

Comparison of Competitive Gains of Some Cooperation Networks, Business and Productive Arrangements State of Goiás

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Abstract. Globalization has caused significant organizational changes in recent decades, increasing competition and the uncertainty of economic markets caused the Small and Medium Enterprises (SMEs) opted for cooperation, joining forces and making possible improvements to reduce risks, threats and better seize opportunities to become more competitive through Business Cooperation Network (BCNs) and Local Production Arrangements (LPAs). In this scenario, the present study aims to study some BCNs and some clusters in the State of Goiás-Brazil, comparing the collective gains provided by both. This study aims to broaden the understanding of earnings and benefits provided by them.

Keywords: Business cooperation networks. Local clusters. Competitive gains. Business benefits.

1. Introduction

Globalization has seen changes in the way of producing and distributing the products by the companies. Increased competition and the uncertainty of the markets caused the Small and Medium Enterprises (SMEs) unite their efforts in order to reduce risks and threats, and seize the best opportunities in the market, making it more competitive [1].

For Amato Neto (2005), SMEs, acting alone, have low bargaining power and in turn, lack of trust in relation to large companies, another point would be the inability to manage and master some value chains [2]. In this context, aiming to achieve competitive advantage as well as local development, enterprises can operate establishing cooperation in forms of clusters, Business Cooperation Network (BCNs), Local Productive Arrangements (LPAs), Production Systems and Innovative Local (PSIL) or productive clusters among many other concepts that refer to the joint work of companies located nearby geographically [3]. Collective actions promote collaboration between customers, suppliers and competitors to a higher position in the market, and promote mutual learning mechanisms, co-speciality, scale and increased individual earnings of companies. [4].

Based on the above, this study intends to carry out a comparison between the collective economic gains provided by the BCN in relation to provided by LPAs.

However, there are no studies in which these factors are compared between the collective gains provided by BCNs and collective gains provided by LPAs. Thus, the research question of this paper is: The collective gains generated by the BCNs are also identified in LPAs and vice-versa?

The purpose of this article is to study some selected BCNs and LPAs, located in the State of Goiás-Brazil,

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comparing the collective gains provided both.

The methodology adopted for the development of the research was defined as a multiple case study, with exploratory, involving literature and documentary qualitative.

This work is justified by the contribution which could bring in theory, with definition, constitution and comparison of BCNs and LPAs, establishing cooperation and strengthening of the participating companies.

It is hoped with this study contribute to the academic research in three LPAs and four BCNs with significant economic role in the State of Goiás, experiencing the difficulties encountered in practice in companies that are part of these networks. Also contribute with their own clusters and BCNs, increasing the understanding of earnings and benefits thereof.

So based on the above, this article is divided into five sections, in this present section presents besides the introduction, the definition of the research problem, the goal, the rationale and importance of the study and structure of this research. Section 2 presents the theoretical framework, with the formation of a conceptual and theoretical base, providing subsidies for the development of this study. Section 3 presents the method used and the technical and methodological procedures used for the study. Section 4 presents the analysis and discussion of the results obtained in the research, performing the analysis of the studied BCNs and LPAs, in order to verify the homogeneity and heterogeneity between the perceptions obtained from respondents. Finally, section 5 shows the relationships identified between the constructs used and the cases studied in the research.

2. Referential Theoretical

2.1. Business cooperation networks

According Verschoore and Balestrin (2008), cooperation networks are defined as organizations made up of a group of formally related companies with common goals, unlimited term existence and multiple scope of activity [5].

The concept of enterprise networks, according to Farias and Ramos (2009), corresponding to inter-organizational arrangements based on systematic links often cooperative, between formally independent companies, which give rise to a particular form of coordination of economic activities [6].

2.2. Local clusters

According to Silva and Hewings (2010), clusters should be understood as groups of companies which have the following characteristics: production processes are sufficiently similar such that the skills acquired in training are useful for LPA firm also be for others belonging to the LPA and the firms are located sufficiently close together so that workers have mobility between them [7].

2.3. Collective gains provided by local clusters and networks of business cooperation

The theme on earnings and benefits in BCNs and clusters can be considered in the academic world as an emerging issue. So it deserves expansions and theoretical insights. Thus, it was decided to present in Table 1 the theoretical approaches about the benefits and BCNs in clusters according to the authors surveyed.

Table 1 - conceptual framework to be used in research

Authors	Benefits
Balestrin and Verschoore (2008) [5]	Bargaining power, ample trade, representativeness, credibility, legitimacy, market strength, training, business consulting, shared marketing, prospecting opportunities, credit guarantee, digital inclusion, marketing structures, shared activities, confidence in new investments, complementarity, transactional ease, productivity, opportunism limitation, expansion of trust, family ties, reciprocity, internal cohesion, socialization of information and experiences, access to new external knowledge, internal and external benchmarking, new products and services, adoption of new organizational practices, access to new markets, development of new business models.
Aragão, Lopes and Dias (2010) [8]	Best price conditions with suppliers.

Giuliani (2013) [9]	Geographical proximity of managers and workers.
Sampaio (2009) [10]	Greater access to information; ability to influence decisions outside the controlled environment spheres by companies; image enhancement; resource optimization and the possibility of cost savings.
Cezarino and Campomar (2006) [11]	Flow of information on the segment; Specialized support infrastructure; Specialized suppliers; Suppliers of substitute goods; Reinvestment of income in the activity; Burden sharing and R & D risks; Exchange of experiences on new opportunities; product lines with superior quality; Pressure on the market; Sharing of resources; Strengthening purchasing power; Force to operate in international markets; Specialization of production; Mass training of skilled workers.
Castro (2010) [12]	Gains of scale through joint sales through business exchanges, trading platforms and others; Exploration of territorial identity as an intangible wealth which adds itself to products of value (through the creation of Collective Brands, Origin Stamps and Geographical Indications).

3. Methodology

This section presents the method used, the technical and methodological procedures used for the study.

The most appropriate method for this research is the study of multiple or multicase cases, to study some BCNs and some clusters, in the State of Goiás. According to Gil (2002) a multicase is defined as a rational and systematic approach in which its scope is to provide answers to problems posed in order to contribute to the specific knowledge [13]. In favor of Gil methodology (2002) and Yin (2005) agree that when using more than one case can demonstrate growing trends because the evidence obtained is more convincing [13], [14].

The survey was conducted in four BCNs established in Goiás, three of Goiania capital and the interior of Goiás, the town of Taquaral. In addition, were considered three clusters (LPAs) located in the interior of Goiás: one in Mara Rosa, one in the North Star and the other in São Luís de Montes Belos.

In total there are seven case studies, following Eisenhardt (1989) recommendations, who claims to be sufficient 4-10 case studies for a study of these characteristics, also said that the use of multiple data sources and iteration with literature enables the achievement of greater construct validity of the research. The crossing of the resulting information from different sources allows greater consistency in the analysis of individual cases and cross-analysis of the data [15].

To preserve the identity of the networks analyzed these received the name BCN1, BCN2, BCN3 and BCN4 and clusters chosen as LPA1, LPA2, LPA3. Segments of BCNs and clusters are presented in Table 2.

Table 2 - Selected Companies for search

Case study	Code	Segment
1	BCN1	Real estate
2	BCN2	Drugstore
3	BCN3	Clothing Industry Fashion Int
4	BCN4	Building material
5	LPA1	Saffron
6	LPA2	Ceramics
7	LPA3	Dairy

The clusters were chosen because they present more consistent answers and more continuous policies, according to Castro (2010). Since the networks were chosen because they were acting in the state of Goiás for over five years and are registered and formalized the Board of Trade of the State of Goiás, and have an organizational structure with at least a president, whether there's someone in the function manager or not.

Respondents of the clusters were selected on-site visit, being chosen associates who were active within the LPA searched. Already in BCNs five associates of each network were selected, including a president in office on the date of the interview and four other members.

The questionnaire of the interviews contained forty-seven questions and was prepared by Universidade do Vale do Rio dos Sinos (UNISINOS), of Porto Alegre, the Professional Master's Program in Management and Business, and authorized their use in this work. The elaborate questionnaires and applied to members of LPAs, was an adaptation of the questionnaire developed by researchers at the UNISINOS.

It was used content analysis to analyze strategy of research data. According to Godoy (1995) content analysis has three stages: pre-analysis, material exploration and treatment of results [16].

In pre-analysis, the collected material is organized, and establish a work schedule that should be precise, well-defined yet flexible procedures. The material exploration phase involves procedures such as encryption, classification and categorization of material collected [17].

In this study, the pre-analysis phase consisted of organizing the material collected during the research in BCNs and clusters, and a dynamic reading of it. In the material exploration phase was prepared tables of each individual network to facilitate the exploitation and analysis, in depth, the collected data. Finally, the treatment phase of the results consisted of a qualitative analysis, which verified the homogeneity and heterogeneity between the perceptions of members and managers of BCNs and clusters analyzed. Based on this qualitative analysis, we found confirmation of the proposition pointed to the study as well as establish relationships and propose inferences grounded in the theoretical framework used as reference in this study.

The method of conjoint analysis was adopted to measure of the competitive gains of the companies involved in different segments and also allow the ranking of each of these gains in order of importance.

4. Analysis and Discussion of the Results Obtained

This section presents the results of research on the characterization and contextualization of collective gains realized in the four BCNs and the three clusters surveyed. Carrying out a joint analysis of surveyed BCNs and clusters.

The analysis sought to verify the confirmation or not of the research proposition and provides subsidies to propose inferences based on empirical data and theoretical references.

Qualitative analysis undertaken of the collective gains of BCNs and studied clusters, empirical evidence obtained by analysis of the benefits allowed further understanding on these gains. First, after the work of Balestrin and Verschoore (2008), it was found in this study factors:

- Greater market power with its elements: bargaining power, ample trade, representativeness, credibility, legitimacy and market power. Among them was mentioned most prominently both in BCN as the clusters studied the bargaining power and market strength. This confirms that both provide a greater bargaining power;
- Generation of collective solutions with the elements: training, business consulting, shared marketing, prospecting opportunities, credit guarantee, digital inclusion and marketing structures. Which they stood out in both BCNs and in the clusters studied the training and the shared marketing;
- Reducing costs and risks with its elements: shared activities, confidence in new investments, complementarity, transactional ease and productivity. Among them were mentioned most prominently both in BCN as the clusters studied shared activities. This confirms that both allow those involved to minimize risk, avoid losses and facilitate transactions;
- Of capital accumulation with its elements: opportunism limitation, expansion of trust, social capital accumulation, family ties, reciprocity and internal cohesion. It showed that this does not constitute economic benefits directly related to organizational goals, so maybe it was not said with great emphasis both in BCN as the studied clusters;
- Collective learning with its elements: socialization of information and experiences, access to new external knowledge and internal and external benchmarking. Among them was reported most prominently in both BCNs and in the clusters studied the socialization of information and experiences.
- Collaborative innovation with its elements: new products and services, adoption of new organizational practices, access to new markets, development of new business models. Among them were mentioned most prominently both in BCN as the clusters studied the new products and services. This confirms that in both, services, products and infrastructure available, enable the development of its members.

Among the relevant differences between BCNs and clusters, should be highlighted: productivity identified in clusters and not identified in BCNs, to approximate the LPAs of the leading standards; complementarily and transactional ease identified in BCN and not identified in clusters, these show that the BCNs have relationships that facilitate access to non-existing resources in companies.

With the work of Cezarino and Campomar (2006) was found in this research that the benefits:

- Burden sharing and R & D risks, product lines with superior quality and mass training of skilled workers were more favorable both in BCN as the studied clusters;
- Specialization of production and substitute goods suppliers, were not favorable in the studied BCNs because they were not identified in the same;
- Pressure on the market, sharing of resources, strengthen purchasing power, exchange of experiences on new opportunities, specialized suppliers, specialized support infrastructure, power to operate in international markets and substitute goods suppliers, were not favorable in the studied clusters, do They were identified therein;
- Substitute goods suppliers were not favorable both in BCN as the studied clusters as they were not identified in any of them.

As the works of Castro (2010); Aragon, Lopes and Dias (2010); Giuliani (2013); and Sampaio (2009), it was found in this research that among the benefits acquired:

- The best possible prices with suppliers can be clearly identified in case study 2 of the BCN, where to buy together, companies increase bargaining power with suppliers, obtaining better prices;
- The geographical proximity of managers and employees are clear on the case study of 4 BCN, where the assemblies, members seek to disseminate tacit knowledge, complemented by information provided by the directors and managers;
- Access to information can be identified in the dissemination of knowledge and the sharing of information and knowledge present in case studies two, three, four and five;
- The ability to influence decisions in spheres outside of the companies controlled environment was found in the case study 3, in support of the credit lines: Bank of Brazil and Caixa Economica Federal;
- The image enhancement was identified in case 2 study with the use of the mark by all participants, causing the unit of the company and demonstrating an important gain for members;
- Gain scaling has been identified in all BCN and two of the three clusters;
- Exploration of territorial identity was identified in two of the four BCNs and two of the three clusters.

The benefits identified in BCNs and LPAs studied are presented in a hierarchical way in Table 3.

Table 3 - more benefits identified in this study in business cooperation networks and local clusters studied together in%

N °	Benefits	BCNs	LPAs
1	Shared activities	100%	100%
2	Bargaining power	100%	66,6%
3	Market strength	100%	66,6%
4	Capacity	75%	100%
5	Shared marketing	75%	100%
6	Socialization of information and experiences	75%	100%
7	New products and services	100%	66,6%
8	Burden sharing and R & D risks	100%	66,6%
9	Product lines with superior quality	100%	66,6%
10	Mass training of skilled workers	75%	100%
11	Economies of scale.	100%	66,6%

The benefits identified at least BCN, is shown in Table 4.

Table 4 - Benefits least identified in this study in business cooperation networks studied

N °	Benefits	BCNs	LPAs
1	Productivity	0%	100%
2	Legitimacy	0%	66,6%
3	Confidence in new investments	0%	66,6%
4	Digital inclusion	0%	0%
5	Production specialization	0%	100%
6	Substitute goods suppliers	0%	0%

Most benefits identified in studied clusters are presented in Table 5.

Table 5 - more benefits identified in this study at the sites studied clusters

N °	Benefits	BCNs	LPAs
1	Shared activities	100%	100%
2	Capacity	75%	100%
3	Shared marketing	75%	100%
4	Socialization of information and experiences	75%	100%
5	Productivity	0%	100%
6	Mass training of skilled workers	75%	100%
7	Production specialization	0%	100%

The benefits unless identified in clusters, are presented in Table 6.

Table 6 - Benefits least identified in this present study the sites studied clusters

N °	Benefits	BCNs	LPAs
1	Complementarity	100%	0%
2	Transactional facility	100%	0%
3	Access to new external knowledge	75%	0%
4	Adoption of new organizational practices	75%	0%
5	Limitation of opportunism	50%	0%
6	Business consulting	25%	0%
7	Reciprocity	25%	0%
8	Internal and external benchmarking	25%	0%
9	Access to new markets	25%	0%
10	Development of new business models	25%	0%
11	Pressure on the market	100%	0%
12	Resource Sharing	100%	0%
13	Strengthening the purchasing power	100%	0%
14	Exchange of experiences on new opportunities	75%	0%
15	Specialized suppliers	50%	0%
16	Specialized support infrastructure	25%	0%
17	Force to operate in international markets	25%	0%
18	Substitute goods suppliers	0%	0%
19	Best price conditions with suppliers	25%	0%
20	Geographical proximity of managers and workers	25%	0%
21	Ability to influence decisions outside the controlled environment spheres by companies	25%	0%
22	Image enhancement	25%	0%

Most benefits identified in BCN studied, they are presented in Table 7.

Table 7 - more benefits identified in this study in business cooperation networks studied

N °	Benefits	BCNs	LPAs
1	Shared activities	100%	100%
2	Bargaining power	100%	66,6%
3	Market strength	100%	66,6%
4	New products and services	100%	66,6%
5	Prospecting opportunities	100%	33,3%
6	Complementarity	100%	0%
7	Transactional facility	100%	0%
8	Burden sharing and R & D risks	100%	66,6%
9	Product lines with superior quality	100%	66,6%
10	Pressure on the market	100%	0%

11	Resource Sharing	100%	0%
12	Strengthening the purchasing power	100%	0%
13	Economies of scale	100%	66,6%

As noted in Tables 3-7, the survey found that:

- The activities and resource sharing was seen as a key advantage in both BCNs as in LPA, demonstrating the proposition of Miles and Snow (1986), which also verified this advantage, where a company has partners in sharing actions and assets and Lubeck and Wittmann (2014), which also verified the achievement of shared activities, to develop strategies that represent companies before their public interaction, in addition to developing technology-based solutions and projects that involve business cooperation. Some examples of common shared activities identified in BCNs and clusters studied were shopping, marketing, training, and shared accounting and legal services.
- Gains of scale, market strength and bargaining power, observed with emphasis mainly on BCNs are obtained as a result of the number of associated growth. These provided the realization of trade agreements on exclusive terms, generated differential, as increased bargaining power with suppliers and partners, more likely to generate brand recognition and to obtain amplitude on public display [5].
- Technical training and training in general are particularly valued in the studied clusters. As an example is the testimony of one of the associates and owner who says "the network promoted training to owners and employees of associated companies".
- The joint development of products and services, and improvement of product quality, especially in BCNs, confirmed one of the potential activities of the presented business networks.
- The strengthening of the purchasing power, especially prevalent in the surveyed BCNs, was demonstrated through various statements such as: "The goal is to strengthen the associated in purchasing power, the training of employees and also the financial part." and "We had new ideas, best trading conditions in all respects. Greater purchasing power, longer term and sponsorships."
- The socialization of information and experiences highlighted in the research was also highlighted by Verschoore (2006) through the sharing of ideas and experiences among its members and in accordance with Grohmann et. al. (2010, p. 26) "exchange of information assumes central importance on the inter-relation, to the extent that raises the level of knowledge of the group" [18].
- The emphasis on productivity especially in LPAs confirmed the paper [19], which concluded that the creation of courses, was reflecting increased production and improving productivity indicators.
- The specialization of production identified mainly in clusters surveyed confirmed the statement Marshall (1982, p. 234-235), which referred to an industrial cluster where there was a deep division of labor between the firms, from which originated external advantages "external economies", generating benefits that would result from specialization of workers, goods and services [20].

5. Final Considerations

This section aims to highlight the main conclusions arising from the study performed.

The research question of this work was to verify that the collective gains generated by the BCNs are also identified in clusters and vice-versa. So for the research and to broaden the understanding of how are the collective gains of BCNs and clusters, defined the objective of this study was to study some BCNs and some clusters, located in the State of Goiás, comparing the collective gains provided on both.

In the present study, we analyzed four BCNs and three LPAs, and should be emphasized that the study was limited to analyzing what are the benefits obtained from the companies that are part of BCNs and clusters studied, implying inability to generalize the results.

The survey results revealed some relevant points about the competitive gains provided by BCN and studied clusters, among which can be highlighted:

- Shared activities, bargaining power, market power, training, shared marketing, socialization of information and experiences, new products and services with great emphasis both BCNs and in the studied clusters;

- With regard to the elements relating to capital accumulation was not verified highlight both the BCN as the studied clusters;
- Productivity and specialization of production, identified in clusters and not identified in BCNs;
- Complementarity, transactional ease pressure on the market, sharing of resources and strengthen the purchasing power, was identified in BCN and unidentified in clusters;
- Benefits identified with great emphasis in the studied BCNs, was observed: prospecting opportunities, burden sharing and R & D risks, product lines with superior quality and economies of scale;
- Benefits identified with great emphasis in the studied LPAs, was observed: mass training of skilled workers.

The theoretical approaches that served as basis for the development of this research, along with the empirical findings found brought contributions to both the academic context as to the business environment. One of the contributions of this study refers to the fact that the collective gains in BCNs and clusters being considered by several authors as emerging issues. Thus, these issues require further clarification, to increase knowledge concerning this area.

From a pragmatic point of view, this research can bring a useful contribution to people and organizations, we can count on this study to make decisions and undertake new actions.

Finally, it was concluded that the collective gains provided by the studied BCNs are also not identified in the studied clusters and vice versa, as it was found in the survey conducted, there are several benefits that are identified in the studied clusters that are not identified in the studied BCNs, as well as various benefits that are identified in BCNs studied are not identified in the studied clusters.

The results of this study do not close the question in need of other studies that may confirm them. Thus, to continue this research is suggested: extension of this research using other sources of evidence, new studies involving the participation of other BCNs and clusters and new studies for deeper research focused on differentiating competitive gains in the various existing segments of BCNs and LPAs.

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