

Competitiveness assessment method for managers: business associations' survey

Método de avaliação de competitividade para gestores: inquérito às associações empresariais

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ABSTRACT:

This research purpose is to present a Competitiveness Assessment Method (CAM) for business association managers. The steps are: (i) context identification, (ii) decision tree modeling, (iii) survey preparation, (iv) data collection and treatment, (v) application of multicriteria method, and (vi) ranking of rates obtained. To test the method, a case study is presented. Results provide a reference for evaluating competitiveness of Business Associations in Rio Grande do Sul, Brazil. Simulations performed confirm the functionality of the CAM.

Keywords: Decision-making, Business Association, Competitiveness Assessment Method, Managers

RESUMEN:

Esta pesquisa objetiva apresentar um Método de Avaliação da Competitividade (MAC) para gestores de associações empresariais. Etapas são: (i) identificação do contexto, (ii) modelagem da árvore de decisão, (iii) preparação da pesquisa, (iv) coleta e tratamento de dados, (v) aplicação do método multicritério e (vi) classificação das taxas obtidas. Para teste, é apresentado um estudo de caso. Os resultados fornecem referência para avaliar competitividade nas Associações Empresariais no Rio Grande do Sul, Brasil. Simulações realizadas confirmam funcionalidade do MAC.

Palabras clave: Tomada de Decisão, Associação Empresarial, Método de Avaliação da Competitividade, Gestores

1. Introduction

Competitiveness, as a concept and strategy, was popularized by Porter in 1980 and remains a relevant topic to governments, academia, and businesses (Bhawsar and Chattopadhyay, 2015). Competition between some companies encourages the development of strategies aimed at achieving market advantages (Nara et al., 2013), however this fierce globalized market presents obstacles for them. The high

competitiveness index and the oscillations, to the influence of the external and internal market, make the organizations have at their disposal concrete information on the actual financial expenses of manufacturing, so that the process of strategic management and decision making happen in a way efficient (Costa et al., 2015).

The union of members from the business field constitute the Business Associations (BAs) (Dür and Mateo, 2013). The connection between government and business aims to increase regional competitiveness by increasing local development (Kingsbury and Hayter, 2006), because the BAs help companies in their interaction needs with the environment where they are inserted, as well as a back up of technical, financial, and commercial information.

Díaz-Chao et al., (2016) recommended a model and a practical tool for measuring and managing the competitiveness of small network enterprises. Kucherenko et al., (2016) proposed a method for the evaluation of intersectoral competitiveness in industries. Siluk et al., (2017), have indicated a model in which a comparative evaluation is performed between business suppliers.

The focus of this research were BAs from different countries. E. Costa et al., (2017) investigated the support provided by industrial BAs to small and medium-sized enterprises in Portugal for internationalization. Battisti and Perry (2015) explored the benefits and motives driving micro and small enterprises in New Zealand to join trade and industry associations. Newbery et al., (2015) analyzed the benefits sought by members of local BAs in the north of England.

Therefore, the purpose of this research is to present the Competitiveness Assessment Method (CAM) for BAs managers. This proposed method seeks to establish, in an organized way, a way to measure the competitiveness of BAs. Most of these researches investigate the companies' view on BAs; thus, this research is novel in that it is to present a CAM for BAs managers.

2. Methodological procedures

The 6 steps of the CAM will be detailed below.

Step 1 – Context identification

In this step, it will be investigated the existing literature by going through terms in databases and through document analysis. Additionally, it was necessary to identify the stakeholders of the sector analyzed.

Step 2 – Decision Tree Modeling

The decision tree represents a decision process in a graphical and chronological way, indicating the phases to be performed to achieve the desired goal (L. F. A. M. Gomes and C. F. S. Gomes, 2012).

The Elementary Points of View (EPVs) break down a Fundamental Points of View (FPV) allowing an adequate analysis of the potential actions' performance from the point of view being considered (Ensslin et al., 2001). The EPVs can be broken down into Elementary View SubPoints (sub-EPVs), which then become the subcriteria (Ensslin et al., 2001). In this research, the EPVs include the Critical Success Factors (CSFs) and the sub-EPVs include the Key Performance Indicators (KPIs). An example of a generic decision tree is shown below in Figure 1

Figure 1
Generic decision tree modeling

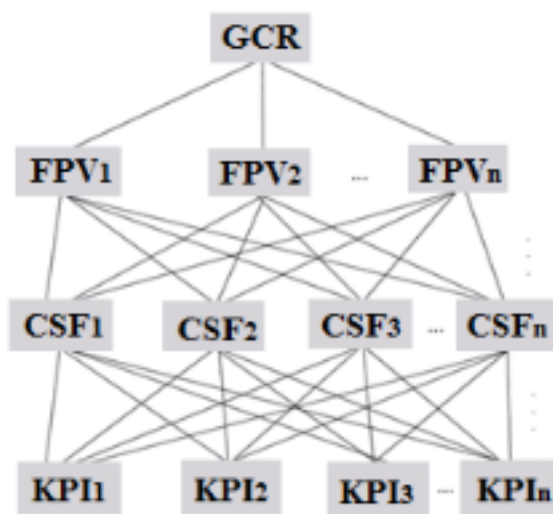


Figure 1 shows that Global Competitiveness Rate (GCR) is the objective; the KPIs are components of CSFs, which in turn belong to the FPVs.

The relevant aspects in assessing potential actions are considered as FPVs, (Ensslin et al., 2001). Generally, an FPV is formed by a set of correlated EPVs (Bana e Costa et al., 1999). The level following the FPV is the CSF.

The CSFs consist of areas in a company or project that are critical to its success (Jahangirian et al., 2017). They are used to administer, verify, and monitor the actions necessary to achieve results (Milichovský and Hornungová, 2013).

The use of KPIs is the most efficient method to monitor the performance of organizations (Sofiyabadi et al., 2016). KPI is a measurable quantity used to classify or compare performance against strategic and operational goals. The managers should focus on a set of KPIs rather than a few or just one to enable better observation of perspectives (Sofiyabadi et al., 2016). However, the choice of indicators is not a simple task due to the complexity of the measurable areas (Milichovský and Hornungová, 2013). In summary, KPIs aligned to the objectives and in adequate quantity allow a correct monitoring of the performance of the organizations, being used in different areas and obtaining relevant results.

Step 3 – Survey preparation

Surveys are widely popular for collecting opinions, expectations, and experiences (Torchiano et al., 2017). Therefore, it is deemed appropriate to gather the opinions of business association managers through a survey. Three steps are suggested for its construction:

Elaboration of questions: The items in the questionnaire should be clear, simple, and consistent (Torchiano et al., 2017).

2. Appropriate language for respondents: The adequacy of the terms in the questionnaire (based on the profiles of the respondents) is essential to ensure clarity of the questions which leads to the collection of appropriate responses (Yamin and Sim, 2016).

3. Definition of a scale for respondents: The questions may be standardized in a specific manner to obtain answers according to a chosen scale (Tarka, 2017), and for this, it is possible to use a widely used instrument for measurement, that is, the Likert scale (Vonglao, 2017). Scale labels are written according to what is being measured and the most appropriate way of referencing to the respondents must be established (Li, 2013).

Step 4 - Data collection and treatment

Data is usually collected through the telephone, internet, or in person. As in (Nara et al., 2014), data collection is a kick-start. Research tools may be employed with the advantage of reducing cost and time, in addition to ensuring respondents' anonymity.

Regarding data treatment, eliminating outliers is recommended since it is a common occurrence in the survey method. Outliers refer to data that do not follow the expected pattern (Chandola et al., 2009), when the data are free from outliers the results become more reliable.

The study population should be identified and their size and means to identify their declared individuals (Creswell, 2010).

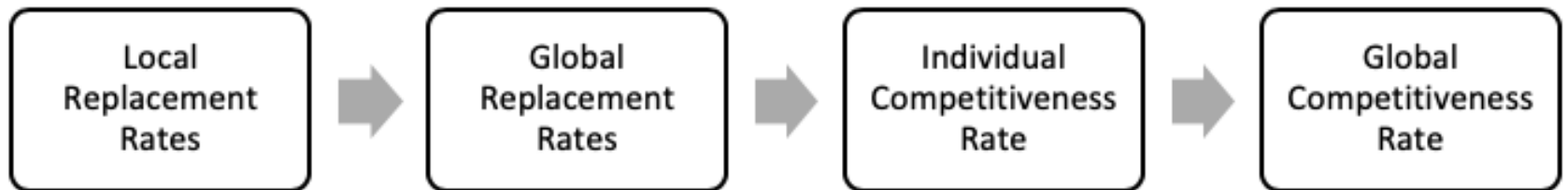
Step 5 – Application of multicriteria method

In this step, it will be shown the detailed steps in applying the Multi-Attribute Utility Theory (MAUT) method.

To carry out the measurement of competitiveness, the MAUT method disclosed by Keeney and Raiffa (1976) is recommended. MAUT was chosen for this research because it aims to support decision-making in situations involving various criteria and attributes (Frank et al., 2013).

Figure 2, where it is possible to check the order of calculations.

Figure 2
Methodological procedures



Step 6 – Ranking of rates obtained

In this step, after finding the rates, they are organized in the order of relevance, that is, in descending order of the rates.

3. Method illustration

This section illustrates the method through a case study of BAs in Rio Grande do Sul, Brazil. Also there will be presented below the results and analyzes obtained in this case study.

Step 1 – Context identification

This investigation was carried out from available literature by researching the terms: “competitiveness”, “business association,” and “service” in the databases of Scopus, Web of Science, and Science Direct. The social statutes of these BAs were also analyzed. In this way, the research was characterized as bibliographical and documental.

The stakeholders were categorized as business association managers and associated companies, the government, and civil society. Among these stakeholders, this research focuses on the business association managers.

Step 2 – Decision Tree Modeling

The construction of the decision tree was based on Soliman (2014) and began with the investigation of literature and documentary research. Considering the accessibility of data, it was appropriate to use documentary research as the means to analyze samples of BAs in Rio Grande do Sul to collect specific FPV.

From the list of references gathered through documentary research, relevant literature were identified and used to analyze the elements which shape the competition in companies, services and BAs. Subsequently, similarities between the FPV indicated by different sources were verified as presented the Table 1.

Table 1
FPVs identified in the social statutes and literature

FPV	References
Quality	Turi <i>et al.</i> , 2014; Koroteeva <i>et al.</i> 2016; Androniceanu, 2017; Sun and Pang, 2017; Kwateng and Darko, 2017; Park <i>et al.</i> , 2018; García-Arca <i>et al.</i> , 2018; Ali <i>et al.</i> , 2018

Representation	Doner and Schneider, 2000; Bennett and Ramsden, 2007; Battisti and Perry, 2015; Kohler-Koch <i>et al.</i> , 2017; A; B; C; D; E; F; G; H, I; J; K; L; M; N; O
Services	Kingsbury and Hayter, 2006; Gallego <i>et al.</i> , 2013; Mesquita <i>et al.</i> , 2007; Nora <i>et al.</i> , 2016; A; B; C; D; F; G; I; J; L; M; N
Benchmarking	Bennett, 1998; Sáez and Periañez, 2015; Battisti and Perry, 2015; B; D; E; F; G; H
Citizenship	Boehm, 2005; A; B; C; D; E; F; K
Financial	Frank <i>et al.</i> , 2013; Poveda-Bautista <i>et al.</i> , 2013; Turi <i>et al.</i> , 2014; Koroteeva <i>et al.</i> 2016; Kuteesa and Mawejje, 2016; Kohler-Koch <i>et al.</i> , 2017

* A: Associação Comercial e Industrial de Santa Cruz do Sul; B: Câmara de Comércio, Indústria e Serviços de Venâncio Aires; C: Associação Comercial e Industrial de Lajeado; D: Associação Comercial, Industrial e de Serviços de Novo Hamburgo e Campo Bom; E: Associação Comercial, Cultural, Industrial, Serviços e Agropecuária de Santo Ângelo; F: Câmara de Indústria, Comércio e Serviços de Farroupilha; G: Câmara de Indústria, Comércio e Serviços de Canoas; H: Câmara de Indústria, Comércio e Serviços de Caxias do Sul; I: Associação Comercial de Porto Alegre; J: Câmara de Comércio da Cidade do Rio Grande; K: Associação Comercial, Industrial, Serviços e Agronegócios de Santa Rosa; L: Associação Comercial, Industrial, de Serviços e Tecnologia de São Leopoldo; M: Associação Comercial, Industrial e de Serviços de Sapucaia do Sul; N: Associação Comercial, Industrial, de Serviços e Agronegócio de Passo Fundo; O: Centro Empresarial de Alegrete.

After determining six points that were considered as fundamental, these points were stratified into a second level, the CSFs. Sixteen CSFs were identified as shown in Table 2, each one with different sources.

Table 2
CSFs identified in the social statutes and literature

FPV	CSF	References
Quality	Customers	Koroteeva <i>et al.</i> 2016; Cheung and To, 2016; Programa Gaúcho de Qualidade e Produtividade, 2017; Aqlan <i>et al.</i> , 2018; Park <i>et al.</i> , 2018
	People	Programa Gaúcho de Qualidade e Produtividade 2017; C; K
Representation	Support and assistance	Bennett and Ramsden, 2007; Kebaili <i>et al.</i> , 2015; Newbery <i>et al.</i> , 2015; Ndyetabula <i>et al.</i> , 2016; D; F; I; L; M
	Interests defense	Doner and Schneider, 2000; Ndyetabula <i>et al.</i> , 2016; A; B; G; H; I; J; K; L; M; N
Services	Events	Bennett, 1998; A; B; D; F; H; J; L; M
	Credit protection	Oliveira and Labre, 2015; L
	Consulting and advisory services	Brown <i>et al.</i> , 2005; Bennett, 1998; A; D; E; F; G; H; I; J; L; M; N

	Marketing	Doner and Schneider, 2000; Kingsbury and Hayter, 2006; Bennett and Ramsden, 2007; Koroteeva <i>et al.</i> , 2016; Yen and Hung, 2017; A; B; C; F; G; H
Benchmarking	Internal and external learning	A; B; D; F; G; H; I; J; K; L; O
	Exchange of information and ideas	Kingsbury and Hayter, 2006; Bennett and Ramsden, 2007; Mshenga and Richardson, 2013; Newbery <i>et al.</i> , 2015; Ndyetabula <i>et al.</i> , 2016; Costa <i>et al.</i> , 2017; B; I; J
Citizenship	Social	Bennett, 1998; Kiron <i>et al.</i> , 2012; Fonseca and Lima, 2015; A; B; D; E; G; I; J; K; L; N; O
	Environmental	Kiron <i>et al.</i> , 2012; Fonseca and Lima, 2015; Park <i>et al.</i> , 2018; A; D
	Cultural	A; B; D; E; F; H; I; J; K; L; N
Financial	Liquidity and activity	Assaf Neto and Lima, 2014; Ersoy, 2017
	Indebtedness and structure	Assaf Neto and Lima, 2014
	Profitability	Assaf Neto and Lima, 2014; Ersoy, 2017

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The KPIs were elaborated according to the CSFs to which they belonged. From the readings of the social statutes of BAs and the papers, a knowledge base was built that enabled the creation of KPIs and the indication to which CSF each of them belong (Table 3).

Table 3
KPIs drawn from the social statutes and literature

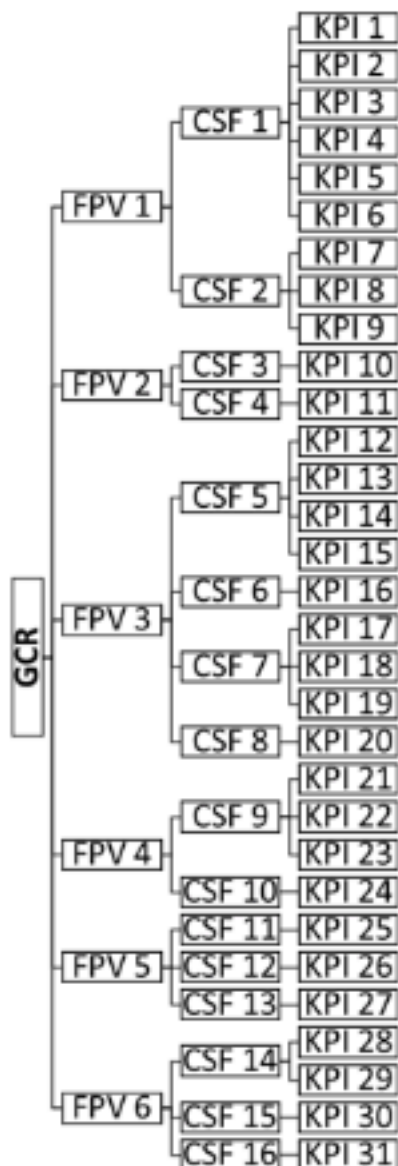
FPV	CSF	KPI (Indicator)
Quality	Customers	Associate size
		Segment differentiation of associates
		New associates
		Loyalty of associates
		Associate satisfaction

		Complaint of associates
	People	Technical qualification of business associations employees
		Higher education of business associations employees
		Periodic training of the business associations employees
Representation	Support and assistance	Associate counseling
	Interests defense	Representative actions
Services	Events	Courses
		Speeches
		Diversification of courses/lectures
		Opinion poll on desired events by associates
	Credit protection	Credit protection service
	Consulting and advisory services	Legal advisory service
		Technical advisory service
		Administrative consultancy service
Marketing	Marketing service	
Benchmarking	Internal and external learning	Meetings between the business associations employees
		Participation in meetings of other entities
		Participation in meetings between of business associations managers
	Exchange of information and ideas	Meetings between members for exchange of information and ideas
Citizenship	Social	Social activities
	Environmental	Environmental awareness and protection activities
	Cultural	Development activities and incentive to culture
	Liquidity and activity	Measurement of the capacity to comply with liabilities assumed
		Measurement of the service cycle

Financial	Indebtedness and structure	How third-party resources are used and their relative performance relative to equity
	Profitability	Evaluation of the result of the return obtained comparing it with the investment applied

The decision tree resulting from this process is presented in Figure 3.

Figure 3
Decision tree



Subtitle:

GCR: Global Competitiveness Rate;

FPV: Fundamental Point of View;

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GCR: Global Competitiveness Rate;

FPV: Fundamental Point of View;

CSF: Critical Success Factor;

KPI: Key Performance Indicator.

Figure 3 reveals that in order to find the GCR, it is necessary to identify six FPV. These FPV are subdivided into sixteen CSFs, which in turn are subdivided into thirty-one KPI. The KPI represent the levels which are considered measurable.

Step 3 – Survey preparation

A survey was prepared and it followed the steps: The questions asked were based on the KPIs; All questions were elaborated in order to obtain the importance of each KPIs for BAs' managers; A formal and clear language, that was considered appropriate for BAs' managers, was used.

The questions were grouped in a sequence that made possible a later analysis, facilitating the grouping of the KPIs, CSFs, and FPV.

Step 4 – Data collection and treatment

Data was collected from February to March 2018, and the survey instrument was sent through e-mail. The software used for data collection was Sphinx.

The population covered in this study include municipalities of Rio Grande do Sul, Brazil, particularly those with either a very high or high Índice de Desenvolvimento Humano Municipal (IDHM). IDHM was chosen because it uses the same criteria as the Índice de Desenvolvimento Humano Global (IDH), which includes longevity, education, and income, and is also adapted to analyze the development of Brazilian cities and metropolitan regions through appropriate indicators (Atlas Brasil, 2017). Furthermore, this criterion makes it possible to present the most developed municipalities which are deemed to have a high number of competitive BAs, the focus of this study.

There are 312 cities in Rio Grande do Sul with a high IDHM, and only one city with a very high IDHM. Considering that associations are more prevalent in large cities (Tavares and Carr, 2013), cities comprising more than 50,000 voters were identified. As a result, 31 cities which rank high in the list of cities with the largest number of active companies in Rio Grande do Sul (Empresômetro, 2017), were chosen. The BAs of these cities have an average of 347 members.

The survey was sent to 31 (study population) BAs, out of which, 16 responded (sample size), resulting in a sampling error of 14% and a confidence level of 95%. This response rate of 52% is higher than other studies which used surveys to study BAs when investigating the members' point of view (for e.g., Newbery et al., 2015, which obtained a response rate of 37%; and Battisti and Perry, 2015, which obtained a rate of 43%). Kohler-Koch et al., (2017) achieved a response rate of 29.5% when questioning business association managers.

For data treatment, a multivariate analysis was performed using ChemoStat. The software's use is to detect anomalous samples through hierarchical cluster analysis and principal cluster analysis. The software's use is to detect anomalous samples through hierarchical cluster analysis.

Step 5 – Application of multicriteria method

Following are detailed steps in applying the MAUT method.

Calculation of Local Replacement Rate

Using treated data, Local Replacement Rates (LRRs) were calculated for FPV, CSFs, and KPI. These replacement rates convert local preference values into global values, so they are scale constants (Ensslin et al., 2001). To find the LRRs of the KPI, CSFs, and FPV, equation 1, 2, and 3 were used, respectively.

$$LRR_{KPI} = \frac{\sum KPI}{nr + kcsf} \quad (1)$$

$$LRR_{CSF} = \sum LRR_{KPI} * \frac{kcsf}{kfpv} \quad (2)$$

$$LRR_{FPV} = \sum LRR_{CSF} * \frac{kfpv}{nkpi} \quad (3)$$

In these equations LRR are the LRRs of KPIs, CSFs or FPVs; nr is the number of respondents of the survey; KPI is about the value of the answers given by the respondents to the KPIs; kcsf is the number of KPIs inside the respective CSFs; kfpv is the number of KPIs inside the respective FPV; and nkpi is the total number of KPIs. With these equations, each of the KPI, CSFs, and FPV could be calculated.

Calculation of Global Replacement Rates

After obtaining the LRRs it is possible to calculate the Global Replacement Rates (GRR) based on equations 4, 5, and 6. The GRR_{CSF} should be calculated for each CSFs based on its corresponding KPIs. In the same manner, GRR_{FPV} of each (FPV) should be calculated based on its corresponding CSFs.

$$GRR_{KPI} = LRR_{KPI} * LRR_{CSF} * LRR_{FPV} \quad (4)$$

$$GRR_{CSF} = \sum GRR_{KPI} \quad (5)$$

$$GRR_{FPV} = \sum GRR_{CSF} \quad (6)$$

In equations 4, 5, and 6, GRR is the GRR of KPIs, CSFs or FPVs; LRRKPI is the Local Replacement Rate of KPIs; LRRCSF is the Local Replacement Rate of CSFs; and LRRFPV is the LRR of FPV.

The GRRs allow comparisons between KPIs, CSFs, and FPV, in order to verify the weighted relevance of each variable to the others in each level of the proposed modeling and presented in the decision tree.

Calculation of the Individual and Global Competitiveness Rates

To find the Individual Competitiveness Rate (ICR), it is necessary to calculate LRRs (using equations 1, 2, and 3) for each BA. From these rates of FPV, we obtain the ICR of each BA (equation 7).

$$ICR = \sum LRR_{FPV} \quad (7)$$

To acquire the value of the GCR, the simple average of the ICRs is calculated (equation 8).

$$GCR = \frac{\sum ICR}{nr} \quad (8)$$

Step 6 – Ranking of rates obtained

In this step, values of the calculated rates are presented in sequence.

Global Replacement Rates of FPVs, CSFs, and KPIs

Table 4, Table 5, and Table 6 present the rankings in descending order of importance.

Table 4
Ranking of FPVs Global Replacement Rates

FPV	Function of FPV	Global Replacement Rate
1	Quality	30.41%
3	Services	19.57%
6	Financial	16.45%
4	Benchmarking	16.10%
5	Citizenship	9.88%
2	Representation	7.58%

Table 4 confirms that FPV Quality is considered the most important with 30.41% of the respondents choosing it, and the FPV Representation (at 7.58%) was considered the least important. It can be noted that FPV Services, with 19.57% of importance, did not reach the first place, even if it is directly from BA where the main focus would be the services provided to the members.

Table 5
Ranking of CSFs Global Replacement Rates

CSF	Function of CSF	Global Replacement Rate
1	Customers	20.96%

9	External and internal learning	12.25%
5	Events	12.05%
2	People	9.46%
14	Liquidity and activity	8.34%
4	Interests defense	4.34%
16	Profitability	4.23%
15	Indebtedness and structure	3.88%
10	Exchange of information and ideas	3.85%
7	Consulting and advisory services	3.58%
11	Social	3.50%
12	Environmental	3.29%
3	Support and assistance	3.24%
13	Cultural	3.09%
8	Marketing	3.08%
6	Credit protection	0.86%

Table 5 shows that the CSF Customers, with a score of 20.96%, was chosen by the BA managers as most relevant proving that for these BAs surveyed all aspects involving customers are critical to obtain success. In second place, with a score of 12.25%, was the Critical Success Factor External and internal learning, followed by Events with a score of 12.05%. At the other side is the Critical Success Factor Credit Protection was the least relevant, scoring well below at 0.86%.

Table 6
Ranking of KPIs Global Replacement Rates

KPI	Function of KPI	Global Replacement Rate
28	Measurement of the capacity to comply with liabilities assumed	4.38%
11	Representative actions	4.34%
23	Participation in meetings between of business associations managers	4.32%

22	Participation in meetings of other entities	4.26%
31	Evaluation of the result of the return obtained comparing it with the investment applied	4.23%
29	Measurement of the service cycle	3.96%
30	How third-party resources are used and their relative performance relative to equity	3.88%
24	Meetings between members for exchange of information and ideas	3.85%
3	New associates	3.72%
5	Associate satisfaction	3.72%
21	Meetings between the business associations employees	3.67%
4	Loyalty of associates	3.67%
6	Complaint of associates	3.56%
25	Social activities	3.50%
7	Technical qualification of business associations employees	3.43%
9	Periodic training of the business associations employees	3.34%
2	Segment differentiation of associates	3.30%
26	Environmental awareness and protection activities	3.29%
10	Associate counseling	3.24%
15	Opinion poll on desired events by associates	3.18%
27	Development activities and incentive to culture	3.09%
20	Marketing services	3.08%
14	Diversification of courses/lectures	3.05%
1	Associate size	2.99%
12	Courses	2.96%
13	Speeches	2.87%

8	Higher education of business associations employees	2.69%
17	Legal advisory service	1.33%
18	Technical advisory service	1.27%
19	Administrative consultancy service	0.99%
16	Credit protection service	0.86%

Table 6 shows that only five KPIs obtained GRRs above 4%. KPI 28 (measurement of the capacity to comply with liabilities assumed, at 4.38%), was considered by the managers as the most relevant. KPI 11 (which addresses the actions of representativeness) obtained a rate of 4.34%. Two KPIs in the sequence are related to benchmarking, KPI 23 (meetings between other BA managers, at 4.32%) and KPI 22 (meetings among other entities, at 4.26%). The last KPIs obtaining a rate above 4% is KPI 31 (on the evaluation of the result of the return obtained comparing it with the investment applied), which earned a rate of 4.23%. Four KPIs were considered the least important: Legal advisory service with a score of 1.33%; Technical advisory service with a score of 1.27%; Administrative consultancy service with a score of 0.99%; and Credit protection service with a score of 0.86%. Given the low score obtained by these four KPIs, it can be inferred that there is no imminent need of control of these indicators by the BA managers.

Individual Competitiveness Rate and Global Competitiveness Rate

Table 7 shows the established ranking of the BAs ICR. This ranking was established to range from 1 to 5, so it can be seen that 13 BAs have ICR equal or above 4, that represents a level of 80% of competitiveness, and just 2 BAs have it below 4.

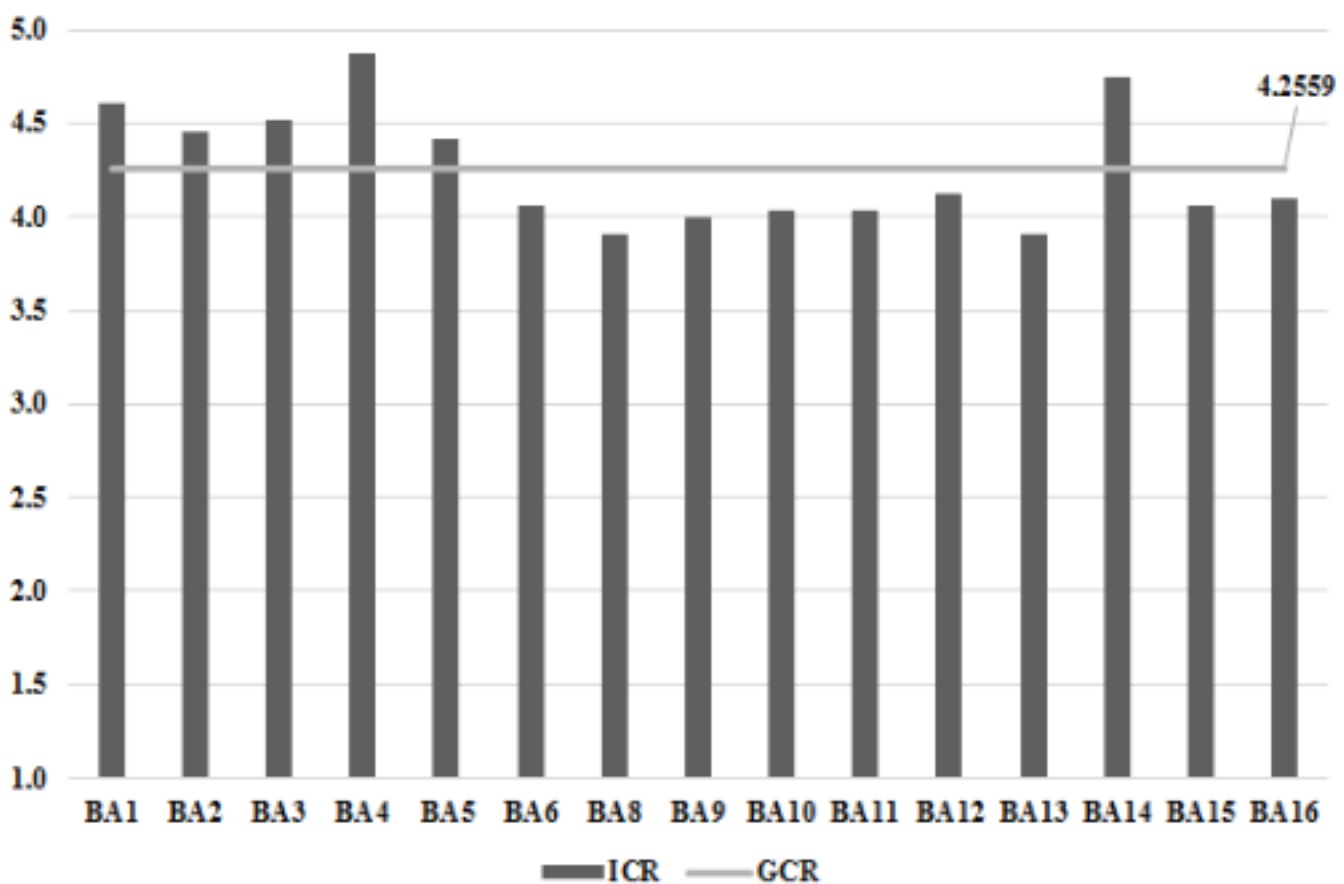
Table 7
Ranking of ICRs in BAs

Business Association	ICRs
4	4.870967742
14	4.741935484
1	4.612903226
3	4.516129032
2	4.451612903
5	4.419354839
12	4.129032258
16	4.096774194
6	4.064516129
15	4.064516129

10	4.032258065
11	4.032258065
9	4
8	3.903225806
13	3.903225806

For better illustration, Figure 4 graphically shows the results of the ICR in reference to GCR.

Figure 4
Graphic of ICRs in reference to GCR



* Note: Business Association 7 was removed from the sample in the data treatment step.

Considering a GCR of 4.2559, it can be seen in Figure 4 that only six BAs (4, 14, 1, 3, 2 and 5) were above this GCR. Besides being considered more competitive, the activities of these six BAs above the GCR can serve as benchmark for the others. These other BAs that are below the GCR can perform a detailed analysis of KPIs, CSFs, and FPV to check for improvement opportunities.

4. Conclusions

This study present a CAM for assessing business association managers. It presents an assessment method to identify BAs' most relevant indicators. A detailed discussion of CAM is included, allowing its replication in different segments.

Through a simulated case study, rankings of the global replacement rates of KPIs, CSFs, and FPVs applicable to individual BAs were formulated, which were then translated to global replacement rates. Results reveal useful information that will enable BAs to focus their activities and decision making on the most relevant factors.

The FPV Quality ranked as the most important while the FPV Representation ranked the least, signifying less relevance to business association managers. As for the CSFs, Clients rated the highest, revealing the associations' focus on attracting and retaining their members. The most relevant KPI for managers is the measurement of the capacity

to meet liabilities assumed. It can be inferred that this result reflects the concern that managers have on the financial administration of their BAs.

The ICRs confirm that 60% of BAs are below the GCR of 4.2559 on a scale of 1 to 5. This means that only 40% can be classified as competitive. Considering that the GCR index was obtained based on the managers' ranking of the indicators in terms of importance, it is believed that these results are exemplified in the daily management of these BAs. Therefore, associations that have not achieved this rate can focus on accomplishing the indicators identified as most relevant, i.e., those at the top of the GRR ranking of KPIs.

Results of this research provide a valuable reference for evaluating the competitiveness of BAs in Rio Grande do Sul, Brazil. The application of the method yielded a global index that can serve as a benchmark and guide association managers in decision-making.

For future research, it is recommended that CAM be applied on the BAs members to verify whether their opinions on competitiveness coincide with that of the managers' notes.

Given the importance of BAs in the development of local companies and the limited existing research in this area, this study aims to contribute both to literature and provide a useful tool (CAM) for the BAs.

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