



Social sustainability in the food value chain: what is and how to adopt an integrative approach?

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Abstract

Despite sustainability is a trending topic in the literature, the analysis of the social dimension in the food industry is almost neglected due to its complexity and the lack of an integrative approach. This research intends to advance on its conceptualization by incorporating multiple insights from stakeholders at various levels of the food value chain. It also aims at analyzing current challenges and problems, its scope and key actors to improve social sustainability initiatives throughout the food value chain. Through a qualitative-exploratory approach by in-depth interviews with high-level authorities, this research explores its scope and implications for the food industry. Findings suggest that sustainability in the food value chain cannot be achieved without considering the social dimension. Social sustainability should include not only human and labor rights but also living conditions, quality of life, food safety, cultural nuances, vulnerable groups and final customers through international agreed instruments. Social sustainability will only be possible with the commitment of all actors and good traceability systems from the seed's recollection to final distribution. Actually, the Sustainable Development Goals can become a good starting point to involve local, national and international government levels on a joint effort with other actors beyond the industry, always considering the specificities of the region under analysis.

Keywords Sustainable development goals · Social sustainability · Food value chain · Food industry · Qualitative data analysis · Developing countries

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1 Introduction

Since its apparition in the Brundtland Commission Report in 1987, the concept of sustainability has become a trending topic; it proposes a present development without compromising future generations in accordance with the three dimensions: economic, environmental, and social (Brundtland 1987; Elkington 1994). In 2005, the United Nations (UN) integrated the “sustainable development” concept as part of its activities and achievements and including the triple bottom line logic by encompassing people, profit, and planet as value of investments that may accrue outside a firm’s financial performance (Elkington 1994). Ever since, UN has encouraged governments to adopt the sustainable development (Rio Declaration on Environment and Development 1992; Labuschagne et al. 2005), by reaching a high consensus among many stakeholders involved in business decision-making processes as it creates synergies between planet, people and profit (Engert and Baumgartner 2016).

Consequently, corporations started paying more attention to other objectives beyond profitability, namely environmental protection, social equity, and economic prosperity (Bansal 2005; Toussaint et al. 2021a). However, those companies usually operate through complex structures, as they are part of large systems or supply chains, whose overall performance depends on the performance of other organizations in different stages and processes (Van der Vorst 2006; Zhu et al. 2013; Maestre et al. 2017). Thus, it is necessary to look not only the firm itself but outside to improve exchanges (material, information and capital) and cooperation throughout the supply chain; only with this approach it would be possible to address both customer and stakeholder requirements linked to the aforementioned dimensions of sustainability (Seuring and Muller 2008; León-Bravo et al. 2021).

These circumstances are specially challenging for the food industry, who is responsible for 1.1 billion people engaged worldwide, accounting 31% of the global employment (ILO 2014). It means, approximately between 300 and 500 million waged workers depending on the food industry, where most of the workforce comes from developing countries. In this line, the United Nations (UN) stablished the Sustainable Development Goals (SDG) to deploy a more sustainable world, including food-related challenges. The 2030 UN Agenda for Sustainable Development explicitly calls for more integrated approaches to ensure no one is left behind (UN 2021). By adopting the 2030 Agenda and undertaking the necessary activities towards the achievement of the SDGs, countries reinforce this commitment, being also applicable to the industry and any other stakeholder involved. Particularly, the SDGs linked to social sustainability with direct or indirect impact in the food industry are: SDG 1—End poverty in all its forms everywhere; SDG 2—End hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 5—Achieve gender equality and empower all women and girls; SDG 8—Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; SDG 10—Reduce inequality within and among countries; and SDG 17—Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The achievement of the SDGs is necessary to overcome the main problems in the food industry, putting aside the idea of optimizing the supply chain of the focal firm and considering stakeholders throughout the entire value chain. It means taking a broader perspective integrating producers and communities both from an economic and social approach (Gereffi and Lee 2016). Thus, the Food Value Chain (FVC) becomes the key object of analysis to better understand sustainability in the food industry.

Despite the importance of the food industry, studies on FVC are very limited (Toussaint et al. 2021b). There is some evidence on sustainable initiatives in supply chains across all levels, from the agricultural sector to the distribution industry (Soysal et al. 2012; Beske et al. 2014; Fredriksson and Liljestrand 2015; Soto-Silva et al. 2016), but they do not offer the required integrated approach of the value chain (Maestre et al. 2017; Dupouy and Gurinovic 2020). For instance, it is important to stress the differentiation between value chain and supply chain. On one hand, the value chain is defined as the series of activities that add value to a product; while on the other supply chain is the integration of all activities involved in the procurement, conservation and logistics of the product. Indeed, the literature have been highly influenced by supply chain management research (Scholten and Schilder 2015), focusing on the main aspects of environmental and economic perspectives (Zhu and Sarkis 2007; Vachon and Klassen 2008; Green et al. 2012; Zhu et al. 2013). It implies an important imbalance between studies on environmental and economic sustainability in the supply chain and the social sustainability ones (Seuring and Muller 2008; Pagell and Wu 2009; Gold et al. 2010; Ashby et al. 2012). In general, the literature on social sustainability has been left apart and somehow ignored (Surbeck and Hilger 2014; Whitelock 2019). This disparity implies a problem and an important limitation to further study social sustainability in value chains (Foerstl et al. 2010; Sancha et al. 2016; Whitelock 2019).

In fact, as sustainable food system requires favorable outcomes in the three dimensions of sustainability, including balance and more equitable benefits for society along with positive economic and environmental impacts (FAO 2018). This study aims at analyzing the current challenges and problems that the conceptualization of social sustainability has within the FVC approach. It intends to provide a greater understanding on the scope of social sustainability and defining who the key actors are to ensure good social practices along the FVCs by incorporating the reflections and perspectives of different stakeholders (Maestre et al. 2017; Dupouy and Gurinovic 2020; León-Bravo et al. 2021).

As the topic is highly novel and complex, including the conceptualization of social sustainability, the research adopts a qualitative and exploratory method applied through the Grounded Theory analysis (Johnson 2015; Minten et al. 2016). This approach helps at identifying core concepts, descriptions and relationships among different categories to gain a better understanding of the topic. With this aim, the sample includes 19 high-level experts, who have provided new insights on social sustainability in FVCs through in-depth interviews. The sample was carefully chosen, requiring all experts to be involved in decision-making processes and social projects to obtain a broader and highly specialized perspective on social sustainability. The insights provided by the experts help to address the gaps identified in the literature on social responsibility in FVCs and let analyze the following research questions to provide more clarity and a better understanding on the conceptualization of social sustainability:

- RQ 1. What does the concept of social sustainability encompass? And what should social sustainability in FVCs include?
- RQ 2. Which actors should be involved in the development of social sustainability in FVCs? And how can social sustainability be measured in FVCs?
- RQ 3. What are the main social problems affecting FVCs?

The structure of this paper is as follows. The second section reviews the literature and theoretical background on social sustainability and its presence in FVCs-related literature. The third section details the methodology, with an in-depth explanation of the recaptured approach. Later, findings are described, including a discussion about the results obtained.

The paper finishes with discussions and integrates not only the main theoretical and practical implications, but also limitations and future research.

2 Literature review

2.1 Social sustainability: a complex concept in the supply chain

Despite that the sustainability concept includes social aspects, it was not until the last decade when the social dimension was commonly integrated in the analysis of sustainability (Ghahramanpouri et al. 2015). It is the vaguest and least explicit dimension in theoretical and practical attempts in comparison to economic or environmental sustainability (Vifell and Soneryd 2012; Ballet et al. 2020; Toussaint et al. 2021b).

Due to the lack of consensus, there is no official definition of social sustainability (Bramley et al. 2006; Ghahramanpouri et al. 2015). For example, scholars studying developing and emerging countries tackle food safety, labor and work conditions (e.g., minimum wages, freedom to associate, health and safety), child and forced labor, (Agyemang et al. 2020), human rights, community development and ethical issues (Zorzini et al. 2015). While other scholars analyzing developed countries pose a different perspective by conducting research on how firms can enhance social sustainability when working with an upstream or downstream partner without considering the first chain linkages (Seuring and Muller 2008; Sancha et al. 2015; Yawar and Seuring 2017).

For academics and practitioners, social sustainability predominantly focuses on how companies become responsible in their purchasing decision throughout their supply chain (Hutchins and Sutherland 2008), suggesting a simple extension of a company's corporate social responsibility (Nunes et al. 2020; Toussaint et al. 2021b). For instance, in some cases it was considered as a mere code of conduct to be accomplished in a mutually inclusive and prudent way (Lafferty and Langhelle 1999; Sharma and Ruud 2003). However, this ethical approach it is not sufficient for global supply chains, where do co-exist vulnerable workers (including evidence of child labour), with hard-working conditions in export-oriented industries in emerging and developing countries (Lund-Thomsen and Lindgreen 2014).

Social sustainability in supply chains is thus living in a continuous discussion, trying also to define the scope of social performance (Gimenez and Tachizawa 2012; León-Bravo et al. 2019; Whitelock 2019). Some scholars contemplated a company's social performance in the supply chain as the reputation or legitimization of companies (Gimenez et al. 2012), while others mainly considered the working conditions (De Giovanni 2012). Nevertheless, the integrative approach was also considered, incorporating the working conditions and social reputation (Golini et al. 2014; Gualandris et al. 2014). It means understanding the management of social sustainability, including those skills and abilities of employees, but also social values and relationships with the community (Ballet et al. 2020). Therefore, the social performance, also called corporate reputation, entails two main dimensions (de Castro et al. 2006), the business reputation (contact with stakeholders connected with the firm, e.g., customers, suppliers, employees), and the social reputation (perceptions of those stakeholders not related with the day-by-day activities, e.g., investors, communities).

Consequently, monitoring social sustainable practices and working conditions in supply chains is a huge challenge, mainly in developing countries (Mamic 2005; Ehrgott et al. 2011; Garetti and Taish 2012). The lack of studies on social performance and social sustainability makes it an ongoing debate on what constitutes social sustainability (De

Giovanni 2012). As aforementioned, it is also challenging to identify universal dimensions and criteria due to the absence of conceptual clarity in both developed and developing worlds (Gugler and Shi 2009), although it tends to be more challenging in developing countries (Gopal and Thakkar 2016; Agyemang et al. 2020). Then, it is highly important and necessary to identify who is the target audience, what issues should be addressed, what are the key actors, and how to implement good social practices (Wood 2010). The implementation of social sustainability practices is not straight, and they depend upon the stage in the supply chain and also the institutional pressure, making its application more and more complex (León-Bravo et al. 2019).

2.2 Social sustainability in the food industry

Sustainability is an emerging concept in the food supply chain (Genovese et al. 2017), which includes different initiatives as the prevention of food waste by consumers' behaviors, the implementation of proactive strategies to enhance sustainable performance, strengthening national control systems to achieve food safety and the transformation of the food system to increase farmers' income (Glover et al. 2014; Zhu et al. 2018). Particularly, the literature has made important efforts to measure the sustainability performance. Van der Vorst (2006) suggests that it requires a set of financial and non-financial measures, including not only costs, quality and safety but also indicators related to the triple bottom line. Aramyan et al. (2007) consider food quality as a multidimensional performance and take elements, such as productions and distribution costs, profits, inventory and return on investments as efficiency in food chains. Bigliardi and Bottani (2010) develop a balanced scorecard for the supply chain including four perspectives, i.e., financial, customer, learning and growth, and internal processes. Manzini and Accorsi (2013) propose a framework that considers quality, safety, sustainability and efficiency, where products and processes should be considered in the entire supply system. However, those approaches underrepresent the social dimension in the value chain due to its complexity to quantify social factors and embed them in a mathematical framework (Eskandarpour et al. 2015).

Furthermore, scholars have also tried to integrate different social performance parameters into the food supply chain decisions (e.g., job creation, job losses, potential damages). Some examples are the Mixed-Integer Linear Programming models for redesigning the network of production plants including production plants, suppliers, distribution hubs and customers (Aramantzi and Minis 2017), or the adoption of the triple bottom line approach in the designing of a multi-echelon closed-loop network (Devika et al. 2014). Other authors have used scores for potential locations of new plants based on social performance indicators like Gross Domestic Product and the unemployment rate in different geographical areas (Varsei and Polyakovskiy 2017). The underlying idea is quantifying social sustainability through different metrics considering employment opportunities, social community development and labor conditions throughout the value chain (Martins et al. 2019).

Nevertheless, those attempts are highly influenced by the supply chain management research (Scholten and Schilder 2015). The concept of supply chain management comes from the idea of optimizing the supply chain of the focal firm, reducing its costs and improving the company's competitiveness. However, modern food chains are characterized by a strong vertical coordination, that is the synchronization of successive stages in value chains (Swinnen and Maertens 2007). Vertical coordination consists of exchange of information by providing inputs and technical support, through rigorous contracts (Goodhue 2011). It means that the value chain analysis requires a broader perspective,

including producers and communities (Gereffi and Lee 2016). This approach is not commonly applied in literature, but it is necessary to better understand the complexity of the social sustainability concept. So far, efforts provide interesting findings, but they lack the existing diversity inclusion in the FVC (from up to bottom), which hampers the implementation of social guidelines to food-company managers.

3 Methodology

3.1 Research approach

As this research intends to gain a better understanding of social sustainability in FVCs, it follows an exploratory qualitative approach, requiring an *ex-ante* conceptualization due to the lack of consensus (Bramley et al. 2006; Ghahramanpouri et al. 2015). Furthermore, it applies a broader perspective focusing on the entire value chains approach, instead of taking the supply chain, including the economic and social impacts (Gereffi and Lee 2016). This approach is particularly useful for several reasons. First, the nature of the topic is difficult to quantify (Mani and Gunasekaran 2018). Second, the complexity of social issues makes it complicated to measure in comparison to economic and environmental ones (McKenzie 2004). Third, the lack of terminology and studies on what social sustainability is and what entails throughout FVCs makes it necessary to find new insights (Gugler and Shi 2009; Gopal and Thakkar 2016).

To attend those challenges, this study uses the Grounded Theory, a common method for the empirical analysis in social sciences (Johnson 2015). This method allows to generate new theory or conceptual propositions from data (Strauss 1987) as it offers a logically consistent set of data collection and analysis procedures aimed to develop theories (Charmaz 2001: 245). Following the three basic elements of the Grounded Theory: concepts, categories and propositions (Corbin and Strauss 1990: 7).

3.2 Data collection and sample

Aiming at collecting technical and practical information on social sustainability in FVCs, the research uses semi-structured in-depth interviews with open-ended questions (Minten et al. 2016). The sample selection is judgmental for the analysis, wherein the main requirements for selection were the following (1) high-level job positions or high-quality experience on the topic; (2) areas of expertise should be on sustainable development, social sustainability, value chains, sustainable food, all these within the food sector; (3) coverage worldwide to counterbalance views and approaches; and (4) key actors in the food sector. Also, as the topic analysis is global, the sample includes different type of organizations and entities, regardless of its nature (public or private) and nationality. Thus, a total of nineteen interviewees were selected, including directors, senior managers and policy decision-makers worldwide, whose work is directly linked to development activities on social sustainability, sustainable food, and value chains in the food industry. Representatives from the food industry, academia, international organizations, associations and other organizations, among others were interviewed. Table 1 details the sample's information. With the aim to provide international data, most interviews were in English, but some of them were also in Spanish. Interviews in Spanish were translated into English to avoid any potential problem while analyzing the information. This sample enables to compare information from

Table 1 Information of the interviewees

No	Country	Type of organization/entity	Region of Influence	Position	Main area of work	Duration (minutes)
1	France	Industry Association	International	Director	Sustainability	30
2	Spain	National Organization	National	Director-General	Biological Science	30
3	Netherlands	Industry Association	Europe	Secretary	Labor Relations	40
4	Guatemala	NGO	International	Senior Expert	Sustainability and Food Supply Chain	40
5	USA	International Organization	International	Head of Unit	Transportation and Maritime Engineer	80
6	Spain	Industry	International	Director	Social Sustainability and Marketing	50
7	Portugal	Industry	International	Director	Sustainability and Corporate Social Responsibility	70
8	Spain	Industry	Europe	Director-General	International Law and Relations	90
9	Venezuela	International Organization	International	Officer	Law and Policy	55
10	Spain	Business Organization	National	Managing Director	Business Science	50
11	Belgium	NGO	Europe and Africa	Coordinator	Small-Scale Industry and International Relations	50
12	Nicaragua	International Organizations	International	Officer	Law and Policy	50
13	Colombia	NGO	International	Manager	Environmental Science and Management	55
14	Venezuela	Industry	International	CEO/CSO	Economics and supply chain	50
15	Morocco	International Organization Regional Organization	International Regional	Former Director Consultant	Fisheries Policy and Economics	65
16	Spain	Advisory Council	Europe	Executive Secretary	International Law and Policy	60
17	Spain	Business Organization Employers' Association Industry Association	National Europe International	Secretary-General President	European and International Law	45
18	Spain	NGO	Southern Europe and Latin America	Director	Buyer Engagement and Markets	55

Table 1 (continued)

No	Country	Type of organization/entity	Region of Influence	Position	Main area of work	Duration (minutes)
19	Mexico	Government	National	Minister Counselor	Fisheries Affair	60

different perspectives to cover the maximum data and approaches on social sustainability in the FVCs: definition, main problems, potential effects, possible solutions and key actors.

Additionally, the development of the script was key, which intended to come up with more clarification from general concepts to come up with a contextualization of the study (see Appendix). The main elements were:

- Definition and scope of social sustainability within the concept of sustainability
- Key actors and measurement of social sustainability
- Contextualization of FVCs linked to social sustainability
- Good practices in social sustainability to improve FVCs

The interviews were conducted from September to December 2019. The fieldwork and the further analysis include data and information from the nineteen semi-structured interviews (Table 1). The interviews were conducted face-to-face and telematically. In order to collect the exact data from the sample, all interviews were recorded with the proper authorization by agreeing an ex-ante anonymity to make them feel free to answer all questions without compromising their job positions and the organization or entity. These recordings are the main source of information of this research. For the further analysis of the main source of information, all interviews were transcribed verbatim word-by-word to avoid any lack of clarity, helping to achieve maximum neutrality. This study considered all the point of views obtained from the content analysis in the findings and conclusions.

3.3 Data analysis

The software used for the data analysis was Atlas.ti©, a qualitative tool, which facilitate the analysis by using codes, networks, relations, and annotating functionalities (Johnson 2015). For the analysis of the data, the nineteen interviews were transcribed verbatim (word-by-word) and uploaded into the software, allowing the data analysis to be accurate. Once uploaded, each transcription was carefully assessed, where participants' quotations were coded using in-vivo codes to analyze the data and develop codes upon participants' language (Corbin and Strauss 2008). Codes into first-order topics reflect the component code elements by using common threads connecting the initial codes (Johnson 2015). Subsequently, these first-order categories were axially coded to build the emergent framework of the findings (Corbin and Strauss 2008). Then, the selection of codes was applied to unify the core categories, which need further explanation. In the data analysis, codes are the following: sustainability, environmental sustainability, economic sustainability, social sustainability and FVC. On one hand, Fig. 1 shows the main words based on the language and repetition of words on social sustainability, including its scope, key actors, and other relevant issues. For instance, words such as people, access, work, conditions, employments were the words which are more linked to the concept "social sustainability". On the other, Fig. 2 shows the categories of social sustainability and FVCs as these two are the principal areas of study based on the interviewees' language and repetition of words. Based on the Grounded Theory, this figure also reflects the interrelations among the main concepts identified in the data collection process; Fig. 2 includes the three pillars of sustainability and their importance, as well as the main areas identified by interviewees to understand the social sustainability in FVCs. It was used as a guidance to analyze the main areas of the conceptualization of social sustainability.



Fig. 1 Cloud of words based on the interviewees' language

Once having set the codes and categories, a series of networks connecting them were necessary to understand the data. Finally, the analysis concludes with the exhibition of results in Sect. 4 through an extensive narrative (Johnson 2015). As the software provides the option of “memos”, they were used to make relevant and important annotations for the analysis of the data.

4 Findings

As interviewees are working in sustainability and had been involved in policymaking and in the development of sustainable standards (in some cases within the whole value chain), they do provide myriad insights related to social sustainability in FVCs. As reflected in Table 1, some interviewees hold more than one job position, enriching their contributions regarding their professional careers (e.g., industry and civil society, among others).

While interviewees confirmed some concepts already established in the literature, they also illustrated new findings in this topic, which are relevant for the conceptualization of social sustainability. Indeed, the relationships among key concepts obtained after the analysis let identify interesting relationships (Fig. 2). The figure shows the network created from the codes used for the analysis of interviews, separating the concept of social sustainability from FVCs, but connected by common dots. Thus, the identification of the main problems, key actors and potential solutions contributed to come up with possible measurements for social sustainability along FVCs, and its interdependency with environmental and economic sustainability.

This section starts with a deep analysis on social sustainability within the definition of sustainability. Next, it suggests propositions to ensure social sustainability, including an understanding of the current challenges and good practices within FVCs, before finishing with a conceptualization on social sustainability in FVCs. All reported information is derived from the interviews.

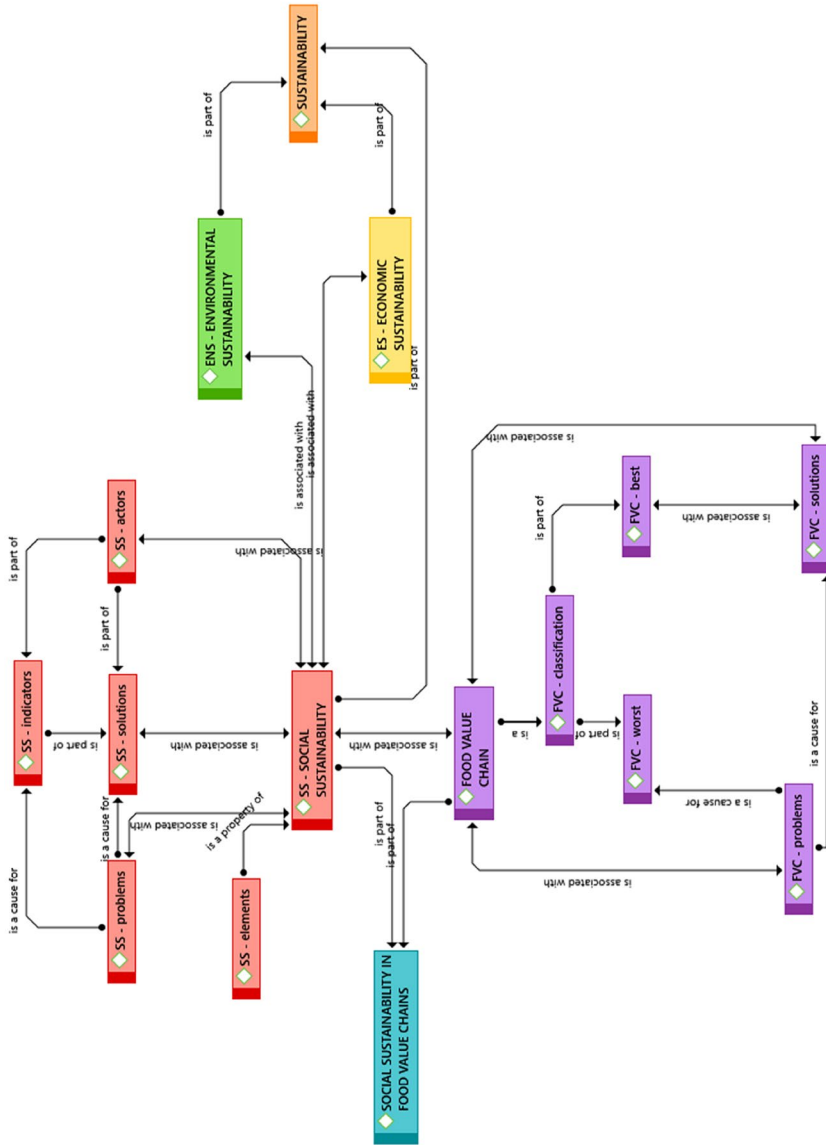


Fig. 2 Interconnectivity among main topics of social sustainability in FVCs

4.1 Definition and concept of social sustainability

Interviewees were familiar with the concept of sustainability given by UN (Brundtland 1987). Particularly social sustainability was mainly related to human beings, encompassing people's activities, their workspace, and in their daily life and personal development over time. A common idea was reflected from interviews, it is an extremely complex concept to define.

Specifically, social sustainability is predominantly associated to working conditions in terms of working hours, workspace accommodation, occupational risks preventions, safe work environment, medical gear, medical care, health protection, social protection, recruitment process, abuses and violations of labor rights at workspace, economic compensations in cases of unemployment or injuries, repatriation in case of accident or dead, payment methods and receipt of payments. Zorzini et al. (2015) and Agyemang et al. (2020) stress the importance of human rights, considering communities and ethical issues, several interviewees agreed that it should be included the respect of human rights for everybody with a special focus on vulnerable people, such as child, young people, women, migrants, disabled people, elderly and unemployed people, but also the respect of communities, their culture and traditions:

Ensuring everybody's rights is fundamental; however, we have taken it for granted although this is not happening all over the world. We must start by giving proper working conditions, where the human and labor rights are protected.

Therefore, it is noted the difficulty of clarifying social sustainability into one definition as it goes beyond working conditions. This confirm what Gopal and Thakkar (2016) mentioned about the difficulty to identify what social sustainability is due to the lack of clarity. It may include also access to basic resources, food security, well-balanced diet, education and training to have a proper livelihood, while it should contribute to the preservation of the environment and to pass on future generations:

Livelihood, employment, food security are key pillars of the social component. It is not only employment, it is not only food, it is not only livelihoods, but it is also medical services, access to education, access to potable water, access to electricity, access to basic needs.

It means that a generation can continue developing living and working activities with dignity, managing resources sustainably and to be maintained over time, including the location and the cultural distinctions:

Social sustainability is not the same for everybody, what it is applicable here it might not be in another part of the world due to traditions, cultural nuances and ways of living.

The implementation and enforcement of international instruments are key on securing social sustainability, particularly in national and regional policies to ensure not only the extraction of a natural resource sustainably:

The need to integrate international legal framework into national policies to secure natural resources, as the exploitation of a resource also affects people.

Summarizing, the concept of sustainability can be achieved when there is a balance among the social, environmental and economic dimensions (Brundtland 1987;

Elkington 1994; UN 2005). Data helped to provide more clarity and expand the scope of what is social sustainability, where the social dimension goes beyond one concept, where human and labor rights are fundamentals, but also working and living conditions, cultural nuances and vulnerable groups should be taken into consideration. Cultural distinctions and geographical locations should be included under this concept. The social sustainability can thus be achieved through international instruments and its enforcement into national-scale laws and policies.

4.2 Ensuring social sustainability along the FVC

The vulnerability of workers, including child labor, with hard-working conditions still exists (Lund-Thomsen and Lindgreen 2014). One of the biggest problems of unsustainable social practices are the victims. Victims are workers involved from the very first to the last stage of the FVC. Although many victims are present along the value chains, the lack of information difficult their identification, mainly in the food industry. It makes not possible to reflect the reality because forced labor is today largely uncovered, and important violations with human and labor rights are taking place. Indeed, labels for products do not guarantee good social practices as some products can hold an environmental label for their products, while having other victims behind (slaves, children work). According to ILO (2014), employment in the food industry represents 31% of the global workforce. Therefore, the importance of information about labor rights and bad working conditions is required within the FVC. However, this is less covered by media, putting consumers out of play when it comes to purchasing decision (Toussaint et al. 2021a,b). Thus, if consumers were aware of what is happening or how a product was made, maybe their purchasing decision could change:

The need to make sure that people are aware of these types of situations and that they understand the impact on people, communities, livelihoods from those commodities.

It is necessary to increase the traceability and transparency in FVCs to avoid potential problems and to share the information among all actors. In addition, the importance of reinforcing existing international instruments on human and labor rights, minimum requirements of working conditions and labor conditions, and a shift in national policies, particularly in developing countries, to ensure food for local communities and population in general is needed. An inclusive sustainable economy contributes towards the social improvement:

We must work in an economic model that allow us to be more inclusive with all people involved in the whole FVC. We must support vulnerable people and include them towards the sustainable economy.

Ensuring social sustainability is responsibility of each actor involved direct and indirect in the FVC going from the political level to action: industry, associations and organizations, academia and consumers. It is thus necessary to look not only the firm itself, but outside the individual company to improve exchanges (material, information and capital) and cooperation throughout the supply chain (Seuring and Muller 2008). All actors involved along the FVC must know their roles, responsibility and expectations. However, governments have a relevant position in laws and policies, and the industry must meet and implement them. This, in cooperation and consultation with relevant stakeholders, such as academia or research institutes to give scientific guidance, and NGOs and civil society to

counterbalance powers. Nevertheless, some NGOs have their own campaign and interests. International organizations are key actors to establish an international framework to assist and provide technical guidance to countries.

Despite the difficulty to measure social sustainability, interviewees expressed strong support for international instruments, such as the SDGs by the UN, as a frame to be followed by countries together with other existing international standards. The SDGs are goals where Members Countries have committed to achieve them in 2030, leaving no one behind (UN 2021). These SDGs are applicable to any actor worldwide, such as governments, industry, and any stakeholders. It means that social sustainability has a multi-dimensional approach, as it has to be analyzed into three levels. This multi-dimensional approach includes not only the contractual part but also it should consider cultural and traditional aspects, especially in local communities, environmental issues, know-how, among others. First, local level, whether a community exploits a natural resource, having proper livelihoods, access to basic needs, including education, and infrastructure enough for the development of their activities. Second, national level, possessing different rates to analyze the real situation of a country, such as gender equality, employment, income per capita, inclusion, education, entrepreneurship, health at work and for the wellbeing of the population, mobility and mortality, among other, and the investment of a government in terms of social protection, education and access to water, services, roads. Third, global level, international indicators conceptualizing and covering all elements of the social dimension above-mentioned in order to analyze the progress of those concepts over the time. For instance, the SDG indicators could serve to measure social issues worldwide as countries have committed to achieve those goals. These measures allow the easy identification of a problem to act and tackle it.

4.3 Main challenges to safeguard social sustainability in FVCs

Although the concept of value chains was defined by interviewees as the sum of activities that adds value to a product from its origin up to final consumers, some other elements were noted. Most interviewees make a distinction between small-scale and large-scale/industrial chains, as well as different types of FVC. Companies usually operate through complex structures, becoming part of large systems or supply chains, whose overall performance depends on the performance of other organizations in different stages and processes (Van der Vorst 2006; Zhu et al. 2013; Maestre et al. 2017). Thus, the FVC has different stages, starting with the harvesting of a raw material (extraction), next this raw material passes through an elaboration process, sometimes even a second processing adding value to the product, followed by packing, distribution, commercialization and consumption. Interviewees mentioned other aspects that should be considered as part of FVCs, which are identified even before the origin of the raw material, such as the preparation of gears and equipment, rights, permissions and authorizations, credits and loans, and recruitment processes; and at the end of a product's life possible options in terms of the reintroduction of a product into the system are considered within the FVC.

When comparing the different stages of the FVC in terms of social sustainability, interviewees agreed that retailers and wholesalers are more organized, where human and labor rights are normally protected. This is because retailers and wholesalers usually have to apply more restrictive legislation and they are subject to labor inspections and other controls. The stages facing problems on social sustainability are mainly the primary producers/extractors/collectors of raw material and those workers at processing plants.

The micro-SMEs and small-scale segments are also affected by the lack of good social practices.

Nevertheless, interviewees pointed out that the lack of law enforcement capacity, the significant difference of bargaining power between small and big companies and the market price are some examples where some firms and part of the industry take advantage of vulnerable people. Sometimes, when a country is not capable to enforce its national laws and legislation due to specific situations such as corruption, there are some companies who prefers to skip the law and do it as its own way. Injustice, illegality and exploitation of workers are hidden in both developing and developed countries. Particularly, monitoring sustainable practices and working conditions in supply chains are huge challenges from the social sustainability viewpoint, mainly in developing countries (Mamic 2005; Ehrgott et al. 2011; Garetti and Taish 2012). The lack of infrastructure limits the activities of actors at the first stage of the value chain, and the lack of formation, as most people working at the bottom have barely education (sometimes do not know reading and writing):

In developing countries workers are being exploited and trampled by many people from developed countries, where all these situations are unseen. The main problems are the illegality and its absence of implementation at work along the FVC.

Therefore, the FVC has become more complex since there are many people involved, where some actors hide their activities and actions. They take advantage of its complexity to avoid responsibilities.

4.4 Good social practices within the FVC: potential solutions

In order to deeply understand where the problem lies, it is necessary to evaluate all stages of the FVC at the same level in terms of social issues. It starts with the education, qualification and recruitment processes, and the acknowledgment of a priori understanding of their working conditions. Here, some misinformation was identified as a problem:

There are countries that have many people working in an illegal way. However, for these workers is the only way of work because they only want to have a job so they can send money to their families. They recognize that it is not the best situation but if they have a job, they are happy. But, once employees know their rights, it is hard to understand for them.

Moreover, governments and industry, mainly big retailers, are the main influencers for promoting social sustainability in the whole FVC. This is because big companies have a high influence in a third country where a product is elaborated. To promote good social practices, policies should ensure the same 'level playing field' in terms of requirements among fiscal policies, as smallholders are affected by this, including micro-SMEs and self-employed people. Also, in terms of sustainability, for consumers it appears that smallholders are not being sustainable as they cannot afford a private certification system to prove sustainable activities.

Transparency was stressed by most of interviewees as an important issue to make social sustainability practices and information available for everybody. Actors along the FVC should receive money from their products equitably, as sometimes intermediators between producers and the final buyer take advantage to earn even the triple of the price that they paid to producers. Therefore, transparency will especially help producers to increase their

bargaining power. Indeed, the transparency to consumers on product information can influence their purchase decision:

We talk about the consumers' purchasing decision, but if we do not give the right information, how will the consumer decide? If big companies are pressured to sell products socially and environmentally sustainable, they will fix the problem in a short period of time, as they have the tools.

In short, to ensure good social practices, the whole value chain should be committed to address the problems from bottom to up, and not only companies working with an upstream or downstream partner (Seuring and Muller 2008; Sancha et al. 2015; Yawar and Seuring 2017). This will help to make a fair distribution of costs and benefits among all actors involved throughout the value chain. In terms of certification schemes, the environmental cost should also reflect all social aspects without an extra cost, as that would mean an extra burden for producers. Nevertheless, good social practices should be not only by legislation, procedures, labels, but in the daily practice of people's purchasing behavior.

4.5 Conceptualization of social sustainability in FVCs

The three pillars of sustainability are closely connected (Brundtland 1987; Elkington 1994). On one hand, climate change and environmental impacts have repercussions on social aspects, mainly in the livelihood of families and communities. On the other, the economic dimension is interconnected with the social one as the economic aspects can help to ensure better working and living conditions.

For instance, the development of social sustainability in FVC requires an integrative deal. In addition to decent working and living conditions for all actors involved in the FVC, the need for a better balance among operators is a must; the agricultural production should be recognized with an equivalent remuneration compared to the industry, that is, stable jobs and the possibility to grow. Access to information, new markets, and training can facilitate the social sustainable goals. Moreover, it is the capacity of each actor at different stages to give value to those people participating in the FVC, not only about decent working conditions but also legality, grievance mechanisms and transparency on how activities are being developed. The support of governments and private companies mainly in the first part of FVC is essential for accomplishing the social sustainable development.

Although interviewees had difficulty in defining social sustainability in FVC, the following quotation is paradigmatic in this regard:

Social sustainability in FVCs is the capacity of each one of the different stages to respect all actors involved along the value chain in the food industry, and to give value to those people involved –i.e., workers, owners of companies, society, communities, etc.- in the elaboration of a product, to be able to transmit that value into the next stage from the beginning until the final consumer. At the end, that value should be returned to those communities or countries to progress in terms of employment, wealth, education and quality of life but preserving their traditions and cultural background. In each stage of FVCs should be fairly remunerated, protecting and respecting human and labor rights.

In summary, social sustainability in food value chains involves a joint and coordinated effort of all actors (top–bottom approach) directly or indirectly involved along the value chain. It should be led by focal companies and governments to ensure working

and living conditions of people and communities, facilitating the access to education and basic needs, wealth distribution, future development, accomplishing global policies and respecting people regardless of race, culture, religion or any other sort of discrimination. Therefore, it should be detailed in transparent global standards being adapted into different nuances and contingencies at different levels—i.e. local, national, regional and global. This must be accompanied by social dialogues, where unions, governments, international organizations, the industry, and NGOs should be consulted in policy decision-making processes. Other relevant stakeholders should be also involved, such as scientists (for further guidance) and media (to share the efforts achieved). Those stakeholders should assess the accomplishment and communicate the achievements in every field to develop a win–win roadmap based in common and multiple-perspective interests. In addition, social goals can only be fully achieved when the economic and environmental sustainability becomes integrated into the activities and purposes.

5 Discussion

5.1 Theoretical implications

This study adds new insights to food policy literature by exploring its social dimension in FVCs from different angles. This approach is particularly valuable as the food industry has a high influence in emerging countries. Although previous studies have acknowledged sustainability as an emerging concept in the FVCs (Genovese et al. 2017; Beske et al. 2014), their approach was highly influenced by the supply chain management research, having the firm or company as the central focus (Beske et al. 2014; Fredriksson and Liljestrand 2015; Scholten and Schilder 2015; Soto-Silva et al. 2016). From a theoretical point of view, this manuscript provides new concepts by taking FVCs from a whole perspective, something hardly to find in current research and in a wide concept as social sustainability is.

In this regard, this study provides some ideas to enrich the theory associated to social sustainability. First, this research integrates the stakeholder theory approach, as it includes different perspectives that would favor a higher institutional legitimacy in the entire value chain (Ehrgott et al. 2011; Gimenez and Tachizawa 2012; Whitelock 2019). Thus, this contribution explores the concept of social sustainability beyond a company's corporate social responsibility (Hutchins and Sutherland 2008; Toussaint et al. 2021b), where the company is the central actor; however, it also requires the direct participation and contribution of governments, associations, non-governmental organizations (NGO), media and any other relevant stakeholders as the institutional pressures are relevant (León-Bravo et al. 2019,2021). The problem of not having a clear concept of social sustainability difficult the interconnectivity among its scope, measurement and information at a global, national and local levels (Gopal and Thakkar 2016; Gugler and Shi 2009). Thus, this study helps at clarifying the concept and providing a potential outline to gain a greater understanding on social sustainability and, therefore, a set of potential indicators to measure the social dimension. Second, the definition of those indicators, with an adaptation to the contingencies and realities of each country, may facilitate future developments in research, with better information to make policies and even purchasing decisions. As a theoretical implication, this integrative approach would encourage the implementation of a better legitimacy and recognition from society (Dupuoy and Gurinovic 2020; Mani et al. 2018). Third, this contribution highlights the importance of studying more social sustainability in FVCs as it

is underrepresented in the literature, including the supply chain literature (Eskandarpour et al. 2015). Nevertheless, this approach would be limited if it does not integrate all stakeholders involved, as their joint activity makes it possible the whole value chain to work. Therefore, the continuation of ongoing debates of what social sustainability is, and a better framing is necessary to achieve a higher consensus or, at least, an international understanding of this concept and reflecting different levels of development.

5.2 Managerial implications

Despite sustainability is getting more attention, even into a regional level, the concept is misused because its three pillars -economic, environmental and social- are not balanced (Ballet et al. 2020). Sustainability is usually associated to environmental issues, and it is necessary to raise awareness about the lack of the social perspective. Social sustainability is considered the most difficult to explain due to its subjectivity. This is because it is highly dependent on the context; some countries have a stronger enforceability and applicability of national and international standards and policies to secure better practices within the countries. Therefore, its definition should be inclusive, considering all possible angles of the social dimension. Normally, it is linked to people and the development of their daily activities. It encompasses the application and protection of human and labor rights for everybody, regardless their geographical localization, race, age, sex or any other sort of discrimination. While social sustainability has recently been subject of study, it is normally related to working conditions. However, the concept goes beyond, it may include living conditions -i.e. access to basic needs and decent housing-, and food security. This can be achieved mainly with the support of governments and the food industry. Governments by developing policies and enforcing its implementation; and the industry by applying and respecting policies and standards. Additionally, international organizations can support countries by providing the legal framework and technical guidance for the implementation into national legislation, the SDGs defined by the UN become an interesting starting point as they suggest challenges that encompass social issues and food-related challenges. Policymakers should collaborate and consult unions, associations and NGOs in order to be inclusive in their policy decisions and processes.

Furthermore, there is a scarcity of studies on value chains, mainly in the food industry. There are studies on sub-sectors of the food industry, e.g., coffee, tea, bananas, but the food industry as a whole is not yet analyzed. Of course, there are different types of FVCs, where the length of value chains is a key element. Particularly, in a long FVC the phenomenon of globalization plays a key role on its developments, activities and functioning, making it problematic to control. This is because more actors get involved and usually the different activities of the value chain experience rapid changes. Thus, it becomes more complex to identify potential problems in FVCs. One of the big concerns is that victims are hidden along these complex chains, mainly at the bottom of the FVC, where monitoring is scarce. This is because some actors in the FVC take advantage of people in vulnerable situations to reduce costs (e.g., migrant workers, human trafficking, modern slavery, gender inequality, child labor, etc.), and governments have not enough capacity to impose and control the implementation and enforcement of their policies. In this regard, the definition of these situations can be biased or not well-defined, making the applicability of law difficult to implement and control. For example, the definition of “modern slavery”, on debate nowadays, provides multiple nuances sometimes used by some actors of the FVC. Moreover, the higher transparency and traceability along FVCs on working conditions and the treatment

of employees can improve these situations. And the signaling through good social practices by companies, and enforcement by governments can favor its improvement (Becchetti et al. 2020). Maybe, the application of the blockchain technology would facilitate traceability during the entire process of the FVC and associate results through signaling activities in the market of the origin of products, but also in the destination market (Giacalone et al. 2021). Moreover, social dialogues among governments, unions, NGOs, and the industry are essential to counterbalance power and it is an option to give voice to those who cannot raise it. Thus, the ongoing dissemination about the social dimension of sustainability as part of SDGs is basic to address and tackle the main problems, as well as the development of a common definition, including all aspects for its applicability worldwide would be a worthy starting point. Of course, this process should be in close collaboration with academia, governments, international organizations, trade unions and entrepreneurs.

Getting more insights and a broad perspective on social sustainability and its real implications in FVCs make possible a clearer analysis by adopting an integrative approach. As mentioned before, social sustainability refers to people; however, it cannot be achieved without the economic and environmental sustainability. The interconnection among economic, environmental and social dimensions is necessary to ensure social sustainability in FVCs. It requires the responsibility of all actors involved to protect workers and their suppliers. Normally, this responsibility relates to companies, but it also goes from policy-makers up to consumers. The press and the media should inform about situations where cases of violations of human and labor rights are taking place, regardless the country and political interests. The importance of raising awareness about the other side of the coin is needed. It is important that people realize how a product is made, under what conditions people are working to produce a certain commodity (Toussaint et al. 2021a). Moreover, the industry and governments have the power to implement and enforce properly the existing standards and legal instruments to ensure good practices in FVCs.

5.3 Limitations and further research

First, due to the complex nature of the topic, the qualitative analysis was needed to clarify concepts, but it encompasses a series of problems related to this research approach. One of the biggest problems encountered is related with the nature of the research as the social aspects can vary depending on the personal or cultural viewpoint. This means that social sustainability can differ from one country to another making difficult its definition and measurement and the cosmovision of indigenous people can differ that of developed countries. This is one of the main limitations while analyzing social sustainability in FVCs and it should be considered also in future research. However, the conceptualization of social sustainability will help develop future quantitative analyses to assess it. Second, as the research provides cross-sectional insights and a picture in a specific moment, it would be useful to analyze the evolution of social sustainability practices in the food industry in the long-term. Third, the sector and the topic chosen for the analysis have many particular characteristics, where conclusions may be limited to defining and contextualizing the topic. Particularly, social sustainability and social responsibility concepts can be seen as the same, but it would be interesting analyze if there is any difference between these two concepts. Fourth, although the sample includes diverse perspectives, it would also be interesting to consider in future research the insights of those communities related to primary production centers and also consumers' perspectives to analyze the sensitiveness related to social issues. Fifth, as the approach "one-size-fits-all" does not apply in this topic, it would

be interesting to analyze FVCs in terms of social sustainability to identify main problems, and what the current initiatives or ongoing work are to improve this area. Therefore, the continuity of the ongoing debate of what constitutes social sustainability is necessary to be more inclusive and filling the gaps by focusing at national, regional and international levels to get a better picture of it.

6 Appendix

6.1 Script in-depth interview

1. Definition and scope of social sustainability within the concept of sustainability:

- Definition of sustainability
- Social sustainability definition
- Scope and elements

2. Key actors and measurement of social sustainability:

- Key actors to promote and secure social sustainability
- Possible indicators or criteria to ensure social sustainability

3. Contextualization of the food value chains linked to social sustainability:

- Food value chain definition
- Classification of food value chains
- Stages of the food value chains better positioned and badly positioned regarding social sustainability
- Main problems in the food value chains linked to social issues

4. Good practices and social sustainability in food value chains:

- Solutions to those problems
- Secure social sustainability in the whole food value chains
- Good practices

Authors' contribution The first authors led the paper, including the initial literature review and the data collection and analysis. The second author also worked in the literature review and the organization of the

paper, with special attention to results and discussion. The third author focused on the data analysis and in the discussion section.

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Declarations

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Ethics approval The research followed the guidelines of the ethics committee of the university and institution where they are signing the document.

Consent to participate Participants consented to participate and to use the data anonymously. The authors have participated in the document and, as a consequence, they consent their participation.

Consent for publication Authors consent its publication.

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