in section 2.2.

### *2.2. Collaborative practices and the Relational View*

Collaborative practices comprise the exchange of information, joint decision-making and the alignment of incentives (Simatupang & Sridharan, 2005). The engagement in collaborative practices with other firms in their supply chain/networks is important to improve sustainability (Gimenez & Tachizawa, 2012) and, in addition, partnerships with external stakeholders/non-business actors can also act as key facilitators (Bäckstrand, 2006). As pointed out by Ebers and Jarillo (1988), a company, through collaborative actions and strategies, is able to achieve and sustain competitive advantages such as: i) mutual learning; ii) co-speciality; iii) better information flow; and iv) economies of scale. The central tenet of collaborative strategies lies in the idea that the competitive advantage of a company is not only located within its internal borders, that is, in the acquisition and use of exclusive resources, as postulated by the Resource Based View (Barney, 1991), but competitive advantage also emanates from inter-organizational relations.

Based on these precepts of collaboration and collectivity, the Relational View (Dyer & Singh, 1998) has been developed as a theory to understand the potential of collaborative practices. According to the Relational View, participation in inter-organizational relationships is able to expand the knowledge and resources of companies, providing them with a source of relational rents that would not be reached if each mobilized independently (Capaldo & Petruzzelli, 2011; Dyer & Singh, 1998; Li et al., 2012; Touboulic & Walker, 2015). Therefore, from a relational perspective, the firm's competitive advantage is not restricted to internal resources, but also consists of those resources accessed by it, which come from its relationships (Dyer & Sing, 1998; Lavie, 2007). In the relational view, the competitiveness of a company is

associated with the generation of relational rents, that is, “gains above normal, resulting from the joint idiosyncratic contributions of alliance partners” (Dyer & Singh, 1998, p.662).

Dyer and Singh (1998) suggest four potential sources of relational rent, namely: (i) specific relationship assets; (ii) knowledge sharing routines; (iii) complementary resources and skills, and (iv) effective governance. Asset specificity, in the Relational View, occurs from exclusive investments directed to the relationship partner, with expectations of mutual gains and the development of competencies that depend on governance mechanisms (Dyer & Singh, 1998; Tescari & Brito, 2018). Williamson (1985) identifies three types of asset specificity: (1) location specificity, (2) physical asset specificity and (3) human asset specificity. Knowledge sharing, on the other hand, concerns the exchange of information and knowledge in inter-organizational relationships and is considered a relevant factor for the success of organizational learning (Dyer & Singh, 1998; Kale & Singh, 2007). The complementarity of resources and competences refers to the complementarity between companies that provides partners with a synergy of resources capable of reducing costs and protecting their competitiveness (Dyer & Singh, 1998; Tescari & Brito, 2018). Finally, governance refers to coordination mechanisms, which can reduce transaction costs and leverage relational gains (Dyer & Singh, 1998; Tescari & Brito, 2018). Therefore, relational rents are a product of the combination, exchange or investment of partners in idiosyncratic assets, knowledge and resources, and the use of effective governance mechanisms, capable of reducing transaction costs or enhancing relational rents through synergy in the combination of resources, capabilities or knowledge (Dyer & Singh, 1998).

In the context of studies on sustainability in supply chains, the relational view has been little used to date and has been argued to mainly be applied to research regarding collaboration between large companies with a focus on environmental activities (Touboulic & Walker, 2015). However, some authors have also used it to discuss research questions regarding suppliers and

their relationships (Benstead, Hendry & Stevenson, 2018; Touboulic & Walker, 2015). It is therefore argued here that the relational view is an adequate theoretical lens to analyse the sustainability initiatives of suppliers from emerging countries in GSCs.

In the specific GSC context, Kaplinsky and Farooki (2010) suggested that suppliers from emerging economies learn about quality and sustainability standards from the demands of their foreign organizational clients. Most of the time, they learn from the GSC's focal company (when it has such knowledge), or from NGOs, customers, business associations (Liu et al., 2019) or from universities and/or research centres (Koberg & Longoni, 2019). Thus, participation in inter-organizational relationships has the potential to increase the knowledge and resources of companies, providing them with a source of relational rents that would not be reached if each mobilized independently (Capaldo & Petruzzelli, 2011; Dyer & Singh, 1998; Li et al., 2012). In particular, Tencati et al. (2008), referring to the context of companies from developing countries, highlight that the relationship management in GSC should involve collaborative forms of governance, as these forms help companies to meet supply demands as well as to leverage the company's reputation in global markets.

Providing recent further details on the effectiveness of collaborative practices, Bustos and Moors (2018), in a study with avocado producers from Colombia and Mexico working in global chains, identified that collaborative practices aligned with innovation contributed positively to the environmental, economic and social dimensions of sustainability. Thus these strategies led to a reduction in the unnecessary use of valuable resources and environmental impacts, a decrease in the uncertainty of supply and demand, an increase in profits and in the reliability of contracts between SC participants, as well as improvements in the working and learning conditions of small producers. Thus, as inter-organizational relationships evolved, structural inefficiencies were gradually reduced due to changes in behaviour and new practices becoming embedded into the organizational culture of companies. They therefore identified partnerships

as the backbone of innovation, acting as a catalyst for positive behaviours that stimulated the exchange of information, the alignment of incentives and appropriate uses of technology (Bustos & Moors, 2018).

### *2.3. Proposing a framework*

In view of the discussions above, it can be said that the literature shows that suppliers from emerging countries have used partnerships in the adoption and development of their sustainability initiatives in GSCs, which has driven them to advance their sustainable behaviours as well as enabling the generation of relational rents for the companies. Thus, these relationships allow supplier companies to obtain resources and new knowledge and to combine them in a unique and collaborative way, realizing competitive advantages and superior performance (Li et al., 2017). It is therefore believed that, according to Dyer and Singh (1998), Vachon and Klassen (2006) and Benstead et al. (2018), partnership-based relationships in GSCs facilitate the transfer of knowledge capabilities, which can be a critical source of relational rents and sustainability.

Thus, from the evidence in the literature presented and discussed in the previous parts of this paper, a framework was developed (Figure 1) that illustrates the theoretical aspects for this research. This framework illustrates that these organizations working in GSCs seek to meet international demands and their requirements and therefore form partnerships so that they can meet sustainability requirements, improve their sustainability initiatives and create relational rents. Thus, the adoption of collaborative practices has been argued to be a key source of relational rents for these suppliers. The partnerships arise when customers, exporters, distributors and other institutions require enhanced sustainability initiatives from these suppliers. These companies, often, to acquire knowledge and act in a sustainable way, need partnerships with other members of the SC, including competitors, research bodies and/or universities. These partnerships, according to the literature, occur through joint research and

exchange of information for the development of technologies, processes and/or sustainably innovative products. In this sense, the literature discussions presented also suggests a positive feedback loop, whereby involvement in GSCs then leads to a greater understanding of international market demands, which in turn leads to more involvement in collaborative practices in the same or additional GSCs, further improving their sustainability initiatives and the generation of relational rents. This positive feedback loop is included in the theoretical framework in Figure 1.

[Figure 1 near here]

This framework was used to provide theoretical-analytical guidance for the empirical study of the Brazilian coffee industry, specifically focusing on companies operating as emerging country suppliers in GSCs, as further described in the method section below. The study adds to the extant literature by adding greater detail on *how* collaborative practices affect the improvement of sustainability initiatives and the creation of relational rents in this context.

## 3. Method

In accordance with the research question for this study, to investigate how collaborative practices influence sustainability initiatives and the relational rents of emerging country companies operating as GSC suppliers, this research adopted a qualitative approach using multiple case studies (Yin, 2017). Thus, Brazilian coffee farmers from the coffee producing region called the Cerrado Mineiro Region, which operate as suppliers of important GSCs, participated in the research. Most coffee grown in that region is certified according to its origin (Coffee from the Cerrado Mineiro Region) and the Rainforest Alliance and UTZ, both of which focus on sustainable agriculture.

The specific coffee growers selected for the research were members of associations and cooperatives participating in the Federation of Coffee Growers of the Cerrado. This institution is the main governance entity working with coffee farmers in the region. It acts to assist

producers in complying with legal requirements, certifications (socio-environmental and designation of origin) and product quality. In the Cerrado Region, 4500 producers operate in 55 municipalities. As a criterion for choosing participants, it was established that they should: (i) be medium or large coffee producers; (ii) carry out export activities directly and / or indirectly; (iii) be willing to participate in the research (accessibility). As a justification for the first criteria, the size of the company tends to influence its sustainable practices (Antonioli et al., 2013). Large organizations tend to have more resources for research and development and for socio-environmental activities (De Marchi, 2012). Small companies are more limited in terms of qualified human resources, technical and financial resources, which leads to less adoption of sustainable practices (Del Río et al, 2009). For classification as to size, hectares planted with the crop were considered. This is the criterion adopted by the Federation of Coffee Growers of the Cerrado, based on the classification of rural properties and the legislation regarding the Tax on Rural Territorial Property (ITR). Thus, producers who had at least four modules participated in the research (each module, in Cerrado Mineiro Region, is equivalent to 40 hectares), that is, 160 hectares of coffee plantation area. Four modules, according to the ITR, is the minimum size for a rural property to be classified as medium-sized.

To access the participants, the "snowball" technique was applied (Teddlie & Yu, 2007). For the operationalization of the technique, a coffee producer already known by the researchers and who is classified as a medium producer was invited to participate in the research. This participant suggested other participants who suggested others and so on. Thus, ten coffee farmers were interviewed. As a criterion for ceasing data collection, the saturation point was used, thus, we stopped the interviews when no more significantly new data was being collected (Eisenhardt, 1989; Teddlie & Yu, 2007). Table 1 indicates the characteristics of the participants. The mnemonics E1 to E10 are used to refer to them hereafter.

[Table 1 near here]

For data collection, semi-structured interviews were used. The interviews were carried out in three steps: planning, execution and transcription. In the first stage of planning, the interview script was developed and coffee farmers were contacted by phone. The script was developed according to the aspects evidenced in the literature and presented in the theoretical model, comprising 5 questions on sustainability, 4 on internationalization and 6 on collaborative practices (cooperation/ partnerships). The execution of each interview started with explaining the research objectives, clarifying any doubts from the participants and requesting the recording of interview. The interviews were then conducted in person or by telephone, depending on the availability of the participants. They took place from June to August 2018 and lasted from twenty-five minutes to one hour each. The last stage included the full transcription of the narratives. In addition, secondary data were collected to triangulate the interview data with other information about the coffee culture in the region, including: the organisations websites; news about coffee culture companies and their certification rules.

The data analysis was carried out using a thematic content analysis approach, as developed according to the precepts of Bardin (2011). Therefore, the analysis involved three stages: pre-analysis, exploration of the material and treatment of the results obtained and interpretation. In the first stage, the material was prepared and organized, read and coded. Subsequently, in the exploration and treatment stages, the most relevant narrative excerpts were found, according to the categories established a priori. These categories were established according to deductive logic (Mayring, 2004) based on the four potential sources of relational rents proposed by Dyer and Singh (1998). This grid was therefore made up of the categories: ‘Investment in relationship specific assets’, ‘Knowledge sharing routines’, ‘Complementary resources and capabilities’ and ‘Governance mechanisms’, all components of the proposed theoretical framework. Subcategories then emerged inductively from the analysis of the interviews, and therefore overall an abductive approach was used (Kovács & Spens, 2005).

These subcategories are described in the next section below, where the analyses of the findings are presented.

## 4. Analysis of findings

As described in the previous section, the four sources of relational rents proposed by Dyer and Singh (1998) were used as the analytical categories for the research findings. In this way, empirical evidence was sought on: investments in relationship specific assets, knowledge sharing among partners, complementary resources and governance mechanisms in the region, as ways to boost the sustainability initiatives, as well as the creation of relational rents for the suppliers. Each of these sources of relational rents is presented on Table 2 and discussed in turn in the following sub-sections.

[Table 2 near here]

### *4.1. Investment in relationship specific assets*

Four subcategories emerged from the data under this theme, which were: (i) management improvements, (ii) research and development (R&D), (iii) eco-innovations and (iv) investments in export. It should be noted that regardless of the type of asset specificity, there is a potential productivity gain for both partners. Nonetheless, it is important to understand the nature of the relationship specific asset that has been shown to be effective in this context. Therefore, where possible, the discussion below highlights the type of asset specificity i.e. whether it comprises of: location specificity, physical asset specificity or human asset specificity (Williamson, 1985).

Management improvements, a specificity of relational specific assets, a human asset (Williamson, 1985), occurred as the coffee grower and his partners (other coffee growers, cooperatives, governmental institutions supporting the producer, among others) developed joint projects to improve farm management processes. The investment in this type of asset provides partners with unique know-how derived from the exchange of experiences between partner

organizations (Dyer & Singh, 1998). This can be seen in reports on the implementation of the Rise Method, digital inclusion and certification:

> *"(...) And so, in 2015, we have assessed our sustainability according to the Rise Method, through* [our] *partnership with the University of Bern in Switzerland. So, as you can see here, I think it is nice to see that when you consider social and environmental issues" (E1).*

The Rise (Response-Inducing Sustainability Evaluation) is a method developed by the School of Agriculture, Forest and Food Science at the University of Bern (Switzerland) that uses a computer program to make a holistic assessment of agricultural operations on farms.

In addition, as argued by interviewees such as E1, E2 and E7, the Foundation for Cerrado Coffee Development, linked to the Federation of Coffee Growers of the Cerrado (FCC), develops projects related to orienting producers about environmental and social certifications as well as designations of origin. In this context, the adoption and development of good agricultural practices, required by certifications, which standardize care for the environment and social welfare, can be seen as one of the sustainable strategies for adding value to coffee production for these farmers. In particular, in terms of trust and additional value paid by buyers as mentioned by E10: *"We receive additional value for our coffee due to sustainable certifications"*. The relevance of certifications for coffee value was also identified in our secondary data by UTZ (2015): "*UTZ certification contributed to greater stability in coffee sales. [...] producers say whether UTZ helped to diversify sales channels"*.

Projects in the Cerrado Mineiro Region related to sustainability and market expansion provide suppliers with unique knowledge, derived from investing in specific assets. In this regard, the predominant role of the FCC is highlighted, which coordinates most of the projects and seeks to differentiate the Cerrado Region.

> *"(...) one of the reasons for these innovations with results for the environment and for people is it is a strategy of the federation, which encourages producers in this regard" (E1).*

> *"(...)the Federation seeks improvement and, therefore, to be different. Our region has always liked to be different, to be innovative. So, I can say that here in the region we produce sustainable, ethical, quality coffee with full traceability" (E2).*

> *"Information about market and certifications arrive quickly to us through the federation and cooperatives. They help us a lot. (...) We also have some sustainability certifications in a group of producers" (E7).*

In the R&D subcategory, a Foundation action also stands out. In this subcategory, there is the presence of investment in physical and local assets. The Foundation is the entity responsible for the development of research in coffee growing and is the manager of the Coffee Center of Excellence in the Cerrado Mineiro Region. According to the interviewees, such as E2 and E6 it develops research projects with the use of experimental fields in different locations and farms in the Cerrado Mineiro Region. The purpose of these actions is to adapt the type of cultivar for each micro-region of the Cerrado Mineiro, enabling producers to improve quality and productivity, as shown in the following statement:

> *"(...) This is a very nice job that we are doing, which is technological innovation. We have the Foundation of Cerrado Mineiro Development and we have 27 experimental fields in 17 municipalities with 12 new varieties. And these 12 new varieties are being tested and in the next three years we will be able to indicate which is the best for each micro-region" (E2).*

> *"Our coffee is well classified and we have an experimental field on the farm to study in partnership with the federation" (E6).*

The mentioned relevance of Coffee Center of Excellence in the Cerrado Mineiro Region was also highlighted in our secondary data by CCCMG (2018) showing the relevance of research made in this institution with partnerships among producers and research institutions and universities:

> "*Producers have direct access to technologies. The themes highlight genetics, drink quality and fight against diseases in the Cerrado Region.[...] The actions have been developed by EPAMIG, Federal University of Lavras (UFLA) and Federal University of Viçosa (UFV), provided the adaptation of coffee cultivars to the climate and soil conditions of the Cerrado Mineiro".*

The results of the project will possibly offer more resistant and more suitable cultivars for each micro-region, improving productivity, reducing the use of chemicals, among other aspects of environmental impacts. Thus there are both sustainability and value creation objectives. In addition to R&D focused on the essential competence of coffee growers, there are also investments in machinery and equipment through relationships between the actors,

which characterizes a specificity of physical and local assets (Williamson, 1985) as shown in the following report:

> *"(...) we who look for other ways. For example, at the moment I am developing a large machine with the* [Brazilian company that supplies agricultural machinery] *to be launched in three years .... So, we have to look for a solution with our hands. (...) The reality of coffee production here in Brazil, particularly in our region, is different from other places. There are many hectares and we need adequate machinery for harvesting, washing coffee. (E8).*

Another specific relationship investment impacting sustainability relates to eco innovation. This, according to the European Union (2018), relates to all forms of innovation, technological or not, that create business opportunities and benefit the environment, avoiding or reducing the environmental impact or optimizing the use of resources. Therefore, eco-innovative actions were developed jointly with the cooperative, as well as with other companies and aimed at developing the quality of cultivars and promoting rural activities. Thus, the fact that they are located in the Cerrado Mineiro Region, allows suppliers to access unique resources, which can be characterized a specificity of local assets. This is how E2's described this investment:

> *"(...) We are making a plant nursery now in Monte Carmelo city, for the cooperative, which has 200 thousand native seedlings for improvement also in this sense of all the coffee growers of our cooperative, so that they can restore the riparian forests and recompose some degraded area with native vegetation. And, as a social project, we have a school in the countryside, which is a partnership with the* [multinational supplier of agricultural inputs]. *This is a project where we value environmental issues that make the child who studies at school, in the countryside, proud to live in the countryside (...)" (E2).*

In addition, investments in exports were evidenced, in which coffee farmers developed joint alternatives with other partners (roasters, exporters, cooperatives and other institutions) in order to forecast and increase the demand abroad for the coffee they produce. This can also be considered as a specificity of human assets in view of the unique knowledge generated between the parties. The following statement illustrates this:

> *"(...) we, through the coffee growers' federation, we are doing a job called 'Demand generation', which is to increase the demand for coffee produced in the Cerrado Mineiro region" (E1).*

Therefore, in accordance with the relational view developed by Dyer and Singh (1998), through investment in physical assets, organizations can raise the standard of quality and ensure product differentiation, as seen in the case of Cerrado Mineiro Region. As highlighted by Dyer and Singh (1998) and Lavie (2007), from a relational perspective, the organization's competitive advantage involves the mobilization of internal and external resources. In the cases in question, the asset derived from this relationship has been able to expand the suppliers' market, as well as bring them closer to the final consumer.

### *4.2. Knowledge Sharing Routines*

In this dimension, it was identified that the participants, in general, consider that they learn from their partners, both national and international. Thus, knowledge sharing for them is diverse and produces different types of learning. Therefore, three subcategories could be observed for knowledge sharing routines: (i) knowledge creation; (ii) knowledge sharing about coffee practices, and (iii) knowledge transfer to local entities. For the first subcategory, it became evident that the creation of knowledge produced incremental innovations in one of the properties. Thus, E1 reports that:

> *"(...) this issue also from the partnership with Sebrae has been bringing many innovations, but as this "is" in your daily life, it ends up being barely noticeable. Now, if I take a photo there, make an assessment of my company when I started with the Educampo project and now, over time, there have been several innovations. But, let's say, that we have been incorporating technology (...)" (E1).*

It should be noted that Educampo is a project by Sebrae (Support Service for Micro and Small Enterprises) that helps in creating opportunities for the individual and collective development of agribusiness. It consists of individual consultancies for each company, training that expands management experience, knowledge exchange and networking between producers and consultants and shared coordination with partner companies as presented in this quotation:

> *"Sebrae has been operating in the coffee sector of the Cerrado Mineiro Region for almost 10 years. […] Sebrae offers training and managerial assistance to producers, facilitated access to certifications that improve the quality of the product and processes and stimulate the group's internationalization". (Cafeicultura, 2011)*

In the second subcategory regarding the sharing of knowledge about coffee practices, the evidence suggests that this occurs as suppliers certify their properties with the help of partners (cooperatives, members and associations) and develop training together. Some interviewees highlight partnerships with public institutions such as Universities, the National Rural Apprenticeship Service (Senar) and the Sebrae aiming at improving management and labour qualifications, as well as the safety and security and social welfare of those involved. Thus, E3 points out:

> *"(...) today Sebrae has several courses, they are all linked to Sebrae, the S system. They provide a lot of training in this sense, for the operator, for spraying, use of pesticides. This is up to them" (E3)*

.

Knowledge sharing with partners has also extended to the international level. Actions related to meetings with international partners, information exchanges, cooperative activities and suppliers' participation in fairs outside the country were mentioned. For example, for one of the interviewees, the sharing of knowledge with international partners allows the exchange of information on technological trends that can act to improve sustainable practices. Also, one of the suppliers cites participation in fairs abroad as a way of sharing know-how and promoting products abroad. The following statements illustrate these points:

> *"I think there are different learnings. I will not say that one is more important than the other. So, there are different teachings" (E1).*
>
> *"You learn a lot, because these people (international partners) transmit a lot of information to us, on the issue of international consumption, on the question of the evolution of technologies. So, like this, it's a win / win. We pass on information to them" (E2).*
>
> *"We participate in associations that promote Brazilian products abroad and this is still a partnership. These associations, for example, I just arrived from a fair in Europe, in Amsterdam. So these NGOs, which, in this case, are the Brazilian Association of Special Coffees, they have a place where you expose your product, receive your customers, do the demos, do the cupping and everything" (E3).*

The Sebrae relevance in this sense can be evidenced in this quote: "*the institution [SEBRAE] supports the group's business strategies, focused on qualified consumer markets, the expansion of the number of farms certified with the Café do Cerrado seal and the participation of producers in the main international events in the sector"* (Cafeicultura, 2011).

It is also worth noting that the evidence within this subcategory adds to the evidence of Liu et al. (2019), who argue that suppliers from emerging economies learn about quality and sustainability standards primarily through partnerships with universities and/or research centers. However, in the evidence presented above, it can be seen that knowledge sharing routines between suppliers and their national and international partners can be considered as factors that support the sustainable and social practices of producers through tacit and explicit knowledge as pointed out by Dyer and Singh (1998) and Zang and Wang (2018).

The last subcategory derived from knowledge sharing was the transfer of knowledge from suppliers to local entities. There are actions such as internship programs granted to educational institutions in the region and dissemination of knowledge in schools through social projects such as *Escola no Campo* (School in the field). The following are illustrative excerpts about this action:

> *"(...) There was even a UFV project, from agronomy students here at the company. It was completed about two months ago, it was a field project, field research that they were doing here. We gave the area to them and they brought the results to us" (E5).*
>
> *"(...) And we do side projects with neighbouring schools to make the ecological trails, always thinking about making the youth, with the people who live in Patrocínio, recognize the value of the coffee culture, of producing coffee as a good thing and not wanting to leave the field" (E9).*

The *Escola no Campo* project is "*a partnership between Syngenta and Cooxupé and served more than 500 children from 20 schools in 2017. The action took information in the field, preservation and guidance to 15 municipalities in the South of Minas and Cerrado Mineiro"* (Expresso do Cerrado, 2017). Such actions demonstrate the concern of suppliers to share and disseminate the knowledge produced. Furthermore, knowledge sharing should also be seen as a source of learning for suppliers capable of acting in a competitive way (Dyer & Singh, 1998; Koberg & Longoni, 2019).

### *4.3. Complementary resources and capabilities*

In terms of complementarity of resources and capabilities, some joint actions by suppliers and their national and international partners are highlighted. These actions influence suppliers

from GSCs in improving their sustainable practices. Only one subcategory emerged from the interviewees' reports, that is, resources and capabilities linked to marketing, logistics and distribution.

Most respondents are part of GSCs through partnerships, whether national or international. In the case of national partners, cooperatives act as a potential source of complementing suppliers' capabilities. They offer information and develop practical actions regarding the production, preparation and commercialization of coffee.

> *"Especially with Cooxupé* [cooperative]*, because it is the cooperative that brought us to Rainforest. They have a team within Cooxupé. [...] they constantly bring us technical information to help our processes on the farm. There are always people there who are helping us and even in the marketing part too." (E4).*

As for international partnerships, some overseas entities (public and private), which have the expertise of commercialization in foreign markets, complement the resources of suppliers. These entities, in the perception of the interviewees, in addition to their expertise in the international market, have distribution know-how and consumer market confidence accumulated in this type of negotiation. The Cooxupé partnership is also highlighted in our secondary data by CCCMG (2010). The following statements by E2 and E5 illustrate this finding: *"Yes, because I have established agents around the world in the area of international trade, that I send my coffee to and they distribute it for me. This is knowledge and expertise that I don't have" (E2). "So, I don't export directly yet. We have some partnerships to try to export directly in the future. But through companies like Syngenta, we supply our coffee to Syngenta through the Nucoffee program and this coffee Syngenta sends to different countries in the world" (E5).* This collaborative practices between Syngenta and these producers were also evidenced on its website (Portal Syngenta, 2018): *"Syngenta seeks to qualify the production and connect the Brazilian coffee grower to the market, mainly the external one, through the Nucoffee project (program that allows exchanging coffee bags for inputs, services and intelligence)"* (Portal Syngenta, 2018).

Considering the relational view, Ngugi et al. (2010) highlight that the complementarity of resources can also act as an incentive for organizations to establish partners, and consequently, to access complementary resources from partners. Thus, our findings further corroborate this point, illustrating how organizations are able to create value through their relationships.

### *4.4. Governance mechanisms*

Three subcategories were identified that reflect governance mechanisms, which are: (i) quality assurance, (ii) structure of partner entities and (iii) trust and reputation. For the first subcategory of quality assurance, the interviewees pointed to certification as the main mechanism that solidifies their sustainability initiatives in the foreign market. Regarding this factor, the narrative of E9 explained:

> *"(...) You don't even enter the market if you don't have the minimum sustainability issues. The person doesn't even receive you. This is the minimum. So, if we are talking about super commodity coffees, the farm must have some type of certification that will guarantee that buyer that, minimally, that farm does not use slave labour. This is the bare minimum. So, like that, you don't go to the international market without the minimum of certification (...)".*

This evidence showed the sustainability initiatives as a qualifier criterion by international buyers, i.e. a kind of driver for suppliers' sustainability. In addition to certification, the structure of partner entities is another factor that reduces transaction costs involved with international buyers as mentioned by E2: *"The federation is a kind of link between us and the international market. It helps us to understand better the international demands and to improve our activities in this sense".* Together with the work developed by the agricultural cooperatives, the FCC's role as a relevant governance entity for the coffee growers of Cerrado Mineiro Region stands out. The FCC is responsible for articulating the entire strategy of the region, acting mainly on traceability practices and demand generation. It should be noted that the institutional structure of the network, as well as actions developed by the FCC, has acted significantly to expand the markets of suppliers and to improve sustainable practices. As an example, the following fragment is pointed out:

> *"No, I don't export directly. It is through partners, who are traders, like Cooxupé* [cooperative], *or Terra Forte* [export company]. *We sell coffee to them and we know that the coffee is exported next, but I have no contact abroad that does the export work" (E4).*
>
> *"The Federation of Cerrado Mineiro always seeks improvements and, thus, to be different. Our region has always liked to be different, to be innovative" (E2).*

It is emphasized that the Cerrado Mineiro Region network is configured as a horizontal network, in which some activities of the organizations are coordinated together. Thus, some of the partnerships signed with Sebrae (CCCMG, 2015) and Embrapa (Embrapa, 2014; Embrapa, 2015) came from the FCC. In this sense, the role of the FCC, as an agent of governance in the network, is recognized by the interviewees and also present in the FCC website (Região do Cerrado Mineiro, 2020), as being essential for the expansion of innovations and the conquest of new markets. This quotation evidences the FCC importance for these coffee producers in terms of representativeness and the possibility of expanding their business: *"The Federation of Coffee Growers in the Cerrado invests heavily in the organization of producers, in certification systems, strategic planning and marketing. The efforts made the brand known in the country and abroad"* (Embrapa, 2015). This provides further evidence for the claims of Tencati et al. (2008), who state that the management of relationships in GSCs should involve more collaborative forms of governance. In the case in question, the form of the institutional network is suggested to help companies meet the supply chain demands, as well as, boost their reputation in the global markets.

Trust and reputation, in this context, involve informal mechanisms that assist in the realization and reduction of transaction risks, that is, decrease transaction costs (Dyer & Syngh, 1998). For example:

> *"(...) trust is built, it is not sold, it is not acquired, it is built. So, like this, we learn from the moment that trust is created and for there to be partnership, first there must be trust, for there to be a true partnership" (E1).*
>
> *(...) I think the great benefit of a partnership is that when you become known, that you have these partners, he buys your coffee in the future. (...) Any producer there, who does not have a partnership and the exporter does not know him, the exporter does not buy from them in the future. And, thank God, we have open doors with everyone. The quality that we sell we know that we will deliver. The farm has a taster inside the farm, who is an employee of ours. So, all batches that leave here are classified, drunk*

*and given a report. So, whenever we sell a quality, we deliver that quality or a little better" (E6).*

In this sense, as highlighted by Dyer and Singh (1998), governance mechanisms are a source of competitive advantage given that they are able to increase synergy between partners and minimize transaction costs. As shown above, in the case of these emerging country suppliers, it is observed that formal and informal mechanisms can have this same impact.

## 5. Discussions and propositions

Figure 1 above summarized the main theoretical framework developed from the extant literature reviewed, and the data presented in the previous section provides empirical evidence to support the development of propositions. Firstly, to explain how the framework was confirmed and expanded, Figure 2 presents a revised, expanded version of the framework, which now includes the sub-categories that emerged from the data for each of the dimensions of the relational view initially included in Figure 1. For example, Figure 2 illustrates that emerging country suppliers, in the midst of their networks of horizontal and vertical relationships, establish collaborative practices through investments in specific relationship assets – including through management improvement, R&D, eco-innovations and investments in exports. Figure 2 expands the outcomes from the adoption of collaborative practices showing that they create relational rents associated with improvements in sustainability initiatives and export processes.

[Figure 2 near here]

Therefore, we found that*:* collaborative practices between key partners facilitate the development of emerging country suppliers in GSCs leading to improved sustainability-related practices and the creation of value in international markets. The data illustrates how this is taking place in the Brazilian coffee industry since the adoption of collaborative practices between the various national and international partners is providing the springboard needed for operations to be enhanced and developed using the principles of sustainability and value

creation. Thus, the data demonstrates that a variety of such collaborative practices lead to the emergence of relational rents associated with sustainability and exports (Figure 2).

Therefore, this evidence also makes it possible to infer that the tenets of the relational view assist to explain how collaborative practices create value and improve the sustainability initiatives of emerging country suppliers in GSCs. This is possible, since when establishing collaborative practices, partners develop sustainable practices that generate relational rents that are absorbed by the global chain itself. Therefore, based on the empirical results, it can be said that the creation of value occurred through relationships (Ngugi et al., 2010), which in fact were constituted by a dynamic and interactive process of sharing and recoding of individual and collective resources (Dyer & Singh, 1998) regarding sustainability and export. This involved interactions between members as well as routines and tools between organizations (Della Corte & Del Gaudio, 2014).

In addition, other aspects can be understood by the data, which contribute to a better understanding of the theory of the relational view, as well as the sustainability of emerging country suppliers operating in GSCs. Specifically, it was evident in the interviewees' reports that the main purpose for collaborative practices is to adapt to the demands of the international market. These demands come from the need to adapt suppliers to the laws of developed countries, as well as the requirements of consumers and the required socio-environmental certifications (Kaplinsky & Farooki, 2010). Therefore, it is emphasized that, in addition to the cultural aspects of the country and the relationship of trust present in the institutional environment, argued by Dyer and Singh (1998), external requirements enforce partners to develop and to maintain relational rents (Benstead, Hendry & Stevenson, 2018). Therefore, from the established discussions, some implications and propositions can be developed. Firstly, proposition 1 seeks to explain the influence of international market demand:

*P1: External requirements, such as certification, legislation and consumer requirements, lead emerging country suppliers to develop collaborative practices to enhance their sustainability initiatives.*

A second important aspect evidenced was the impact of the relational rents that result from the emerging economy suppliers' involvement in international markets and in collaborative practices. These rents both arise from and lead to a greater understanding of international market demand, which in turn strengthens supplier capabilities to operate in these international markets and create value for these SC actors. The resultant positive feedback loop demonstrated in the findings of this study indicate that as the rents increase, the understanding of international market requirements grows, and this leads to the suppliers looking for further collaborative opportunities to further improve their sustainability initiatives and export processes. In this sense, the relational rents, though initially outcomes, then go on to act as facilitators of sustainability in the entire GSC. Thus when suppliers obtain relational rents they also can understand and better satisfy the international market demands by further improving their sustainability-related practices and creating value.

Therefore, it is understood that relational rents help suppliers to establish themselves within GSCs in a sustainable way. The means to do this include: sustainable strategies and practices that involve sustainable innovations (Diabat et al., 2014); environmental and social certifications (Hajjar et al., 2019; Rich et al., 2017); de-commoditization (Bustos & Moors, 2018; Ras & Vermeulen, 2009; Ras et al., 2007) and other forms that contribute towards the entry of such suppliers to GSCs.

Thus the sources of relational rents were seen to be the improvements in the suppliers' own businesses, that is, as better process management, i.e. export processes and value creation generated by the collaborative relationships between partners resulting in idiosyncratic contributions, which could not be obtained if they acted in isolation (Dyer & Singh, 1998;

Capaldo & Petruzzelli, 2011; Li et al., 2012; Dyer et al., 2018). This leads to the second proposition:

*P2: Emerging country suppliers' collaborative practices generate relational rents that would not be obtained if they acted singly; and these rents in turn lead to a greater understanding of international market demands, creating a positive feedback loop that leads to further collaborative practices and further improvements in their sustainability initiatives to satisfy international market demand.*

## 6. Conclusions

This article aimed to investigate how collaborative practices with national and international partners influence the sustainability initiatives and relational rents of companies that supply GSCs. The results show that collaborative practices provide a strong foundation for sustainability initiatives, internationalization and relational rents for the foreign market. Our results suggest that GSC relationships depend on the involvement of key partners for the implementation of strategies related to sustainability initiatives in international markets. We found that the tenets of the relational view are adequate to explain the mechanisms for creating relational rents and improving sustainability initiatives by suppliers from emerging countries in GSC. From this evidence in the Brazilian coffee growing industry, it is suggested that the adoption of collaborative practices contributes to successful export processes and improvement in their sustainability initiatives.

As theoretical contributions, the study advances the understanding of sustainability in GSCs, pointing to collaborative practices as relevant mechanisms to generate relational rents for emerging country suppliers. Our results demonstrate the relationship between collaborative practices and relational capabilities as important factors for sustainability, for internationalization and for creating value for such actors in GSCs. No less important, this study also contributes to the advancement and consolidation of the theory of the relational view by

supporting empirically and theoretically the constructs proposed by the theory, and expanding the key tenets of the theory (i.e. relationship specific assets, knowledge sharing routines, additional capabilities and resources, and effective governance mechanisms) into sub-categories as shown in Figure 2. In particular, we highlight the collaborative practices adopted by Brazilian coffee growers, who act as suppliers in GSCs and have not yet been analysed under the relational view theoretical framework, as well as giving a voice to these agents. Thus, we address a specific gap in the literature identified by authors such as Jia et al. (2018), who argue for further studies involving suppliers from emerging countries. Finally, we develop propositions from our data indicating: how external requirements such as foreign market consumer requirements lead to collaborative practices in the search for sustainability improvements; and how these sustainability improvements in turn lead to relational rents which then lead to a greater understanding of international market demand, which results in further improvements in sustainability initiatives that would not be achieved if they acted alone.

From a managerial perspective, the evidence provided in this study on the sustainability initiatives of suppliers from emerging countries in GSCs can support the elaboration and implementation of public policies. It can also serve as information to the suppliers and to the focal companies for the formulation of appropriate strategies and the management of sustainability development mechanisms at the organizational level as well as across the entire SC (Pakdeechoho & Sukhotu, 2017; Jia et al., 2018; Mani et al., 2018; Liu et al., 2019; Koberg; Longoni, 2019).

Finally, as limitations we highlight the difficulty in empirically analysing the categories of knowledge and resource sharing routines and complementary skills. This limitation has already been argued by Tescari and Brito (2018) in their work using the quantitative approach.

As proposals for future research, it is suggested to investigate the barriers to relationships, relational rents and the adoption of sustainable initiatives of suppliers from

emerging economies. In addition, new studies could compare the origin of suppliers as a means of identifying the uniqueness of interorganizational collaborative practices and their relationship to countries' level of development. Further studies could also use additional sustainability dimensions such as the Triple Bottom Line (TBL+) (Fritz & Silva, 2018) to study sustainability in SCs in Latin America relating it to the relevance of inter-organizational collaborative practices in this specific context.

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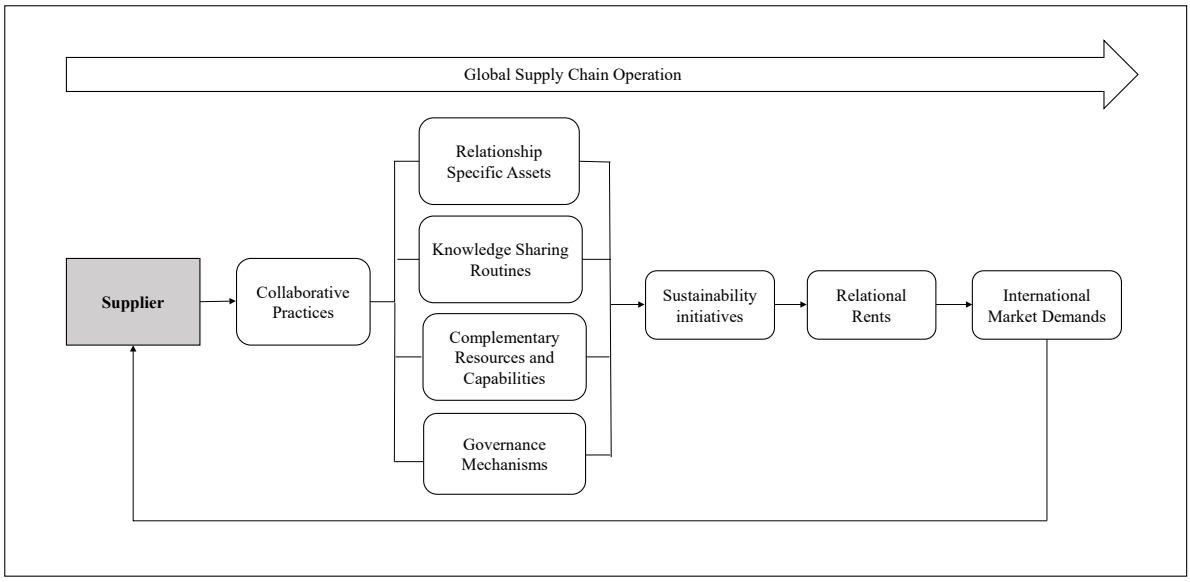


Figure 1. Framework explaining the operation of suppliers from emerging countries in global supply chains using collective practices.

Table 1: Characteristics of participants

| Participant | Years managing the company | Expertise | Size | Position in the company |
|---|---|---|---|---|
| E1 | 20 | Agronomist Engineer | Medium | Owner and manager |
| E2 | 33 | Agronomist Engineer | Large | Owner and manager |
| E3 | 35 | Mechanical Engineer | Large | Owner and manager |
| E4 | 7 | Economist | Medium | Owner and manager |
| E5 | 6 | Agronomist Engineer | Large | Manager |
| E6 | 23 | Agronomist Engineer | Large | Owner and manager |
| E7 | 27 | Civil engineer | Large | Owner and manager |
| E8 | 23 | Agronomist Engineer | Large | Owner and manager |
| E9 | 17 | Administration | Large | Owner and manager |
| E10 | 16 | Publicity | Large | Sustainability manager |

Table 2. Research constructs and associated empirical evidence

| Construct | | Subcategories | How it occurred in the empirical context | Sample evidence from interviews |
|---|---|---|---|---|
| International market demands | | - | Suppliers are pressured to act more sustainably, achieving the global supply chain demands as well as to leverage the company's reputation in this global market. | *"(...) You don't even enter the market if you don't have the minimum sustainability requirements. The person doesn't even receive you. This is the minimum. So, if we are talking about superior commodity coffees, the farm must have some type of certification that will guarantee that buyer that, minimally, that farm does not use slave labour. This is the bare minimum. So, like that, you don't go to the international market without the minimum of certification (...)" (E9).*<br><br>*"We signed a document affirming that we comply with environmental laws and social standards so that we can sell that coffee abroad". (E6).* |
| Collaborative Practices | Investment in relationship specific assets | Management improvements | Occurred as the supplier and its partners developed joint projects to improve company management. | *"Information about markets and certifications arrive quickly to us through the federation and cooperatives. They help us a lot (...)" (E7).* |
| | | Research and development (R&D) | They occurred as the supplier and its partners, mediated by the Federation (institution responsible for governance) are part of common research initiatives aimed at improving production and sustainable initiatives. | *"(...) This is a very nice job that we are doing, which is technological innovation. We have the Foundation of Cerrado Mineiro Development and we have 27 experimental fields in 17 municipalities with 12 new varieties. And these 12 new varieties are being tested and in the next three years we will be able to indicate which is the best for each micro-region" (E2).* |
| | | Eco-innovations | They occurred as the supplier and its partners, being located in the region and by the partners, have access to unique resources, which can be characterized by a specificity of local assets. | *"(...) We are making a plant nursery now in Monte Carmelo city, for the cooperative, which has 200 thousand native seedlings for improvement also in this sense of all the coffee growers of our cooperative, so that they can restore the riparian forests and recompose some degraded area with native vegetation. And, as a social project, we have a school in the countryside, which is a partnership with the [multinational supplier of agricultural inputs]. This is a project where we value environmental issues that make the child who studies at school, in the countryside, proud to live in the countryside (...)" (E2).* |
| | | Investments in export | They occurred as the supplier and its partners (roasters, exporters, cooperatives and other institutions) share unique knowledge to | *"(...) we, through the coffee growers' federation, we are doing a job called 'Demand generation', which is to increase the demand for coffee produced in the Cerrado Mineiro region" (E1).* |

| | | | |
|---|---|---|---|
| | | predict and increase the external demand for the coffee they produce. | |
| Knowledge sharing routines | Knowledge creation | This occurred as the supplier and its partners produced incremental innovations in the properties. | "*(...) this issue also from the partnership with Sebrae has been bringing many innovations, but as this "is" in your daily life, it ends up being barely noticeable. Now, if I take a photo there, make an assessment of my company when I started with the Educampo project and now, over time, there have been several innovations. But, let's say, that we have been incorporating technology (...)" (E1).*<br><br>*"You learn a lot, because these people (international partners) transmit a lot of information to us, on the issue of international consumption, on the question of the evolution of technologies. So, like this, it's a win / win. We pass on information to them" (E2).* |
| | Knowledge sharing about coffee practices | This occurred as suppliers certified their properties with the help of partners (cooperatives, associates and associations) and developed joint training. | *"(...) today Sebrae has several courses, they are all linked to Sebrae, the S system. They provide a lot of training in this sense, for the operator, for spraying, use of pesticides. This is up to them" (E3)* |
| | Knowledge transfer to local entities | This occurred as suppliers became involved in actions such as internships granted to educational institutions in the region and the dissemination of knowledge in schools through social projects. | *"(...) And we do side projects with neighbouring schools to make the ecological trails, always thinking about making the youth, with the people who live in Patrocínio, recognize the value of the coffee culture, of producing coffee as a good thing and not wanting to leave the field" (E9).* |
| Complementary resources and capabilities | Resources and capabilities linked to marketing, logistics and distribution | This occurred as suppliers entered GSCs through partnerships, whether national or international. In the case of national partners, cooperatives act as a potential source of complementing suppliers' capacities. They offer information and develop practical actions related to the production, preparation and commercialization of coffee. With regard to international partnerships, some foreign entities (public and private), which have marketing expertise in the foreign market, complement the suppliers' resources. | *"Especially with Cooxupé [cooperative], because it is the cooperative that brought us to Rainforest. They have a team within Cooxupé. [...] they constantly bring us technical information to help our processes on the farm. There are always people there who are helping us and even in the marketing part too." (E4).* |

| | | | | |
|---|---|---|---|---|
| | Governance mechanisms | Quality assurance | This occurred as suppliers use certifications as the main mechanism that strengthens their sustainability initiatives in the foreign market. | *"(...) You don't even enter the market if you don't have the minimum sustainability issues. The person doesn't even receive you. This is the minimum. So, if we are talking about super commodity coffees, the farm must have some type of certification that will guarantee that buyer that, minimally, that farm does not use slave labour. This is the bare minimum. So, like that, you don't go to the international market without the minimum of certification (...)". (E9)* |
| | | Structure of partner entities | This occurred based on the institutional structure of the entities that reduces transaction costs with international buyers and enables partnerships. | *"No, I don't export directly. It is through partners, who are traders, like Cooxupé [cooperative], or Terra Forte [export company]. We sell coffee to them and we know that the coffee is exported next, but I have no contact abroad that does the export work" (E4).* |
| | | Trust and reputation | This occurred from the trajectory of interaction between suppliers and partners, reducing the risks of transactions and increasing truly. | *"(...) trust is built, it is not sold, it is not acquired, it is built. So, like this, we learn from the moment that trust is created and for there to be partnership, first there must be trust, for there to be a true partnership" (E1).* |
| Relational rents | | - | It creates benefits through the relationships and the interactive process of sharing and recoding of individual and collective resources | *"The federation is a kind of link between us and the international market. This helps us to better understand international demands and to improve our activities in this regard". (E2).*<br><br>*So, I still don't export directly. We have some partnerships to try to export directly in the future. But, through companies like Syngenta, we supply our coffee to Syngenta through the Nucoffee program and this coffee Syngenta sends to different countries in the world "(E5).* |
| Sustainability Initiatives | | - | As they are pressured to operate sustainably, they have been involved in social and environmental projects as well on certifications related do sustainability. | *As a social project, we have a school in the countryside, which is a partnership with the [multinational supplier of agricultural inputs]. This is a project where we value environmental issues that make the child who studies at school, in the countryside, proud to live in the countryside (...) (E2)*<br><br>*As the farm is certified and we serve several customers worldwide, these customers have many environmental and social requirements. (E8)* |

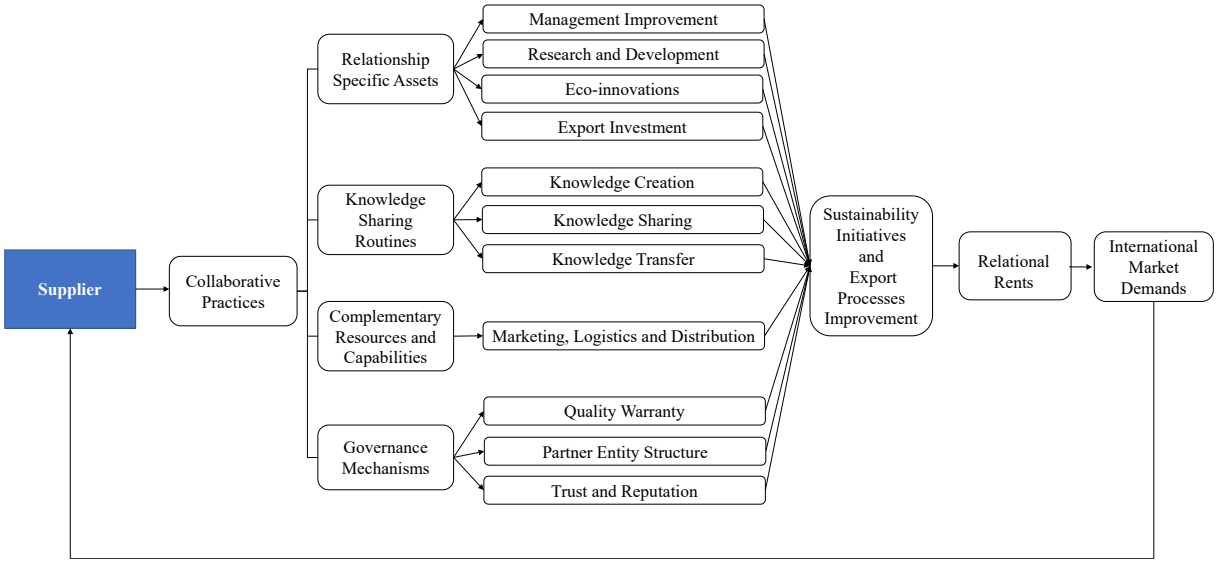


Figure 2. Relationship among collective practices, sustainability and relational rents of emerging country suppliers in global supply chains