Satisfaction of cooperatives: analysis of measurement scales

Satisfação dos cooperados em relação às cooperativas: análise de escalas de mensuração

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Abstract

Satisfaction is a complex and important construct in different areas of knowledge, such as marketing and consumer behavior. Based on the importance of this construct, the objective of this article is to identify and analyze measurement scales referring to the perception of "cooperative satisfaction" in relation to cooperatives. This is an exploratory study with a qualitative and descriptive character, with systematic review as a method of investigation. It has been identified that there is no specific scale in the literature aimed at measuring the "satisfaction of the co-workers" construct. In any case, it was found that the scales that exist for the construct "satisfaction" can be used to measure the satisfaction of the cooperates, a construct considered in this article, with the appropriate adaptations, as can already be

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observed in other areas in which scales for the construct "satisfaction" are used.

**Keywords:** Scale Development. Satisfaction Scale. Satisfaction of Cooperatives.

**Resumo**

A satisfação é um construto complexo e de suma importância em diferentes áreas do conhecimento, como o marketing e o comportamento do consumidor. Com base na importância deste construto, o objetivo deste artigo é identificar e analisar escalas de mensuração referentes à percepção da “satisfação dos cooperados” em relação às cooperativas. Trata-se de um estudo de natureza exploratória, com característica qualitativa e descritiva, tendo a revisão sistemática como método de investigação. Identificou-se que não há, na literatura, um escala específica direcionada para medir o construto “satisfação dos cooperados”. Em todo caso, verificou-se que as escalas que existem para o construto “satisfação” podem ser utilizadas para mensurar a satisfação dos cooperados, construto considerado neste artigo, com as devidas adaptações, conforme já pode ser observado em outras áreas nas quais escalas para o construto “satisfação” são utilizadas.

**Palavras-chave:** Desenvolvimento de Escala. Escala de Satisfação. Satisfação dos Cooperados.

**Introduction**

Satisfaction is a construct widely studied in the most different areas and presents various definitions even though, regardless of the area of knowledge, all have convergence. Because it is considered an abstract variable or, as called in psychometry, latent, several studies seek to measure it, in various contexts (TINOCO; RIBEIRO, 2007; MILAN et al., 2008; ZEQUINÃO; CARDOSO, 2013; RODRIGUES et al., 2018).

On this construct, several authors mention an existing relationship between the expectations that are created by consumers, whether by products or services, as well as the variables resulting from these, such as, for example, the service of dismissing, and the experiences that are experienced by these (MARCHETTI; PRADO, 2001; KOTLER; KELLER, 2006).

If this relationship between expectations and experience is good, one can consider that the consumer can be satisfied. Thus, once satisfied, it not only tends to return to the company to acquire new products, but also characterizes itself as a potential customer to indicate the
company, including through word-of-mouth advertising, thereby promoting a possible increase in profit margins (ANDERSON; MITTAL, 2000; SIRDESHMUKH et al., 2002; ARTONI; DARÉ, 2008).

In this sense, it is of fundamental importance to know the satisfaction of consumers, of customers, regardless of the type of organization, since this knowledge will bring significant results for organizations, as, for example, indicating the best investment strategies, which tends to contribute to the improvement of the decision-making process.

In the light of these observations, the following question arises: Are there measurement scales referring to the perception of cooperative satisfaction among the cooperatives? This question is part of the general objective of this article, namely to identify and analyze measurement scales referring to the perception of cooperative satisfaction among cooperatives.

The article is structured, in addition to this introduction, first section, with five more sections. The second section addresses the theoretical path. The third presents the methodological procedures. The results and analyzes are presented in the fourth section. The fifth brings some conclusive reflections, while the sixth section mentions the thanks and later presents the references used.

**Theoretical Path**

2.1 Notes on Cooperatives

Cooperativism is already widespread in various parts of the world and is gaining more adherents to the Cooperative Movement every day, even though there is no consensus on the concepts and meanings attributed to the terms "Cooperativism", "Cooperative", "Cooperation", "Cooperative".

Bialoskorski Neto (2006) points out that since the prehistory of our civilization, indigenous tribes and ancient civilizations, such as the Babylonians, have practiced cooperation and some form of solidarity association, which indicates that cooperativism and cooperation, in practice, are very old terms in the history of humanity.

However, despite the existence of these historical accounts, Rech (2000) highlights the early cooperative movement, especially the process of worldwide expansion, from Rochdale's cooperative experience. According to Bialoskorski Neto (2006), this experience gives rise to the modern world cooperative movement, with its principles and values.
(2016) highlight that values correspond to the way of being cooperative, while the principles relate to the way of acting, that is, they dynamize and make effective the practice of values.

According to Gaiger (2013), European immigrants were responsible for introducing cooperativism in Brazil at the end of the 19th century, especially in the South and Southeast. It also points out that this introduction, as well as in the countries of origin of cooperativism, also took place as a strategy to combat the situations experienced by workers. The first cooperative created in Brazil was the Consumption branch, in the city of Ouro Preto, Minas Gerais (MG), called the Civil Servants Society of Ouro Preto, on October 27, 1889 (EGEWARTH, 2015).

Law No. 5,764, of December 16, 1971, defines the National Policy of Cooperativism, establishes the legal regime of cooperative societies, and provides other measures. Article 4 defines cooperatives: ‘cooperatives are partnerships of a civil nature, not subject to bankruptcy, formed to provide services to members, distinct from other companies ...’.

Until 2019, 13 (thirteen) branches of cooperativism were considered (Agriculture, Livestock, Consumption, Credit, Education, Special, Housing, Infrastructure, Mineral, Production, Health, Work, Transport, and Tourism and Leisure). As of 2020, after a democratic process and a detailed evaluation of the benefits for cooperatives, the branches of cooperativism have undergone a restructuring and are now only 7 (seven) - Farming; Consumption; Credit; Health; Labor, Production of Goods and Services; Transport; and Infrastructure (OCB, 2020).

2.2 Satisfaction: Between Definitions and Measurements

In the area of marketing and consumer behavior, satisfaction has been widely studied, as organizations have sought to overcome the challenges that present themselves with a focus on not only satisfying, but also surprising their consumers, enabling these good experiences to exceed the expectations generated by a given product or service (HEKIS et al., 2014; MUNIZ et al., 2014).

Ferreira (2000) points out that the term satisfaction is related to the feeling of contentment, of pleasure, this being coupled with the realization of what is expected, that is, the expectation. Kotler and Keller (2006, p. 142) define satisfaction as a "sense of pleasure or disappointment resulting from the comparison of the perceived performance (or result) of a product or service with the buyer's expectations".
Thus, if the perceived performance does not meet expectations, the consumer will be dissatisfied. On the other hand, once the performance is achieved, it will be satisfied. This satisfaction can be reflected in excellent results for the organization (SIRDESHMUKH et al., 2002; ARTONI; DARÉ, 2008).

In addition, if the perceived performance exceeds expectations, the consumer will be highly satisfied or delighted. Thus, in addition to other variables that may be related to consumer satisfaction, one can perceive that expectation is a variable that, to a greater or lesser extent, influences the measurement of the satisfaction construct.

In this sense, companies should not be primarily concerned with selling their products and services, but should be attentive to meet the needs and expectations of their consumers, as sales will thus occur as a consequence of the attention given to their customers, especially since there are several factors that can contribute to the formation of expectations, such as personal needs, the company's communication with its customers, the word-of-mouth spread and, of course, previous experiences (KOTLER; KELLER, 2006).

It is important to point out that consumers are no longer a purely passive target at present, which forces companies to be always on the lookout, especially with technological progress. Thus, all sectors of the organization must be concerned with the customer, trying to identify their perceptions about the services that are provided to him, the products that are sold to him and, of course, identify what to do to correct that which does not have a good perception.

From this perspective, satisfaction is characterized as a complex construct, presenting an abstract concept and therefore cannot be measured by using a single item. In order to be measured, in a valid and reliable way, different indicators must be considered (HAIR JR. et al., 2019).

2.3 Satisfaction of the Cooperatives: Knowing the Construct

Cooperatives are democratic organizations, run by their own cooperatives - also called members, associates and even partners - that actively collaborate in all planning, execution and decision-making processes.

Thus, cooperatives play a dual role in cooperatives, since they act as owners, by the very nature of cooperatives, but they are also users, customers or even consumers of the services developed by cooperatives or of the products offered by them.
In this way, it is as if we thought, in the first instance, that the cooperative itself is responsible for guaranteeing its satisfaction in relation to the cooperative, in the most different perspectives, since, in the condition of owner, it must also act so that the services developed and the products offered by the cooperative are adequate providing satisfaction for everyone, including his own.

By exercising this dual role, we could consider that the cooperatives would be continually satisfied with the cooperatives of which they are part. After all, were they not themselves responsible for their dissatisfaction? However, this dual role played by the cooperatives at the same time may lead to management problems within the cooperative. These problems, in turn, can interfere with the satisfaction of these cooperatives.

In this sense, considering the management of cooperatives and the dual role exercised by cooperatives, Zylbersztajn (2002) points out that part of the management problems refers to difficulties due to the non-separation between ownership (cooperated as owner) and control (carried out through the cooperatives), which can cause loss of managerial efficiency of the cooperative.

Focusing on the objective of this article, the construct "cooperative satisfaction" presents similar characteristics to the construct "satisfaction" itself - complex, with abstract concept and cannot be measured by means of a single item (HAIR JR. et al., 2019). Although both can be considered from different perspectives, it is taken into account that the construct "satisfaction of the cooperatives" is directed to the cooperatives, in order to seek to identify and, if necessary, analyze scales that are effectively directed to these organizations.

Methods

The study is exploratory in nature, with qualitative and descriptive characteristics, with systematic review in the literature as a method of investigation.

During the research, through the systematic review, the Periodicals database of the Coordination for the Improvement of Higher Level Personnel (CAPES) was used, depending on its coverage, since this database encompasses different specific databases such as Scopus which, together with the Spell database, had the articles prioritized in this study, through the search filtering items.

As a filter for carrying out the systematic review, we considered works that were related to the construct "satisfaction of the cooperated", through the use of different search terms, in English and in Portuguese, including the construct. Thus, the following search terms
were used: satisfaction / satisfaction, satisfaction scale / satisfaction scale, development of a satisfaction scale / satisfaction scale development, and member satisfaction / satisfaction of the cooperatives. In addition, it was considered a temporal cut of articles from 1990 to 2019 (Figure 1).

It should be noted that the aim of the search, despite the increase of words in the terms used, was to make it more specific with focus on locating articles that worked the considered construct or, at least, nearby constructs that could, even if it was not the purpose of the article, be analyzed from the perspective of use by means of adaptation and, with this, it is possible to identify the gap of a specific scale.

![Figure 1 - Processing after systematic review.](image)
Source: Prepared by the authors.

The term satisfaction brought a considered number of articles, even when coupled with cooperativism. By carrying out some filtering when carrying out the searches, an initial corpus of 46 articles was arrived at that would be potentially relevant for the study - focusing on the term satisfaction linked to cooperativism. Taking a preliminary reading, only of the titles and the abstracts, it was defined that 20 articles would be relevant for the study. However, when reading the methodologies of the articles, with a focus on the construct "satisfaction of the coworkers" and also on the constructs specifically linked to the scale of satisfaction, although in other contexts, 04 articles proved to be relevant for the study.

The 04 articles were read in full and the analysis was carried out based on the standards set by DeVellis (2012) for the construction of scales.
Results and Discussions

No scale has been identified in this study, specifically the concept of ‘cooperative satisfaction’. However, it was verified the existence of some articles that presented the construct in question as a search term, but with a focus on qualitative works.

In addition, it was also possible to verify the existence of many articles that address the "satisfaction" construct, in the most different areas of knowledge, from marketing to medicine, among others. It was also found that many of the articles depict the use of scales already universally validated, such as the use of Servqual, SERVPERF and the American Customer Satisfaction Index (ACSI) methodology.

The 04 defined articles for analysis were read in full and the relevant general data are presented in Table 1.

<table>
<thead>
<tr>
<th>Author(s) / Year</th>
<th>Analysis(s)</th>
<th>Dimensions (D)</th>
<th>D No.</th>
<th>Items / Variables</th>
<th>Scales</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAVIANO, V.; LOBLER, M. L.; AVELINO, A. F. A. (2019)</td>
<td>ERA</td>
<td>Service; Input; Social and economic aspect; Location and physical structure; and Service</td>
<td>5</td>
<td>32</td>
<td>There was no indication of scales used in previous studies</td>
<td>305</td>
</tr>
<tr>
<td>SPINA, D. T.; GIRALDI, J. de M. E.; OLIVEIRA, M. M. B. de (2013)</td>
<td>Factorial Analysis and Multiple Regression Analysis</td>
<td>Knowledge; Documentation; Attendance; Presentation; and Tangible</td>
<td>5</td>
<td>20</td>
<td>Adapted from Cronin and Taylor (1992)</td>
<td>49</td>
</tr>
<tr>
<td>COSTA, A. C. F. da C.; SOUZA, S. S. de; SILVA, L. C. T. da (2008)</td>
<td>Main Component Analysis (ACP) and Structural Equation Models (SEM)</td>
<td>Expectation; Perceived quality; and Perceived value</td>
<td>3</td>
<td>53</td>
<td>Based on the American Customer Satisfaction Index (ACSI), model developed by Fornell et al. (1994 apud FORNELL et al., 1996); and adapted from Fornell (1992)</td>
<td>221</td>
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Table 1 - Articles selected for analysis.
Source: Prepared by the authors.

The 4 articles were analyzed based on some categories according to the description
of DeVellis (2012), when it comes to structuring a scale. Thus, during the analysis, he sought to identify: a) the clear determination of the construct under study in the article; b) the set of items / variables used; c) the characterization of the sample; d) the performance, or not, of the content validations, of construct; e) the application of pre-test; and f) the analysis of the items.

4.1 Article on Member Satisfaction in Agricultural Cooperatives

In the first article, Flaviano et al. (2019), the authors aim to "identify the factors that influence the degree of satisfaction of the cooperates". They mention the performance of content validation and construction, but it is not clear the definition of the construct to which they refer, although, in the course of reading, one can perceive that it is the construct "satisfaction". Likewise, it is not clear in the article how to carry out a pre-test, but at a given moment it is implied that it was carried out before the application of the questionnaire to the sample considered in the survey.

In the article in question, no scale is created, nor is a universally validated scale used to study the construct "satisfaction". However, the authors use quantitative statistics to develop the study. To do so, they mention the use of Exploratory Factorial Analysis (EFA) and the use of the survey technique, by means of a five-point ordinal scale (however, the authors refer to survey as a method and name the five-point scale as being interval). The KMO presented in the study is 0.949, that is, because it is close to 1, the use of Factorial Analysis is appropriate.

Regarding the sample, the authors point out that 330 questionnaires were applied to members of agricultural and livestock cooperatives in the state of Rio Grande do Sul, 46 of which would be disregarded. However, they inform that the sample for the survey is 305, leaving an incoherence about the exact quantity of questionnaires that, in this case, were disregarded.

For carrying out the research, the set of items (variables) is created by the authors, based on an ordinal scale of five points - possibly referring to a Likert scale, although this is not mentioned - without mentioning previous studies that support the use of the defined items. By means of exploratory factor analysis, 6 factors/dimensions were generated, with different items linked to each one of them. Because of this, one of the factors, which is not mentioned, is excluded from the analyzes, since it presents only 02 items/variables, resulting, therefore, 5 factors/dimensions that, according to the authors, are: Service; Input; Social and Economic
Aspect; Location and Physical Structure; and Attendance. Cronbach’s Alpha, highlighting the reliability of the factors, ranged from 0.77 (Location and Physical Structure) to 0.932 (Service), which is considered a good consistency, since the reference value is 0.70 (HAIR et al., 2009).

The authors highlight that, through exploratory factor analysis, 5 factors/dimensions are indicated explaining satisfaction in agricultural cooperatives. Furthermore, they point to the carrying out of research in just one branch of cooperativism as a limitation. On the other hand, the proposal for future studies is not clear, mentioning the need to develop studies, for example, in other organizational formats.

4.2 Article with the SERVPERF Scale (CRONIN; TAYLOR, 1992)

The analysis of the influence of the dimensions of quality of service on customer satisfaction was studied by Spina et al. (2013), through a study at a company providing service in the pest control sector. Thus, throughout the article, the authors address in detail the two constructs under analysis: "quality of services" and "customer satisfaction". In the case of the former, the SERVPERF scale, developed by Cronin and Taylor (1992), was used, as well as a Likert scale of 5 points when applying the questionnaires to the population considered in the study. After the results of the quality of services, the second construct was considered, seeking to evaluate the influence of the dimensions of quality on satisfaction. Therefore, the article does not deal with the creation of scale, but with the application of an already existing scale adapting to a specific segment.

To measure the quality of services, the set of items has already been validated depending on whether the SERVPERF scale is already used, thus containing 22 items. For the study in question, the authors pointed out that it was necessary to make small adaptations to the questionnaire, from the same authors who created the scale, for the pest control segment. As for the application of the questionnaires, it occurred by means of a link created in Google Forms and sent to the population considered in the survey.

As to the population and sample of the study, the authors highlight that we are dealing with customers belonging to the pest control segment, who have a service contract with a company located in the interior of the state of São Paulo. In this sense, they mentioned that the population in question is 147, depending on the active contracts, but only 49 replied to the questionnaire, thus characterizing the sample of the study. This sample makes the use of the factorial analysis inappropriate, since the ideal is to have a sample greater than 50.
During the methodological procedures described in the article, the authors do not mention any type of validation, although in the theoretical reference, when presenting the constructs, valities related to the scale used are mentioned. Likewise, the authors do not mention anything about the application of the pre-test, possibly considering that the scale in question is already validated.

The authors put forward a central hypothesis in the article, namely: the quality of the service positively influences the satisfaction of customers. During the analyzes, they justified the reason for not carrying out hypothesis testing, but even so, at the end of the article, they stressed the confirmation of the central hypothesis formulated.

In order to carry out the analyzes, the authors mention factorial analysis, in the case of quality of services, but not specific which, although it can be imagined that it would be exploratory. However, they point out that the factorial analysis carried out has the objective of reducing the data only, in such a way as to simplify the regression analysis. In this study, KMO is 0.667, i.e. close to 1, although it could be a higher value, indicating high suitability for the use of Factorial Analysis. In any case, by means of the factorial analysis performed, the items were grouped into 05 factors/dimensions: knowledge, documentation, attendance, presentation and tangible.

From there, multiple linear regression was performed to assess the influence of the dimensions of quality of services on customer satisfaction. Thus, the dimensions of the quality of services were considered the independent variables and the satisfaction of the dependent variable. It has been identified that the dimension "knowledge" is the one that most influences satisfaction and, according to the authors, the one that least exerts influence is "tangible".

As main results, the authors observed that the quality factors obtained by the factor analysis explained almost 57% of customer satisfaction, confirming the central hypothesis created in the study. Furthermore, they pointed out that the result obtained in the study is indicative of the validity of the Cronin and Taylor model (1992).

The size of the analyzed sample is presented by the authors as a limitation of the study. In this sense, among the suggestions for future research, they highlight the expansion of the sample.
4.3 Article on the Application of the American Customer Satisfaction Index Methodology (ACSI) - Fornell et al. (1994 apud FORNELL-et al., 1996)

Costa et al. (2008) conducted a study to discuss the applicability of the American Customer Satisfaction Index (ACSI) methodology, a model developed by Fornell et al. (1994 apud FORNELL et al., 1996), to Brazilian reality situations, based on the model of structural equations. Therefore, the study does not deal with the creation of scale, but with the use of something already validated.

To do so, it considers the 4 latent variables foreseen in the model: expectation, perceived quality, perceived value and consumer satisfaction, the first 3 being analyzed as antecedents of the last variable. All of these constructs were duly addressed in the article.

A numerical scale with 10 points was used in the study, containing 53 items, and this was already validated (FORNELL, 1992). Considering these 53 items, used in the data collection, 23 measure the expectation, 25 measure the perceived quality, 2 the perceived value and 3 the satisfaction. The study sample refers to users of the services offered by Companhia do Metropolitano de São Paulo - Metrô, totaling 221 individuals. It was not mentioned about the performance of pre-test, possibly depending on the use of a model already validated, as well as the instrument used in the data collection.

The convergent validity and the discriminant validity of each variable (expectation, perceived quality, perceived value and consumer satisfaction) were presented in the article, the former, for example, being determined by means of the average variance extracted (AVE), with all values above 0.5.

By way of the analysis of the main components, which takes into account the total variance of the data, 25 of the 53 items considered in the data collection instrument were excluded, as a function of having presented, for example, communalities and low factorial loads. With the analysis of the model of structural equations, they identified that the variable "perceived quality" is the one that most impacts on consumer satisfaction.

The authors of the study reached the conclusion that the results obtained suggest that ACSI, in the way it is configured, is not satisfactorily applicable to the Brazilian public services sector. In addition, they identified a null effect of the variable "expectation" on satisfaction. In this sense, they suggest that, in order to increase the applicability of the model to situations similar to that of the study, the concept of expectation, as well as its relationship with the other variables of the model, should be revised.
4.4 Work Satisfaction Scale (EST) Article - Siqueira (2008)

With the aim of analyzing job satisfaction through the Work Satisfaction Scale (EST) developed and validated by Siqueira (2008), Barbosa *et al.* (2016) conducted a study at the Hospital Público de Campo Maior, Piauí, with 182 employees, including doctors, nurses, technicians and general services.

The study, therefore, is not a question of the creation of scale, but of the use of an already existing scale, in a given context. Throughout the article, the authors present a clear definition of the construct under analysis. The scale used presents 5 factors that contribute to job satisfaction, namely: colleagues; salary; leadership; nature of work; and promotions. In addition, it has 25 items, these being associated with a scale with 7 points.

The authors used *survey*, not promoting any alteration in scale, but after the pre-test carried out with 30 people to ratify the clarity of the instrument for collecting the data and to measure the average time of the responses -, the authors decided to exclude some items that did not show satisfactory factorial loads. The instrument was drawn up in an electronic form, by means of *Google Docs*, and sent by e-mail.

Values related to scale creation were not mentioned, as this is not the case, but the authors mentioned convergent validity.

The value of Cronbach's alpha for the 25 items of the scale used was 0.877, which is considered a good consistency, since the reference value is 0.70 (HAIR *et al.*, 2009). Taking into account the factors of the scale, the alpha values varied between 0.82 (nature of work) and 0.92 (salary), all values being therefore also above the reference value (HAIR *et al.*, 2009).

The study sample, considering the 25 items, is adequate. Thus, after carrying out the confirmatory factor analysis, the authors came to the conclusion that the leading factors (0.458), co-workers (0.293) and promotions (0.175) are those that influence job satisfaction, representing 45.8%, 29.3% and 17.5% of this influence, respectively.

**Final Considerations**

There is no doubt about the importance of the "satisfaction" construct, in different areas of knowledge, in particular in organizational studies, with a focus on *marketing* and consumer behavior.
In addition to the existence of many studies related to this construct, the field is still comprehensive, considering that some scales may be restricted to the contexts in which they were developed, thus requiring an adaptation so that they can be used in other realities.

In this sense, there is room for studies aimed at developing new scales that focus on the "satisfaction" construct, but with the inclusion of other terms such as, for example, "satisfaction of the cooperatives", although this satisfaction may be linked to different variables and also change, as a function of a new context, from one branch of cooperativism to another, etc.

No scale has been identified that would specifically measure the construct "satisfaction of the co-workers". When this construct was identified, for example, in the title of the article, it was observed that this was not a quantitative but qualitative empirical study.

The articles considered here presented different forms of analysis, predominantly for Exploratory Factorial Analysis (EFA) and Models of Structural Equations (SEM). In addition, the values obtained by means of the analyzes carried out were generally in line with the reference values, such as Cronbach's alpha. When this did not happen, the authors mentioned it throughout the article.

The main limitation of this study is related to the definition of the construct, since, depending on the results obtained through the searches, the focus should have been on the construct "satisfaction" itself, seeking to identify scales that were created for this construct and, depending on the scale, suggest to the one that would be more suitable for adaptation in cooperative organizations. Besides this central limitation, the methodological aspects associated with this question of the construct also constitute a limitation, since there was a lot of time invested in the search for articles focusing on a construct that was not well defined. While, of course, it is important to note that it is possible that there is (m) scale(s) that specifically measure (m) the construct "cooperative satisfaction", however it was not (ram) identified in the study.

For future research, it is suggested to develop quantitative empirical studies in the context of cooperative organizations, seeking to measure the satisfaction of cooperatives, not only in different realities, but also considering the different branches of cooperativism and the various optics within the cooperative.
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