



Knowledge management and competitive advantage: the case of Sicoob, north-west Paraná

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Abstract

This article analyzed the generation of competitive advantage at the Sicoob Bank in the Northwest of Paraná State through knowledge management, in accordance with the perspective of Nonaka and Takeuchi (1997). The theoretical basis is presented in a specific section, divided into two parts. In the first, there are strategy-related concepts from the perspective of knowledge management as a source of competitive advantage, and in the second knowledge management. Using a quantitative approach, a questionnaire with a five-point Likert scale served as the main source of data. The questionnaire contained twenty-two statements addressing the model in question, in addition to a document analysis. After these were studied, they were analyzed according to the perspective of the average scores obtained in the questionnaires. The employees from three service points of the cooperative served as the unit of analysis. The main results show a satisfactory average in the creation of knowledge and predominant socialization and combination as the modes of knowledge conversion. It was concluded that knowledge management contributes to the generation of competitive advantage at SICOOB, because the model used in the research shows a satisfactory level of transitions of knowledge between individuals, i.e., employees show interest in spreading knowledge among themselves.

Keywords: Knowledge Management. Competitive Advantage. Credit Union.

Introduction

Studies that aim to describe different forms of generating competitive advantage face conceptual, methodological and analytical challenges in order to construct theories that explain this phenomenon. In the attempt to contribute to the construction of a theoretical framework that aids the field of strategy to overcome these challenges, analysis of the origin of competitive advantages through knowledge management appears to be a fertile field of research. Therefore, studies that address knowledge management are shown to be feasible alternatives for strategy researchers.

In this sense, studies of knowledge management have grown in significance and relevance in the academic world. Muylder and Salles (2010) demonstrated how academic studies of the theme of learning, knowledge management and the model of Nonaka and Takeuchi (1997) were conducted between 2005 and 2009. These researchers identified 197 articles published in Brazil on the theme of learning and knowledge management. These include 80 articles on the approach of Nonaka and Takeuchi (1997), which is the theoretical choice of the present article, as it explains competitive advantage as a contribution to the understanding of management in organizations.

In the range of possible interpretations for the generation of competitive advantage, without detracting from other variables that might explain the phenomenon, the sector in which the company under study operates can be considered. Thus, the credit union sector is a fruitful field as its regimental uniqueness and uniqueness in terms of legislation can aid research.

The main aim of this study is to identify the generation of competitive advantage at Sicoob in the Northwest of Paraná State through knowledge management. The present article is divided into four phases following this introduction. In the second part, the theoretical basis on which the analysis is grounded is presented. The third section shows the methodological procedures. In the fourth section, the data are analyzed, and the fifth section contains the conclusions and suggestions for future studies. At the end of the article, a complete bibliography is provided.

Theoretical and empirical framework

Strategy

Historically, there is no consensus regarding the concept of strategy or how competitive advantages are generated and maintained in organizations. A number of authors have conducted studies on the theme and have arrived at different points of view. According to Gaj (1987), strategy can be defined in three ways. The first has to do with planning, the main focus of which is the end result as a consequence of strategic work following a written plan for a specific period of time and adjusted periodically. The second views strategy in broader terms in a more philosophical and wide-ranging way. The third views strategy as something pragmatic, an instrument to guide organizations. In the latter case, a plan is not strictly required, but it seems to be something more complex that is used to achieve organizational goals, with practical resources being made available.

Other analyses in the field, including Mintzberg, Ahlstrand and Lampel (2010), claim that there are ten different “schools of thought” for strategy. According to these authors, each school has a unique perspective, with different focuses on the formulation of strategy. These perspectives are considered narrow and overstated in one sense, and interesting and insightful in another. According to these authors, the schools are divided into three groups, with the first three schools being prescriptive in nature, with the focus being on how strategies should be formulated. The next group has six descriptive schools that consider specific aspects of the strategy formulation process. The last group, which seeks to integrate all the others, is made up of only one school.

For an analysis of the field of strategy, Whittington (2002) presents four generic approaches to strategy: classical, evolutionary, processual and systemic, which differ from one another through results and processes. According to the author, the classical and evolutionary approaches seek to maximize profits through the result of the strategy, while the systemic and processual approaches are more diverse and analyze results other than profit. The strategies are also antagonistic regarding process. While the evolutionary and processual approaches view strategy as something that emerges from governed processes randomly, vaguely and conservatively, the classical and systemic approaches view strategy as something deliberate.

Therefore, it can be inferred that with the evolution of studies on the field of strategy, the conceptual nuances are increasingly detected by researchers. This in turn provides more possible explanations for strategic phenomena that are better adapted to their ontological and epistemological characteristics. As a result, analyses are increasingly detailed and specialized from different points of view.

With this range of diversity and conceptual possibilities, the present article uses the concept of Barney and Hesterly (2011), that strategy is exposed as the theory of a company on how to obtain competitive advantages from an organization. In this sense, competitive advantages are only generated when an organization is capable of creating, through innovations in a broad sense, greater economic value than its competitors. Therefore, without excluding other analytical possibilities, it is assumed that a competitive advantage is generated through knowledge management (NONAKA; TAKEUCHI, 1997), as shown in Figure 1.

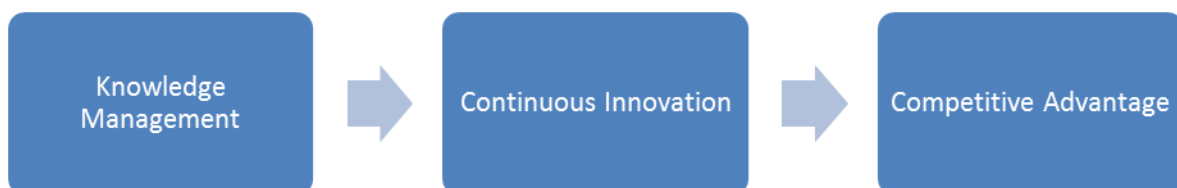


Figure 1 – Generation of competitive advantage
Source: Nonaka; Takeuchi, 1997.

From this point of view, it is considered necessary to describe how knowledge is created in a company and how it spreads.

Knowledge creation in a company

In the field of strategy, knowledge management emerged from the perception that organizations require information management (DAVENPORT; MARCHAND, 2004; NONAKA; TAKEUCHI, 1997; DAVENPORT; PRUSAK, 2003) and its relevance in terms of generating a competitive advantage. This idea is currently gaining space in academia and in the literature as a result of this challenge in the managerial field and in research (NONAKA; TAKEUCHI, 1997; DAVENPORT; PRUSAK, 2003; DAVENPORT; MARCHAND, 2004; QUINN; VOYER, 2006; MINTZBERG *et al*, 2010).

Several approaches are used in research on knowledge management and the generation of competitive advantage. These include knowledge transfer (EASTERBY-SMITH; LYLES; TSANG, 2008), culture as a factor for generation and dissemination (BJORKMAN; STAHL; VAARA, 2007), providing (PETRASH, 1996), sharing (HOOFF; RIDDER, 2004), intellectual capital management (DAVENPORT; PRUSAK, 2003), formalization of experiences (BECKMAN, 1999), barriers to transfer (SZULANSKI, 1996), elements in the formation of dynamic capabilities (EASTERBY-SMITH; PRIETO, 2008), deliberate control (SPEK; SPIJKERVET, 1997), dissemination of strategy (TEIXEIRA; CARVALHO; LOPES; BECKER, 2015) and facilitating access to knowledge (NONAKA; TAKEUCHI, 1997).

From the perspective of facilitating knowledge, the theory of organizational knowledge creation of Nonaka and Takeuchi (1997) addresses the innovation process in two dimensions, one of which is epistemological and the other ontological. The first explains tacit and explicit knowledge while the other addresses knowledge creators (individual, group, organizational and inter-organizational). When the interaction between tacit and explicit knowledge is raised at the ontological level, a knowledge creation spiral emerges. This is the essence of the theory. These facts occur in four ways: socialization, externalization, combination and internalization, known jointly as the SECI model.

From the ontological dimension, which analyzes the origin and propagation of individual knowledge at the group, organization and inter-organizational level, the authors argue that knowledge is created by individuals and not by the organization. It falls to organizations to prepare creative individuals or provide contexts for the creation of knowledge.

The creation of knowledge must be understood as a process that expands organizationally the knowledge created by individuals, crystallizing it as part of the network of knowledge of the organization (NONAKA; TAKEUCHI, 1997, p. 65).

Nonaka and Takeuchi (1997) explain that tacit knowledge is special and specific to the context and difficult to formulate and communicate. It is characterized as subjective and stems from experience. It is simultaneous and analogous. Explicit knowledge can be transmitted in formal and systematic language, such as booklets, manuals, norms and other practices that contain the register of disseminated knowledge. It is classified as objective and is created through sequential and theoret-

ical rationality. Interaction between tacit and explicit knowledge is referred to by the authors as four modes of knowledge conversion.

The first is socialization, a mode of knowledge conversion that results from the sharing of tacit knowledge. It occurs when two or more individuals divulge their subjective knowledge (NONAKA; TAKEUCHI, 1997). It stems from the interchange of experiences. Companies spread knowledge through training courses and meetings when seeking suggestions to resolve specific problems, discussing different viewpoints and experiences. The purpose of such meetings is to share knowledge between agents and make new proposals. This encourages creativity and increases trust (NETTO, 2005).

The second is externalization and it involves transforming tacit knowledge into explicit knowledge. It alludes to changing the subjective into the objective, through models, analogies and metaphors (NONAKA; TAKEUCHI, 1997). The form of knowledge conversion is normally shown during the creation process and is stimulated through dialogue or collective reflection. Of all the forms of conversion, this is the key point for knowledge creation, as it creates new concepts through tacit knowledge (PEREIRA, 2005).

The third, combination, is the result when different forms of explicit knowledge clash. It has to do with the more common practices of companies, when collaborators systematically share their objective and registered knowledge through documents, e-mails, meetings and information systems (NONAKA; TAKEUCHI, 1997). The knowledge stems from internal or external sources and, once systematized, forms new knowledge (CRUZ; NAGANO, 2006).

The fourth is internalization, which is transforming explicit knowledge into tacit knowledge. It is directly linked to learning how to do things. In short, it is the comprehension of knowledge available in manuals and books. It is executed by individuals, and the more it is used, the more they accumulate their experiences and build new knowledge. This is called the incorporation of explicit and real knowledge, and once it is spread, it acts as a propagator of new tacit knowledge and new experiences (NONAKA; TAKEUCHI, 1997).

These forms of knowledge conversion, shown in Figure 2, are always changing and it is necessary to pay attention to the transition movements from one stage to another, maximizing the amount of knowledge, maintaining the sequence, beginning with socialization, moving on to externalization, then to combination and internalization before reinitiating the process (NONAKA; TAKEUCHI, 1997).

	Tacit knowledge	Explicit knowledge
Tacit knowledge	Socialization	Externalization
Explicit knowledge	Internalization	Combination

Figure 2 – Modes of knowledge conversion.
Source: Nonaka; Takeuchi, 1997, p. 69.

Nonaka and Takeuchi (1997) also state that the knowledge spiral is concluded with the inclusion of the ontological aspect, i.e., the transmission of knowledge from the individual to the group, the organization and between organizations. Therefore, it can be inferred that the assumption of the present study (the generation of competitive advantage) can be accepted as a base element for analysis.

Methodology

The present study looks at a case that is descriptive in nature, as it seeks to analyze facts without manipulating them (CRESWELL, 2007; TRIVIÑOS, 1994; HAIR; BABIN; MONEY; SAMOUEL, 2005; BERVIAN; CERVO, 2005; MORGAN; SMIRCICH, 1980; FLICK, 2004; MAY, 2004). According to Collado, Lucio and Sampiere (2006, p. 101), “from a scientific viewpoint, describing is collecting data”. As mentioned in the introduction, the present study aims to evaluate how knowledge management aids the generation of competitive advantage. Therefore, the study is characterized as descriptive, as this typology enables the identification of characteristics of the phenomenon in question and the relationships between the categories under analysis. It also enables the researcher to use secondary documents as a source of analysis (FLICK, 2004; MAY, 2004; HAIR *et al.*, 2005).

Regarding the method, the present article is classified as quantitative as it aims to be as accurate as possible in terms of results (RICHARDSON, 2010; BERVIAN; CERVO, 2005; HAIR *et al.*, 2005) and this method has proved to be more adequate for the research purposes. This main characteristic of the quantitative approach does not diminish the influence of the qualitative data that were obtained, especially from secondary sources. The data were collected using a structured questionnaire adapted from Popadiuk and Ricciardi (2011), and followed the aforementioned attributes of socialization, externalization, combination and internalization that were addressed in

the section on knowledge management. Therefore, the operationalization occurred as follows: socialization, externalization and combination with six items each, and internalization with four items. Thus, the collection instrument was in four different parts, each representing one of the modes of conversion described by Nonaka and Takeuchi (1997).

Another point concerning the questionnaire was that the twenty-two items were operationalized using a five-point Likert scale, varying between negative and positive responses (RICHARDSON, 2010; HAIR *et al.*, 2005; BERVIAN; CERVO, 2005; BORTOLO; COLLA, 2013). In this sense, the respondents were asked how frequently the facts related to the SECI model occurred, with the options “never”, with a score of 1, “hardly ever”, with a score of 2, “sometimes” with a score of three, “often” with a score of 4, and “always”, with a score of 5.

Census sampling was used, i.e., the data were obtained from 57 collaborators at three service points of the Sicoob Credit Union (*Cooperativa de Crédito de Livre Admissão do Noroeste do Paraná*) in the town of Paranaíba, in Paraná State. Despite the effort to obtain census sampling, responses were received from 46 respondents, which account for 80.70% of the total number of possible respondents. The researchers considered this a highly representative number of the purposes of the study.

The unit of analysis for each of the collaborators at the three Sicoob service points and the level of analysis was constituted as organizational (FLICK, 2004; MAY, 2004). Document analysis was used a great deal to describe the company (FLICK, 2004; TRIVIÑOS, 1994; MAY, 2004). The use of these secondary data aided the analytical inference regarding strategy, competitive advantage and the development of the organization in question. This analytical and operational procedure process is in accordance with the research question, i.e., competitive advantage occurs through knowledge management.

The temporal perspective of the study is transversal and the data were collected during the first two weeks of October 2014. From an operational perspective, this transversal option in studies of knowledge management, especially when based on the theory of Nonaka and Takeuchi (1997), due to its subjectivity, dynamic and relational aspect between the elements, represents a starting point. This is because this dynamic is assumed to be more complex than can be identified in studies of this type. Thus, the transversal nature is one of the limitations of the study that will be presented at the end of this article.

The data were treated using the average score technique. This technique involves the attribution of averages to the responses marked by the respondents (HAIR *et al.*, 2005; RICHARDSON, 1990; BORTOLO; COLLA, 2013; COLLADO; LUCIO; SAMPIERE, 2006). After totaling the responses, the interpretative analysis technique was used. The attribution of the scores for the sum was done by attributing weights to each response (BORTOLO; COLLA, 2013; HAIR *et al.*, 2005; RICHARDSON, 1990). Therefore, more frequent situations would have a higher score and less frequent situations would have a lower score. To these data, descriptive statistical tests were applied as the average to locate the measurements of the central tendencies within the scale (HAIR *et al.*, 2005; RICHARDSON, 1990; BORTOLO; COLLA, 2013; COLLADO; LUCIO; SAMPIERE, 2006).

Presentation and analysis of data

Presentation of the company in question

The company under study was founded in 2003 by entrepreneurs in the northwest region of Paraná State. It is currently named Sicoob Noroeste do Paraná. It has one Controllershship and 10 service points (SPs). Three of the SPs are located in the town of Paranaíba (Downtown, Jardim Ipê and São Jorge) and the others are located in the towns of Alto Paraná, Loanda, Nova Esperança, Nova Londrina, Rondon, São Carlos do Ivaí and Terra Rica, which cover other cities in the region. It is a financial institution that provides over 9200 cooperative members with lines of rural and commercial credit. Its portfolio includes loans, insurance, consortiums and investments. Table 1 shows the data regarding the organization.

The institution runs a number of projects with the community and collaborators, some of which have won national awards. It has online programs for training its employees. It also runs courses and lectures, and publishes manuals, booklets and information sheets. Recently it has adopted measures related to knowledge management. It currently has over 155 collaborators that operate in the sectors for services, finance, controllership, products and services, credit and management.

The data published by the company show that all its indicators have risen in recent years, with the exception of distribution of surplus in 2013, when the surplus was reduced. According to the company, this was due to investment of its own resources to open new branches.

Table 1 – Descriptive numbers of the organization

Numbers of the Sicoob Noroeste do Paraná Credit Union					
	Dec, 2010	Dec, 2011	Dec, 2012	Dec, 2013	Aug, 2014
Number of members	2324	2986	5311	7661	9250
Managed assets ^(a)	32	40	55	100	112
Credit portfolio ^(b)	18	35	67	118	154
Fixed-term deposits ^(c)	18	23	33	55	70
Social capital ^(d)	5202	6855	10071	15710	18000
Distribution of surplus ^(e)	1334	1955	3419	3243	2516

Nota. (a), (b), (c), (d) and (e) are values expressed in millions of Reais.

Source: Income Statements for 2014.

It is interesting to highlight the evolution of the data for 2011 to 2012, when there was growth that varied from 37.50% for managed assets to 91.43% for credit portfolios. In 2012, the base of the processes directly linked to the training and development of collaborators was structured and remains in place until today.

Presentation and analysis of the research

The initial data show the characteristics of the collaborators who completed the questionnaire. They are aged between 18 and 63 years. Most of them (63%) are female and the others (37%) are male. It should also be noted that 91% of the interviewees have entered higher education, with 76% concluding it, while 37% have also concluded a post-graduate course. Service is the sector with the highest concentration of respondents, at 33%, followed by cashiers at 24%, products and services at 11%, credit, with 17%, and management, with 15%.

Following the application of the questionnaire, the information obtained was classified. This information is presented below in groups according to theme:

For the socialization group, the highest average scores obtained were Sharing of information, with an average of 4.33, with predominance for “often”, with 50% and “always”, with 41%. The next highest score was for Encouraging colleagues to express their ideas, with an average of 4.11. It should be highlighted that the second option has the most responses with “always”, at 46%. This was followed by Contribution to the enrichment of discussions, with an average of 4.02, with the best score for “always” at 37%.

The lowest average scores, with less than 4.00, were for Understanding the thoughts and opinions of our colleagues, with 3.96. The highest number of responses for this item was “hardly ever”, at 54%. This was followed by an average of 3.67 for Collecting information before meetings, with “always” being the predominant response, with 30%. It had the highest concentration of responses as “hardly ever” and “never” in socialization, with 11% and 4%, respectively. Finally, observing and copying behavior of company colleagues had the worst average, with a score of 3.57, with most responses being “sometimes”, at 46%. The data on socialization are shown in Table 2.

Table 2 – Description of the questions related to socialization

	Never (1)	Hardly ever (2)	Sometimes (3)	Often (4)	Always (5)	Average (a)
Sharing of information:	0%	0%	9%	50%	41%	4.33
Understanding the thoughts and opinions of our colleagues:	0%	2%	22%	54%	22%	3.96
Contribution to the enrichment of discussions:	2%	2%	24%	35%	37%	4.02
Encouraging colleagues to express their ideas:	0%	7%	22%	26%	46%	4.11
Collecting information before meetings:	4%	11%	28%	26%	30%	3.67
Observing and copying behavior of company colleagues:	0%	9%	46%	26%	20%	3.57

Note: (a) Averages for researched items

The data for the “Externalization” group are presented in Table 3:

Table 3 – Description of issues related to externalization

	Never (1)	Hardly ever (2)	Sometimes (3)	Often (4)	Always (5)	Average (a)
Creation of models to explain ideas:	2%	9%	44%	27%	18%	3.49
Transforming complex thoughts into concrete ideas:	0%	4%	44%	36%	16%	3.62
Description of technical terms in colloquial language:	0%	9%	33%	44%	13%	3.62
Explanation of abstract concepts using simple examples:	0%	4%	31%	38%	27%	3.87
Use of analogies to explain abstract concepts:	0%	7%	53%	30%	9%	3.42
Help colleagues to express themselves:	0%	2%	36%	36%	27%	3.87

Note: (a) Averages for researched items

Regarding externalization, there was a draw between Explanation of abstract concepts using simple examples and Help colleagues to express themselves, with 3.87. For the former, the predominant response was “often”, with 38%. For the latter, “often” and “sometimes” scored 36%. It should also be mentioned that both had a higher concentration for “always”, with 27%. Then came Transforming complex thoughts into concrete ideas and Description of technical terms in colloquial language. Both had an average of 3.62. The predominant response for the former was

“sometimes”, at 44%. , the same score as the predominant response for the latter, although in this case the response was “often”.

With a very low average, Creation of models to explain ideas scored 3.49, with “sometimes” as the predominant response, at 44%. In last place, with the lowest average of the whole study, with 3.42, was Use of analogies to explain abstract concepts. This item had the largest concentration of “sometimes” as a response in the whole survey, with 53%.

The combination group, after treatment of the data shown in Table 4, presented the following numbers:

Table 4 – Description of the items related to Combination

	Never (1)	Hardly ever (2)	Sometimes (3)	Often (4)	Always (5)	Average (a)
Organization of ideas under discussion:	0%	0%	23%	43%	34%	4.11
Use of personal experiences to seek solutions:	0%	0%	18%	30%	52%	4.34
Organization of summaries at the end of meetings:	5%	18%	25%	23%	30%	3.55
Mental organization of subjects discussed at meetings:	0%	2%	25%	36%	36%	4.07
Collection of information and comparison with existing information in the search for new ideas:	0%	5%	23%	39%	34%	4.02
Organization and structuring of ambiguous concepts to facilitate understanding:	0%	9%	36%	43%	11%	3.57

Note: (a) Averages for researched items

Use of personal experiences to seek solutions had the highest score of the whole study, with an average of 4.34, with 52% responding that they “always” use personal experience. This was followed Organization of ideas under discussion, with an average of 4.11 and a high concentration of “often” responses, with 43%. This was followed by Mental organization of subjects discussed at meetings, with an average of 4.07, with 36% of responses being “often” and “always”. With a slightly lower average came Collection of information and comparison with existing information in the search for new ideas, with an average of 4.02, and 39% of the respondents choosing “often”.

The lowest averages were for Organization and structuring of ambiguous concepts to facilitate understanding, with an average of 3.57 and 43% responding “often”, and Organization of summaries at the end of meetings, with an average of 3.55. In this case, 30% of the respondents market “often”. There was also an expressive concentration for the “never”, at 5%, and “hardly ever”, at 18%.

Closing with the internalization group, the pertinent data are shown in Table 5:

Table 5 – Description of the items related to Internalization

	Never (1)	Hardly ever (2)	Sometimes (3)	Often (4)	Always (5)	Average (a)
Comparing new ideas with previous experiences:	0%	9%	27%	43%	20%	3.75
Seeking confirmation of ideas and concepts expressed by colleagues:	0%	5%	34%	36%	25%	3.82
Making sure that colleagues were understood:	0%	0%	36%	34%	30%	3.93
Giving colleagues time to reflect on the theme:	0%	12%	23%	42%	23%	3.77

Note: (a) Averages for researched items

There was a slight variation between the averages, highlighting Making sure that colleagues were understood, with an average of 3.93 and 36% of the respondents marking “sometimes”. This item had the highest concentration was for “always”, at 30%. This was followed by Seeking confirmation of ideas and concepts expressed by colleagues, with an average of 3.82 and 36% of the responses as “often”. Giving colleagues time to reflect on the theme had an average of 3.77, with 42% of the responses being “often”. Finally, Comparing new ideas with previous experiences had an average of 3.75. The highest concentration of responses was for “often”, with 43%.

With these scores, it was possible to calculate the average for each segment. Socialization and Combination had the same average of 3.94. Internalization had an average of 3.82. The average for Externalization was 3.65. These results can be viewed more clearly on the radar chart in Figure 3, which shows knowledge conversion in the organization in question.

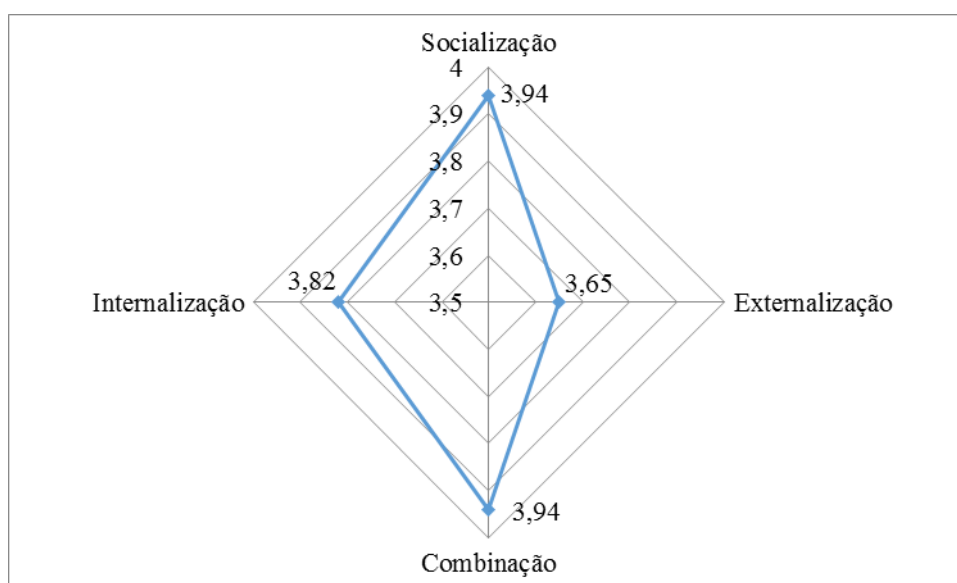


Figure 3 – Average for knowledge conversion.

The data show the predominance of socialization and combination. An explanation for this is that a credit union is subject to many regulations (Central Bank, Bancoob and Sicoob Central do Paraná). These factors, when combined with the strategy adopted by the company, result in constant training courses (socialization) and exchanges of information through documents (combination).

It should be emphasized that the norms, information sheets, manuals and other documents are very important, as they serve as a basis for “learning by doing” (internalization) when there are no socialization and combination processes.

Externalization had the lowest average because the company is not directly linked to the creation of new concepts. The information that is passed on to the collaborators is mostly clear and specific, in detriment of the use of analogies and metaphors.

The radar chart with the averages also shows the existence of all the necessary elements of the SECI model for the creation of the knowledge spiral in the organization. Through the chart and the numbers presented by the company, it can be seen that its knowledge management strategy, along with the other strategies, helps the company to grow.

Conclusion

Based on the findings of the study, the company can be said to have satisfactory averages in the model for knowledge creation proposed by Nonaka and Takeuchi (1997). This statement is based on the averages of 3.94 for socialization and combination, 3.82 for internalization and 3.65 for externalization.

According to Nonaka and Takeuchi (1997), socialization is the sharing of tacit knowledge. In this sense, we concluded that in terms of socialization, the company in question shows good sharing of the subjective knowledge of individuals in the working environment, especially the form of sharing information and encouragement for colleagues to express their ideas. In other words, the main conclusions of the present study lie in the fact that organizations that are heavily influenced by external norms tend to generate a competitive advantage through socialization and combination.

According to Nonaka and Takeuchi (1997, p. 75) “combination is a process of systematizing concepts into a knowledge system”. In other words, it is knowledge that stems from objective sources such as documents, e-mails and meetings. Therefore, we define it as an element for building a competitive advantage, as it is of paramount importance to the company, using personal experiences to solve problems and organize ideas under discussion.

Concerning externalization, the authors claim that this results in the transition from tacit knowledge to explicit knowledge through the materialization of ideas, concepts and metaphors, the bases of an innovation process. Thus, we found that the company does not have a high level of externalization. This is related mainly to the segment in which the institution operates, which emphasizes the propagation of knowledge clearly and objectively.

Finally, the authors argue that internalization emerges from transforming explicit knowledge into tacit knowledge. Thus, we conclude that the resulting process of the

activity that the authors define as “learning by doing” has a satisfactory result, as with the acquisition of objective knowledge, individuals become propellers of the propagation of knowledge. The main factors that characterize this fact are making sure that colleagues have been understood and seeking confirmation of ideas and concepts expressed by colleagues.

Thus, we can affirm that knowledge management helps to generate a competitive advantage at the Sicoob Noroeste do Paraná Credit Union, as the model used in the study and presented in the section on the theoretical framework showed a satisfactory level of knowledge transitions between individuals, i.e., the collaborators showed interest in spreading knowledge to all.

One of the limitations of this study was that some collaborators, for personal reasons, did not answer the questionnaire, and this may have influenced the conclusion of the data in the final result. It should also be highlighted that some of the interviewees found the questions difficult to understand. Another relevant point is the lack of similar studies for the comparison of results.

Finally, a recommendation for future studies is the continuous reapplication of this methodology at the institution in question to analyze the evolution of this concept, and at other similar institutions to compare the information obtained. Furthermore, more in-depth studies are recommended for each of the dimensions analyzed with a view to gaining a better interpretation.

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