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Measurement of Coopetitive Performance of Micro and Small Companies in Horizontal Cooperation Networks

Dr. ***Rodolfo Reinaldo Hermes Petter*** (Correspondence author)
Production Engineering Post Graduation Program – PPGEP
Federal University of Rio Grande do Sul (UFRGS)
Av. Osvaldo Aranha, 99, Porto Alegre, Rio Grande do Sul, BRAZIL, CEP: 90035-190
Tel.: +55 51 98306-5866 E-mail: rodolfopetter@gmail.com

Prof. Dr. ***Luis Mauricio Resende***
Production Engineering Post Graduation Program – PPGEP
Federal Technological University of Paraná (UTFPR)
Av. Monteiro Lobato, s/n – Km04, Ponta Grossa, Paraná, BRAZIL, CEP: 84016-210
Tel.: +55 42 3220-4800 E-mail: lmresende@utfpr.edu.br

Prof. Dr. ***Pedro Paulo de Andrade Júnior***
Production Engineering Post Graduation Program–PPGEP
Federal University of Santa Catarina (UFSC)
R. Eng. Agronômico Andrei Cristian Ferreira, Florianópolis, Santa Catarina, BRAZIL,
CEP: 88040-900; Tel.: +55 48 3721-2724 E-mail: pp.andrade@ufsc.br

***A*bstract:** This research proposes a model for measuring the competitivity levels of companies' horizontal cooperation networks – HCN. For this, the authors carried out bibliographic review of the methods, tools and models for measurement and analysis of competitivity and coopetition of HCN. Then, the Critical Success Factors – CSF for companies' networks were identified, after grouping of two dimensions: cooperation and competences. Based on this, the AHP (Analytic Hierarchy Process) method was used to assign importance and weigh the intensity levels of each of the CSF. Then, the authors proposed a competitive diagnosis model according to the Cooperation × Competences Diagram, which allows the analysis of the network or of a particular company in the network. Therefore, the tool developed is proved to be flexible, adaptable to different cooperation network structures, able to indicate the level of competitive homogeneity between companies of the network and, also highlighted flaws and strengths of company's performance.

Keywords: Micro and small companies; Coopetition; Horizontal cooperation networks; Critical Factors of Success (CFS)

JEL Classifications: L14, L20, L25, D20

1. Introduction

The need for management and enhancement of competitiveness has become something basic for companies in their performance and survival in the market. Therefore, ways to generate and keep it were rescued and restructured, as in the case of coopetition, structure that governs the performance of companies organized in cooperation networks.

Countries such as Italy, France, Portugal, England, India, Honduras, South Korea, traditionally haves actions directed to the animation and articulation of portions of its industrial politics toward the formation of cooperation of companies networks. These networks, interpreted and taken as an economic model, establish *a priori* an excellent chance in the support of the micro and small companies, contributing so that these become more competitive from the moment when they propose and act in a cooperative way, coordinated and articulated hence, under the coopetition structure.

The competitive gain in this economic model, specifically in horizontal networks of cooperation of companies (HCNs), comes from the union of action and operational and strategic efforts (cooperation) for the promotion of the competitiveness of the network and the involved companies, reflecting in the joint evolution of development of this type of company networks.

Furthermore, based on the perspective of coopetition, this research considers that competitive networks of horizontal cooperation power is also dependent on essential internal and/or core competencies of each company that makes up the network. These competencies structure their competitiveness and if adding to the collectivity, reflect the level of competition of the network of companies, faced with the market.

In this study we propose a new hierarchical structure for analysis and a model for measuring the levels of coopetition of HCNs, structured under the frontier actions between companies, i.e., through the actions of cooperation between network companies, and the evaluation/measurement of internal responsibilities of each of the companies making up the network.

The objectives of this research were established in: (*i*) identifying and proposing, based on the literature, the critical success factors (CSFs), and their variables, of the dimensions cooperation and competencies; (*ii*) proposing a hierarchical framework for analyzing the coopetition in HCNs; (*iii*) proposing a model of measurement/diagnostic levels of coopetition of HCNs, based on the Analytical Hierarchy Process (AHP) and; (*iv*) exposing a field application of the model.

This paper begins with a literature review about coopetition. This is followed by descriptions of the theoretical and mathematical foundations of the structure analysis and diagnostic model, in order to contextualize the proposal up to their application logic. Finally, there is the description of the field application of the model, and its concluding remarks.

2. Literature Review

Coopetition is based on the concept that it is possible to simultaneously compete and cooperate generating competitiveness, as rival organizations complement each other, allowing for mutual cooperation with the aim of strengthening competitive forces.

Regarding inter-company cooperation in an HCN, organizations generally cooperate aiming at very specific reasons such as reduction of investment costs for technology development; reducing barriers to opening new markets; risk reduction in the development process; scaling up of production; reducing the time for innovation processes and product development or; promotion of group learning (Tidd, Bessant, & Pavitt, 2005), (Verschoore & Balestrin, 2008b).

In the cooperative model of activity in networks, the relationship between its actors is of partnership. This means sharing a common interest with one or more actors, each presenting a contribution concerning its own characteristics of (Martinelli & Joyal, 2003; Lui, Wong, & Liu, 2009).

Regarding the inter-company competition of an HCN, the result of individual actions of the companies, is generated by the magnitude of the synergistic inter-relationship between the companies, being a crucial factor for the development of new processes, products and technologies (Porter, 2004).

Having as a base the fusing of the concepts of competition and cooperation, the coopetition is structured and it deals with a new structure for the interpretation and analysis of the interdependence between organizations, where there occurs the convergence of objectives and interests, giving form to the 'coopetitive system of creation of value' (Dagnino & Padula, 2002; Padula & Dagnino, 2007).

Based on the identifying of opportunities, the main benefits generated by this pattern of activity are risk division and sharing opportunities. Other benefits of industrial action in the pattern of HCNs are the gains in economies of scale and market power; learning and innovation; reducing costs and risks, among others (Verschoore & Balestrin, 2008; Maia & Maia, 2011).

However, for an HCN to be able to extract benefits relevant to their evolutionary development, it must develop to a higher level of structure and/or mature action, denominated mature, such that the governance of the network is able to articulate, formulate and align strategies of augmentation and competitiveness of the network.

However, specifically targeted tools are necessary to the analysis and measurement of levels of maturity of the networks, so their coopetitive development can be diagnosed and managed, in order to better exploit their potential for growth.

Starting with these assumptions, we constructed a new framework for analyzing coopetition, specific to networks of horizontal cooperation of companies, identifying and clarifying their critical success factors and the variables that they are made up of as well as the hierarchical levels of the analysis.

3. Analysis Model of Coopetition in HCNs

3.1 Hierarchical structure analysis of coopetition in HCNs - CSFs and Variables of the analysis model

The analysis of the hierarchical structure of coopetition in HCNs was constructed from the systematic review of the literature by Petter *et al*. (2014), who established the 18 CSFs and their variables, composers of this analysis and, in turn, creators of the HCNs measurement model coopetitive performance described below.

The study by Petter *et al*. (2014) established that the coopetitive analysis of companies and networks of companies is structured in four plans with different levels of coverage, organized hierarchically based on the analysis of the systemic competitiveness of the organizations, the levels being arranged as follows.

The first level, the group of the Systemic Factors, which composes the set of factors and variable composers of the global analysis of the competitiveness of the industry that is originating from the system.

Further, there is the group of Sectorial Factors, which includes the factors and variables directly related to analysis of the competitiveness of a specific sector.

In the next level below, is the group of Inter-Relationship factors, which underlie the analysis of competitiveness generated specifically through the activity of working of cooperative way. These factors are directly linked to the actions of cooperation which must exist in the HCNs, this set of actions, being considered the cornerstone for collaborative success (through the generation of competitive advantages) of the network.

Finally, in the last level, is the group of Internal Factors, factors and variables that are the constituents of the analysis of competitive power generated internally in a company network, as well as the core competencies that each company has that foment and condition the actions of Cooperation of the other participants of the network.

However, as the fundamental pillar for the evolutionary development of the levels of HCN competitiveness is the coopetition, the scope of the measurement model of HCN competitiveness was delimited in the Plans of Inter-Relationship Factors and Internal Factors of the hierarchical structure that falls into 18 Success factors established by Petter *et al*. (2014) as shown in figure 1.

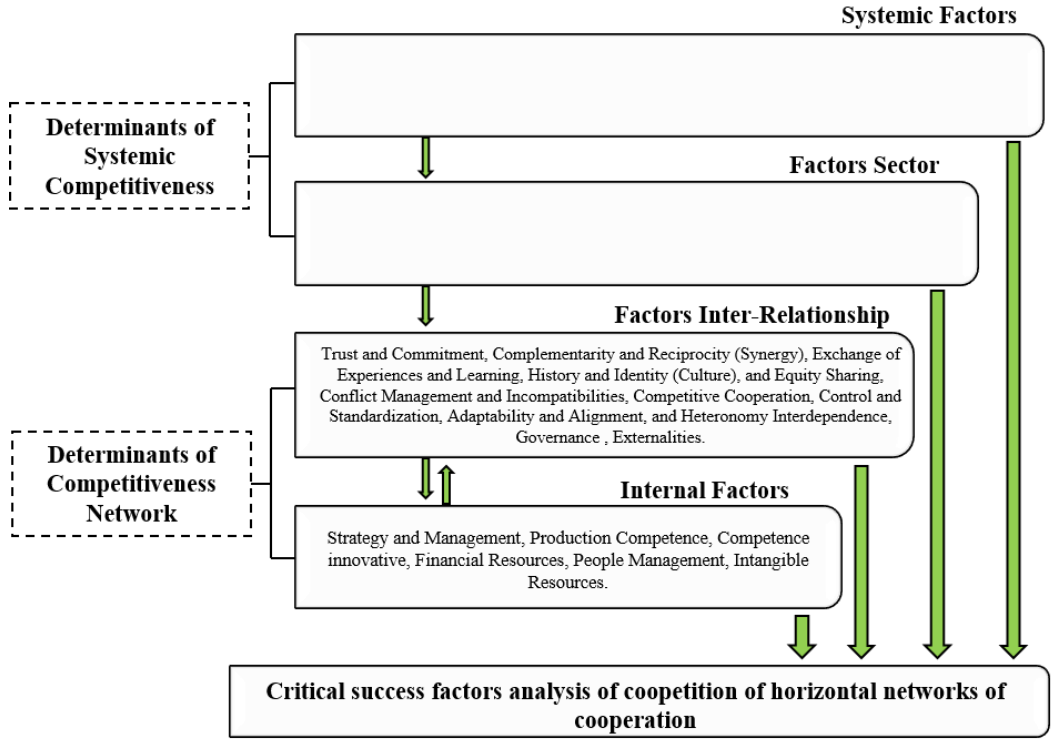

Figure 1. Structure of analysis of the coopetition of horizontal cooperation networks

The 18 CSFs constructed and allocated in the analysis structure were developed based on 46 variables that structure their scope. This structure through the variables is necessary for the application in the HCN and internally in the companies of an HCN of the model proposed in this research. The 46 variables are presented in tables 1 and 2 in the electronic annex 1 available in (http://www.ufrgs.br/producao/admin/Upload/29052017_164246.pdf), related to the dimensions of cooperation and competences respectively, as well as to the authors that are used in its construction.

Therefore, the coopetitive performance diagnosed by this model deals with the *status quo* (at the moment of the model application) in relation to the levels of sectorial and systemic factors, not

including any influences that both the levels of factors can have on the coopetition of the network of companies under analysis.

3.2 Mathematical basis of the model

It was assumed that the CSFs and model variables should be weighted according to their importance and relevance. The tool that fitted the requirements of the model is the method of multi-criteria for decision support *Analytic Hierarchy Process* (AHP), created by Saaty (1991).

Therefore, there is the equal comparison between elements (CSFs) of the model, and these comparisons are obtained through direct application of questioning individuals involved with the decision problem, therefore individuals of network governance involved with the decision may be a group of people or a single individual, as long as they are fully familiar with the problem.

The assignment of importance intensity levels to the CSFs is carried out by parity and elimination comparisons between them, for example, after the CSF-1 is compared to 11 other CSFs of the dimension cooperation, the FCS-2 will be compared to the other 10 CSFs, CSF-1 being deleted from the following comparison parity, and so on until the last pair of CSFs is compared. This structure is applied to both dimensions of cooperation and competencies.

From this stage, the data obtained is entered in a square matrix $n \times n$ (A). Then the treatment of numerical data by the mathematics structure of the AHP is carried out, with the objective of obtaining Relative Vector Priority of each of the matrix elements, which are the representative values of the weights assigned to each CSF.

At this time, for the measurement model of the levels of coopetition in HCNs, the weights **(W)** of CSFs in relation to their size are identified. This priority value/weight will be used as a multiplication factor for the diagnostic framework of the model.

Subsequently, in order to certify the consistency of sentences attributed to the CSFs, it is followed by the development of the application of the AHP method, which has in its mathematical structure the obtainment of consistency rate of sentential parity ratings given to its application in the CSFs for a determined HCN.

3.3 Structure of the model diagnosis

The 18 CSFs develop into 46 variables, which in turn are split into 144 indicators according to their magnitude of influence on the CSFs. These indicators structure the questionnaire (described in Petter, 2012) used for the application on the managers of the constituent companies of the network analyzed. As each indicator represents a practical action, the manager of the company has two options of reply for each indicator: Yes (1) and No (0).

Based on the responses to the indicators, the mathematical development of the model is carried out. First, for each company in the network, we obtain the value of each CSF in relation to the dimension to which it is listed, by tabulating the responses, using the equation (1).

$$Vcfs = \left(\sum_{j=1}^{n} R.Vv \right).P \qquad (1)$$

Where: **Vcfs** = Value of CFSs Dimension; **Vv** = Variable value; **R** = Indicators answer; **P =** Critical Factor Success Weight.

Thus, when we calculate all the Vcfs of each of the two dimensions, the sum of the same will result in the Final Value of the Dimension, FVD, both for the Cooperation dimension, as for the Competence dimension. To do so, one must use equation (2).

$$Fvd = \sum_{j=1}^{n} Vcfs \quad (2)$$

Where: **Fvd** = Final Value of Dimension; **Vcfs** = Value of CFSs Dimension.

From obtaining these data, it is possible to identify the point of coopetitive performance that the company finds itself in, with regard to the other companies in the network.

Further, to evaluate the performance of the whole network, we should make use of equation (3) generating the value of each CFSs:

$$Vcfs(network) = \left(\sum_{E1}^{En} Vcfs\right) \Big/ nE \quad (3)$$

Where: **Vcfs (network)** = Value of CFSs for the Network Dimension; **E** = Enterprises; **Vcfs** = Value of CFSs in Enterprises Dimension; **nE** = Number of Network Enterprises;

Based on this, we obtain the Vfd of each dimension of the Network by means of equation (4):

$$Vfd(netowork) = \left(\sum_{j=1}^{n} Vcfs\right) \Big/ nE \quad (4)$$

Where: **Vfd (network)** = Value final of Network Dimension; **Vcfs (network)** = Value of each CFSs of the Network.

On this basis, it is possible the coopetitive positioning of each company performance, along with the network, through the application of the mathematical procedures presented so far, in both the dimensions Cooperation and Competencies.

However, it is still necessary to establish some benchmarks at the time of the construction of the diagram based on the values previously obtained.

3.3.1 Construction of the Diagram Cooperation × Competencies of the Diagnosis

Initially we must establish the maximum values for the axes of the diagram. We assume the horizontal axis *X* as the axis of the dimension cooperation, and the vertical axis, *Y* as the dimension of the competencies axis. The maximum value for each axis is obtained according to equation (5), based on the weight assigned to each CSF by the governance of the network under analysis multiplied by the number of indicators for each of the CSFs.

$$VM = \sum_{j=1}^{n} P.NI \quad (5)$$

Where: **VM** = Maximum Value of Axis; **P** = Weight of CFSs; **NI** = Number de Indicators by CFSs.

It is noted that the indicators of the variables considered as not applicable for network analysis are excluded at the time of calculation of the maximum values of the diagram axes. Therefore, it is possible to design the diagram Cooperation × Competencies of coopetitive network diagnosis.

3.3.2 Structure of the Diagram Cooperation × Competencies of Diagnosis

Based on the values obtained by the structure of the diagnostic model (Vfd for the two dimensions) and the maximum values of the axes, it is possible to structure the Cooperation × Competencies diagram, as shown in Figure 2.

To better analyze the results obtained, the Cooperation × Competencies diagram is divided into three major sites, defined as follows:

1st - The risk site: the networks fitting in this region have low coopetitive performance, showing little gain or synergy in inter-company relations, requiring major adjustments and strategic realignment of the network, or even have a great dystonia between internal cooperation and competencies are for one or another dimension;

2nd - Transition site: it evidences the beginning of the generation of results by means of the coopetition, with the evolution of the levels of competitiveness of the network through the coopetition. Classified networks in these areas already present some gain, however there are still flawed or limited points;

3rd - Maturity site: it evidences the high coopetitive performance, with mature and complex actions of both inter-relationship and internal competencies. The companies located on this site have substantial positive interference in their levels of competitiveness, the result of working together and synergy with the network.

Also, these three sites were divided into nine quadrants, for further analysis, seeking to translate different stages of coopetitive performance of an HCN. The structure of the diagram is shown in Figure 2.

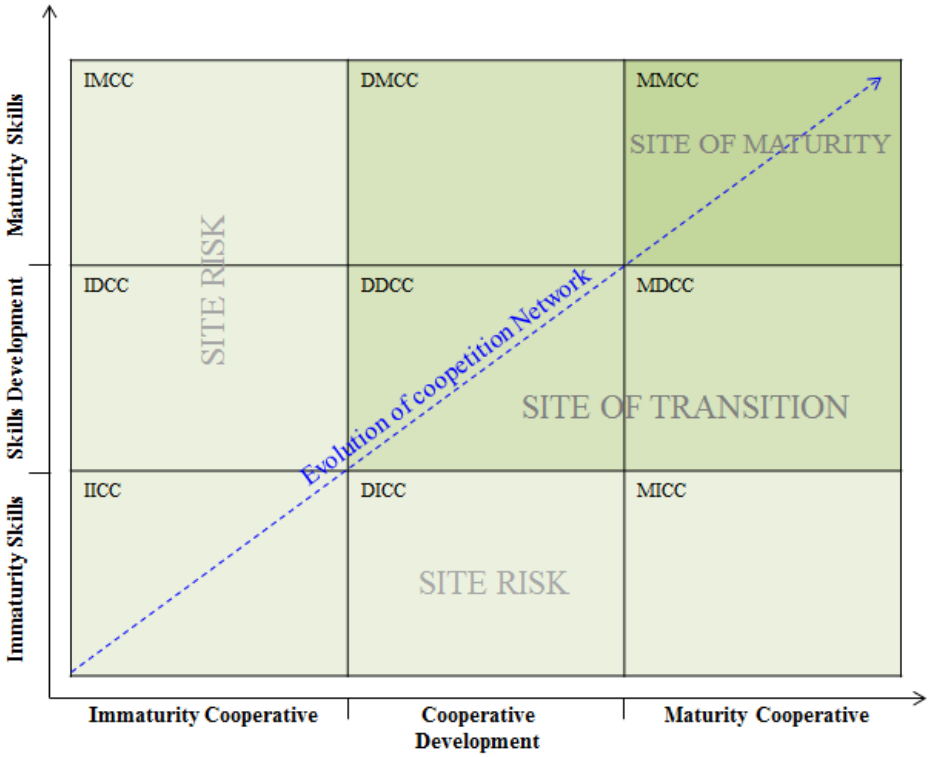

Figure 2. Cooperation × Competencies of the Model Diagram

The levels of coopetitive performance through the quadrants are analyzed at three sites.

(1) Quadrants at the risk site:

IICC - Cooperative and Competences Immaturity: This stage features a low performance of cooperativeness and competencies, presenting a high risk of mortality, not only to the network, but also for the companies that are classified here. The occurrence of the positioning in this stage translates into a network with poor performance, where inter-company cooperativity is almost zero or is zero;

DICC - Cooperative Development and Immaturity of Competences: This stage indicates some complexity in the actions of inter-company cooperativity but under-performing in in-house competencies. However, as it is found in the stage of cooperative development, the level of difficulty of restructuring is reduced through inter-company cooperativity, which may use this factor for the competent support and development of other network partners in order to generate internal competencies and capabilities for the companies;

MICC - Cooperative Maturity and Immaturity of Competences: This stage is characterized by the great inter-company network cooperativity, capable of generating substantial positive interference in the levels of competitiveness and in particular the network of companies that position themselves in it. However, it still is a stage of low competence development, which does not add more value to the evolution of the levels of competitiveness of these companies and of the network, not totally eliminating the risks of failure of the companies that position themselves in this stage, still delaying the coopetitive evolutive development of the network;

IDCC - Cooperative Immaturity and Development of Competences: This stage indicates a low performance of inter-company cooperativity but a little development in in-house competencies. It is a stage that presents risks, despite having certain value-added levels of competitiveness of companies found in it;

IMCC - Cooperative Immaturity and Maturity of Competences: This stage characterizes highly competitive companies, but with a very low level of cooperativeness. The stage points to two situations: the near extinction of the network or the exclusion of companies that find themselves at this stage, due to their own fault. However, the mortality risk of these companies is significantly reduced, due to the fact that these are competitively self-sufficient.

(2) Quadrants at the transition site:

DDCC - Cooperative Development and Development of Competences: At this stage, there is a decreased risk of mortality of the companies or their dismissal or termination of the network, because the stage is in the *start* of the evolutionary development of coopetition companies, this being a decisive stage in the process of coopetitive evolution of these and the network. The positive aspect of this quadrant is the balancing of cooperative activities with internal competencies already generated by companies, facilitating the development of companies and the network to reach the level of maturity;

MDCC - Cooperative Maturity and Development of Competencies: At this stage, it is interpreted that the companies found therein are able to take advantage of and increase the competencies development through absorption and implementation of technical information emanating from the cooperative network environment and with the help of its partners. However, as the stage is of development of competencies, special attention is still needed to the structure of company's competencies;

DMCC - Cooperative Development and Maturity of Competencies: Networks at this stage present companies with high capacities and internal competencies, but with initial cooperative

actions, requiring greater efforts in this regard. This is the beginning of carrying out cooperative actions, and there should be efforts for coopetitive development through the improvement in inter-company cooperativity, even though these are competitively self-sufficient.

(3) Quadrants at the maturity site:

MMCC - Cooperative Maturity and Maturity of Competencies: This is the greatest stage of evolution of a coopetition network, which means the moment of consolidation of the structure of continuous improvement of the coopetition network. The stage reflects a maturity of performance in the form of a horizontal cooperation network, by achieving competitive self-sufficiency of the network. Also, the stage points to the need for a review of the organizational structures of the companies and network with the aim of maintaining this coopetitive self-sufficiency.

Therefore, based on the understanding of the structure of the development stages of a coopetitive HCN and its interpretations by the network companies, but also for its governance, the diagram allows a clear view of the homogeneity of coopetitive levels of performance between the network companies and also the overall performance of this, based on the positioning of each company on the quadrants of the diagram.

4. Application of the Coopetition Analysis Model in an HCN in the Furniture Sector

The model was applied in an HCN made up of eight micro and small companies which are manufacturers of designed furniture, located in the western region of the State of Santa Catarina, Brazil, with the name of *Núcleo dos Moveleiros* (Furniture Makers Nucleus). The application of this was carried out in three major sequential steps, according to the flowchart shown in Figure 3. In brief, this flowchart consolidates the relationship between the methods of data collection, with their respective methods of data processing through the equations used by the model to build the final diagnosis.

According to the model sequence of operation, step 1 was carried out, dealing with the assignment of intensity values of importance of the CSFs of the model, through the methodological structure of parity comparison defined by the AHP method.

The assignment of the weights, obtained through the application of forms organized in parity structure of comparison of factors, was the responsibility of the network manager, on the basis that they are the individual who has the knowledge needed on the reality of the network performance in relation to the CSFs of the model.

Once these forms are applied, we obtained weights *"P"* present in equations (1) and (5), as well as, in the following, obtaining the levels of consistencies of the weights carried out by the manager in attributing the values of the intensities to the CSFs.

In the case of this application in the Furniture Makers Nucleus, respectively, for the dimensions of cooperation and competencies, we obtained consistency rates of 0.10 and 0.08, which are acceptable according to the methodological parameters of the AHP, which has its maximum rate of acceptance of a value ≤ 0.10.

Sequentially, the network manager conducted the check on the applicability of the 46 variables in the model, considering the compliance of each of the variables, the form and reality of performance of the network, at the time of the model application. It was checked that, all the variables are adherent and consistent with the features of the performance of the Furniture Makers Nucleus.

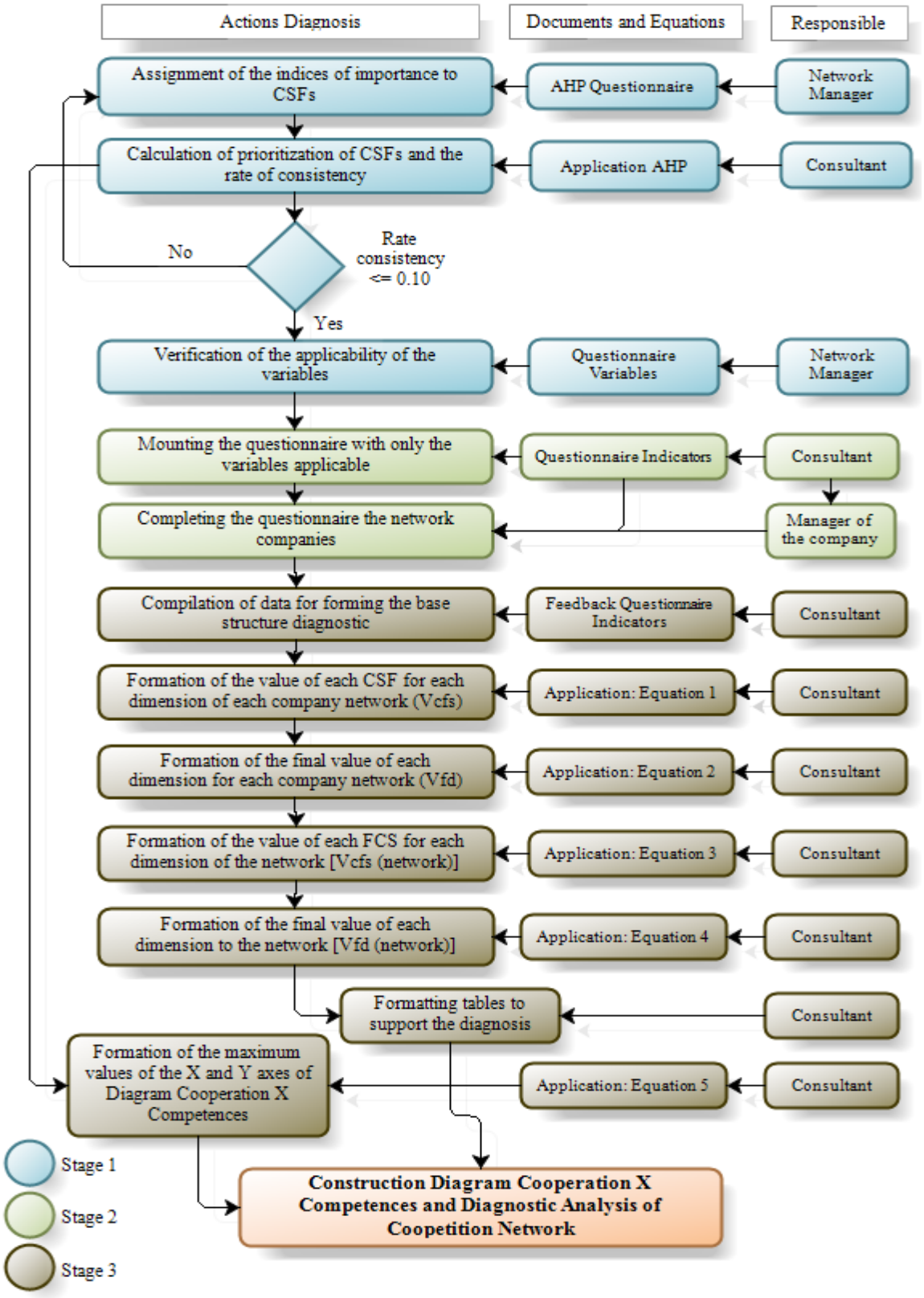

Figure 3. Flowchart of the model application

From this finding, we could put together the final questionnaire for their use in each of the eight companies of the network in a structured interview format.

With the data compiled, among this the values of positioning in the cooperation × competencies diagram for each company and the network, the weights for construction of the diagram were calculated, starting with the definition of maximum possible values of its axes, based on equation (5).

In tables 1 and 2 that follow, the definitions of the maximum values of the axes of the diagram for the Furniture Makers Nucleus are shown. It's worth noting that these figures deal with maximum levels of performance, both in cooperation and in competencies that companies and the network itself are able to reach during the scenario at the time the application of the diagnostic model is made.

Table 1. Maximum value for the *X* axis (Cooperation)

CFS	Weights CFSs (P)	No. of Indicators (NI)	Maximum axis value (VM)
CFS - 1	0.045	13	6.186
CFS - 2	0.032	20	
CFS - 3	0.085	7	
CFS - 4	0.068	6	
CFS - 5	0.047	7	
CFS - 6	0.063	8	
CFS - 7	0.121	6	
CFS - 8	0.096	6	
CFS - 9	0.149	3	
CFS - 10	0.103	4	
CFS - 11	0.108	5	
CFS - 12	0.083	5	

Table 2. Maximum value for the *Y* axis (Competencies)

CFS	Weights CFSs (P)	No. of Indicators (NI)	Maximum axis value (VM)
CSF - A	0.229	10	8.780
CSF - B	0.111	15	
CSF - C	0.217	4	
CSF - D	0.160	7	
CSF - E	0.189	12	
CSF - F	0.093	6	

Once the maximum values of the axes are defined, as well as having all the other values collected and processed, we can then produce the Cooperation × Competencies Diagram of the Furniture Makers Nucleus, displayed in Figure 4 that follows.

In reading the coopetitive network performance, which is shown in the diagram as "network result", this is found in the quadrant with the greatest performance MMCC (Cooperative Maturity and Maturity of Competencies), i.e., in the maturity site of the diagram.

According to the standard model sentences, the quadrant MMCC describes the following coopetitive scenario: The core is positioned in the greatest stage of evolution of the coopetition, which means the moment of consolidation of the structure of continuous coopetition improvement of the network. The stage translates a maturity of the performance in the form of a network of horizontal cooperation, through the attainment of competitive auto-sufficiency of the network and the companies who find themselves in this quadrant.

Also, the stage points to the need for a review of the organizational structures of the companies and network with the aim of maintaining this coopetitive self-sufficiency.

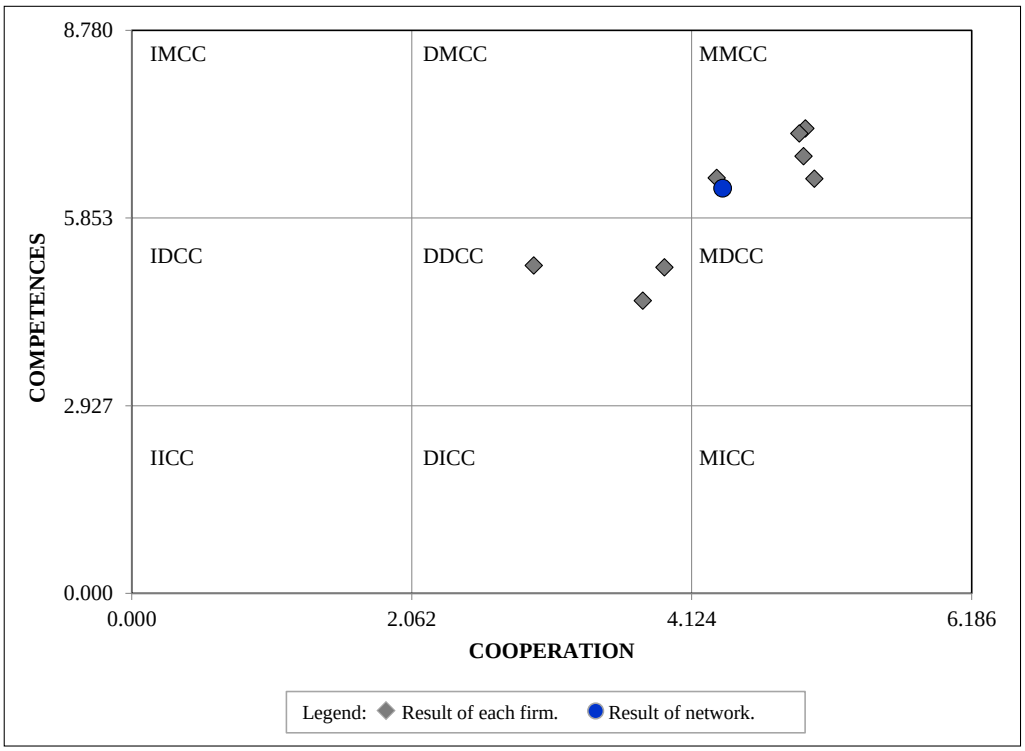

Figure 4. Cooperation × Competencies Diagram of the Furniture Makers Nucleus

From this point, it is clear that the high coopetitive performance of most companies in the Furniture Makers Nucleus, therefore establishing that its performance is already at a mature level.

Specifically, referring to quadrant DDCC (Cooperative Development and Development of Competencies), the three companies that are found have a reduced risk of mortality, or even of the trend to disconnect from the network, having as a base that it is in this quadrant that these companies start the evolutive development of their coopetition, this being a decisive stage in the process of their coopetitive evolution.

In this manner, it is at this moment that these three companies from the Nucleus need to invest the maximum possible of their efforts, with the objective of the elimination of the risk of a possible fall to inferior stages of coopetitive maturity, as well as to prevent the beginning of a regression process, both in competencies and in inter-company cooperation.

Also, these three companies are going through a moment in which they are adding value to their levels of competitiveness through their cooperative action. One of the main positive features attributed to the performance of these companies is the balancing of the cooperation actions with internal competencies already generated by each of these companies, therefore facilitating their evolutionary development in terms of maturity level.

Another relevant aspect, noticed during the implementation of the model, is the time the companies have participated in the network. Such importance given to this aspect is linked to the time cycle of inter-company collaborative actions, which generate collective efficiency.

That is, these companies are already investing collaborative efforts which contribute to the collective efficiency of the network, however, as they have been working for a shorter time collaboratively in the "Furniture Makers Nucleus", they still have not detected in a measurable form, results generated by the cooperativity.

A point to note is the good competencies performance of all the companies in the network. It was also found in the model application, this performance of the competencies, generally between network companies, was built of two major parts:

1st - All the network companies have a very similar organizational culture and have several aspects in common. Two of the most relevant are great discipline regarding the structure of production costs and pricing and the constant search for optimization of the production system and controlling waste, even if, especially the three companies positioned in the quadrant DDCC, do not have a high level of formality for the control of the above elements. However, all the companies are competitively self-sufficient.

2nd - The construction of mechanisms that add value to the processes of production and administration, as well as on product differentiation through cooperativity, mainly through the exchange of technical information. That being, the second portion of the Nucleus competency maturity has high-level function results stemmed from the collective efficiency of the network.

Also regarding the collective efficiency, taking into account both dimensions, it was noted that the Nucleus has a limitation in its continuous improvement, due to lack of greater formalization, dependence and interdependence of its governance.

Even the Nucleus being mature, actions such as standardization of documents, procuring of new suppliers and customers, establishing relationships with external network research centers and training of manpower, among others, do not occur because the governance of the network does not have a formalized structure that can provide the management of these aspects.

In this situation, a good strategy for the Furniture Makers Nucleus would be its disconnection with the body that currently performs its management governance, and the structuring of an independent governance body, as the Nucleus, since its inception, has always had a board structure with members as president, secretary, accountant, etc.., these being the managers of its constituent companies.

Finally, an aspect of great importance in the application of this network model, is the undisputed high performance CSF 1 (Confidence and Commitment) which, besides being verified by the model, is highlighted as one of the factors that allows good coopetitive performance of the network as well as the maintenance and stability of intercompany cooperativity relationships, reflecting directly on the collective gain in efficiency and therefore competitiveness of the network.

5. Concluding Remarks

From this research, we obtain a model of basic structure, flexible nature and high level of customization to different types of networks, which brings a great contribution to the methods of evaluation and analysis of company networks. When applying the model, it is possible to diagnose and propose a prediction for the network in order to increase its competitiveness.

Therefore, the model has the ability to be applied to any industry at regional, state and national levels, serving also as an application tool and for strategic support to public policies for regional development, which attributes it with the rich quality of being flexible.

Such flexibility of the model is attributed to its ability to customize to particular networks that adopt it for tracking their coopetitive evolution, aiming to make it, with each application cycle,

more aligned to the particular realities of network operations, allowing a more concise diagnosis in every assessment cycle of its coopetitive performance.

This customization shows the ability of the model to undergo additions or removals of elements in the three levels of the model (the CSFs, the variables and also the indicators).

As the customization will be made by the network that adopts the model, this is possible from the internal levels to the more external, i.e. part of the proposition of adding or removing indicators by managers of companies from the network to the other levels.

Finally, the model shows itself to be dynamic, as well as a model open to the proposals of considerable evolution, due to the methodological structure that was established in its development.

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