

PERCEPTION OF VALUE CO-CREATION ACTIONS IN AGRICULTURAL COOPERATIVES

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ABSTRACT

This research developed a model for measuring the perception of value co-creation of the activities developed by the cooperative and analyzed the relationship between the perception of these actions and the members' characteristics. To test the proposed model, the Partial Least Square method was used. The levels of actions of value co-creation, professional management, satisfaction and loyalty and temporal orientation of the members were measured based on the members' perception. The results of the model demonstrate a significant association between satisfaction and loyalty and perception of value co-creation actions and a positive association between the cooperative's time orientation and perception of value co-creation actions. As practical implications, the results of value co-creation actions with innovation characteristics (value co-creation) tend to be perceived in the long term and influenced by the specific characteristics of the members.

Key words: value co-creation, temporal orientation, satisfaction, loyalty.

1. INTRODUCTION

The co-creation of value occurs in the personalized form of the service, that is, in the experiences unique to the client. Value is co-created with customers, if and when a customer is able to customize their experience, using an organization's product-service to a level that is best suited to the value of their investment, in the form of new knowledge with higher revenue, profitability, brand value and loyalty (PRAHALAD; RAMASWAMY, 2004a).

Value co-creation is a form of economic strategy that addresses the continuous and mutual generation and realization of value in the business-client dyad (PRAHALAD; RAMASWAMY, 2004a). In this direction, the concept of co-creation of value has been used when the purpose of the study intends to investigate the participation of the client in the productive process of the organization. The concept of value creation is related to the joint creation of value by the client and organization (PAYNE; STORBACKA; FROW, 2008; PRAHALAD; RAMASWAMY, 2004a).

What allows co-creation of value in a cooperative organization, the member participates in some stages, which will be explained later, that allow this co-creation of value together between member and cooperative. It is understood that it is possible that there is co-creation of value in cooperatives due to the interactive process between member and cooperative through resources, processes and products given the objective function of the cooperative and the distribution of property rights.

Therefore, given the existence of the process of value creation in cooperatives and the need for knowledge about the processes of co-creation of value, the research questions are: what are the determinants of co-creation of value according to the perception of the cooperative?

As a general objective, this research intends to analyze the determinants of value co-creation based on the perception of the cooperative given the governance structure. The specific objectives are: to identify the process of value co-creation in agricultural cooperatives, to identify if there is value co-creation in agricultural cooperatives.

This research is justified because the cooperatives present an organizational architecture different from the non-cooperative organizations, because the cooperative at the same time is the owner and client of the organization, being able to also exercise management roles, customer role and decision making, And may present another dynamic in the process of co-creation of value.

The gap of the literature that is sought to fill is that the agricultural cooperative coined value naturally, since it presents a facilitator for that which is its organizational architecture and distribution of property rights, where the cooperative is at the same time owner and client of the cooperative.

2. LITERATURE REVIEW

2.1 Cooperatives and their concepts

In Brazil, cooperatives have a relevant economic importance. According to the Organization of Brazilian Cooperatives - OCB (2014), the number of cooperatives is approximately 10.4 million and they directly generate 298.182 thousand jobs. There were 6,587 cooperatives in the country, such as consumer, agricultural, educational, transportation, special, production, tourism and leisure, medical, infrastructure, housing, mineral, educational and credit.

In addition to the favorable numbers of the cooperative sector, cooperative organizations face some difficulties as a problem of the horizon, the incentive problem, the portfolio problem, the control problem and the problems of influence and also the problems that arise from marketplace.

The co-creation of value can stimulate actions that bring benefits in the medium and long term, making clients realize the benefits generated by the organization. It can also encourage activities of participation of clients in actions that meet their own needs and of groups generating benefits for these and the organization (GRÖNROOS, 2011; PRAHALAD; RAMASWAMY, 2004a; FROW et al., 2015, DERVOJEDA et al., 2014). Value creation can dynamically offer innovation and the creation of products, services and processes that generate direct and indirect results for customers and organizations, responding to the needs of the market and customers (GRAMNOS, 2011; PRAHALAD; RAMASWAMY, 2004a).

Cooperative society, as well as the capital society, needs strategies and resources to survive and expand its business activity. The biggest challenge is to overcome their intrinsic inability to evolve, transforming themselves from an organization originally defensive in their strategies to a more aggressive organization in the market, facing capital companies.

It is noted that one of the objectives of the cooperative is to provide economic benefits to its members, as it rationalizes common expenses, making the results more efficient. The cooperative has greater bargaining power with the market, increasing the economic and financial capacity of the cooperative in a single organization, besides eliminating the intermediary figure, reducing the cost of purchasing consumer products (PINHO, 2004, FULTON, 1999). Establishing a more efficient quality control of production (POLÔNIO, 1999).

These organizations are developed because of the advantages that members find in the connection between some investments. By participating in a hybrid organization, the parties accept mutual dependence, reducing the benefits of control that the hierarchy could provide (MENARD, 2004; ANDERSON, 1985). But, on the other hand, there are advantages such as economies of specialization, economies of scale, economies of scope and savings in transaction costs (MENARD, 2004, 2013).

Thus, in this environment where the relationship between related parties is fundamental to the organization's competitive advantage and to overcome market barriers and value co-creation emerges as a strategy that adds value by strengthening the supplier-customer-cooperative relationship. This concept will be further explored in the next section.

2.2 Value co-creation in agricultural cooperatives

Ulaga and Eggert (2006) proposed that, in order to create value, the organization must migrate from the product-centric view (the dominant logic of goods) to the vision of personalized experiences for each client. The focus for creating additional value that is so sought after by managers becomes the interaction and enhancement of the cooperative-member relationship. Among the existing actions, one that deserves to be highlighted is the value co-creation, since it represents a competitive advantage with the participation of the client that has been the subject of recent research (GALVAGNO; DALLI, 2014; PRAHALAD; RAMASWAMY, 2004a).

Value co-creation is the high-quality interactions that allow the client (member) to co-create unique value experiences with the organization (cooperative) that are the key to unlocking new sources of competitive advantage (GRÖNROOS, 2011). Vazquez, Camacho and Silva (2013) argue that co-creation of value represents the creation of joint value between

the supplier or the client and the organization, and requires the construction of experiences and the resolution of problems with a combined effort between the parties which make up a business relationship.

The cooperative organization should assist in the co-creation of value by designing and delivering relevant experiences, also facilitating the learning of the organization and the cooperative. Co-creation implies the creation of joint value between the cooperative and the member, with the high level of participation of the member in the customization. Also Requires Construction Co-creation provides unique experiences for each co-worker, representing much more than personalizing your products and services through a narrow range of options. It is creating more value on the service that the cooperative offers its members.

Grönroos (2011) and Prahalad and Ramaswamy (2004a) argue that value creation is innovation, improvement, joint creation (participation), creation of a favorable environment and customization of the service. However, the co-creation goes beyond, it represents a break in the traditional way of customizing thinking about the generation of value.

2.3 Variables that influence value creation

It is believed that some factors influence the co-creation of value and consequently the perception of the members about the actions of value creation. Among them, the practices of corporate governance. The open and clear dialogue between the organization and the cooperative, provided by the practices of corporate governance, encourages, creates and assists in maintaining the loyalty and trust of the consumer community. This process is part of the traditional co-creation model of dialogue, access, risk-benefit and transparency (DART) proposed by Prahalad and Ramaswamy (2004a).

These elements are essential for the construction of value creation actions, especially dialogue, transparency and access. In this way, an organization that has a participative and professionalized management, which seeks the separation of ownership and control, offers transparency of the actions favoring the communication and the access of the cooperative to the information, fomenting their participation in the actions of value creation; As well as the perception of the cooperative about the value added obtained in the customer and organization relationship (SERIGATI, 2008; PRAHALAD; RAMASWAMY, 2004a; COOK, 1994).

The perception of the benefits and results of co-creation actions can be intensified through the professionalization of cooperative management and the reduction of agency conflicts, through transparency, through the formal control of the Board of Directors, which represents the interests of the Members (PRAHALAD; RAMASWAMY, 2004a). In addition, trust between cooperative and cooperative tends to increase as well (VENTURA, 2009; SERIGATI, 2008; BACHMANN, 2001). It is believed that the perception of the cooperative about the results generated by the actions of value creation can be influenced by the level of professionalization of the management.

Several studies have also identified that the commitment (loyalty) of the members is associated with the performance and abilities of the manager (BHUYAN, 2007); With the existence of cooperative education (STAATZ, 1987); And with the ability of the cooperative to differentiate its cooperative from the uncooperated (Fulton, 1999). Bhuyan (2007) states that members' commitment is greater when they are satisfied with the performance of cooperative managers and satisfaction is sought through increased trust, which is achieved through transparency in relationships.

The members' loyalty is related to the performance and competitiveness of the cooperative and the value that is given to its stakeholders. Thus, value creation as a competitive strategy may represent an increase in the results and benefits perceived by the cooperative. Therefore, to encourage loyalty and reciprocity is to ensure the involvement of the cooperative in the cooperative, with effective participation to add value to the production chain. For this, it is necessary to increase new products and services giving the cooperative differentiated incentives and direct and indirect benefits above the competitors (ANCELES, 2014; BIALOSKORSKI NETO; DAVIS, 2010; VENTURA, 2009).

The temporal orientation can be understood as a temporal gap between the moment when its efforts are allocated in different tasks and the moment they are received as rewards, results of the performance in the tasks (VAN RINSUM, 2006), an approach that can also be applied To evaluate the cooperative effort and the benefits they receive.

Aguiar and Frezatti (2014) have identified that non-financial performance measures are related to time orientation. Contract to the authors' expectations as non-financial measures of performance for incentive purposes and negatively associated with temporal orientation. They highlight the importance in understanding non-financial measures of performance are associated with time orientation.

In this sense, the perception of value co-creation actions can be influenced by the effects of long-term temporal orientation, since the results of improvement and innovation of products and processes may be due to actions with a focus on the long term and with non-Financial resources (PRAHALAD and RAMSWAMY, 2004b).

3. MODEL, VARIABLE AND PROXY

To analyze the perception of value co-creation, the following dimensions were considered: value co-creation between member and cooperative, level of satisfaction and loyalty, temporal orientation of the member and degree of professionalization of management, as detailed in table 1.

Table 1 presents the constructs and their respective interdependencies with the value co-creation. In order to identify and analyze the perception of value co-creation the cooperative, a first and second order model was used, and the perception index of the value-creation actions is a latent variable (construct) that was measured from 3 dimensions and 35 questions, which comprise a set of actions and characteristics. Chin, Marcolin and Newsted (2003) describe that the latent variable is used to represent a phenomenon that can not be measured directly. The index of perception of the actions of co-creation of value comprises a construct of first order and the dimensions that make up the model are of second order (CHIN; MARCOLIN; NEWSTED, 2003).

The proposed model has as respondents the members of the cooperative researched in which the following dimensions were considered: actions of value co-creation, professionalization of cooperative management, type of temporal orientation of members, level of satisfaction and loyalty. From the definitions and variables considered in the proposed structural model, a set of hypotheses and expected relations (signals) between the variables, which are described in Table 2, were elaborated.

Table 2 – Research hypotheses

Hypotheses	Variable	Expected coefficient	Authors
H1a	Professionalism of cooperative management => perception of value	(+)	Costa, Chaddad e Azevedo (2012), Ventura (2009), Serigati (2008), Bhuyan (2007),

	co-creation		Prahalad e Ramaswamy (2004a).
H1b	Professionalism of cooperative management => Satisfaction and loyalty	(+)	Ventura (2009), Serigati (2008) e Bhuyan (2007).
H2a	Satisfaction and loyalty => perception of value co-creation	(+)	F.J.C. Silva et al. (2016), Chan, Yim e Lam (2010), Serigati (2008)
H2b	Satisfaction and loyalty => Temporary orientation of the member	(+)	Dikolli e Vaysman (2006), Hemmer (1996), Kaplan e Norton (1996).
H3a	Temporary orientation of the member => perception of value co-creation	(+)	Grönroos (2011), Serigati (2008), Prahalad e Ramaswamy (2004b), Bushee (1998), Van der Stede (2000), Laverty (1996), Kaplan e Norton (1996), Cook (1995), Merchant (1990).
H3b	Professionalism of cooperative management => Temporary orientation of the member	(+)	Cook (1994).

Source: Prepared by the authors

In the proposed model of measurement of the perception of the actions of co-creation of value (Perpcoo), we sought to evaluate the degree of adherence of second-order dimensions: (ProfGestão) Professionalism of cooperative management, (SatFid) Satisfaction and loyalty, and (OTC) Temporary orientation of the member, as shown in Figure 1.

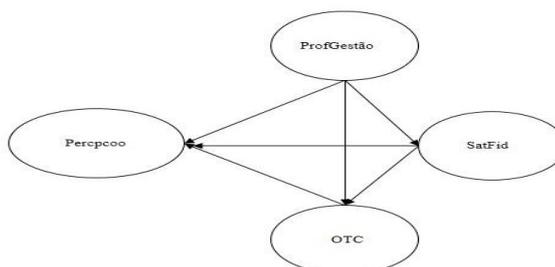


Figure 1 - Measurement model of the perception of the actions of co-creation of value in agricultural cooperatives

Source: survey data

Finally, as the present study focuses on the design of a descriptive and exploratory research, the variables were related not to the connotation of obtaining "cause and effect", but of association between the constructs (KERLINGER, 1980).

4. METHODOLOGY

This study seeks to provide an in-depth understanding of members' perceptions of cooperative actions that co-create value, revealing the dynamic and complex interconnections between actors (cooperative and members). This study also seeks, through an empirical investigation, to identify the perception of the cooperative in a context of agricultural cooperatives, since it is not possible to quantitatively measure the additional value that is generated by these co-creation actions, but it is possible to identify the perception of the Members about their existence in relation to the results produced and perceived.

From the empirical perspective, a survey was carried out with a cooperative to verify the adherence of the proposed model. Among the advantages of survey studies, such as the case of this research that addresses the perception, temporal orientation of the members, besides satisfaction and loyalty, is the possibility to test theories and to understand the

behavior in different levels of analysis, being able to be individual, organizational subunit(VAN DER STEDE et al., 2007; HAIR JR.; RINGLE; SARSTEDT, 2013).

The questionnaire questions were elaborated based on theories about co-creation of value, distribution of property rights in cooperatives and characteristics related to professional management, level of satisfaction and fidelity, and type of orientation of the cooperative.

For the analysis of the questionnaire responses, the Partial Least Square (PLS) method was used by the SmartPLS software to test the proposed model.

Likert scale from 1 to 10 was used in the questionnaire, in which 1 represents the lowest score assigned and 10 the highest score, which measure the intensity of perception. A complementary sensitivity analysis was also performed to verify if the characteristics of the members make the group homogeneous or heterogeneous by performing multi-group analyzes (time of association in the cooperative, schooling, age, ownership size in hectares and indebtedness). For analysis, 204 questionnaires were considered.

5. ANALYSIS AND DISCUSSION OF RESULTS

The structural model of the research will be presented and with the necessary corrections to obtain the evaluation model. Silva and Bido (2014) point out that the AVE is the average of the squared high factor loads. In order to increase the value of the AVE, the variables with factorial loads (lower value correlations or low loads) should be eliminated. Eliminating these variables results in all AVE values higher than 0.50. After making these adjustments, we have the following model.

Eliminating the eight variables can achieve values of all AVEs above 0.50 to have an evaluation model. Figure 1 presents the new evaluation model and Tables 1 and 2 show the new values of the quality of fit results of this new model.

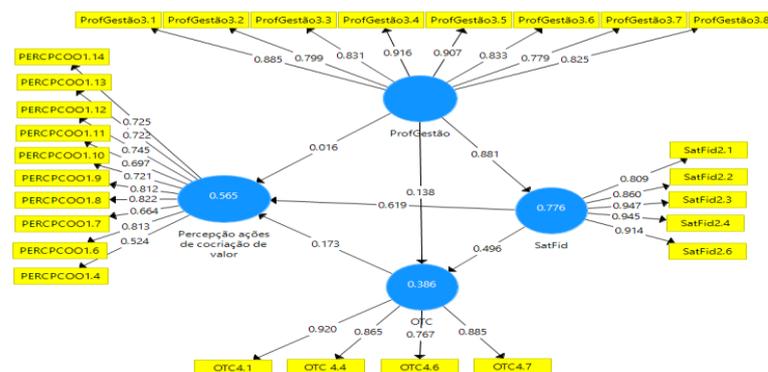


Figure 2 - Structural model of perception of the actions of co-creation of value
Source: survey data

As a guarantee of the discriminant validity, there are adjustments of the measurement models and now part for analysis of the structural model presented in Figure 2. The first analysis of this second moment is the evaluation of the coefficients of determination of Pearson (R²). The R² evaluates the portion of the variance of the endogenous variables, which is explained by the structural model. Cohen (1988) suggests that R² = 2% is classified as a small effect, R² = 13% as a mean effect and R² = 26% as a large effect in the social and behavioral sciences. This indicator represents the quality of the adjusted model (SILVA; BIDO, 2014).

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In the analysis of the structural model in Figure 1, it can be verified that the Temporal Orientation dimension of the limb presents an R² of 0.386 and a positive effect; Satisfaction and fidelity has a positive effect and an R² of 0.776; Perception of co-creation value actions, R² is 0.565; Professionalism of the management did not present significance. Therefore, the perception of the perceived value co-creation actions by the members, evaluated in three dimensions, presented R² and significant coefficients for two of them.

Table 1 - Adjustment quality values of the structural equation model after elimination of VOs with lower factor load values

	Alpha by Cronbach	Composite reliability	Average Variance Extracted (AVE)
Temporal orientation	0,882	0,919	0,741
Perception of co-creation actions	0,904	0,918	0,532
Professional management	0,944	0,953	0,719
Satisfaction and Loyalty	0,938	0,953	0,804
Cutting pattern	>0,7	>0,7	>0,5

Source: survey data

Table 1 shows that the values of Cronbach's alpha, composite reliability and AVE are all higher than 0.70 and 0.50, respectively, after the necessary adjustments have been made to have the evaluation model. In the correlation values between VL and AVE, Table 2 reports that all values were in favor of the Fornell and Larcker criteria when comparing the square roots of the AVE values of each construct with the (Pearson) correlations between the constructs (or variables Latent). The square roots of the AVEs were larger than the correlations of the constructs, as stated in the literature (HENSELER; RINGLE; SINKOVICS, 2009; FORNELL; LARCKER, 1981).

Table 2 - Pearson correlation and descriptive statistics for latent variables (VL) and square roots of AVE values on the main diagonal

Fornell And Larcker Criterion	Temporal orientation	Perception of co-creation actions	Professional management	Satisfaction and Loyalty
Temporal orientation	0,861			
Perception of co-creation actions	0,564	0,729		
Professional management	0,575	0,660	0,848	
Satisfaction and Loyalty	0,618	0,739	0,881	0,897

Source: survey data

Table 3 shows the coefficient of determination indicators. It is possible to observe that all the validated values had a great effect because they had values higher than 26% (SILVA; BIDO, 2014). The results showed that there is a significant positive relationship between the level of perception of the actions of co-creation of value with the other studied variables, less with the professionalization of management, but this has a moderating effect with the other constructs.

Considering the exploratory aspect of the research and its limiting factors, the proposed structural model presented an explanatory power of R² of 0.386 for the cooperative's time orientation, R² 0.565 for perception of the value creation actions, and for the level of satisfaction and loyalty a R² of 0.77.

In order to interpret these values one can think that when cooperative respondents are satisfied and loyal to the cooperative, they perceive more the actions of value co-creation and that a long-term temporal orientation also positively influences this perception.

To test the significance of the relationships pointed out, the "Bootstrapping" module is used as shown in Figure 3.

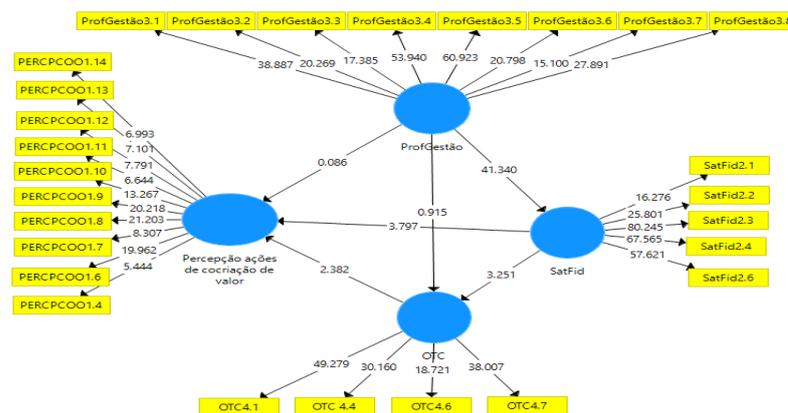


Figure 3 - Structural equation model with the Student t test values obtained through the SmartPLS bootstrapping module.

Source: survey data

Table 4 shows the regression coefficient and the T statistic, which aims to identify if the values of the T-test (values close to the arrows joining the variables or constructs) should be greater than 1.96 for the coefficients to be considered Different from zero (SILVA and BIDO, 2014). For this alternative, 500 reamings were used. Figure 3 presents the structural model for latent variables. It is possible to notice that two of the three independent variables explain their respective indicators in a statistically significant way.

In the case of the latent variable Professionalization of Management, the main indicator it explained was Satisfaction and Loyalty ($t = 41,340$), which reflects the use of this measure for the purpose of perceiving value creation actions. Hypothesis H1b discusses that there are reasons for cooperatives to improve management, since the professionalization of management improves the image of the cooperative vis-à-vis stakeholders, increasing the reliability of the organization. In order to maintain professionalism in the management of the cooperative and consequently to meet the needs of the members (VENTURA, 2009; SERIGATI, 2008; BHUYAN, 2007; PINHO, 2004), economic survival in this dynamic environment Competitiveness (VENTURA, 2009; SERIGATI, 2008; PINHO, 2004).

But the same does not happen with the other variable Professionalization of Management, where the indicator Temporal Orientation ($t = 0.915$) is not explained. This hypothesis H3b considers that the professionalization of cooperative management would influence the members' temporal orientation (COOK, 1994), but this hypothesis was not validated. This also occurs in relation to H1a, where Management Professionalization in relation to perception of value-creation actions presents $t = 0.086$ and, therefore, H1a was also not validated.

In the case of the latent variable temporal orientation of the members, the indicator explained by it presented a $t = 2,382$ which reflects the use of this measure in the perception

of value creation actions. This hypothesis H3a represents that the temporal orientation of the members influences in their perception of the actions of value co-creation.

Van Der Stede (2000) and Merchant (1990) define the time orientation (OT) as the time horizon between the effort allocation and the moment of receiving the remuneration within which it seeks to optimize financial incentives, that is, the OT exercises influence on the perception of return. Kaplan and Norton (1996) argue that non-financial performance measures (such as the perception of value-creating actions) are perceived as more timely to provide follow-up information on efforts that have affected long-term outcomes than financial indicators, and these measures would have the potential to induce long-term temporal orientation.

In a cooperative context, the short-term orientation of the members may be detrimental to the organization, since there are no incentives to create medium- and long-term results (SERIGATI, 2008; COOK, 1995). Grönroos (2011) and Prahalad and Ramaswamy (2004a) argue that co-creation of value can stimulate actions that bring benefits in the medium and long term, making clients realize the benefits generated by the organization, being perceived over time. That is, this hypothesis was validated by the model, agreeing with the literature.

And, finally, the latent satisfaction and fidelity variable explains the perception indicator of co-creation value actions with $t = 3,797$ and also explains the temporal orientation of the members with $t = 3.251$. To understand the validation of this H2a hypothesis, there is a set of evidences pointed out by studies that indicate that a greater participation of the client in the organization tends to generate higher levels of satisfaction (CHAN; YIN; LAM, 2010).

The effect of member participation in cooperative activities on their satisfaction occurs when cooperative members can create value through their participation (SERIGATI, 2008). One of the most important factors for member loyalty and satisfaction is related to the performance and competitiveness of the cooperative and the value that is given to its stakeholders.

In other words, the cooperative's competitiveness strategy vis-à-vis other organizations (BIALOSKORSKI NETO; DAVIS 2010; CHAN, YIN, AND LAM; 2010, BIALOSKORSKI NETO, 1998; COOK, 1995), are examples that have found significant positive relationships between the client's participation in the process and their satisfaction with the service provided. In the same sense, F.J.C. Silva et al. (2016) also discusses that value creation is closely linked to the satisfaction and loyalty of clients who participate in these actions; The more customers co-create value, the more satisfied and loyal they become the brand that offers this attitude. The H2b hypothesis was also validated because, according to the literature, satisfaction (as a measure of non-financial performance) with the organization encourages the client to have a longer-term focus (HEMMER, 1996).

As shown in table4, the hypotheses H1b, H2a and H2b, H3a can be accepted, since the signals indicate favorable effect for the proposed coefficients.

Table 4 - Evaluation of the structural model of the latent variables: regression coefficient and the statistic T.

Variable of 2 ^a . Order => 1st variable. order	Hypot he sis	Result	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STD EV)	P Values
Professionalism of cooperative management => perception of value co-creation	H1a	Not confirmed	0.016	0.060	0.187	0.086	0.932
Professionalism of cooperative management => Satisfaction and loyalty	H1b	Confirmed	0.881	0.885	0.021	41.340	0.000

Satisfaction and loyalty perception of value co-creation =>	H2a	Confirmed	0.619	0.590	0.163	3.797	0.000
Satisfaction and loyalty Temporary orientation of the member =>	H2b	Confirmed	0.496	0.484	0.153	3.251	0.001
Temporary orientation of the member => perception of value co-creation	H3a	Confirmed	0.173	0.165	0.072	2.382	0.018
Professionalism of cooperative management => Temporary orientation of the member	H3b	Not confirmed	0.138	0.149	0.151	0.915	0.361

Source: survey data

Finally, the general adjustment indicator of the model is evaluated. Tenenhaus et al. (2005) proposed a GoF (Goodness of Fit). Wetzels, Odekerken-Schröder and Oppen (2009) suggest the value of 0.36 as suitable for the evaluation of this indicator for the social sciences and behavioral areas. When performing this calculation in the survey, it obtained 0,6427, indicating that the model has an adequate adjustment.

5.1 Results discussion

The results of the model presented previously show that the satisfaction and loyalty variable was the one that presented greater weight on the perception of the actions of value co-creation, followed by the temporal orientation of the members. This represents that satisfaction and fidelity presents a greater weight on the perception of value, corroborating with that which approaches the theory on the subject. Satisfied clients perceive more value and consequently are more loyal because they perceive advantages when negotiating with the organization.

Regarding the time orientation, it is possible to observe that the cooperatives that have a long term time horizon perceive more the actions of co-creation of value, since the returns and benefits are paid over time. On the other hand, members with short- and medium-term temporal orientation perceive less value.

The variable professionalization of the management had an indirect effect in the perception of the actions of co-creation of value. This means that this variable exerts a greater weight of direct effect on the satisfaction and fidelity of the members in order to influence the perception of value. This means that more satisfied and faithful members perceive more the actions of professionalization of the management.

It is possible to notice that the members' perception of value is more impacted by the characteristics of interdependence (between cooperative and member) as satisfaction and loyalty and temporal orientation of the member than by the characteristics of the management professionalization cooperative. These characteristics of the cooperative have an indirect effect on the satisfaction and loyalty model.

This may indicate to the cooperative how the organization's investments should be made to increase member satisfaction and loyalty, thereby increasing the members' time horizon and, consequently, the investments made in relation to risk and return. These variables influence the member's perception of value over the value actions offered by the cooperative. These are the drivers for the cooperative to generate more value for its members by offering an additional membership, being represented by actions that increase satisfaction, such as operational activities, as Table 2, which the cooperative provides.

5.2 Multi-group analysis

In many real world applications, the assumption of homogeneity is unrealistic because individuals are likely to be heterogeneous in their perceptions and assessments of current constructs. The multigroup analysis (MGA) allows to test if the predefined data groups have significant differences in their estimates of specific group parameters (HAIR JR .; RINGLE; SARSTEDT, 2013). One of the main objectives of this type of analysis is to compare pairs of path coefficients for identical models, but based on different samples. The results of this analysis were performed according to Hair Jr. et al. (2014).

Multigroup analysis (MGA) data suggest that there is heterogeneity between the group of indebted and non-indebted cooperative members. The group of indebted individuals was composed of 110 individuals and not indebted 94. For this analysis, the average of the responses on indebtedness was made, where an average greater than 3.53 was considered as indebted, and a lower average, as non-indebted.

It is possible to observe in the test that there was a significance of 0.006 ($p < 0.05$) in the question of heterogeneity (path coefficients-MGA) in the aspect indebtedness on the relation between satisfaction and fidelity of the cooperated on the perception of value creation actions. The way in which satisfaction influences the perception of value creation actions is different given the group of indebted and non-indebted. Therefore, they perceive value differently.

The effect of member satisfaction and loyalty on the perception of co-creation value actions is significantly (0.759) higher for indebted members. This finding makes intuitive sense considering the nature of their relationship in comparison with non-indebted cooperatives, by analyzing the path coefficient, according to table 5.

Table 5- Path Coefficients PLS-MGA indebtedness

PLS-MGA	Indebted		NotIndebted		Indebted x Not Indebted	
	Path coefficients	Standard error	Path coefficients	Standard error	Path coefficients-diff	P value
OTC -> Perception of value co-creation actions	0,020	0,098	0,169	0,110	0,149	0,845
ProfGestão -> OTC	0,136	0,155	0,009	0,238	0,127	0,328
ProfGestão -> Perception of value co-creation actions	-0,050	0,191	0,791	0,225	0,841	0,994
ProfGestão -> SatFid	0,862	0,025	0,911	0,022	0,050	0,933
SatFid -> OTC	0,594	0,141	0,345	0,249	0,249	0,183
SatFid -> Perception of value co-creation actions	0,759	0,155	-0,088	0,255	0,847	0,006

Source: survey data

The data show that the characteristic level of indebtedness of the member positively affects the relationship satisfaction and fidelity on the variable perception of the actions of value co-creation. It is possible to verify that the most indebted members are more satisfied and faithful and perceive more the actions of value creation. This may occur because of the dependency of these members on value-creating activities, as they are more relevant than for less-indebted members.

The results show that, given the time of association, the temporal orientation of the cooperative influences some relations. The effect of the temporal orientation of the members on the perception of value creation actions is significantly ($p < 0.10$) higher for the cooperative

with up to 19 years of association in the cooperative. This finding makes intuitive sense considering the nature of their relationship compared to members older than 20 years, analyzing the coefficient of paths. And the same result, with ($p < 0.05$), in relation to the professionalization of the management over the long-term orientation of the cooperative members and also to a greater professionalization of management on satisfaction and fidelity ($p < 0.10$). Consequently the heterogeneity aspect given the association time is significant as shown in Table 6.

Table 6 - Path Coefficients PLS-MGA for association time

PLS-MGA	20 years or more		Upto 19 years		Up to 19 years X 20 years or more	
	Path coefficient	Standard error	Path coefficient	Standard error	Path coefficients-diff	P value
OTC -> Perception of value co-creation actions	0,076	0,082	0,261	0,114	0,185	0,096
Prof gestão -> OTC	-0,165	0,210	0,361	0,144	0,526	0,024
Prof gestão -> Perception of value co-creation actions	0,457	0,165	-0,123	0,235	0,581	0,977
Prof gestão -> Sat Fid	0,849	0,026	0,899	0,023	0,050	0,076
Sat Fid -> OTC	0,655	0,222	0,370	0,157	0,286	0,860
Sat Fid -> Perception of value co-creation actions	0,418	0,155	0,590	0,187	0,171	0,233

Source: survey data

The data indicate that members with up to 19 years of association have a long-term orientation, perceiving in a more positive way actions that value value (0.261) and also perceive more the benefits of professional management. When they perceive the benefits of professional management, they also increase their time horizon, representing greater confidence in the solidity of management and the cooperative for their investments (0.849 and 0.899). It is verified that there is a positive direct relation between professionalization of management and temporal orientation (0.361), similar to the previous one.

These results indicate that members with short- and medium-term temporal orientation perceive value creation in the activities and professionalization of management. However, the characteristic association time is not determinant in the relationship between management professionalization and satisfaction and loyalty, since both groups perceive the relationship positively and with very close values.

Another characteristic that presented heterogeneity of the groups was in relation to the size of the rural property. The two groups were divided between 151 members with rural property of up to 20 hectares and 53 cooperatives with properties over 20 hectares. The data show that there are aspects of significant heterogeneity in relation to the size of the rural property of the members. The data indicate ($p < 0.05$) that the time orientation of the cooperative influences the perception of value creation actions differently in relation to the size of the property. That is, larger cooperatives (more than 20 hectares) have a positive association with long-term temporal orientation. In the same way that a greater professionalization of management also influences the long-term orientation of the larger cooperative ($p < 0.05$).

Table 7 - Path Coefficients PLS-MGA property size

PLS-MGA	20 or more	Upto 19 hectares	Up to 19 hectares x Up to 19 hectares
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	Path coefficients	Standard error	Path coefficients	Standard error	Path coefficients - diff	P value
OTC -> Perception of value co-creation actions	0.497	0.144	0.060	0.071	0.436	0.003
Prof gestão -> OTC	0.647	0.210	0.131	0.169	0.516	0.030
Prof gestão -> Perception of value co-creation actions	0,000	0.314	0.359	0.166	0.389	0,864
Prof gestão -> Sat Fid	0.931	0.0354	0.888	0.020	0.043	0.130
SatFid -> OTC	0.170	0.220	0.449	0.170	0.279	0,844
SatFid -> Perception of value co-creation actions	0.407	0.251	0.376	0.154	0.031	0,463

Source: survey data

The characteristic of the member in relation to the size of the rural property positively impacts on the relation temporal orientation and perception of the actions of co-creation of value (0,497). Thus, larger members tend to perceive more value because of the risk and return relationship in becoming involved and because they have a dependency relationship with the cooperative organization. This is due to the specificity of the products, seeking to be involved in long-term projects. In addition, the larger cooperatives evaluate a positive management relationship over the cooperative's time horizon leading them to long-term projects.

The last multigroup analysis was done with the level of education of the respondent members. The two groups were composed by cooperated with up elementary school. Full grade representing 127 individuals and the other group composed of 77 individuals with education above the High school. It was possible to observe in the data that there is significant heterogeneity between the groups. The variable professionalization of the management influencing the perception of the actions of value creation showed a significant result ($p < 0.05$). The effect of the professionalization of the management on the perception of the actions of co-creation of value is greater for the cooperated ones until elementary school.

Table 8 - Path Coefficients PLS-MGA for schooling

PLS-MGA	Elementary school		High school		Elementary school X High school	
	Caminho dos coeficientes	Erro padrão	Caminho dos coeficientes	Erro padrão	Caminho dos coeficientes - diff	P valor
OTC -> Perception of value co-creation actions r	0.0527	0.084	0.357	0.105	0.304	0,984
Prof gestão -> OTC	0.038	0.170	0.239	0.267	0.200	0,735
Prof gestão -> Perception of value co-creation actions	0.589	0.186	0,000	0.324	1,000	0.0019
Prof gestão -> Sat Fid	0.880	0.023	0.881	0.023	1,000	0,513
Sat Fid -> OTC	0.572	0.160	0.442	0.286	0.129	0.354
Sat Fid -> Perception of value co-creation actions	0.175	0.207	0.884	0.236	0.709	0,989

Source: survey data

The characteristics of the member in relation to their level of schooling presented a result that the members with up to elementary school perceive the relationship between the professionalization of cooperative management and the perception of the benefits of co-creation of value, that is, a lower level of schooling influences a greater perception of value in

management. And the group of higher education does not perceive this relationship. This shows the dependence and trust of the cooperative with lower level of education in relation to the management of the cooperative and in the actions that are carried out by it.

In addition, the multigroup analysis was also done for the age of the members

Separating them into two groups, being a group of 88 individuals with up to 50 years and the other with 116 individuals over 50 years. However, the results did not show significant heterogeneity.

After these analyzes it is possible to conclude that the results showed that the value co-creation is perceived more intensely in situations of shorter cooperative association time, in which cooperatives with up to 19 years of association have a long-term temporal orientation, perceiving Positive actions that value value and also perceive more the benefits of professional management. It is also possible to conclude that the perception of co-creation of value is influenced by the degree of indebtedness of the members. It was possible to verify that the most indebted members are more satisfied and faithful and perceive more the actions of value co-creation.

Finally, the size of the rural property of the cooperative also influences the perception of the actions of co-creation of value, with larger cooperatives tending to perceive more value. The cooperative's characteristic in relation to the size of the rural property positively impacts on the relation temporal orientation and perception of the actions of co-creation of value.

6. FINAL CONSIDERATIONS

When analyzing the model of structural equation proposed in the research, it is verified that the dimension of Temporary Guidance of the member (OTC) presents an R2 of 0,386 and a positive effect; Satisfaction and fidelity (SatFid) has a positive effect and an R2 of 0.766; Perception of value creation actions (Percpcoo), R2 is 0.565; And Professionalization of management (ProfGestion) did not present significance. Therefore, the perception of the perceived value co-creation actions by the members, evaluated in three dimensions, presented R2 and significant coefficients for two of them. The results showed that there is a significant positive relationship between the level of perception of the actions of co-creation of value with the other studied variables, less with the professionalization of management, but this has a moderating effect with the other constructs.

The data indicate that the latent variable Professionalization of Management presented, as the main indicator explained, the Satisfaction and Fidelity. That is, an organization that adopts professional management practices presents higher levels of satisfaction and fidelity, since there is an improvement of the image of the cooperative and attendance of the needs of the stakeholders.

Likewise, professionalization of management influences the members 'temporal orientation, which can be explained by an increase in trust and better attendance of members' needs, reducing agency conflicts and influencing the time horizon of return of what was invested. The latent variable temporal orientation of the cooperative reflects the use of this measure in the perception of the actions of value creation. That is, the perception of the benefits generated by the organization with actions of co-creation of value can be influenced by the time horizon of the cooperative, being perceived over time. And the variable Satisfaction and fidelity explains the perception of actions of co-creation of value and also explains and temporal orientation confirming what the literature of value co-creation approached.

In relation to the results of the multi-group analysis, it was observed that the effect of satisfaction and fidelity of the cooperated on the perception of the actions of co-creation of value is significantly higher for the indebted members. This means that more indebted members are more aware of co-creating value actions. The effect of the time orientation of the cooperative on the perception of value creation actions is significantly greater for the cooperative with up to 19 years of association in the cooperative. And the same result was found in relation to the professionalization of management over the time orientation of the cooperative and also to the professionalization of management over satisfaction and loyalty.

The data show that the temporal orientation of the member influences the perception of the actions of co-creation in relation to the size of the rural property. Larger members (more than 20 hectares) have a positive association with long-term temporal orientation. Such a greater professionalism of management also influences the long-term orientation of the larger members. And the effect of the professionalization of the management on the perception of the actions of co-creation of value is greater for the cooperated ones until elementary school. Degree, showing dependence and trust among members less educated with the decisions and actions of cooperative management.

In addition, it is concluded that members perceive value in the actions offered by the cooperative. It is also concluded that the satisfaction and loyalty and temporal orientation of the member influences this perception in a direct way, while the professionalization of the management influences indirectly. In addition, this perception may be influenced by some characteristics of the members such as level of indebtedness, time of association, level of schooling and size of the member's rural property. The value perception of the members is impacted by the characteristics of the member and the cooperative.

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