

ABSTRACT

From a triple bottom line perspective, clean production is responsible for the environmental footprint but also takes care of the economic and social footprint. We have grown in the theoretical understanding of the three circles of sustainability, although the social circle has been the least attended. The aim of this article is to analyse the current theoretical state of social sustainability. A systematic review of 107 articles on social sustainability from 1995 to date was conducted. The analytical and conceptual methodology based on criteria theoretical review of the literature. In the findings are distinguished four approaches in study of social sustainability: community, urban, human development and corporate. There are epistemological and theoretical disagreements. Useful conceptual frameworks have been created and applied, albeit with an environmental and bias. Future lines of research and implications are proposed for each of the four found.

Keywords: theory; social sustainability; review.

RESUMEN

Desde una perspectiva triple, la producción limpia es responsable de la huella ambiental, pero también se ocupa de la huella económica y social. Hemos crecido en la comprensión teórica de los tres círculos de la sostenibilidad, aunque el círculo social ha sido el menos atendido. El objetivo de este artículo es analizar el estado teórico actual de la sostenibilidad social. Se realizó una revisión sistemática de 107 artículos sobre sostenibilidad social desde 1995 hasta la fecha. La metodología analítica y conceptual basada en criterios teóricos de revisión de la literatura. En los hallazgos se distinguen cuatro enfoques en el estudio de la sostenibilidad social: comunidad, desarrollo urbano, humano y corporativo. Hay desacuerdos epistemológicos y teóricos. Se han creado y aplicado marcos conceptuales útiles, aunque con un enfoque ambiental y parcial. Se proponen futuras líneas de investigación e implicaciones para cada uno de los cuatro encontrados.

Palabras clave: teoría; sostenibilidad social; revisión.

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REVIEW OF THE CURRENT THEORETICAL SITUATION OF SOCIAL SUSTAINABILITY

REVISIÓN DE LA SITUACIÓN TEÓRICA ACTUAL DE LA SOSTENIBILIDAD SOCIAL

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INTRODUCTION

Sustainability is recognized as an essential condition for the integral development of organizations, regions or nations (Brundtland, 1987; UN, 2015; UN, 2016); therefore, it is imperative to understand the conditions that guarantee sustainability in its three dimensions. In recent decades, sustainability studies have had a remarkable inclination towards economic and environmental circles. Even today it is common for many to associate sustainability exclusively with the environment (Opp, 2017). Social sustainability is an emerging theme in academia and social projects today. Although some positions question the need for theoretical studies on sustainability (Nakanishi and Black, 2015; Meyerding, 2015; Washington, 2015), other experts insist on the need to continue analysing the theoretical conditions of the social dimension of sustainability (McKenzie, 2011; Foladori, 2005; Eizenberg and Jabareen, 2017). For example, McKenzie (2011) points out as a problem that there is no single definition of social sustainability.

For their part, Foladori (2005) and Barnett (2004) propose to sustain the critique from the paradigms of the economic model of globalization that reduces sustainability to terms of economic value seeing the social as a means for

economic (socio-effective) ends. Likewise, Colantonio and Lane (2007) encourage the continuation of the open debate on the conceptualization from the holistic approach against the reductionist one. Not clarifying theoretical questions implies sustaining the concept of social sustainability in “chaos” and, therefore, compromising its useful application (Dempsey, et al., 2011); not clarifying theoretical questions makes it difficult to identify relevant indicators to exploit the potential of this dimension (Vallance *et al.*, 2011). Therefore, it is necessary to continue understanding the existing concepts from a transdisciplinary perspective, as well as the theoretical relations of the social dimension (Boyer, Peterson, Arora and Caldwell, 2016; Missimer, Robèrt, Broman and Sverdrup, 2010).

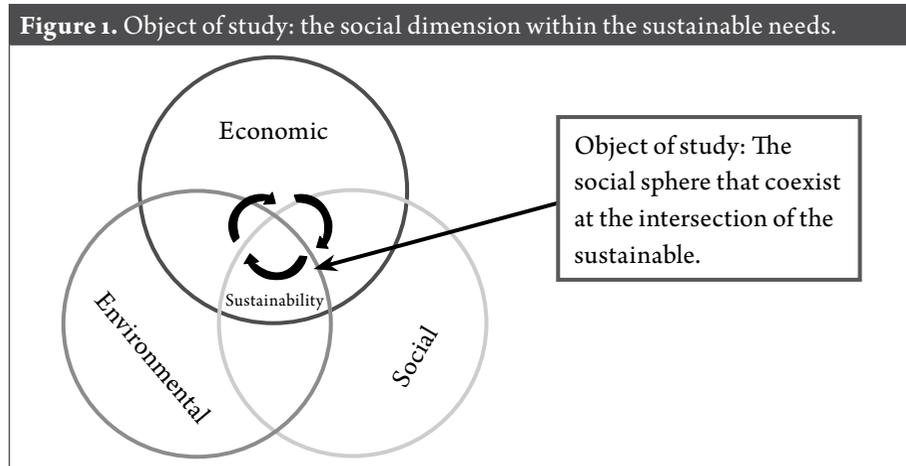
In view of the above, it is necessary to continue understanding the existing concepts from a transdisciplinary perspective, as well as the theoretical relations of the social dimension (Boyer, Peterson, Arora and Caldwell, 2016; Missimer, Robèrt, Broman and Sverdrup, 2010).

Before the presented scenario arises the objective of this investigation which is to analyze the current state of social sustainability, as far as its concepts, approaches, methodologies and paradigms. In order to achieve this purpose, a systematic review of the literature was carried out by means of a descriptive mapping of the articles in terms of the production number per journal, per year, per region and per area of knowledge. Subsequently, the documents were analyzed in hermeneutical terms with attention to the data that allowed us to categorize according to taxonomies on the use of definitions, theoretical paradigms and types of methodology; these taxonomies have been frequently used in literature reviews. Finally, the results, discussion and conclusions are presented. Future lines of research and practical implications are proposed for each approach found. In this manuscript we intend to contribute to the current theoretical discussion on social sustainability and propose relevant theoretical guidelines for its study.

THEORETICAL-CONCEPTUAL APPROACHES IN SS

The objective of this reflection is to address the social sphere of sustainability without losing the perspective of the “triple bottom line” (Nakanishi, and Black, 2015; Köksal, Strähle, Müller and Freise, 2017) where the “social” in sustainability is implicit from the already well-known definition of the Our Common Future report: to meet the needs (economic, environmental and social) of the present without compromising the ability of future generations to meet their own needs necesidades (Brundtland, 1987). In this approach, SS (in the

real and operational sense) is the intersection where the three dimensions coexist. Therefore, the object of this study is the social aspect that coexists in the intersection of the sustainable as shown by the figure 1.



Source: Brundtland (1987).

As regards the concept of SS, the recent academic discussion agrees that it is the least defined and explored sphere (Missimer, Robèrt, Broman, 2017; Hellberg, 2017; Opp, 2017; Khan, 2016; Meyerding, 2015; Dempsey, *et al.*, 2011). Although there is no general consensus on the concepts and theories within the research on SS, there is important progress in the historical process of SS study. It can be classified into four main approaches: community development, urban development, corporate development and quality of life development.

The community approach aims to analyse SS in the community itself. It was the first one to be located in the articles of this research and here studies in the agricultural sector are predominant. In their work, Jones and Tons (1995) present a concept of rural SS and define it as “the continued ability of rural communities to maintain their demographic and socio-economic functions” (p.136). They also point out community and rurality as the three key elements of rural SS. In Sweden, Källström and Ljung (2005) propose a conceptual framework based on the premise of collaborative work to analyse social aspects in farmers in the area. Liu y Zhang (2013) proposed indicators for measuring SS in farming areas in China. In Africa, Romijn, *et al.* (2014) measured the involvement of social aspects in *Jatropha* coconuts. Gathorne-Hardy *et al.* (2016) explained through a quantitative study how the indicators of income, employment intensity, quality of employment and cost of rice had a negative impact on a farming community in India. On the other hand, Shreck *et al.* (2006), in Ca-

lifornia, USA, and Medland (2016), in Spain, found that organic agriculture has negative effects on the internal SS of farms. Other sectors are researched using this approach, such as Pesquero Glaser and Diele, 2004; Shiau and Chuen-Yu, 2016), Public Administration (Le Blanc, 2006; Johnstone, Robison., and Manning, 2013; Lin, Zhang and Geertman, 2015), Energy (Lehtonen, 2011), Construction (Valentin, and Bogus, 2015; Nakanishi, and Black, 2015; Sierra, Pellicer, and Yepes, 2016), Mining (Suopajärvi, *et al.*, 2016; Tiainen, 2016; Gould, Missimer, and Mesquita, 2017) and Education (Edvardsson *et al.*, 2015). The main theoretical approaches used here were Stakeholders, Social Capital and Governance. McKenzie's work (2011) had a certain conceptual influence.

The urban approach is perhaps the one that has produced the most and theoretically influenced the studies on SS. This approach refers to research studying urban conditions (housing, density, connectivity, accessibility, forms and intelligent design) and its impact on social aspects. The first work located is that of Chiu (2002), who, using descriptive analysis, seeks to identify the conditions of equity in housing in Hong Kong. Here, conceptual and theoretical frameworks emerged that could be considered classic in SS (Colantonio and Lane, 2007; Bramley, *et al.*, 2009; Dempsey, *et al.*, 2011; Vallance *et al.*, 2011; Cuthill, 2010). In Australia, Colantonio and Lane (2007) propose a definition and theoretical framework after discussing the usefulness and operability of SS theory and metrics. In the UK, Bramley *et al.*, (2009) conduct an empirical study finding the level of relationship with aspects of urban form, density and type of housing. Cuthill (2010) proposed a contextualised conceptual framework to assess the accelerated growth of south-eastern Australia. In 2011, Dempsey, *et al.*, (2011) took up the theoretical aspects and argued that *equitable access and sustainability of the community itself* are necessary conditions for urban SS in the UK. In the same year, Vallance, Perkins and Dixon (2011) in New Zealand, subscribed to the theoretical construction and propose a triple typology scheme for conceptual understanding of SS. There have been empirical measurement studies on urban SS in Honk Kong (Chiu, 2002; Chan, and Lee, 2008), India (Dave, 2011), Spain (Gurrutxaga, 2013), China (Yung, Chan, and Xu, 2014; Xiao, Qiu, and Gao, 2016), Korea (Kytä *et al.*, 2016; Yoo, and Lee, 2016), Malaysia (Moulay, Ujang and Said, 2017) although in the last two years conceptual research has been resumed (Marsal-Llacuna, 2016; Long, 2016; Opp, 2017; Eizenberg and Jabareen, 2017). The predominant theoretical framework in this approach is Social Capital.

The corporate approach refers to studies where SS factors are linked to companies or industry. Here, two investigations set guidelines for corporate SS investigations. In 2008, on the one hand, Hutchins and Sutherland (2008) proposed a model of indicators to measure SS in the USA automotive supply chain:

work equity, healthcare, safety and philanthropy. On the other hand, in 2011, Ehr Gott, Reimann, Kaufmann and Carter (2011) carried out an empirical study on 244 manufacturing companies from the USA and Germany; they sought SS factors that move developed countries in the selection of suppliers in emerging economies. In their results they find six statistically significant motives: customer pressure, government pressure, strategic capacities of suppliers, middle management pressure, reputation of the purchasing company and training in supplier management. From these, the investigations took a triple general tendency: the study of the supply chain, the study of the manufacturing sector and the study of emerging countries.

Studies in emerging countries include studies conducted in India. Rajak and Vinodh (2015) modelled a set of indicators to evaluate SS performance in Indian manufacturing companies; they propose four corporate SS facilitators: internal human resources, external population, stakeholders and macro-social performance. From a contextualisation perspective, Mani, Agrawal and Sharma (2015) identified 14 facilitators and their interrelations in the adoption of social sustainability measures in the supply chain of the manufacturing industry. Silvestre (2015), studied the oil and gas supply chain in Brazil and suggested that certain systemic aspects found in emerging and developing economies such as: 1) inadequate infrastructure (roads, ports, internet, etc.); 2) bureaucratic corruption; 3) social problems (exclusion, concentration of wealth, delinquency); and 4) economic informality increase the complexity of supply chains. Mani, Agrawal, Sharma and Kavitha (2016) made an SS analysis of the supply chain in two manufacturing companies in India.

By means of a comparison, one arrives at contextual dimensions of SS in this sector. In the same year, Mani, Agarwal, Gunasekaran, Papadopoulos, Dubey and Childe (2016) sought to validate their model of SS measurement in the general management of the supply chain (upstream and downstream) in the same sector; its model contains six significant themes: equity, philanthropy, safety, health and well-being, ethics and human rights. On the other hand, Khan (2016) opens a gap in another approach of corporate SS, and in a conceptual exercise he presents the relationship between SS and the frugal innovation in companies in India. In Brazil, Stattman and Mol (2014) evaluate the inclusion of farmers in the supply chain of biodiesel projects.

In Korea, Jung (2017) evaluates the supply chain through the lens of SS, focusing on third-party logistics providers. And in Chile, the authors Sierra, Pellicer and Yepes (2017) make an estimate of SS in companies in the construction industry; find SS criteria such as job stability, employability practices, human capital, community capital and macro-social activities. Other studies were carried out in developed countries such as France and the UK, as well as

Table 1. SS approaches and criteria in literature review.

| | Quality of life | Community development |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C O N C E P T U A L D E S C R I P T I O N | <p>Social sustainability:</p> <ul style="list-style-type: none"> - A long and healthy life - Access to knowledge - Access to the necessary resources - Body Health - Body integrity - Cultivation of senses, imagination and thought - Practical reason (own moral principles) - Membership - Relationship with other species - Playing - Control over the environment - Right to future generations - Improvement - Access to law - Right to cultural diversity - Access to nutritious food - Access to clean water - Suitable shelter - Social Security - Material goods necessary for a decent life - Access to energy sources - A decent job - Exercise and relaxation - Emotional and social well-being - Strong family ties - Strong interactions with the community - Social equality - Ability to trust others - Identity, autonomy and self-determination - Right to freedom - Political voice and empowerment - Time and space for connection with nature - Sense of meaning, hope for the future. - relative well-being | <p>Social sustainability:</p> <ul style="list-style-type: none"> - Health - Political influence - Competition - Fairness - Heritage - Efficiency - Legitimacy - Social justice - Social/community welfare - Human scale development - Government committed - Human Services - Social infrastructure - Community and/or human scale development - Building community capacity - Human and social capital - Belonging to a population |

Source: Self made.

| Urban development | Corporate development |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Social sustainability:</p> <ul style="list-style-type: none"> - Equal access and opportunity - Environmental justice and health risks - Community and the value of place - Basic human needs - Safety - Eco-prosumption - Sustainable urban forms - Humanisation - Comfort - Distribution - Education and training - Social justice: inter- and intra-generational - Participation and local democracy - Health, quality of life and well-being - Social capital - Community - Safety - Fair distribution of income - Social order - Social cohesion - Community cohesion - Social networks - Social interaction - Sense of community and belonging - Employment - Residential stability (versus turnover) - Active community organisations - Cultural traditions - Urbanity - Attractive public realm - Decent housing - Local environmental quality and amenity - Accessibility - Sustainable urban design - Walkable neighbourhood: pedestrian-friendly | <p>Social sustainability:</p> <ul style="list-style-type: none"> - Work equity - Healthcare - Safety - Philanthropy - Health and well-being, - Ethics - Human rights - Human well-being, - Basic needs and quality of life - Social justice, inclusion and equity - Poverty reduction - Learning capacity - Human dignity - Social infrastructure - Social capital - Community involvement - Social coherence - Employment - Behavioral changes - Job stability - Employability practices - Human capital - Community capital - Macro-social activities - Stakeholder participation |

in Bangladesh, Spain and Portugal. In corporate SS, the theoretical framework of Corporate Social Responsibility (CSR) and the Stakeholders take precedence. In recent years, 50% of corporate SS work has supported a theoretical approach.

Lastly, the quality of life approach relates SS issues to human development factors. The totality of the research of this approach was located in developed countries between 2010 and 2015. They emphasise the regions of the USA, with the research of Rogers *et al.* (2012) and Kruse-Ebeling (2012), who propose conceptual models based on human well-being. In the UK region, McMahan and Bhamra (2012) propose to incorporate SS in design practices with university students. Parry-Jones (2014), in terms of service and comfort, evaluates SS in a hospital in the United Kingdom. In Germany, Fritz and Koch's research (2014), based on econometric indicators, analyses the SS of developing and emerging countries in relation to the environmental and economic dimension of sustainability. In this approach, the philosophical/practical proposal of Nussbaum and Sen from UK (1993) on the quality of life and human well-being has theoretical relevance.

The description of these four approaches has presented the historical evolution of research as well as its predominant conceptual and theoretical approaches. More influential authors were mentioned as well as the regions with the greatest contribution and of greater urgency as regards the topics of the social dimension of sustainability. Each approach seeks to present essential conditions of SS. Table 1 shows some of the SS criteria found in the literature review.

THEORETICAL FRAMEWORK

There is an open discussion about the exact nature of what is a theory, Wacker argues that a theory must provide at least three essential characteristics: a) a framework for analysis; b) an efficient method for the development of the field; and c) clear explanations for the pragmatic world. It must have four basic criteria: *Definition of variables, domain limitations, relationship building (model) as well as theoretical predictions and empirical support* (Wacker, 1998, pp.362).

A good theory must also include certain virtues such as *uniqueness*: to have a concept that tends to unity in the field of science; *parsimony*, from the principle of simplicity, a theory that is better if less postulated; *conservation*, to be able to withstand rebuttal; *generalisability*, must be able to generalise within its delimitation framework; *fecundity*, where contributions are conceived that extend the scope of the theory; *internal consistency*, must have the basic principles of a logical process; *empirical riskiness*, must venture to predict the non-obvious reality; *abstraction*, a theory must grasp the essence of reality, so that the concept

is timeless (applicable at all times) and universal (one for all cases). These principles apply to all theories (Wacker, 1998).

For Meredith, research is done to build theory and “the normal cycle of research must go from description to explanation and from explanation to proof” (Meredith, 1993:4). This cycle turns in a spiral where in each rotation the scientific scope advances, the descriptive models fertilise explanatory frameworks, and when trying them empirically they finally develop theories. In turn, the resulting theory continues in the virtuous circle of science, taking it back to try it “against reality” and this allows three things: a) to validate the findings, which strengthens the theory; b) to bring new findings and grow the limits of the model; or c) to invalidate the theory and build models that bear rebuttal.

Within the framework of this context, the theory of social sustainability will be analyzed with Wacker (1998) and Meredith (1994) aspects that stand out in one theory: conceptual aspects, methodological aspects, theoretical frameworks and paradigms.

METHODS

Systematic review and selection criteria

To meet the research objective, the methodological design was analytical-conceptual (Wacker, 1998) and the type of analysis was bibliometric and hermeneutic, the search engine was the Web of Science (wos). A filter was created using the Boolean “NEAR/o” (Social Sustainability NEAR/o), thus obtaining only documents with the two keywords as a unique concept. A second “specialty” filter was applied using the “title” category, which secured documents with the words in their title. Finally, applying an academic quality criterion, only documents from reviewed journals with an impact factor were chosen in the “Journal Citation Reports (JCR)”. Full bibliographic details of the 107 articles selected for analysis are shown in the “Annex” so that our research processes are transparent and allow an independent evaluation of our classification and analysis Burgess *et al.* (2006).

Scheme and classification taxonomies

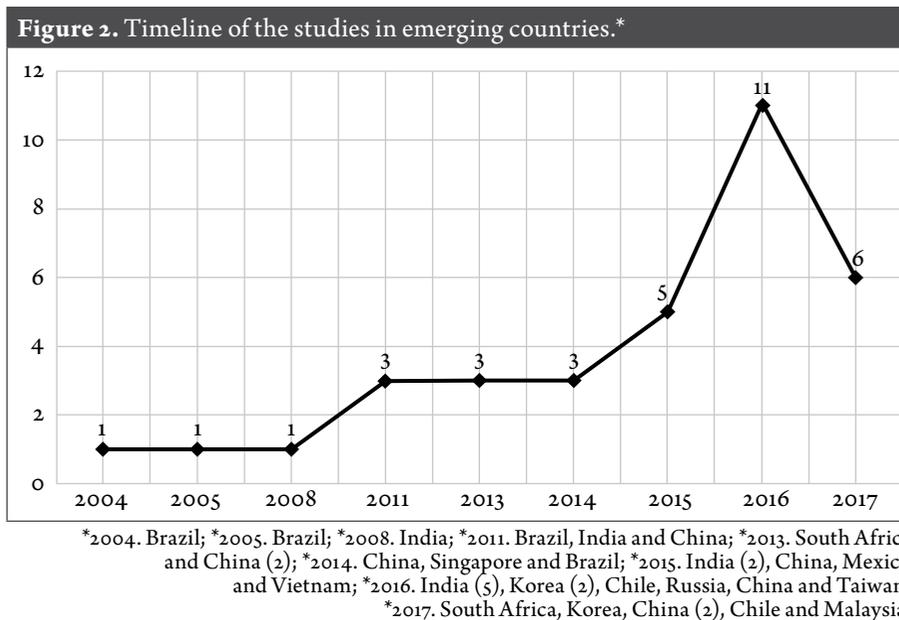
To perform the analysis of the theoretical status of social sustainability, an adaptation was made to the proposal of Burgess, Singh and Koroglu (2006:706) where he offers a four-dimensional outline for the classification and theoretical review of a subject, As the author himself expresses in his article, the construct to classify his articles was reviewed and validated by three evaluators with

practical and academic experience in methodology, as well as using widely used taxonomies in literature reviews for bibliometric purposes, methodological and epistemological analysis.

Taxonomies from the work of Burgess et al. were used for the section on definitions, theoretical aspects and methodological questions. (2006), Meredith (2006) and Wacker (1998). Taxonomy on research paradigms was taken from the idea of Burgess *et al.* (2006) and built on the work of Biedenbach and Müller (2011): a positivist, functionalist, interpretative and humanist paradigm. Wacker (1998), in his article *A definition of theory: research guidelines for different research methods*, proposes a taxonomy on research methodologies with a structure of six types of methodology: analytical and empirical.

RESULTS

Descriptive features of literature



Source: Self made.

The 107 localised documents are contained in 59 journals of different disciplines. The largest production is concentrated in the journals *Sustainability*, followed by *Journal of clear production*, *Sustainable development* and *Urban studies* with a combined 34.25% of journals reviewed here by peers. The SS, according to the search parameters, has its beginnings with Smailes (1995) and Jones and

Tons (1995) in Austria. It is noted that this is a relatively recent issue, because although the academic production of the peer-reviewed journals began just over 20 years ago, the significant publication of documents in recent years. The most important and consistent production phase was five years ago, with 38.3% in 2015 and 2016.

In the analysis by region, in 2011 a positive trend to research on SS in emerging countries is of note. The year 2016 was the most important in terms of number of studies. Academic work for the time being is mainly concentrated in the Asia region, figure 2.

Definitional issues

With regard to the definition of SS, table 2 reveals that 60% use an existing definition, while 11% of documents have created their own definition. A quarter of the research does not use a definition.

Table 2. Classification of publications by use of definitions.

| Type of definition | Article Reference number (see Appendix for references details) | Count |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Developed own definition | [1, 4, 5, 77, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 21, 23, 24, 25, 26, 28, 32, 33, 35, 37, 38, 42, 43, 44, 46, 48, 49, 51, 53, 56, 57, 58, 59, 60, 62, 64, 65, 70, 71, 72, 75, 45, 78, 79, 80, 81, 84, 87, 89, 91, 94, 95, 97, 29, 27, 7, 69, 59, 114] | 65 |
| Used existing definitions | [49, 51, 70, 71, 76, 77, 78, 80, 66, 20, 68, 12] | 12 |
| Incrementally changed existing definitions | [42, 102, 103] | 3 |
| None used | [5, 21, 113, 104, 105, 33, 67, 73, 97, 106, 64, 24, 48, 107, 19, 25, 44, 108, 109, 60, 110, 8, 61, 111, 28, 112, 115] | 27 |
| Total | | 107 |

Source: self made.

Theoretical concerns

With regard to theory, 44% of the documents analysed range from description to empirical proof; while 36% range from description to explanation, table 3. Only 8% of the research covers the three moments of the virtuous circle of research: description, model explanation and empirical proof. Looking at the work from an individual perspective, only six investigations contain the three circle moments; for example Huq, Stevenson and Zorzini [88], who, using a description of the reality of suppliers in the supply chain and on the basis of the

theory of stakeholders, sought empirical validation through a case study at a manufacturing company.

Table 3. Classification of publications in relation to the virtuous circle of research.

| Research strategy | Article Reference number (see Appendix for references details) | Count |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Black boxes. Description to proof | [49, 36, 35, 1, 52, 15, 79, 80, 51, 53, 82, 84, 105, 102, 39, 54, 33, 77, 55, 103, 90, 67, 31, 34, 97, 64, 91, 43, 92, 48, 107, 114, 95, 45, 96, 58, 46, 110, 37, 8, 100, 101, 10, 29, 68, 115, 59] | 47 |
| War stories. Description to explanation | [6, 5, 14, 32, 17, 38, 18, 81, 21, 11, 13, 42, 83, 70, 111, 104, 71, 86, 72, 87, 76, 89, 63, 106, 16, 40, 24, 93, 19, 30, 25, 56, 108, 109, 60, 98, 99, 61, 113, 20, 27, 12, 28, 112, 7] | 45 |
| Ivory-tower prescriptions. Explanation to proof | [74, 73, 41, 94, 78, 47] | 6 |
| Virtuous circle. Description to explanation and proof | [62, 85, 88, 66, 57, 65, 44, 26, 69] | 9 |
| Total | | 107 |

Source: Self made.

In relation to the paradigms that support the 107 papers that were analysed, there is an equitable distribution among them. There is a slight trend in studies reviewed in the interpretive and humanist paradigm. The approach to social sustainability, unlike the trend of other areas of knowledge, is off the positivist trend table 4.

Table 4. Classification of publications by type of paradigm.

| Paradigm | Article Reference number (see Appendix for references details) | Count |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------|
| Positivist. Quantitative verification | [62, 54, 33, 74, 63, 106, 64, 91, 94, 78, 107, 114, 45, 26, 96, 56, 58, 37, 8, 100, 101, 68, 69, 59] | 24 |
| Functionalist. Practical purpose | [1, 52, 15, 79, 80, 81, 11, 13, 53, 84, 85, 105, 55, 31, 41, 43, 24, 92, 48, 93, 65, 108, 60, 110, 20] | 25 |
| Interpretative. Hermeneutical verification | [14, 18, 51, 83, 113, 102, 39, 88, 89, 103, 90, 67, 34, 97, 66, 19, 30, 25, 95, 98, 99, 61, 111, 10, 29, 23, 12, 7, 115] | 29 |

| | | |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----|
| Humanist. Human develop- ment approach. | [6, 5, 49, 36, 23, 17, 35, 38, 21, 42, 82, 70, 104, 71, 86, 72, 87, 76, 77, 73, 16, 40, 57, 44, 109, 46, 47, 28, 112] | 29 |
| Total | | 107 |

Source: Self made.

Research methodological issues

With regard to methodological designs, it is observed that in research on social sustainability there is a burden on empirical research with 64%. Analytical research is concentrated in the conceptual subcategory with 35%. The contribution in analytical-mathematical, analytical-statistical, and empirical investigations of experimental design is practically nil in table 5.

| Table 5. Classification of publications by type of paradigm. | | |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Type of research | Article Reference number (see Appendix for references details) | Count |
| <i>Analytical</i> | | |
| Conceptual | [6, 5, 14, 32, 17, 38, 18, 81, 21, 11, 13, 42, 83, 70, 113, 104, 71, 86, 76, 77, 89, 16, 93, 19, 30, 108, 109, 60, 98, 99, 61, 111, 20, 27, 12, 28, 112, 7] | 38 |
| Mathematical Statistical | [[64,110] | 1 |
| <i>Empirical</i> | | |
| Experimental design | [[49, 36, 35, 52, 79, 80, 62, 53, 85, 54, 33, 55, 74, 91, 41, 43, 94, 78, 107, 57, 114, 44, 45, 26, 96, 56, 58, 37, 8, 101, 47, 59] | 33 |
| Statistical sampling | [1, 15, 51, 82, 72, 84, 105, 87, 102, 39, 88, 103, 90, 67, 31, 73, 34, 97, 63, 106, 40, 24, 92, 48, 78, 66, 65, 25, 95, 46, 100, 10, 29, 68, 69, 115] | 36 |
| Case studies | [1, 15, 51, 82, 72, 84, 105, 87, 102, 39, 88, 103, 90, 67, 31, 73, 34, 97, 63, 106, 40, 24, 92, 48, 78, 66, 65, 25, 95, 46, 100, 10, 29, 68, 69, 115] | 36 |
| Total | | 108 ¹ |

¹ 108 of 107 documents appear since one investigation used two types of methodology.

Source: Self made.

DISCUSSION

With regard to the results of this review, a series of theoretical issues will be addressed in order to establish the conclusive bases of this work on the current theoretical condition of social sustainability.

Conceptual, theoretical and methodological interrelations in SS

For Wacker (1998), “fecundity” is a theoretical virtue and happens when contributions broaden the scope of the theory. The diversity in the research areas addressed by SS is a context that allows for the possibility of new scope and contributions. However, diversity without a unified ontological criterion has prevented “uniqueness” in SS studies. This is in line with the appreciation of Liu *et al.* (2017), who sees multidisciplinary status as a challenge for SS.

With regard to the definitions of SS, more than 40 papers defining it were identified, although the influence of only half a dozen of them can be observed in the research. In the community approach, for example, the only concept that has been taken up is that presented by McKenzie (2011), where he defines SS as “a condition that improves the quality of life within communities, and a process within communities that can achieve this condition” (p.9). This conceptualisation has been taken up in research by Wolbring and Rybchinski (2013), Longoni and Cagliano (2015) and McMahan and Bhamra (2012). In urban SS, there has been less diversity of definitions and a higher number of authors with significant influence. Of particular note is research by Bramley and Power (2009), where they conceptualise urban SS as “the social equity and sustainability of a community”. In this approach, the Colantonio and Lane concept (2007) also stands out, described as “a condition and a process that improves the quality of life of a community”, as is the definition of Dempsey, Bramley, Power and Brown (2001), who in turn give continuity to Bramley’s concept. It is not yet possible to say that the problem of the conceptual agreement pointed out by McKenzie (2004) 14 years ago has been overcome. According to Wacker (1998), SS still does not have the scientific virtues of uniqueness and parsimony, as there is a general disagreement and a wide variety of positions. However, the advances and consensus among the most influential authors pointed out, perhaps allow to say that SS begins to leave the conceptual “chaos” that Dempsey *et al.* (2011) warned of half a decade ago. But reality also encourages us to continue working on the precision of the concept of SS, because, as Wacker (1998) and Meyerding (2015) affirm, a clear definition of variables is only possible if there is a clear framework for analysis.

There is also widespread disagreement about the epistemic and ontological foundations of social sustainability. The common agreement is that there is a theoretical problem, within which there is a tripartite division where each group sees reality differently. One group sees it as a problem that there is no concept or unified theoretical framework for all contexts. Authors such as Eizenberg and Jabareen (2017) propose a comprehensive theoretical framework to explain what is social in all areas. A second group sees it as a problem that attempts are made to make a single definition, and asserts that to unify a concept and a theoretical framework for all cases would be dehumanising and would go against the essence of what is social. Rogers *et al.* (2012) emphasise that we will not have a comprehensive well-being if we do not consider the differences and subjective goods of people. And a third group includes Missimer *et al.* (2017a; 2017b) and Gould *et al.* (2017), who argue that social reality is neither totally static nor totally subjective, that it is a complex adaptive system and, therefore, propose a theoretical model to govern principles that respond to that reality: diversity, learning, self-organisation, trust and common sense. Outside the three groups is Woodcraft (2012) who, from a pragmatic stance, argues that theoretical and abstract debates should be left to move towards practical and functional research for social sustainability.

It is observed that a minimum percentage, 8% of the works, has description, theory and proof. 40% of the works have been dedicated to describing the reality to arrive at a theoretical or conceptual contribution, which is congruent by the recent incursion of SS to scientific discussion. In Meredith's terms, nearly half of SS research is either a "war story" or "stories" (models) that did not come to empirical verification. Another 40% of the research has shared the description to arrive at empirical proof, although the majority of these investigations do not have theoretical reference to what they seek to validate. Metaphorically, that part of the SS investigation is either a "black box", or they are findings that verify descriptions but do not verify or construct a model that explains reality. According to the analogical typology proposed by Meredith (1993), the generation of scientific knowledge can only be advanced if it is sustained by spinning in a virtuous cyclic spiral. This spiral starts from a description of reality, explains the reality within a theoretical framework and comes to the validation of that model from the empirical proof. In this way, the theory can be contributed, enriched and/or refuted and it is within that virtuous circle where the construction of scientific theory is achieved.

As for the interrelationship and follow-up of the SS research, we can see, for example, the work of McKenzie. (2004), which has been taken up by Boström *et al.* (2012), Fleischer *et al.* (2013), Ahmad *et al.* (2017) and Opp (2017). Or the work of Colantonio and Lane (2007), which has been taken up by Gressgård

(2011), Buser and Koch (2014) and Sierra *et al.* (2016). They continue to be referred to in community, urban, corporate and human development SS. There are even networks or research teams that have worked for years on the theoretical maturation of SS within the virtuous circle that Meredith offers (1993). In the UK, of the pioneers of SS and the urban approach, the research of Bramley, Dempsey, Power, Brown and Watkins (2009), Dempsey, Bramley, Power and Brown (2011), and Dempsey, Brown and Bramley (2011), who provided a conceptual framework and have continued to mature the theory with empirical proof. The work of Mani, Agrawal and Sharma (2015), Mani, Agarwal, Gunasekaran, Papadopoulos, Dubey and Childe (2016), Mani, Gunasekaran, Papadopoulos, Hazen and Dubey (2016), and Mani, Agrawal, Sharma and Kavitha (2016), from approaches and the model proposed by Hutchins and Sutherland (2008), from a corporate approach, approached a set of metrics to evaluate SS in supply chains. And in Switzerland, the work of Missimer, Robèrt, Broman and Sverdrup (2010), Missimer, Robèrt, Broman (2017a; 2017b), and Gould, Missimer and Mesquita (2017), within the framework of strategic management of SS, took almost seven years to mature the adaptation of a Framework for Strategic Sustainable Development (fSSD) to the social approach to sustainability to finally bring it to empirical validation. Returning to Meredith's point of view (1993), the theoretical and methodological interaction of the above-mentioned works sustain SS in a virtuous circle of description, explanation and proof.

Paradigms and implications in SS

Of the papers reviewed, 58% focus on a humanistic and interpretive paradigm. At the moment the work has taken up the qualitative investigations that enable us to know "how" and the "why" of the situation in people who participate in a community, in companies, in the city or in the urban setting. For example, Sierra *et al.* (2016), with his case study on the affectations to the community of a construction project in Chile or the case study of Medland (2016) where he verifies the labour and human situation of the workers in a farming area in Spain. The remaining 42% encompass the functionalist and positivist paradigms. This type of research is important because it brings the scientific results of SS to a level of evaluation/measurement and practical decision-making. An example is the work of Tirado *et al.* (2015), who proposed a system of indicators to evaluate the efficiency of a government social program in Mexico, or the work of Gould (2017), who proposes a measurement to evaluate SS in the mining sector in Switzerland.

There is a group of authors in favour of a pragmatic or proactive philosophy. Nakanishi and Black (2015) do not present any definition in their work based on Washington's book (2015), where he encourages the demystifying of sustainability and moving away from theoretical discussions and solutions to real problems (2012). A functionalist extreme could radicalise the term of contextualisation by Dempsey *et al.* (2011). While it is true that SS has a specific aspect and that each region and culture has its particular needs, in the end we would have to apply SS for each individual because each has different needs. Yeo and Heng (2014) frame a spatiotemporal conceptualisation of SS but applicable to a neighbourhood in Singapore and only applicable to the time from 12.00 am to 5.00 am. Wacker (1998) mentions that a virtue of theory is abstraction, which allows the tendency to a concept applicable to reality but from a generalisable and timeless concept. Since 2007, Colantonio and Lane (2007) have encouraged us to continue in an open debate on the conceptualisation from a holistic approach versus a reductionist approach. There is the risk of such extremes, of falling into an a-theoretical SS research and a contextualism of reductionist relativism.

Although 40% of the works analysed do not use a theoretical framework, the rest have achieved a consensus in the choice of theories that frame their findings. Three are the predominant theories in SS research: Social Capital, Stakeholders and Corporate Social Responsibility (CSR). These theoretical approaches have been useful and allow the fulfilment of a condition of the virtuous circle pointed out by Meredith (1993). However, each theoretical framework has a paradigm and a philosophy to explain the problem of social aspects. The question would be: does the paradigm of theory lead us to the original meaning of a sustainable society? The theory of Social Capital is mainly used in urban SS, its fundamental thesis is conceived on sociology and therefore naturally tends to social ends. SS, under this approach, is the process for achieving people's participation and cohesion. CSR and Stakeholder Theory originate from the corporate context, so their natural purposes tend to corporate purposes. In basic terms, it is the well-being of human capital and the community linked to a company or sector.

Faladori (2005) reflects on the essential purpose of SS and is being carried by theories and their paradigms. He refers to the origins of the purpose of the social aspect of sustainability: to eradicate inequality in terms of poverty and human dignity. He affirms that a community can access a sustainable good only from human empowerment, from which arises the economic good and ecological care. However, there is a risk of falling into a double discourse: talking about SS but pursuing another purpose that does not lead to a sustained

good. He criticises the basic hypothesis of the theory of social capital, and although cohesion and participation are essential conditions of empowerment, it does not mean that cohesion and participation guarantee the empowerment of a community. It would be necessary to question whether Dempsey, Bramley, Power and Brown's (2011) investigations are biased to remain in the means and not to seek the end. The author states that the root of inequality could be in macrosocial causes such as in the dominant economic models.

On the other hand, Faladori (2005) criticizes socio-environmental tendencies whose purpose is not the social aspect in itself, but the environmental one, or they take the social aspect as a means for an economic purpose (Gladwin, Kennelly and Krause, 1995). The problem with the theories of corporate origin is that their purpose is corporate and the social aspect can be used as an end to performance. One of the great pieces of research on environmental sustainability was the work of Hart (1995; 2003), based on the theory of resources and capacities. The purpose of this theory is simple, its objective is financial performance. In his work Hart proposes environmental care through green management in firms and the social impulse through the inclusion of economies at the base of the pyramid. The environmental and social sustainability promoted by Hart is actually a function of the reduction of costs, depending on the economic dimension.

Hutchins and Sutherland (2008) have promoted studies in emerging countries. Mani et al. (2015;2016) have stood out in this line of research and base their research mainly on two main theories: CSR and stakeholders. The initial problem with the CSR theory is that, as a starting point, it locates the social aspect in an exogenous part of the company, in a moral option where there may be corporate advantages. As Hutchins and Sutherland (2008) mention in their work, "a basic principle of CSR is doing business in a way that is consistent with with morals and values of society" (p. 1689). In CSR, from its origin, one does not see a directly necessary relationship with economic development; so said approach is not congruent with the vision of the "triple bottom line" where the three pillars of sustainability coexist systemically and each is a necessary condition of the other. The Stakeholder theory prioritises the interests of groups, but it only has a direct relationship with the internal or personal social aspect and the community also becomes an exogenous factor of the corporate aspect. It again places the social aspect in a dilemma, more moral, rather than necessary. Both theories' purpose has an end that depends on finance, so under this approach, companies would take measures in the face of social aspects depending on the moral bringing with it a profitable advantage.

CONCLUSIONS

In the research approach of this paper, the following question was asked: what is the current theoretical state of social sustainability? Given the evidence gathered in the review and analysis made the following is concluded:

- With regard to the *essential characteristics* of a theory, SS provides conceptual and theoretical frameworks highlighting the contributions of the approached of urban SS and corporate SS. These approaches have *provided an efficient method for the development of the field*, as it has sought to strengthen its theory with conceptual and empirical sample and case studies. As reviewed, the theory has sought to *provide clear explanations for the pragmatic world*; there is also a trend of investigations with a functionalist paradigm that seek to offer pragmatic solutions.
- From the point of view of the criteria proposed by Wacker (1998) Basic criteria: Social sustainability is in a constant effort to generate a *definition of variables*; given the complexity of what is social, it has not been easy to *delimit the domain*. It has generated *relationship (model) building* as well as *theoretical and empirical support predictions*. However, from Meredith's approach (1993), there is a very low percentage of academic bodies or research following up or seeking to validate existing theories. But it is not a matter of generating as many theories as articles; it is necessary to give continuity to the theories already challenged to contrast them with reality.
- In the last five years, researchers of social sustainability have shown a notable interest in strengthening its theoretical and scientific body, despite not achieving a concept that tends to unity in its scientific field, presenting its significant progress. Its postulates are still diverse and complex and the findings are largely a *black box* aiming only to accept or reject hypotheses or propositions, rather than to refute and prove a prevailing theory. And with regard to theories, the question remains as to whether SS should generate or find a theory that has an ontological and epistemic basis centred on the issue of social and community. But it is a fact that a large percentage of research is based on theoretical frameworks that view the social in a partial way or under the bias of efficiency or environmentalism.

Future lines of research and implications by SS approach

In general

- *Future lines of research.* Literature invites ontological reflection to reconcile the contradictions on the concept of reality and to alleviate the over-conceptualization of SS from a transdisciplinary approach. The call is for research in emerging countries: From Emerging Asia: India, Indonesia, Malaysia, Singapore, Taiwan, Thailand, Vietnam. In Latin America: Argentina, Colombia, Mexico, Brazil, Venezuela, Chile; from Emerging Europe: Bulgaria Czech Republic, Russia, Hungary, Poland; from Africa: Saudi Arabia and Algeria, Nigeria, Qatar.

Community and quality of life approaches

- *Future lines of research.* In terms of community and quality of life, literature calls for the study of the SS from theoretical models that consider the relative well-being of the community, under the approach of “capacity” of access to improved quality of life, beyond generic measures such as GDP of the regions. Rethink the theory of Social Capital and the integral aims of SS in communities, reopen the debate on the possibility of equality, justice and social empowerment in the current economic model. Research in rural areas in emerging countries little explored in this approach.
- *Implications:* The implications in the community approach and quality of life are a call to public administration in emerging countries. The research results are lights for the elaboration of public policies for empowerment and the generation of “capacities” to promote and make concrete the relative quality of life in local and federal governments.

Urban approach

- *Future lines of research.* The urban approach needs philosophical foundations that reconcile its current ontological and epistemological contradictions. To question the influence that current economic models have on the capacity of access to relative well-being in structuring and urban design in less studied emerging countries.
- *Implications.* The implications in the urban approach are public administration as well as private sector. SS research results should impact urban design and redesign, especially in developing countries.

Corporate approach

- *Future lines of research.* In the corporate SS. Literature demands continuity and to fill some gaps: to continue with the study of corporate sustainability in its social sphere. Conceptual analytical studies to deal with ontological issues and open the debate on economic-environmental biases in their theoretical frameworks. Theoretical modeling and verification with empirical case studies in the study of the supply chain (downstream/downstream) from the suppliers' perspective. Research on corporate social sustainability in emerging countries less studied, mainly: Latin America: Argentina, Colombia, Mexico. Emerging Europe: Bulgaria Czech Republic. Africa: Saudi Arabia and Algeria.
- *Implications.* Corporate SS research has management implications that are related to decision-making in firms in both developed and emerging economies. In the business SS study, advanced economies will be aware of the social factors in developing companies and the uncertainty or risks they may entail in the performance of their value chain. From the emerging countries' perspective, companies will be aware of the sustainable advantage of social factors in their strategic planning and will be able to take strategic actions to incorporate them and respond to the social quality demands of potential global clients. Developed countries, by demanding social sustainability factors from their potential suppliers in emerging economies, promote the quality of social life to the company's internal and external human capital. Corporate SS research is also a call to public policy for the need to seek subsidy strategies and find a balance in emerging country companies; so that social actions do not mean putting at risk the economic sustainability of vulnerable business sectors such as Micro, Small and Medium Enterprises (MIPYME).

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