UN Inter-Agency Task Force on Social and Solidarity Economy

Characterization of the UNTFSSE Knowledge Hub - 2019 repository about the relationship between Social and Solidarity Economy and the Sustainable Development Goals

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Abstract

This article aims to appraise a compendium of 99 articles selected from the 320 submitted to the Call for Papers "Implementing the Sustainable Development Goals: What is the role of the Social and Solidarity Economy?", Initiative of the United Nations Inter-Agency Task Force on Social and Solidarity Economy (UNTFSSE) in alliance with the United Nations Research Institute on Social Development (UNRISD). The 99 articles were produced in 60 countries and most of them were presented on June 25th and 26th, 2019, in Geneva (Switzerland). To do an exploratory analysis of the repository, establishing a difference between descriptive analysis and a Multiple Correspondence Analysis, distinctive characteristics were identified and organized into categories such as country of origin, language, type of solidarity organization, methodology, and Sustainable Development Goals (SDGs) implemented, using a Multiple Correspondence Analysis. As a result, it was found many texts focused on how Social and Solidarity Economic organizations implemented the SDG which reveals an incipient presence of indicators and models to measure this implementation. The result of this exploration demonstrates to be possible to observe the characterization of the repository under analysis, to make the role of the various social and solidarity economy organizations visible, to serve as base information for the design of public policies, to apply research with a more scientific nature and to exchange knowledge among organizations that arise from the practices carried out to contribute to the SDGs.

Keywords

Social And Solidarity Economy, Sustainable Development Goals, Multiple Correspondence Analysis

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1. Introduction

In 2018, UNTFSSE launched a Global Call for Papers on SDGs and SSE aimed to identify and mobilize research from different regions and territories that critically examines the role of SSE as a means of implementation for the SDGs.

Selected for the Conference, we had 99 papers examining the role of the SSE in implementing the SDGs. Their authors, researchers from 60 countries, presented them at the International Labour Office in Geneva (Switzerland) in June 2019. The purpose of this article is to obtain the distinctive characteristics of these studies using Multiple Correspondence Analysis.

The results identify and contrast categories such as country of origin, language, type of solidarity organization, implemented methodology, and SDGs under study.

It was addressed during the event, the following questions: what special features in SSE practices contribute to SDGs? What is the comparative advantage facing other firms? Which actors or institutions are essential to create a suitable environment for implementing SDGs? And what is the possibility of replicating positive initiatives in other local contexts?

One of the themes included in the Call for Papers was how SSE measures its scale and impact in a context where statistics often fail to capture the diversity of SSE actors and impacts and where definitions and indicators vary according to the region. The aim was to identify robust methodologies and innovative solutions for measuring SSE and its impacts.

Papers were welcome to examine how SSE can be a means to foster the integrated and holistic nature of sustainable development to avoid trade-offs and contradictions associated with conventional economic development, as well as to deal with economic, social, environmental, and cultural aspects of development in SSE, and with the role of democratic politics and governability.

The event's organizing committee identified the following themes from the association between the SDGs and how the ESS could contribute to the achievement of the 2030 Agenda:

- **Ending poverty and hunger**. SDGs 1 and 2 call for an end to poverty and hunger. This cluster focuses on the role of SSE in food security, sustainable agriculture and improved nutrition.

- **Social protection.** This cluster has a focus on the role of SSE in achieving SDGs 3 and 4 related to ensuring health and education for all.

- **Equality.** SDGs 5 and 10 directly address the question of inequality, focusing on gender equality and the empowerment of women and girls, and the need to reduce inequality both among and within countries. The question is: How can SSE contribute to reducing inequalities?

- **People-centred growth.** This cluster focuses on the role of SSE in addressing aspects of SDGs 8 and 9 related to employment, decent work, infrastructural development, innovation and productivity, and the future of work.

- **Environmental protection and sustainable production and consumption.** This cluster focuses on the role of SSE related to aspects of environmental protection, the environmental retrofitting of economies and transforming consumption patterns (SDGs 7, 12, 13, 14 and 15).

- **Sustainable human settlements.** SDGs 6 and 11 address sustainable and inclusive human settlements. This cluster looks at the role of SSE in access to clean water and sanitation, and rural-urban linkages favouring, for example, food security and fair trade.

- **Peaceful and inclusive societies and institutions.** SDG 16 relates to developing effective, accountable, and transparent institutions (16.6) as well as ensuring responsive, inclusive, participatory and representative decision making at all levels (16.7).

- **Sustainable finance.** SDG 17 aims to strengthen domestic resource mobilization and mobilize additional financial resources from multiple sources. Of interest for the Call is the role of solidarity finance involving SSE actors and institutions in democratizing access to fair and affordable finance.

The articles presented provided information for

• describe the role of the SSE (the actors and organizations involved and their activities)

• assess impacts related to specific objectives and SDGs

• identify critical enabling factors, contexts, or "ecosystems", including public policy, private sector and civil society support, resource allocation and forms of social and political organization

• identify the main constraints that impede the progress, expansion, and long-term sustainability of the initiatives

This meeting enabled to increase the visibility of the implementation of SDGs within and outside the UN system, and it also generated inputs for decision-making people. It enabled researchers to share and exchange evidence and ideas about the articulation of SSE, the different contexts, and the contribution to sustainable development and achievement of SDGs.

Thus, the purpose of this paper is to present a descriptive analysis of some of the fields of interest which the 99 articles chosen from the repository were classified into, to, posteriorly, using a Multiple Correspondence Analysis (MCA), characterize the repository in terms of theme dimensions, methodologies and sessions or most frequently treated SDGs. This means we are aware that the papers deal with a higher number of SDGs than those prevailing indirectly. The UNTFSSE Knowledge Hub Repository is presently published on https://knowledgehub.unsse.org/

2. Raison d'être of the relation between SSE and the achievement of SDGs

Because of the Cooperatives being one of the most representative organizations worldwide (Chaves & Monzón, 2018), it is convenient to insert that they are the entities of SSE that provide the greatest added value and employment for the purpose of socioeconomic impact. Thus, without forgetting the rest of the SSE effective institutions and given their magnitude, the relationship between their action and their contribution to SDGs offer us the tendency, in the broadest sense, of the SSE contribution to SDGs (Morais & Bacic, 2020). Indeed, strengthened during the Industrial Revolution, cooperatives developed a certain behaviour around the world that gives preference to agreed values over their administration and management in a set of principles. Revised for the third time in 1995, cooperative principles are interdependent, they must support and reinforce each other (ICA, 2015).

One of the Cooperative Principles which is most strongly related to the Sustainable Development Goals is principle number 7 *Concern for Community* described by Alarcón & Álvarez (2020) under a network analysis. Some of the other Principles are not as intense as the first. In fact, this principle arises from certain discussions, which the Brundtland Report was a reference point, and states that concerning for social and environmental sustainability helps to maintain a cooperative's economic success (ICA, 2015). In this Report, this institutional relation that arises as guidance to cooperative´s behaviour is evidenced in certain cooperative´s practices. Other papers include the supposed links between the organizations' action and SDGs, but do not the intensity. Concern for community in cooperatives expresses the role played by values in economy, which accounts for a deontological vision of SSE alternative to the neoclassical function of companies.

This can be considered within the agent choice theory. These agents, from a cooperative or another SSE organization make choices that give preference to an interdependent utility approach belonging

to socioeconomics (Etzioni, 2006) and this positively affects a multiple valuation practice beyond the consuming sphere and pleasure of the individual agents. Given the multiple uses established for SSE organizations, the event under study selected those that are a contribution to the SDGs or sustainability in the broadest sense.

3. Social and Solidarity Economy. The sense of unity and the limitation of consensus

There is not only one definition for SSE. Multiple definitions address ethical, economic, and social dimensions that respond to the territorial particularities from where it is conceptualized. Therefore, multiple laws and policies try to seek an instrumental conceptualization of their regulatory aspirations (Luque and Álvarez, 2021). In this heterogeneity and diversity of concepts, the shared criteria on the content of the SSE have been built from the verification of ways of proceeding the organizations in harmony with the economy of participation, self-management and that put the needs of the groups above personal interests. However, one of the biggest obstacles in adopting a universal definition of the SSE is the inclusion of organizations that are not formalized and the inclusion of organizations whose exchange practices are not carried out in the markets.

Among the concepts that seek to shelter a wider spectrum of situations, we highlight that of the International Labor Organization, which in 2011 proposed the following concept for the SSE: "it refers to companies and organizations, in particular cooperatives, mutual societies, associations, foundations and social enterprises, which specifically produce goods, services and knowledge and at the same time pursue economic and social objectives and promote solidarity "(Fontenau, et.al, 2011). Although the purpose of this section is not discussing what kind of SSE definitions have been used and their implications for SSE research regarding its contribution to the SDGs, this paper uses a wider definition provided by Fontenau, et.al (2011).

In this perspective, assuming that the contributions to the SDGs are the result of the achievement of the SSE principles as deontology of choice in a multipurpose concept of wellbeing, it is required to delimit the concept that specifies the distinctive features of SSE. It is not a concept being built, on the contrary, one that has a vast theoretical richness, ranging from, for example, the principle of parsimony belonging to economic institutionalism, which specifies connotations and practices of diverse nature according to the territories where they take place, but having a common leitmotif.

The common leitmotif is based on habits and routines, as it has been shown in Alarcón (2012, 2016) and in Alarcón & Álvarez (2018, 2020) which appear as multiple benefits according to the orientation of the statutory activity of the company under study. Thus, the common denominator implies meeting individual needs in a collective way by means of associative groups addressing certain common

goods. The scale of those benefits is represented by Social Transfers in kind given to households, which are allowed to consume above their consuming expenses.

Following the above reasoning, expressions such as social economy, social and solidarity economy, communal economy and third sector, among others, would be identified with a signifier commonly accepted by social economy theorists who do not argue nor claim being above or underneath any ideological viewpoint identified at present with progressivism or conservatism. In fact, adaptation of each nuance and difference of every "Social Economy structure" is what permits us to cope with the local problem.

Therefore, SSE includes a set of enterprises featured as follows:

- They operate proceeding from relationships of empathy and values expressed in habits and routines (Alarcón, 2016) that conform ways of operating with their groups of interest, markets, and community (within it, environment) (Álvarez & Marcuello, 2020),

- They operate under the principle of Non-Priority on Personal Non-Profit (above the pecuniary individually oriented Benefit) and produce Social Transfers in Kind.

As stated by Etzioni (2007), from a deontological point of view, social and solidarity economy assumes that the way its members proceed establishes some rationality where the values play a role which predominates the sum of the personalist reasoning. This idea bridges with the moral approach expressed towards 1830 by authors such as Charles Dunoyer, who, at the University of Louvain, advocated a moral approach to economics which blended with people's liberties in the production processes, since in those times, machine, production, and market were in centre stage. This aspect was addressed in Bastidas (2004) and Guerra (2006). In this same argument line, the concept of Social Economy was advanced long ago by authors such as Francios Vidal (1846), Benoit Malon with the Social Economy Treatise (1883), Constantin Pecqueur (1842), Marcel Mauss with his proposal of economy of socializations; Charles Coquelin, who would include the term "Social Economy" in his Dictionary of Political Economy (1854); Frédéric Le Play, from social Christianity, with his Social Economy Society (1856) and his journal Social Economy.

All those signifiers did not strictly reach the common meaning of SSE expressed by CIRIEC-International and CEF-CEMAP, based on the addition of the multiple criteria that each legal form is required to have for its membership. This is how it is expressed in the Charter of Principles of the Social Economy of the European Standing Conference on Cooperatives, Mutual Societies, Associations and Foundations (CEP-CEMAF), predecessor of Social Economy Europe, and suggested by the National and International Scientific Committee of CIRIEC. It is a summative

concept composed of the entities whose main and intentional procedure is oriented towards the following principles:

- The priority of people and social purpose over the capital,
- Voluntary and open membership,
- Democratic control by members,
- The combination of interests of members/user and / society (general interest),
- The defence and application of the principles of solidarity and responsibility,
- Autonomous management and independence of public authorities,
- Reinvestment of surplus is essential to achieve sustainable development goals, services of interest to members or general interest,
- Principle of Non-Distribution of Benefits (NDBP).

In parallel with the mentioned above, we can find Social Economy conceptual and theoretical development which, from diverse perspectives, identifies emerging both market and non-market enterprises that have attempted certain transitional forms towards broadening the generic concept. They are based on the hybrid interorganizational features conceptually established by Chaves & Monzón (2018) in local areas in Ibero-America which are not, in general, replicable in every socio-economic area collected by authors such as Álvarez & Marcuello (2020).

A broader analysis should be applied on the attempts to delimit the activity of SSE organizations that perform practices which include tax evasion, community exploitation of workers or restriction to their social rights, health, or social security entitlements against the principle of decent work. Some authors believe that this can be compensated with the argument of family or communal subsistence. This subsistence is real and effective, but not all the organizations where we find groups and networks can be included in the concept of SSE, which leads to the conclusion that the mere presence of a certain legal form does not mean it belongs to the SSE (Cruz, 2011). In short, as stated by Arizmendiarrieta, values are not owned, they are conquered (or achieved).

Based on emphasis on habits, routines, social transfers in kind and Non-Priority on Personal Non-Profit, it is possible to strengthen the common state policies under a general agreement to avoid the ups and downs following the political processes of governments from one tendency or another. In addition to this, if these ideas are successfully overlapped with the idea of a shared Agenda, such as the 2030 one, SSE can be one of the protagonist's institutions in the transitions required by the XXI century.

But it should be said that, just as it cannot be stated that an organization which is part of SSE holds this definition only because of its legal form, neither can it be claimed that such an organization is sustainable because of the relationship among its principles, particularly, those about concern for community, education, and training, as was shown in a network analysis Alarcón & Álvarez (2020), and sustainability practices raised in the SDGs. If a sustainable entity exists, it should be so in its three dimensions: economic, social, and environmental, and none of the dimensions can compensate for the fault in one of the others. This means that both sustainable and non-sustainable entities exist within the SSE as well as among capitalist firms.

What is stated above accounts for the fact that SSE actions tend to contribute more to relative terms but not in absolute terms. Because of that, when making decisions about surplus distribution, SSE gives priority, in many cases, to expenses for sustainability and to the result of exploitation. For instance, in a capitalist firm, the results are considered in the first place, then social action. In conclusion, there is no social action, nor corporate social responsibility, if results are not obtained previously. There lies the difference. It is order, priority and intentionality of exploitation interventions and economic, social, and environmental sustainability. Also, negative effects and externalities not considered should be considered, yet actions of SSE organizations consist of the habit of Non-Priority on Personal Non-Profit and produce routines of Social Transfers in Kind. All of this is being increasingly analysed more rigorously.

During the past decade, changes in perspectives have been introduced due to new evidence and measurement tools for SSE organizations at the macro —National Accounts System—, meso and micro levels— Social Balances and Sustainability reports.

4. Methods

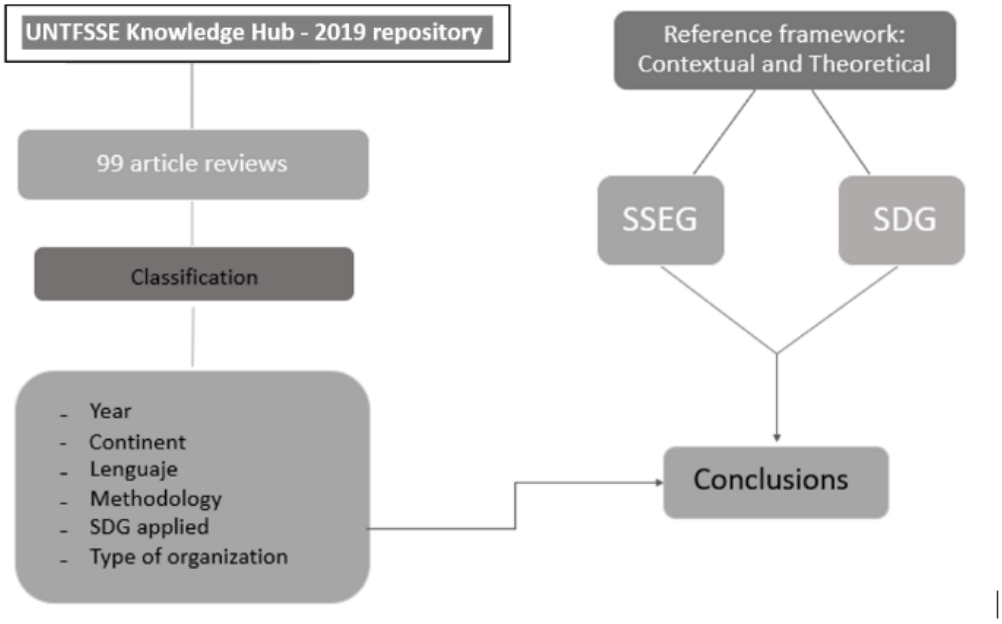
The methodological design partially consists of an exploratory analysis, a descriptive analysis for some categories into which the set of 99 repository articles can be classified, by means of keywords, abstracts, title of articles, continent, country, language, type of organization, methodology, and SDG implemented in the study and whether it has been measured.

The procedures for data collection and processing of all the 99 texts published on the online SSE Knowledge Hub platform for SDGs (https://knowledgehub.unsse.org/) led us to the setting of a database which included the characteristics to be analysed (Figure 1) to apply the descriptive analysis in the first place and afterwards, the Multiple Correspondence Analysis (MCA), in order to reduce the database dimension to a characterization of the repository.

Unlike the Principal Components Analysis, the MCA studies the relationships among several categorical variables, and, more precisely, among its categories. The aim is not to judge the scope of the UNTFSSE Knowledge Hub Repository as a representative of the reality of the theme dealt with, neither the imbalances in the treatment of transversalities between SSE organizations and SDGs, since the absence of an international comparison standard makes it impossible to discover the typical characteristic of the relationships among SSE organizations and SDGs to which they are conferred and to what extent, only in case there were a representative and comparable measure. It is merely about obtaining the general characterization of the content of the repository and of the event.

In the repository we can find the selected papers on the theme of the Call for Papers "Implementing the SDGs: What role does the SSE have?" whose aim is to open new spaces for SSE to become a fundamental tool for governments to achieve the 2030 Agenda and be an input for the design of policies and socio-business development programs.

Figure 1. Methodological Scheme



Source: prepared by the authors

These articles become context evidence, with experience in a given sector and interdisciplinarity (Lucía & Ortiz, 2018), which allows to consolidate a categorical group in order to identify the theoretical production related to the articles and the scientific production expressed, (Montilla Peña,2012).

Therefore, the descriptive part is focused on the weight that each characteristic identified in the database built has in the UNTFSSE Knowledge Hub Repository, whereas the remaining exploratory analysis is devoted to transforming this database so that the MCA can be implemented, with the aim of characterizing the repository by means of multiple correspondences of its modalities.

Thus, the Simple Correspondence Analysis (SCA) is applied using two characters or qualitative variables, each of which can present several modalities or categories. However, the method can be generalized to the case of a number of variables or qualitative characters bigger than two. When the number of qualitative variables is bigger than two there is no contingency table and the data representation needs a higher number of characters ***K*** of each ***J: (J$_1$, J$_2$, ..., J$_K$)***. With the MCA it is possible to study the relations among the modalities of all the qualitative characteristics under treatment.

The purpose of the MCA is to find the associations among variables or among modalities of those same variables which bear more importance in terms of the original inertia. It is an extension of the analysis of more than two variables of the SCA of a table which crosses two categorical variables. The technique was started by Guttman (1941), Burt (1950) and Hayashi (1956) and, also, named Homogeneity Analysis by other authors (Tenenhaus & Young, 1985).

The MCA consists of a Correspondence Analysis where matrix ***Z*** is called complete disjunctive table (CDT). It is obtained from the table which contains the categories which correspond to everyone for each variable transformed into its indicator variables, called fictitious variables. The matrix ***Z*** (see ANNEX), ***IxJ***, consists of a set of the UNTFSSE Knowledge Hub Repository articles, I=1..., i... 99 (in rows), a set of variables o qualitative characters J_1,...,J_k,...J_K (in columns) and a set of exclusive modalities 1, ..., m_k for each qualitative character. The total number of modalities will then be $J = \sum_{k=1}^{K} m_k$.

The CDT provides the distances between the articles (individuals) in the repository. It is not the usual Euclidean in Principal Component Analysis, rather the Chi2 distance typical of the Simple Correspondence Analysis. The distances by rows (i) and columns (k) are given respectively by:

$$d^2(i,i') = \frac{1}{J}\sum_{k=1}^{K} \frac{I}{z_{.k}}(z_{ik} - z_{i'k})^2$$

$$d^2(k,k') = I\sum_{i=1}^{I} \left(\frac{z_{ik}}{z_{.k}} - \frac{z_{ik'}}{z_{.k'}}\right)^2$$

The square cosines are used in addition to the contributions of the categories (Graphs 7 and 8) [1], which holds a similar interpretation in MCA.

This paper will focus on the k categories in the interest of the exploratory analysis to reduce the dimension and characterize the repository, since this paper does not aim at predicting or evaluating the accuracy of the model, nor does it deal with the dependence of the variables involved. The square cosine of the k-th category to the α axis, or the relative contribution of the α factor to the position of the k-th categories, is defined as:

$$Cos_{\alpha}^{2}(k) = \frac{\varphi_{\alpha k}^{2}}{d^{2}(k,G)}$$

where the quadratic distance to the k centre of gravity of category is expressed in that equation, and verifies

[1] The relative contribution of category "k" to factor "α" is defined as (k "columns-categories", f "rows-papers")

$$\mathrm{Cr}_{\alpha}(\mathrm{k}) = \frac{f_{.k}\psi_{\alpha k}^{2}}{\lambda_{\alpha}} = \frac{z_{.k}\psi_{\alpha k}^{2}}{IJ\lambda_{\alpha}}$$

It is verified that $\sum_{k=1}^{K} Cr_{\alpha}\ (k) = 1$.Therefore, the categories with higher contribution are more relevant for the description of the axis. Additionally, it is possible to compute the contribution of variable "j" to the "α" axis as

$$Cr_{\alpha}\ (j) = \sum_{\mathrm{k}\in\mathrm{K(j)}} Cr_{\alpha}\ (k)$$

The factorial coordinates for category k and individual "I" are the transition relations between the factors in the concrete space and the projection space:

$$\varphi_{\alpha k} = \frac{1}{\sqrt{\lambda_{\alpha}}} \sum_{i=1}^{I} \frac{z_{ik}}{z_{.k}} \psi_{\alpha i}$$

$$\psi_{\alpha i} = \frac{1}{\sqrt{\lambda_{\alpha}}} \sum_{k=1}^{K} \frac{z_{ik}}{z_{i.}} \varphi_{\alpha k}$$

Where, λ_{α} are the eigenvalues obtained directly from the diagonalization of the corresponding matrix of the equation from which the main axes (u_{α}) are obtained as

$$\mathbf{S} = \mathbf{F}' \cdot \mathbf{D}_{\boldsymbol{I}}^{-\mathbf{1}} \cdot \mathbf{F} \cdot \mathbf{D}_{\boldsymbol{K}}^{-\mathbf{1}} = \frac{\mathbf{1}}{\boldsymbol{J}} \mathbf{Z}' \cdot \mathbf{Z} \cdot \mathbf{D}^{-\mathbf{1}}$$

Were,

$$\boldsymbol{F} = \frac{\mathbf{1}}{\boldsymbol{IJ}} \mathbf{Z}$$

Then matrix $\boldsymbol{Z}$ is the CDT, $\boldsymbol{D_K}$ is the diagonal matrix with the weights of the columns (k) of general term of $\boldsymbol{[z_{.k}/IJ]}$ and $\boldsymbol{D_I}$ is the diagonal matrix with the weights of the individuals (i) of general term $\boldsymbol{[1/I]}$, which is usually constant

The factor coordinates $\varphi_{\alpha k}$ and $\psi_{\alpha i}$ verifies respectively, except for the scale factor $\frac{\mathbf{1}}{\sqrt{\lambda_{\alpha}}}$, the category "k" is at the midpoint of the individuals (papers) and that individual (paper) "I" is at the midpoint of the categories. That is to say, if two categories corresponding to two different categorical variables are close to each other, it is understood that they are associated in the sense that they have the same or very similar papers, because they are in the midpoint of the papers that have those categories. If the categories that are close together belong to the same variable, this indicates similarity between the groups of papers that have those categories, because these modalities are mutually exclusive and cannot be associated.

$$\sum_{k} \quad Cos_{\alpha}^{2}(k) = 1$$

Each element z_{ij} takes the value 0 or 1 depending on whether the "I" individual (paper) is affected by the "j" category or not. Therefore, each shaded rectangle of the CDT can be considered as a contingency table whose elements are 0 or 1. So the CDT (***Z***) consists of K juxtaposed sub-tables to obtain the simultaneous representation of all categories (columns) for all individuals (rows).

The categorical variables GEOGRAPHY (by type of continent) and ORGANIZATION (by type of Cooperative, Non-Profit Organization, Government or Supranational Organization, Other types of Social Enterprises) have been discarded from the original Z disjunct matrix. Those categories did not help to increase the explanation of the reduction of dimension for the repository. At the same time, the categorical variable SDG is replaced by MESA. Originally, the SDG categorical variable had 17 categories with a General SDG when individuals (papers) incorporate more than one. Then the variable was reorganised with the categories called SESSIONS that was presented in the introduction section in order to tune into the repository order: MESA_1Y2, MESA_3Y4. MESA_8Y9, MESA_5Y10, MESA_7_12_13_14Y15, MESA_6Y11, MESA_16, MESA_17 and MESA_ GRAL.

Finally, the categorical variables for the MCA to apply are SESSION (MESA), with the TOPIC (including TEMA_CASOSGENERAL, TEMA_CASOSINCLUSIÓN, TEMA_POLITICAS, TEMA_CASOSINNOVACIÓN, TEMA_INDICADORES categories) and IMPLEMENTED METHODS (including MET_MIXTA, MET_CUALITATIVA, MET_CUANTITATIVA, NO_METODOLOGÍA categories)[2].

5. Results and discussion

5.1 Descriptive analysis of UNTFSSE Knowledge Hub Repository

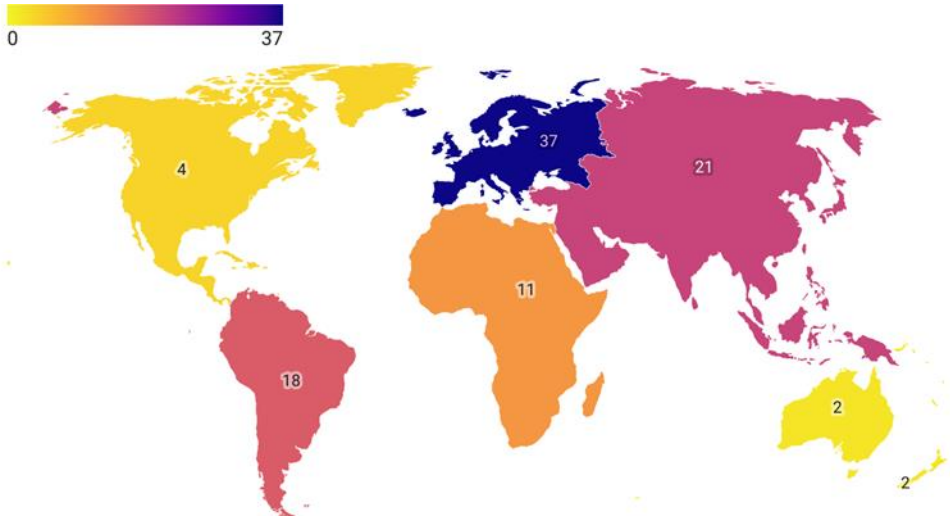
The papers selected for the repository came from a variety of countries located mainly in the continents of Europe, Asia, South America, and Africa. There were some highlights such as India where the most empirical samples were analysed (13), followed by Spain (9), Argentina (7), Brazil (6) and France (6) (Graphic 1). The repository articles are unpublished and were written in 2019, except for two which belong to 2018, and one to 2016.

[2] See, at the end, the Table in the Annex.

Although studies about SSE and SDGs have become frequent over the past years, initiatives about call for papers addressing this theme have been scarce, which means that in the past, not many editors received and published as many articles about SSE and SDGs as a central topic as nowadays.

Thus, up to 04-12-2021, Scopus (www.scopus.com) obtains 190 references from the 3.151 dealt with for ESS, within almost 8 million belonging to Economics, Business Administration and Financing & Accounting, which make up for as much as 9 per cent of all scientific literature registered at Scopus. But the surge takes place over the past four years, 2 out of each 3 references, almost 25 per cent, during the past year. It is interesting to draw our attention to the present effervescence.

Graph 1. Articles in the UNTFSSE Knowledge Hub Repository according to continent



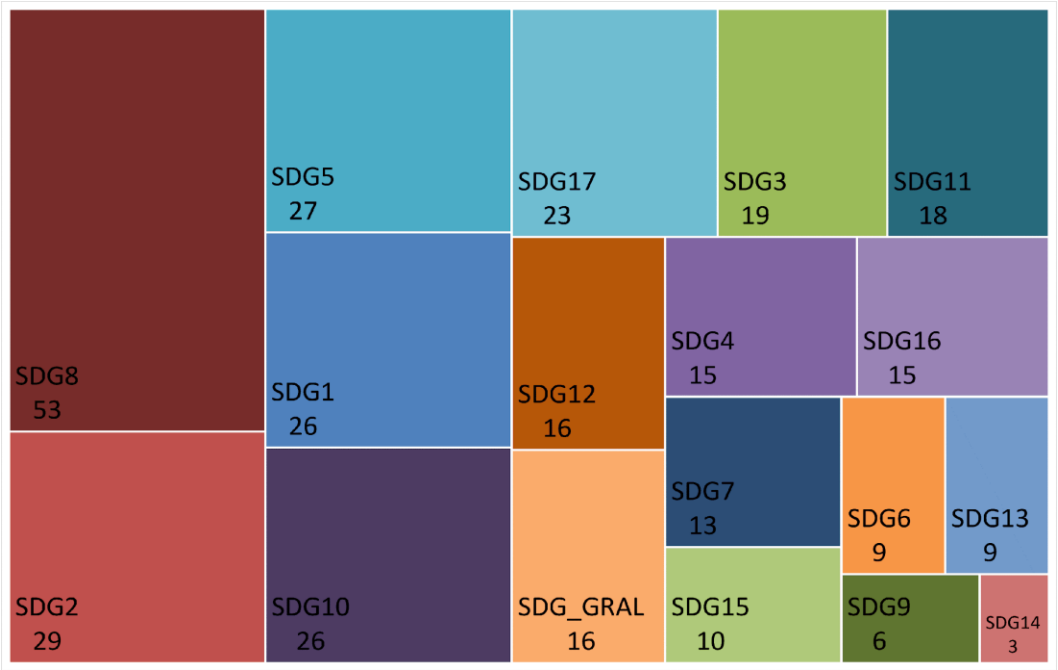
Source: Prepared by the authors and Data wrapper.

Although it is not representative of the global concern about a specific SDGs and its relationship with SSE organizations, since this information remains unknown, lie behind the proposals of the repository focused on SDGs 8, 2, 5, 1, 10 y 17, in this order. In other words, 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all"; 5: Achieve gender equality and empower all women and girls; 2: Ending hunger, achieve food security and improved nutrition, and promote sustainable agriculture; 1: Ending poverty in all its forms everywhere; 10: Reduce income inequality within and among countries; y 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development (Graph 2).

If SDGs are grouped according to the sessions in the event, the result is that half the weight of the repository is concentrated on the sessions about Equality (5 & 10), on Growth centred on the person (8 & 9) and Ending poverty and hunger (1 & 2) (Graph 3). Of the 99 articles, 16 addressed SDGs in general terms but did not focus specifically on any of them, 83 of them developed one or more goals.

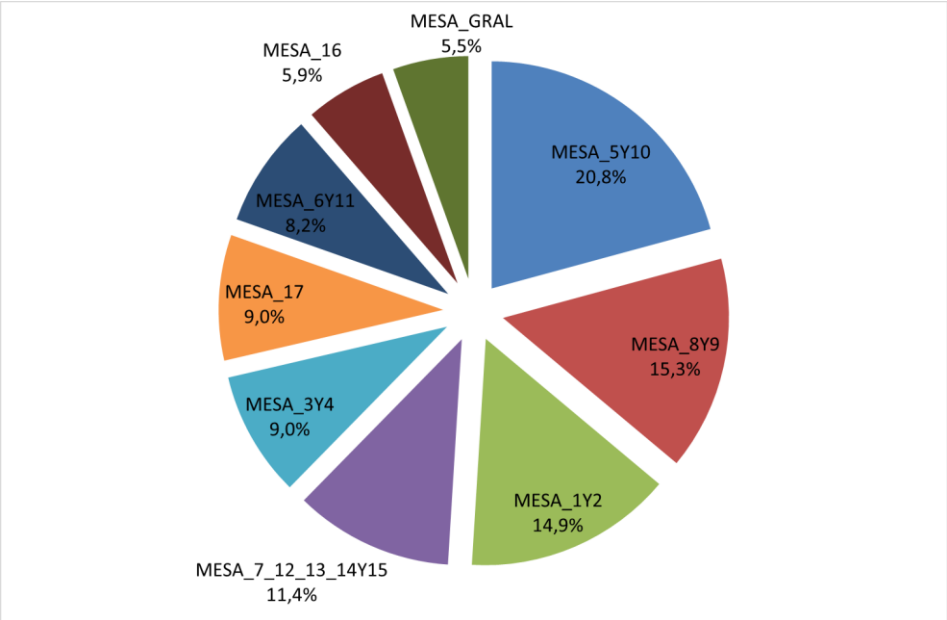
The fact is that most of the studies used qualitative methodology (Graph 4) with emphasis on case study, but with lack of dependency multivariate methods and interdependence both with certain strictness and complexity. As for quantitative methodology, none of the articles presents a scientific model to measure the contributions of SSE organizations to SDGs. The statistics shown are merely descriptive without constructs that account for corrections between independent and dependent variables. It is understood that **it** is an exploratory analysis of the papers.

Graph 2. Concern in UNTFSSE Knowledge Hub Repository according to the 17 SDGs



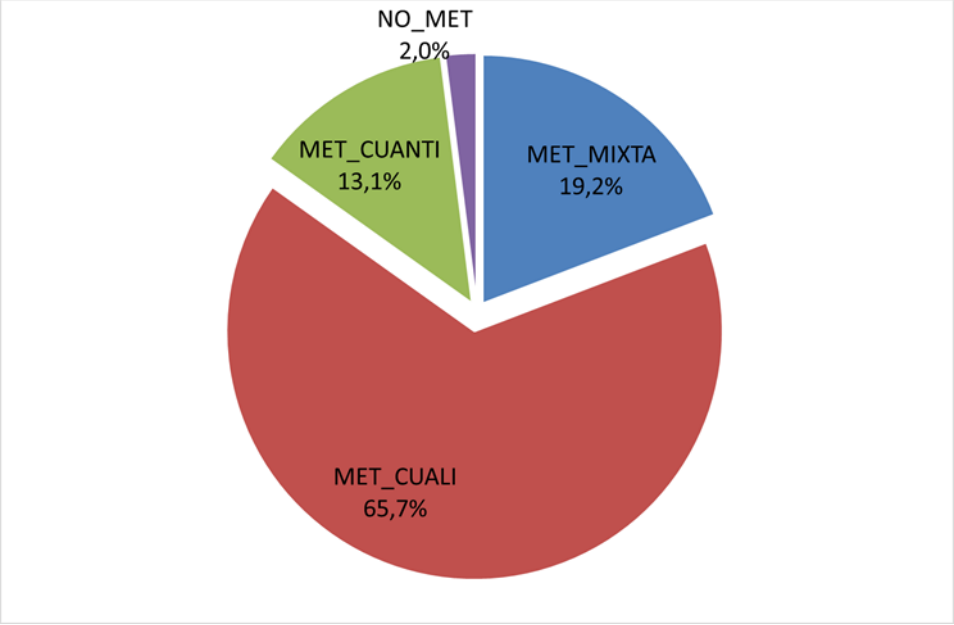
Source: Prepared by the authors

Graph 3. Concern in UNTFSSE Knowledge Hub Repository according to sessions



Source: Prepared by the authors

Graph 4. Participation of the methodologies used in the UNTFSSE Knowledge Hub Repository



Source: Prepared by the authors

About the language of the papers mentioned, English is the most frequent (Table 1), followed by Spanish. Among those in English, six are also written in a second language: Spanish, Korean and French, in this order.

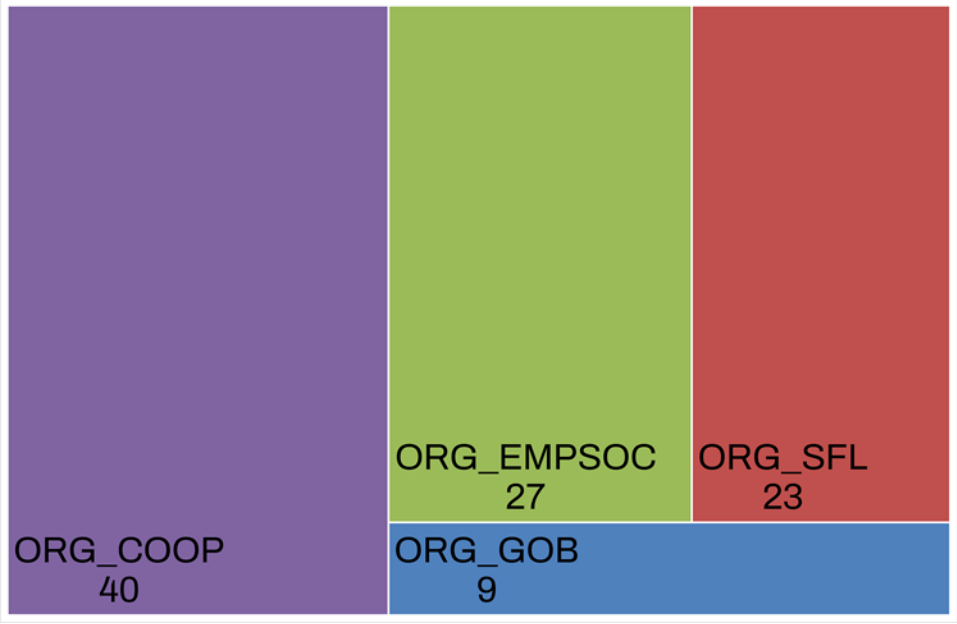
Table 1. Main languages of the articles

Main language	Number of articles
English	71
Spanish	17
Portuguese	6
French	5

Source: Prepared by the authors

This means that the concern of the contributions to the repository is consistent with what was stated in the theoretical section, namely that SSE organizations tend to bring together income sources and work by means of their associative management, which produces considerable impact on work for poverty and hunger reduction and on distribution of economic results equitably, thus reducing inequality. It happens, to a great extent, since a significant proportion of the SSE organizations is formed by members with right of opinion and vote, and economic participation is not measured by capital contributions but by the extent to which the services provided are used. For instance, it is also noted that in the repository almost half of the papers deal with cooperatives, over other organizations such as Not for Profit (23), or Social Enterprises of various types (27), apart from governmental organizations (9), which focus on public policies (Graph 5).

Graph 5. Type of organization dealt with in the papers of the UNTFSSE Knowledge Hub Repository



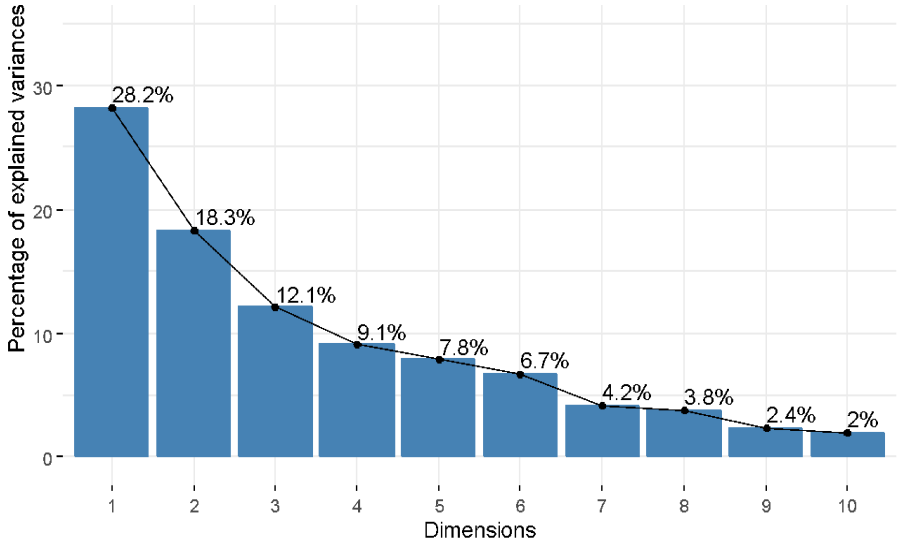
Source: Prepared by the authors

5.2 Reduction of the dimension of the repository

The results of MCA are obtained from R Team Core (2020) using "ade4", "ca", "dplyr", "factoextra", "factoMiner", "ggplot2" and "knitr" packages. In the sedimentation graph (Graph 6) is shown the number of dimensions versus its percentage of explanation of the "variability" (inertia) of the set of characteristics (and modalities). In the sedimentation graph the dimensions are presented in descending order. The two main dimensions represent almost 50 per cent of the main or original inertia noted in the methodological section.

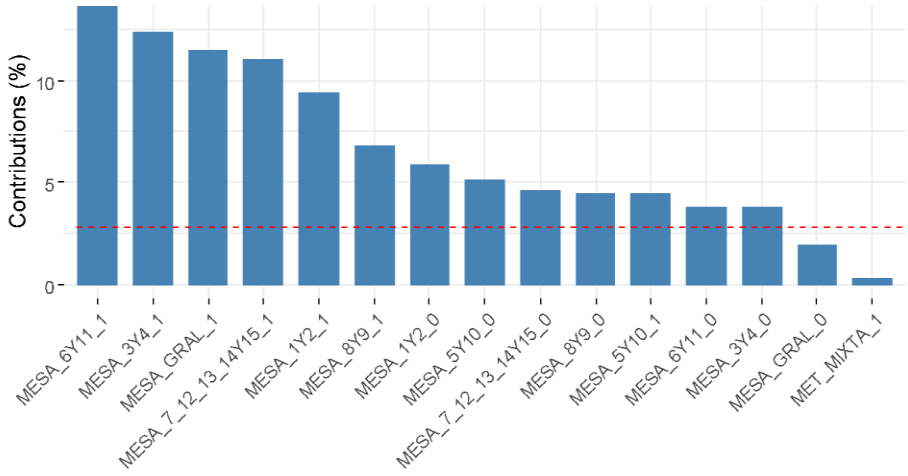
Even though the articles in the repository associated with the Equality session are the most numerous, they do not make up for a significant contribution to the main two dimensions to which the repository was reduced. This means that MCA deals with joint associations with respect to all the other modalities of the characteristics. Therefore, in dimension 1, it is confirmed the modalities Sustainable human settlements, social protection, Environmental protection and sustainable production and consumption, and Ending poverty and hunger (Graph 7). This happens simultaneously to the substantial contribution of the modality Qualitative Method, and they are followed by the modalities of Mixed Methods along with Cases of Socioeconomic Inclusion. In both dimensions it is difficult to interpret a joint component, but it does remain clear that the papers would be out of the Quantitative Methodology (Graph 8).

Graph 6. Sedimentation graph of MCA on the UNTFSSE Knowledge Hub Repository



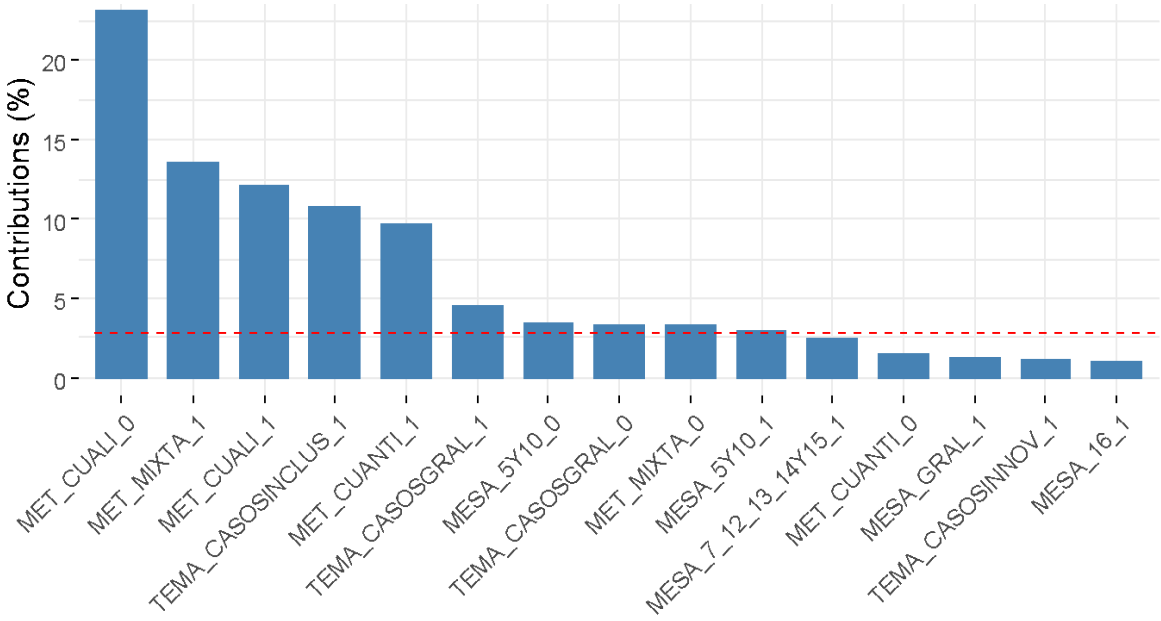
Source: Prepared by the authors

Graph 7. Contributions $Cr_{\alpha 1}(k)$ of the dichotomized categorical variables to α_1 dimension



Source: Prepared by the authors

Graph 8. Contributions $Cr_{\alpha 2}(k)$ of the dichotomized categorical variables to α_2 dimension



Source: Prepared by the authors

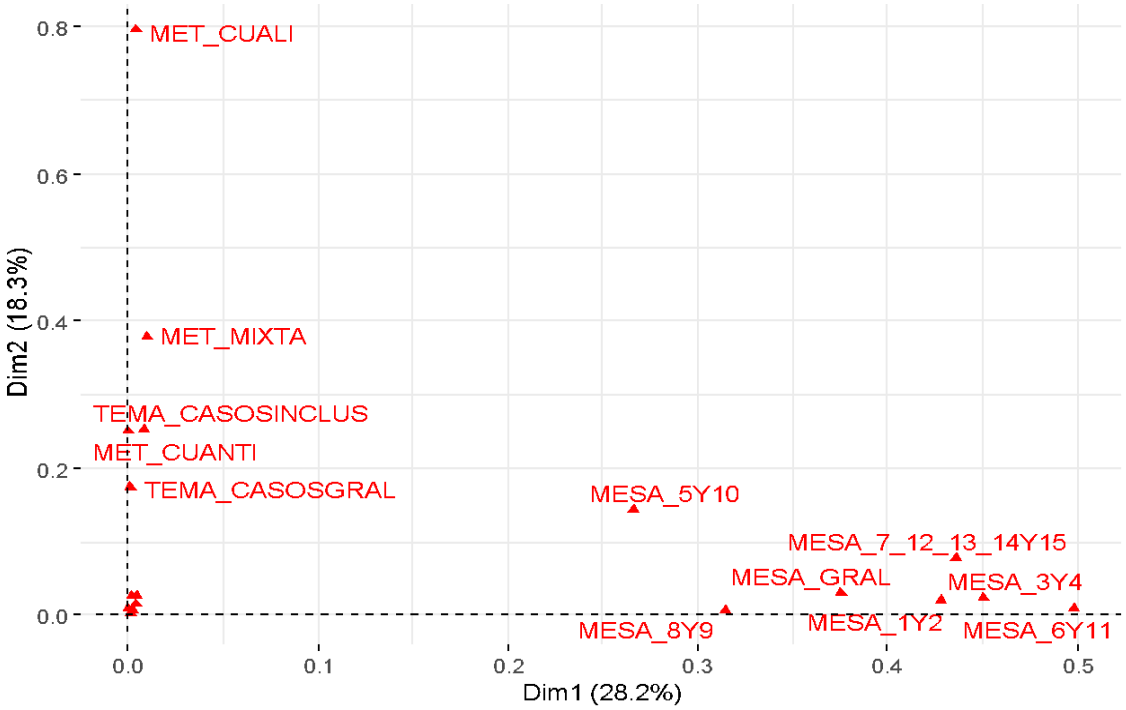
Although the characterization of the repository under the ACM analysis deals with a set of articles focused on **qualitative methods** and on (sessions of) **Sustainable Human Settlements**, **Social Protection**, **Environmental protection and sustainable production and consumption**, and

Ending poverty and hunger, it can also be said that the repository associates types of articles of the SDGs from those same sessions, as it tends to associate types of articles of **social inclusion topics with quantitative and mixed methods**. It should be noted that this type of articles is not the majority's case, since the MCA does not deal with the isolated weight of the remaining characteristics which a small percentage participation implies, as the case in a simple descriptive analysis that does not consider the relationships with the joint structure of attributes (Graph 9).

Thus, the Graph 9 considers the importance of the variable, the attribute as a set, regardless of whether it occurs or not, and in its relationship with the rest of the structure of the attributes of the set. It does not consider the attribute in an isolated way. Neither does the Graph 10 present the attributes in an isolated way, instead, it presents their levels: it indicates where it occurs or not, but always in relation to the entire structure of the attributes. Note that the quality of the representation of a point on the axis will be higher when the cosine squared is closer to 1.

Graph 9. Cloud of categories on the α_1 y α_2 dimensions

(Contributions in terms of $Cos^2_{\alpha 1;\alpha 2}(k)$)

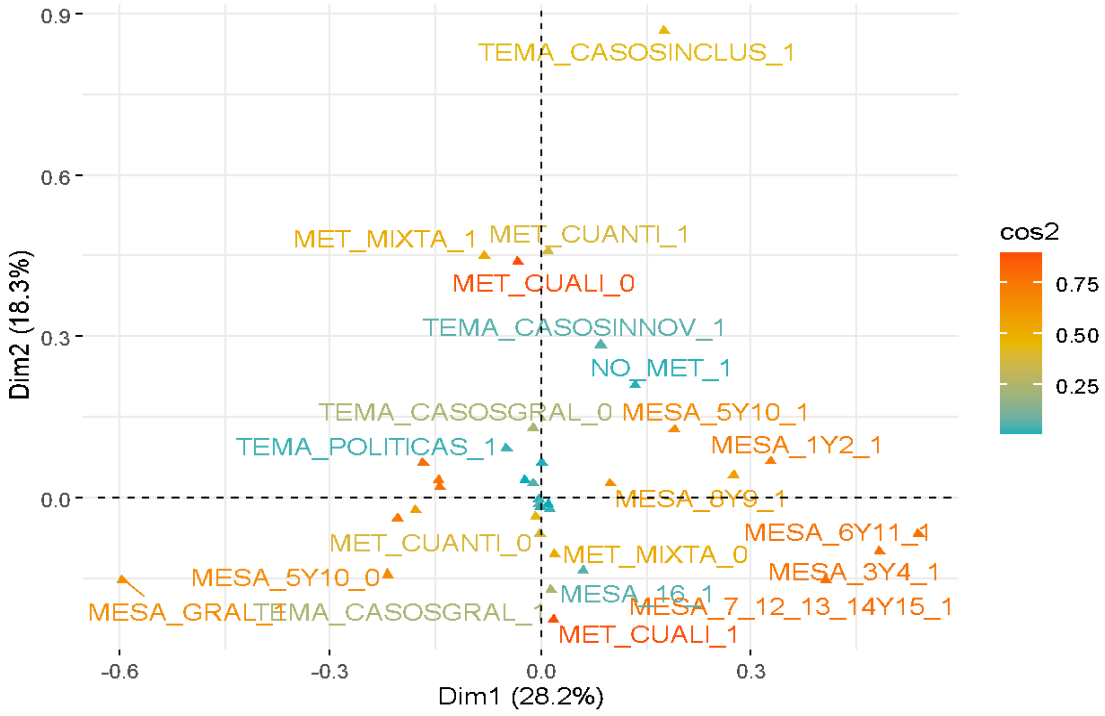


Source: Prepared by the authors

Therefore, when dichotomizing the modalities of the characteristics **Method**, **Session** and **Topic** (Graph 10), a representation is obtained in the two dimensions that represent most of the main inertia. So, when analysing the multiple correspondences of the repository, from the darkest orange to brown, the largest contributions relative to the original inertia in Cos2 are presented. In such a manner, they enable us to learn if a point is correctly represented on the factorial axis.

Far from the midpoint of Graph 10 we find the modalities that most contribute to inertia and, additionally, the modalities which are closest to each other would belong to certain summary variables of the set of characteristics. Consequently, in general, the same is said as understood from Graph 9, but by attribute levels, having standardized the indicators of quality, which help to interpret the closeness among the attributes as more intimately related when interpreting the characterization of the set of observations.

Graph 10. Cloud of dichotomized categorical variables on α_1 and α_2 dimensions (Contributions in terms of $Cos^2_{\alpha 1;\alpha 2}(k)$)



Source: Prepared by the authors

Consequently, an attempt can be made to characterize the repository regarding the relationships of the attribute levels with the rest of the attribute structure, like the studies that deal with the session's **Sustainable human settlements**, **Social Protection**, **Environmental protection and sustainable production and consumption** using **qualitative methodologies**. There is another certain grouping which seems to be clear because of the joint relationship of attributes that group **social inclusion issues** under **quantitative or mixed methodologies**. It is also necessary to mention that sessions **Ending poverty and hunger**, **Equality** and **Growth centred on people** without specific methodologies are quite near (Graph 10).

5. Conclusions

The review of the 99 articles leads us to a reflection on how SSE organizations line up to achieve the SDGs, becoming decisive tools for governments to comply with the 2030 agenda without leaving these organizations aside.

Accordingly, it is convenient to differentiate the characters of the repository studies both individually and all together, due the possible associations among all the modalities obtained from the MCA. For example, from the strategic point of view for management, it is interesting to see how the study presented shows the high participation of cooperative management in compliance with SDGs 1,2, 5, 8 and 10, where actions connect the community and the territory to improve the life quality of the different social actors presented. This is consistent with the findings on the relationship between the community-oriented cooperative principle, the practices that cooperatives develop to achieve this principle, and concrete contributions to the SDGs.

However, from the perspective of the MCA, some modalities must be seen in their joint correspondence with others, instead of an isolated way, in their contribution to the main inertia. For this reason, it has been necessary to eliminate the **type of organization** as a characteristic of the repository, and this contributed to elucidate the modalities' association of the repository articles' characteristics on the original inertia and, therefore, the characteristic and its modalities are not so decisive for representation in overall. Previously, the same was done with the **geography** on which each article of the repository deals with, mainly of European origin. In other words, the descriptive

analysis of participation of characters or modalities suggests a certain idea and the MCA suggests otherwise.

Although this review offers a baseline that makes it possible to reflect on the condition of SSE as a model capable of achieving a portion of the sustainability agreed upon in the 2030 Agenda, this is eventually possible because of the specificity of organizational practices that gives preference to self-management of their members as a means of meeting individual needs collectively and in an articulated way in a business deontology that gives preference to the reinvestment of surpluses in aspects such as education, community investment, development of environmental enterprises, democratic decision-making, election and participation mechanisms. It can also be mentioned that in the repository they are mainly represented by qualitative studies, and tentatively by average quality and accuracy quantitative studies, which most of them are case descriptions with little evidence that could tip the balance in favour of the SSE compared to other socio-economic organizations.

However, the characterization obtained from the MCA consider the power *jointly* treated in the associations among articles focused on **qualitative methods** and on sessions of, in this order, **Sustainable Human Settlements**, **Social Protection**, **Environmental Protection and sustainable production and consumption**, as well as **Ending poverty and hunger**. This last session, paradoxically, is the most important one in terms of weight of SDG 1 and 2 in the repository. In addition to the fact that in the repository there is an **association of types of articles of SDGs from those same tables**, as if belonging to the same latent variable, and tends to associate types of articles on **social inclusion topics with quantitative and mixed methods**.

Consequently, studies with scientific rigor are required to make it possible to validate characteristic models by latitude to globally characterize the actual weight and relative contributions of the SSE to the SDGs, by means of measurement and construction that, in one way or another, influence on dependent variables of analysis that could be useful to draw conclusions from a larger number of organizations. This has an impact on the design and implementation of public policies, for the analysis or verification of compliance with the SDGs in a systematic way, to generate global information systems, to approach the real and core needs of humankind and of course, to propose alternative solutions.

It is necessary for the SSE organizations to measure their present situation to continue facing the challenges and helping to solve current problems with innovative processes that may lead to the achievement of actions such as, among others, the proposal of the UN in the 2030 agenda. In the continuous progress of events the contributions of the SSE organizations could suit as a compendium to generate adjustment possibilities so that such experiences are representative of global reality, avoiding biased participation, which could mean that what is discussed does not reflect the reality of SSE and its contributions to the achievement of the SDGs, especially about the way it interacts with

communities, participating in cooperation networks, accessing a range of information, enhancing social innovation, which is highlighted by means of the MCA in its general contribution to the characterization of the repository.

Thus, it is essential to make a "pause along the way" and rigorously analyse the different gaps that exist in this relationship between SSE and SDGs, since until now there are no hypothetical structured quantitative measurement models, nor qualitative based on multivariate models, that could provide accurate data and the possibility to establish relationship among variables for the prediction of hypotheses to complement theoretical frameworks based on reliable analysis models. Even though in this analysis of the repository there are only 14 articles with quantitative methodology, only a few refer to data collection using descriptive statistics or specifically relating a few very generic sociodemographic variables.

The reduction of the dimension to characterize the set of articles in the repository and their characteristics is not supposed to represent the global reality. However, if the world standard reference was available, it would be possible to learn if the repository represents the objective it was pursuing. Consequently, this analysis is not intended to guide strategies for the visibility and promotion of the SSE as an instrument to help achieve the SDGs. However, we must be aware of the limits of these contributions and bear in mind which of the SDGs the SSE organizations are addressed and, at least, to what extent. The relationship between the SSE and other SDGs could be analysed, such as those related to fishermen's cooperatives devoted to the sustainability of marine ecosystems, or traditional capitalist enterprises that have a greater potential for absorbing technological progress and competitiveness per worker per hour, as well as gross capital formation (real investment, not financial investment) towards sustainable energy generation, but these cases are not very visible within the generalization that appears in the 99 cases studied.

The main objective is to be impartial in the identification of ESS agents and their “foundations”, to be aware of the limits, to introduce seriousness and rigour in the issues that can support sustainable future growth. Because, in absolute terms, the group of companies not associated with ESS contributes much more than they do. Thus, simply because of its approximate weight in countries where quantitative studies on SSE are carried out, the weighting arcs in different magnitudes, whether in number of organizations, employment or Added Value Generated, are between 2 and 8 per cent.

The remaining socioeconomics runs parallel to the role of Public Economy, Households, and traditional capitalist companies, which represent the largest weight of the three institutional sectors. All right, so why SSE? Well, because in relative terms their contribution to the achievement of the SDGs is bigger, and due to the definition under economic institutionalism proposal, since they do not require neither priority for-profit margins, nor individual profit purpose to undertake their social actions both with their own members and with broader society. When it comes to harnessing or

releasing resources to improve the socioeconomic or environmental position of others, the contribution of SSE to general sustainability tends to be important.

ANNEX. Complete Disjunctive Table for Multiple Correspondence Analysis on UNTFSSE Knowledge Hub - 2019 repository

	MET_ MIXTA	MET_ CUALI	MET_ CUANTI	NO_ MET	TEMA CASOS GRAL	TEMA_ CASOS INCLUSIV	TEMA_ POLITICA	TEMA_ CASOS INNOV	TEMA_ INDICA	MESA_1 Y2	MESA_3 Y4	MESA_8 Y9	MESA _5Y10	MESA_7 _12_13_1 4Y15	MESA_6 Y11	MESA 16	MESA 17	MESA_ GRAL
1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	1	0
4	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
5	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
6	0	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
7	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0
8	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0
9	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	0
10	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0
11	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
12	0	1	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0
13	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0
14	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0
15	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0
16	0	0	1	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0
17	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0
18	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
19	1	0	0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0
20	1	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0
21	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
99	0	1	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0

Source: Prepared by the authors

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