

ADVANTAGES OF JOINING A NETWORK OF SMALL AND MEDIUM ENTERPRISES (SMES): NATIONAL (BRAZIL) VERSUS INTERNATIONAL LITERATURE REVIEW

VANTAGENS DE ADERIR A UMA REDE DE PEQUENAS E MÉDIAS EMPRESAS (PMES): ANÁLISE DA LITERATURA NACIONAL VERSUS INTERNACIONAL

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RESUMO

O objetivo deste artigo é mapear os principais estudos, publicados na literatura nacional e internacional, sobre redes de Pequenas e Médias Empresas (PMEs), a fim de consolidar os diferentes pontos de vista sobre as vantagens de se aderir a uma rede de empresas. Para isso, foi selecionado, por meio de um processo estruturado, um portfólio bibliográfico. Este estudo, de caráter descritivo e bibliográfico, concluiu que as vantagens apresentadas por pesquisadores, em ambos os contextos, são congruentes e complementares: ganhos no aspecto gerencial, desenvolvimento conjunto de novos produtos, redução de custos, acesso a novos mercados, acesso a mão de obra especializada - e importantes para a melhoria da competitividade das PMEs.

Palavras-chave: Redes organizacionais. Revisão de literatura. Pequenas e médias empresas (PMEs).

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ABSTRACT

The main goal of the paper is to map the main studies, published in the national and international literature, on SMEs networks in order to consolidate the different views on the advantages of joining a network of companies. For this purpose, it was selected by means of a structured process, a Bibliographic portfolio (BP). This study of descriptive and bibliographic character concluded that the shown advantages by researchers, in both contexts, are congruent and complementary - gains in the managerial aspects, joint development of new products, cost reduction, access to new markets, access to specialized workers - and important for the improvement of the SMEs competitiveness.

Keywords: Inter-firm network. Literature review. Small and medium enterprises (SMEs).

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INTRODUCTION

Small and Medium Enterprises (SMEs) perceived substantial changes in the competition for the market in recent decades. Many of them understand that their market, before captive, is now a target for larger and more organized foreign competitors (DAMASKOPOULOS *et al.*, 2008).

In addition to increased competition, SMEs have access, usually problematic, to sophisticated equipment, technology services, professional training, efficient structure for purchasing inputs and sale of products. In other words, SMEs coexist with capacity constraints and higher economic resources compared with larger competitors (WEGNER; MISOCSKY, 2010).

However, SMEs have sought alternatives to face the difficulties imposed by the management and market aspects, being that one of the alternatives is the insertion into networks of small and medium enterprises or production arrangements (CAMARINHA-MATOS; ABREU, 2007; VILLA, 2007).

The researches related to cooperation between enterprises and the establishment of inter-organizational relationships stand out at the moment they become an important alternative for many enterprises, especially for small and medium sized businesses that need to adapt to the changing scenario and to the demands of new capacities and skills (VERSCHOORE; BALESTRIN, 2008).

Despite recognizing that adhering to a network of enterprises is important for the improvement of SMEs' competitiveness, each study brings in a partial form, the advantages of that adhesion. In each survey, the author points out some advantages of being part of a network of cooperation between SMEs, but it can be seen in each study a different and/ or complementary view, without a thorough analysis on the topic.

In this context, the research question emerges: What are the advantages pointed out in national and international literature for SMEs to join a network of cooperation? To answer this question, we defined the following research goal: to map the studies main networks of SMEs, in order to consolidate the different views on the advantages of joining a network of SMEs to achieve the overall objective; there were defined the following specific objectives: (i) carry out a structured process to select the articles that are more closely aligned with the subject, (ii) consolidate the main advantages cited in the literature to join a network of enterprises, and (iii) compare the advantages related to internal and external organizational contexts of selected publications.

The article presents the following: (i) theoretical reference, (ii) research methodology, (iii) presentation and discussion of results, and (iv) closing remarks.

THEORETICAL REFERENCE

First, it shows the concept of enterprises' network. However, the task is not easy because there are several concepts in the literature and different visions of what is, and what is the purpose of cooperation networks. However, the conceptual distinctions that arise in the literature on local production systems are reduced to varying degrees of development, of integration of the production chain, of articulation and of interaction between agents and local institutions, and of systemic capacities for innovation (SUZIGAN, 2001).

However, for the purposes of this work, cooperation networks are geographic concentrations of interconnected enterprises, specialized suppliers, service providers, firms in related industries and associated institutions in a particular field that compete but also cooperate (PORTER, 1998).

The topic *enterprises' network* has motivated several studies during the last years (SUZIGAN, 2001). Some researchers have as a focus the study of public policies related to the formation of PMEs networks (SUZIGAN, 2001); other authors focus on the SMEs network management through the Evaluation of the Organizational Performance (BURLAT *et al.*, 2003; BITITCI *et al.*, 2004; PETTAN, 2005; GRANDO;BELVEDERE, 2006; VILLA, 2007; CARPINETTI *et al.*, 2007; BITITCI *et al.*, 2007; CARPINETTI *et al.*, 2008; HANSEN; OLIVEIRA, 2009; PARRILLI, 2009; JAHN, 2009; WEGNER; MISOCKY, 2010). Some other studies deal with the formation of SMEs networks and their contribution to regional development (SUZIGAN, 2001), from, among other researches on the topic (MARTINKENAITE, 2011; CHAO, 2011).

The studies related to the formation of SMEs networks arise from limitations that SMEs face due to the limited size of insufficient human and financial resources, and other factors that prevent SMEs from facing the innovation policies envisage only by their internal skills (PEREIRA; VENTURINI, 2006).

Another factor which limits the development of SMEs refers to the management standpoint. Surveys conducted in Brazil indicate that the vision of business management is hardly implemented in SMEs (SUZIGAN, 2001).

In addition to the aforementioned limitations, SMEs have difficulty in entering the international market, and is an accepted fact that in the 21st century, the competition is made between enterprises that efficiently and effectively integrate their skills and resources to compete in a global economy (BITITCI *et al.*, 2004). Besides the difficulty in entering the global market, SMEs present limitations for consolidation in the local market. Opening new markets is influenced by the fast development of technology and by the need to integrate different technologies. Isolated small companies rarely have enough influence to maximize the efficiency and to minimize the cost, and consequently, many struggle to find enough capital of investment to upgrade or expand their portfolio. Small enterprises are recognized as being flexible and receptive to customers and to market opportunities, but their size means they are especially vulnerable to resource constraints. Many small enterprises close within a few years of their creation, and the lack of resources is often cited as the main factor (WELSH; WHITE, 1981).

Thus, the literature indicates that SMEs should join networks of cooperation to overcome these limitations (GEROLAMO *et al.*, 2008; HANNA; WALSH, 2008; CAMPO; ALBARRACÍN, 2008). Some studies of the formation of regional clusters highlight the improved stability of SMEs belonging to clusters. The reason lies in the collaborative activities carried out within a district that covers different aspects of SMEs and that has not always directly measurable results in economic and financial terms (ANTONELLI; CAROLEO, 2011).

In a global economy, enterprises are trying to reinvent their business and maintain their competitive advantage through collaboration that has been discussed as a path for organizations in situations where working alone is not sufficient to achieve the desired ends (BITITCI *et al.*, 2007). SMEs belonging to networks are often more competitive and innovative than those operating in isolation. By working jointly, SMEs can increase their focus through specialization in functions that are complementary within their networks (BITITCI *et al.*, 2007).

RESEARCH METHODOLOGY

This section is organized as follows: (i) methodological framework; (ii) procedures for bibliographic search, and (iii) procedures for data analysis.

Methodological Framework

In relation to the objective, this research is of descriptive nature (GIL, 1999), because it seeks to map and analyse the characteristics of a bibliographic portfolio (PB) on the national and international advantages for SMEs to join a cooperation network and consolidate the view of the authors (GIL, 1999). The nature of the study is theoretical, since it seeks to consolidate the information contained in the literature about the benefits that SMEs get when they join a SMEs network (RICHARDSON, 2008). The data used in research are secondary because the articles published in national and international networks on the topic of SMEs networks were analysed (RICHARDSON, 2008). Thus, the used survey instrument was the document analysis, that is, journal articles (GIL, 1999). Regarding the approach of the problem, the research is features (RICHARDSON, 2008), since the made analysis includes the meeting of the advantages mentioned by the authors in relation to participating in a cooperative network.

Procedures for bibliographic search

The literature search was performed in national and international journals through two structured processes. First, we present the process used to select the Bibliography Portfolio (BP) of published researches in international journals. The procedure used *Knowledge Development Process- Constructivist - ProKnow-C*, used in several scientific researches (TASCA *et al.*, 2010; BORTOLUZZI *et al.*, 2010; ROSA *et al.*, 2011; AFONSO *et al.*, 2011; BORTOLUZZI *et al.*, 2011ab; LACERDA *et al.*, 2011; LACERDA *et al.*, 2012; BRUNA JUNIOR *et al.*, 2012).

To form the BP of the research topic, the process was divided into two main phases: (i) selection of the database (DB) of gross articles, and (ii) filtering of the articles database. The first phase, selection of the database of gross articles, is subdivided, in turn, into three stages, namely: (i) define keywords, (ii) establish databases and (iii) search articles in databases with the keywords. The second phase, the filtering database of articles, is subdivided, in turn, into five stages, namely: (i) elimination of repeated articles, (ii) alignment by reading the title, (iii) alignment on the scientific recognition; (iv) alignment by reading the summary, and (v) alignment by reading the full article

Database selection of gross articles

To meet the phase 'database selection of gross articles ' to form the bibliographic portfolio about networks of SMEs, initially were defined the lines of research and the keywords for each axis (first step). From the definition of the key words, all possible combinations between the keywords of the search axes were formed. It is noted that the search was conducted through the 90 possible combinations of keywords using the

Boolean AND expression that indicates that the return of articles happens when the three keywords appear in the search fields.

In the development of the second stage, initially, it has been set up the database (DB) to carry out the research. As a criterion for selection of DB, the following aspects were established : (i) the DB should be included in the portal's journal of the regular Coordination of Improvement of Higher Education Personnel (CAPES), (ii) to be chosen, the DB should be in one of the following three major areas of CAPES: Applied Social Sciences, Engineering and Multidisciplinary area, because these three areas are closely aligned with the topic illustrated in the research, (iii) the DB should provide a tool of search with the possibility of using *Boolean* expressions (iv) the search engine of the DB should provide the ability to search in the fields: title, abstract and keywords. Thus, 23 DB met the established criteria. As a result, it was verified the alignment of keywords in the DB, that is, it was sought the number of articles for the combinations of keywords. Thus, it was possible to fix the desired representation, that is, to decide the amount of DB that would be researched. With the made analysis, it was decided to keep looking in all related DB.

The third step consisted of conducting the search in each DB through keywords combinations. It is noted that the fields of search were: title, abstract and article keywords. It is also noteworthy that the search was not restricted in relation to the period of time, that is, it was sought the data range provided by DB. This process resulted in the primary gross articles database of 3375 articles. Finally, for completion of the phase: database selection of gross articles to form the gross BP on SMEs Networks, it was performed the test of adherence of these keywords. The goal here is to verify the need for incorporation of new keywords to ensure an aligned BP. For this purpose, it was proceeded to the reading of the found articles' titles; all the keywords of the articles were collected and compared with the keywords used in the initial search. With the completion of this process, it was found that there was no need to incorporate new keywords. So, it was passed to the development of the next phase.

Filtering of articles database

The first stage in the phase of filtering the database of articles refers to the importation of articles for a *software* of bibliographic management. Thus, there were imported for the *Endnote software* 3375 articles out of the gross articles database. After the importation, the *software* allows the exclusion of repeated items. Thus, there were excluded 2289 repeated articles, and remained 1086 non-repeated articles.

The next step was the reading of the 1086 titles in order to check the alignment of the articles to the research topic. It is noted that at in this stage it was sought to delete the articles that had total misalignment with the research topic; in doubt, the article was kept for further analysis of the next steps. As a result of the reading process, 501 articles remained aligned to the research topic. Similar procedures were followed/viewed/noticed in the articles by Nascimento *et al.* (2010) and Mondo and Fiates (2014).

The next step consists in identifying the scientific recognition of the articles. In this process, the scientific recognition is measured by citations in other scientific studies, so it was identified the number of times each article was cited. For standardization purposes, it was sought the amount of citations of each article in the "Google academic". The result of this step was the identification of 215 articles with the highest scientific recognition (97% of citations) and 286 with less scientific recognition (3% of citations).

The next step consisted in conduct the reading of 215 abstracts of articles with the highest scientific recognition in order to verify the alignment of the article with the topic. In addition to the 215 articles, 27 articles of the references were included to the BP on the basis of the test of their representativeness. After this step, remained 57 articles that were "saved" in the A repository. As a result, the articles were filtered with less scientific recognition, that is, the 286 articles (separated in the previous step) were analysed in order to verify if the article was recent and if the author is present in the A repository. With this analysis and reading of these abstracts, 17 articles that were "saved" in the B repository were identified. To finish this step, the articles "stored" in the A (57 items) and B (17 articles) repositories were joined, forming a single repository, called C, consisting of 74 articles.

The final step of filtering the articles database consisted in making the filter for alignment of the entire article. The result of this step was the selection of 21 articles that make up the International BP.

In relation to the search in national journals, this occurred in national journals in the field of Management, Accounting and Tourism and Engineering III, classified as Qualis Stratum A1 to B5 by the Coordination of Improvement of Higher Education Personnel (CAPES-Brazil). It should be noted that the search occurred in selected journals and there was no restriction on the researched period, that is, the search happened in all available editions in each journal. There were surveyed 408 scientific journals where 668 general articles on the topic *enterprises' network*. As a result, there was a reading of 668 abstracts, being that 55 articles aligned to the topic were identified. Then, it was made the full reading of the 55 articles to verify which were fully aligned to the topic of SME Network Management. After reading the 55 articles, there were selected 33 aligned articles, and 22 were excluded for misalignment. Thus, 33 articles are part of the national BP to perform the research.

Procedures for data analysis

It was sought to build a mapping of the articles in order to draw on each author's vision, the advantages of joining a network of enterprises. It should be noted that the procedures for carrying out the mapping of the BP articles was the same for the national and for the international BP. The aim of the mapping is to extract the articles of the national BP and of the international literature related to the benefits of being part of a SMEs network.

To perform the mapping of the 21 articles out of the international BP and out of the 33 national articles, it was proceeded with the reading of these articles and it was extracted the vision of each author about the advantages of being part of a network of enterprises. This information was recorded in a spreadsheet, sorted by a sequential number of each work, the authors' names, year of publication, the journal where the article was published and a column with the advantages of joining the network of enterprises. There were formulated two electronic spreadsheets, one for the analysis of the articles of international bibliographic portfolio (21 articles) and one for the national bibliographic portfolio.

PRESENTATION AND DISCUSSION OF RESULTS

The mapping of the articles published in international journals allowed to identify the advantages of participating in networks of SMEs, as the examples in Chart 1.

Chart 1 - Advantages of being part of a network of SMEs

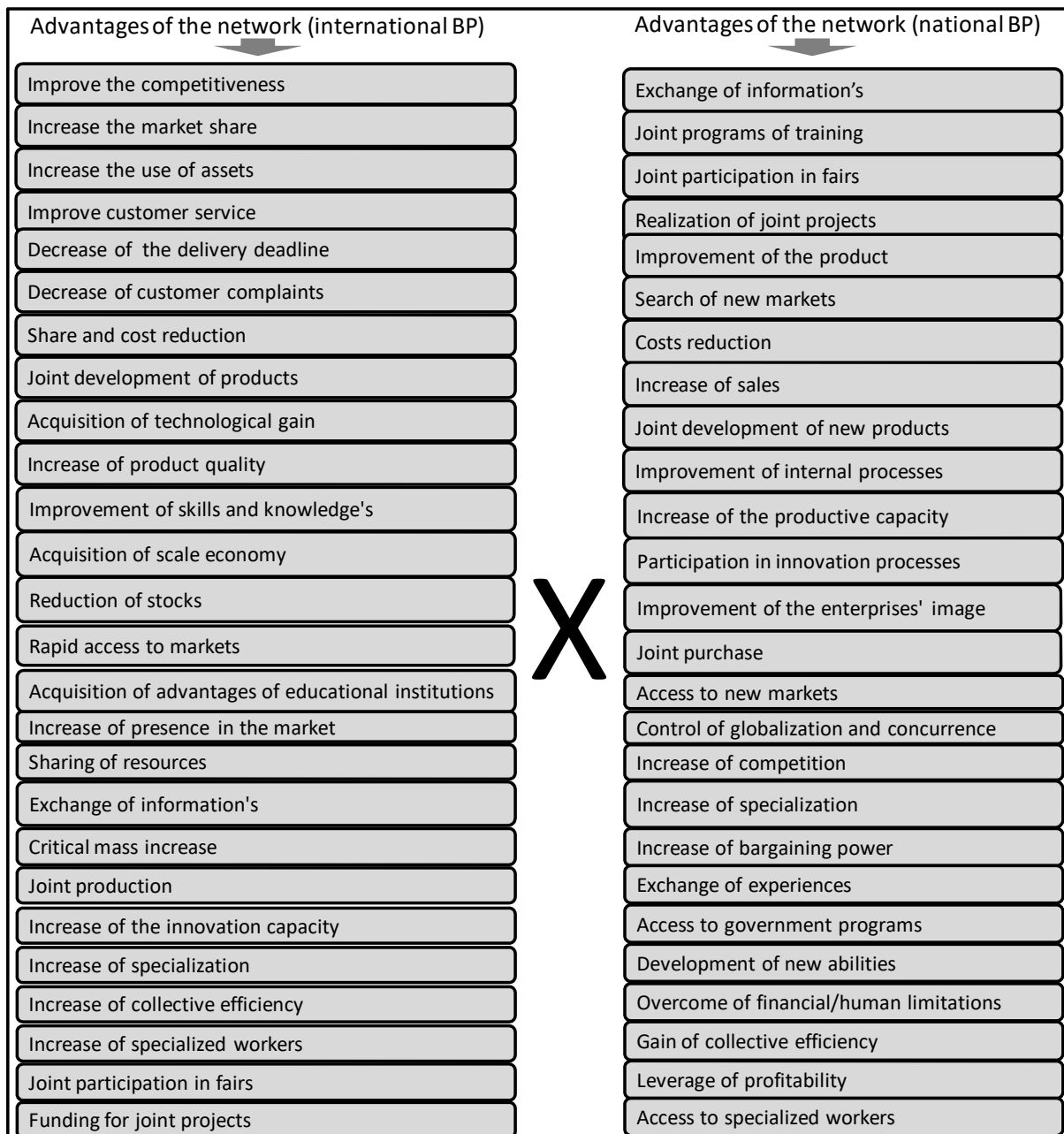
Importance/advantages of being part of a network of enterprises (international portfolio)	Author(s) of the article in the BP
Increase their market share and increase asset utilization.	Bititci <i>et al.</i> (2004)
Share resources and information, reduce risks, cost and time of placing new products on the market.	Bititci <i>et al.</i> (2007)
Economy of scale for purchasing and supply, joint production and sharing of services and business, solutions for common problems and exchange of knowledges.	Burlat <i>et al.</i> (2003)
Share costs, share risks, reduce the level of dependence on third parties; increase the capacity for innovation; defend/ increase a market position, increase flexibility.	Camarinha-Matos and Abreu (2007)
Specialization of hand labour, easy access to input suppliers and to specialized services and rapid diffusion of new knowledge. These advantages are called external economy, because it can help to reduce costs for firms in cluster.	Carpinetti <i>et al.</i> (2008); Carpinetti and Oiko (2008).
Core of specialized workers, easy access to input suppliers and to specialized services, and rapid dissemination of new knowledge.	Gerolamo <i>et al.</i> (2008)
An individual enterprise could share skills that have not been perceived yet.	Hanna e Walsh (2008)
Collaboration between companies have become important tools for business management to improve business competitiveness.	Hoffmann and Schlosser (2001)
Importance/advantages of being part of enterprises network (national portfolio-Brazil)	Author(s) of the article in the BP
Training programs, organization of fairs, courses and seminars, and by the integration of skills.	Galdámez <i>et al.</i> (2009)
Inter-organizational relationships lead to the possibility of relational returns, which can not be generated by any of the organizations individually.	Wegner and Misocsky (2010)
Seeking new markets, lowering costs, sell as a group, create and develop new products and more efficient production processes, increase the productive capacity of the company, participate in innovation projects, improve the company image, plan joint purchases and create differential against the competition.	Rezende and Serpa (2009); Gobbo Junior <i>et al.</i> (2006)
The collaboration with other enterprises causes them to develop sustainable competitive advantage by the creation of value.	Faccin <i>et al.</i> (2009)
Reduction of costs, economy of resources, access to new markets, new technologies.	Adam <i>et al.</i> (2008)
Access to information, resources, markets and technologies.	Mais <i>et al.</i> (2010)
Increasing the bargaining power in negotiations with their suppliers and customers and also allows the interaction between the agents involved in the production process, which in turn generates an overflow of knowledge to all individual firms.	Silva and Hewings (2010)
Gain of collective efficiency. It is agreed that the joint action of a group of enterprises in the same industry brings benefits to local economic development and sustainability of these enterprises.	Marion Filho and Sonaglio (2010)
Freitas (2001), opening the view that cooperative relationships are also possible and able to leverage a lot the profitability of an enterprise, as they can reduce costs along the chain and also ensure better service levels to customers.	Farias and Ramos (2009)
To promote the generation, acquisition and dissemination of knowledge and innovations.	Galão and Camara (2009)
Access to inputs, specialized personnel and information, complementarities between the activities of various participants, access to institutions and to public properties.	Mazzaro <i>et al.</i> (2009)
Competitive advantages of global reach.	Martins <i>et al.</i> (2009)
Create favourable conditions to overcome barriers – technological, financial and of scale and the sharing of risks.	Souza and Ferraz (2007)

Source: Elaborated by the authors.

From the information contained in Chart 1 is possible to consolidate the benefits resulting from participation in collaborative network.

Figure 1 presents the information's about the advantages of joining a network, in order to guide the comparison between the international and national contexts.

Figure 1 – Relationship of the advantages of participating in a network



Source: Elaborated by the authors.

From the information presented in Figure 1, is possible to make up a comparison of them: it appears that the advantages listed by the researchers who published articles on SMEs networks are congruent and complementary, that is, the main advantages listed in the articles published in international journals are also listed in national journals. The advantages are mainly related to improvements in the internal context of enterprises, such as management aspects, inventory reduction, asset utilization, funding for joint projects, reduction of costs. External improvements inherent to the market are also visible: bargain with suppliers, customer service, reaching new markets, access to specialized workers, participation in fairs. Thus, it is

understood that Figure 1 can consolidate the main advantages of participating in a cooperation network in the view of authors who have published in international and national journals.

After the consolidation of the advantages of being part of a network of SMEs by the sight of publications conducted in international and national journals, it was possible to identify the advantages related to the external context and internal to organizations. Regarding the external context, there were considered the advantages related to the performance of the enterprise towards the market and *stakeholders*, and in relation to the internal context, there were considered the advantages inherent to internal processes, efficiency and internal effectiveness and the relationship between the individual enterprises participants in the cooperation network.

Figure 2 presents the comparison between the advantages of being part of a network of SMEs identified in articles published in national and international journals, related to the external context.

Figure 2 - Advantages of participating of a network of SMEs (external context)

Advantages identified in the articles published in in international journals (external context)	Advantages identified in the articles published national journals (external context)
Increase of market share	Achieve new markets
Increase of specialized workers	Access to specialized workers
Improve competition	Increase competition
Greater presence in the market	Increase sales
Get rapid access to markets	Search of new markets
Acquisition of advantages of educational institutions	Greater access to government programs
Improvement of customer service	Face globalization and concurrence
Reduce delivery deadline	Improve enterprises' image
Reduce customer complaints	Increase of bargaining power
Funding for joint projects	

Source: Elaborated by the authors.

It is perceived, in Figure 2, that part of the advantages (grey colour) are aspects considered by the authors who published articles in national and international journals, which indicates some convergence on the advantages over the external context to enterprises participating in a network of companies. Most of these convergence advantages are related to participation in higher market share, by revenue growth, market consolidation and opening of new markets. It is also noteworthy the convergence on the increase and improvement of competitiveness and of access to specialized workers.

However, it is perceived that some of the advantages of the external context are identified only in articles published in national or international journals, such as, the increase of the bargaining power, the access to government programs and the improvement of the enterprise' image appears only in articles published in national journals. On the other hand, taking advantage of educational institutions and research, improve customer service, reduce the delivery time, reduce customer complaints and the possibility of seeking funding for joint projects appears in articles published in international journals.

Figure 3 shows the comparison between the advantages of being part of a network of SMEs identified in articles published in national and international journals related to internal context.

Figure 3 - Advantages of joining a network of SMEs (internal context)

Advantages identified in articles published in international journals (internal context)	Advantages identified in articles published in national journals (internal context)
Increase of the use of assets	Increase of production capacity
Increase of collective efficiency	Gain of collective efficiency
Increase specialization	Increase of specialization
Increase of critical mass	Exchange of experiences
Increase of product quality	Improvement of the product
Increase of innovation capacity	Participate of innovation projects
Share and reduce costs	Reduction of costs
Share resources	Joint training programs
Joint development of products	Joint development of new products
Improve skills and knowledges	Development of new skills
Joint participation in fairs	Joint participation in fairs
Exchange informations	Exchange of informations
Produce jointly	Purchase jointly
Reduce stocks	Improve internal processes
Acquire scale economy	Overcome financial and human limitations
Acquire technological gain	Realization of joint projects
	Boost profitability

Source: Elaborated by the authors.

It is perceived in Figure 3, that some of the advantages (grey colour) are aspects that are considered by the authors who published papers in national and international journals, which indicates some convergence on the advantages over the internal context to enterprises participating in a network of enterprises. Most of these convergent advantages are related to the gain of collective efficiency, increased specialization, exchange experiences, improvement of products, joint projects of innovation, cost reduction, sharing of resources and information exchange.

However, it is also perceived that some of the advantages of the internal context are identified only in articles published in national or international journals, for example, purchase jointly, improve internal processes, overcome resource constraints and leveraging profitability only appear in articles published in national journals. On the other hand, produce jointly, reduce inventories, obtain scale economies and technology gain appear in articles published in international journals.

FINAL REMARKS

This research aimed to answer the following research question: What are the advantages pointed out in the national and international literature for Small and Medium Enterprises to join a network of cooperation? The study could answer the question as consolidated the advantages from the researchers’ perspective who published articles in national (Brazil) and international journals.

The aim of this study was to map the major studies of networks on SMEs in order to consolidate the different views on the advantages of joining a network of enterprises. This was achieved through three specific objectives. The first, was to conduct a structured process to select the articles more closely aligned with the research topic that was presented in the Procedures for bibliographic search subsection, which clarifies the

followed path to select the articles (21 published in international journals and 33 published in journals national) that formed the researched bibliographic portfolio.

The second specific objective was to consolidate the main advantages of joining a network of enterprises from the perspective of the authors who have published articles in national and international journals. This goal was achieved and demonstrated from the information contained Figure 1, where are cited the gains in management aspects, joint development of new products, cost reduction, access to new markets, access to specialized workers.

And the third objective was to compare the advantages related to internal and external organizational context of national and international publications. Figures 2 and 3 identify the internal advantages (gain of collective efficiency, increase of specialization, exchange of experiences, improvement of products, joint projects of innovation, cost reduction, etc..) and external (higher participation in market share by revenue growth, market consolidation and opening of new markets, etc..) that are converging between the publications and the advantages that are not convergent, that is, which have been pointed out only by authors who have published in national or international journals

From the results, it is argued that participating in a cooperation network (i) brings important benefits to the competitiveness of enterprises (BITITCI *et al.*, 2007); (ii) allows to overcome the limitations inherent to a SME (BITITCI *et al.*, 2004; GEROLAMO *et al.*, 2008; HANNA; WALSH, 2008); (iii) provides greater stability to the enterprises and these gains do not always have measurable results in economic and financial terms (ANTONELLI; CAROLEO, 2011).

This work present as limitations: (i) the absence of the comparison of literature with practical situations of enterprises that operate individually and in network, (ii) the use of subjectivity in some stages of the selection of articles to form the bibliographic portfolio, and (iii) absence in the study of literature search inherent to the mentioned disadvantages by the researchers regarding the inclusion of SMEs in collaborative networks. Thus, it is pointed out for future works: (i) consult network managers to check the alignment between literature and practice, (ii) consulting enterprises that work individually and enterprises that operate in the network to verify the perception of relevance about the advantages listed in this study, and (iii) to identify in the literature the disadvantages of participating in a network of SMEs, to compare with the advantages identified in this study.

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