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Intercooperation Strategy in Business Networks: An Analysis of Predictive Factors

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Resumo
O estudo teve como objetivo analisar os fatores preditores na intenção de redes empresariais em adotar uma estratégia de crescimento através da intercooperação. A pesquisa adotou a abordagem quantitativa, por meio de uma *survey* com 156 associados de redes empresariais e analisou os dados por meio de regressão linear múltipla. A estratégia de intercooperação em redes empresariais emerge como estratégia de crescimento onde a complementariedade das redes auxilia a obtenção de objetivos comuns, além de manter as redes atrativas para seus participantes, bem como a novos associados. Estudos anteriores já identificaram benefícios da intercooperação, entretanto resta investigar os fatores antecedentes desta estratégia interorganizacional. Os resultados demonstram que os antecedentes da intercooperação se originam de motivações estratégicas, gerenciais, culturais e ambiental-institucional, sendo também o número de associados da rede fatores que influenciam decisões futuras de intercooperar. O estudo apresenta contribuições gerenciais e teóricas a respeito da identificação dos fatores propulsores e restritivos e suas dimensões, além do impacto destes na intenção das redes empresariais em adotar estratégias de crescimento por meio da intercooperação.
Palavras-chave: Fatores Preditores. Intercooperação. Redes Empresariais. Relações Interorganizacionais.

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Abstract
In this study, we aimed to analyze the predictive factors behind business networks' intention to adopt a growth strategy through intercooperation. We adopted a quantitative approach, using a survey with 156 members of Brazilian business networks and analyzed the data through multiple linear regression. Intercooperation emerges as a growth strategy where the complementarity of business networks helps achieve common goals and keeps the business networks attractive to their current and new members. Previous studies have identified the benefits of intercooperation, but the antecedents of this interorganizational strategy have yet to be investigated. Our results demonstrate that the antecedents of intercooperation originate from strategic, managerial, cultural, and environmental-institutional motivations, with the number of network members being a factor that influences future intercooperation decisions. We present managerial and theoretical contributions regarding driving and restrictive factors and their dimensions and their impact on business networks' intention to adopt growth strategies through intercooperation.
Keywords: Predictive Factors. Intercooperation. Business Networks. Interorganizational Relations.

La estrategia de intercooperación de redes empresariales: un análisis de los factores predictivos

Resumen
El estudio busca analizar los factores predictivos en la intención de las redes empresariales de adoptar una estrategia de crecimiento a través de la intercooperación. Esta investigación adoptó el enfoque cuantitativo, realizó una encuesta con 156 miembros de redes empresariales y analizó los datos mediante regresión lineal múltiple. La estrategia de intercooperación en redes corporativas surge como una estrategia de crecimiento donde la complementariedad ayuda a lograr metas comunes, además de mantener las redes atractivas para sus participantes, así como nuevos miembros. Estudios previos ya han identificado los beneficios de la intercooperación, sin embargo, queda por investigar los factores antecedentes de esta estrategia interorganizacional. Los resultados demuestran que los antecedentes de la intercooperación se originan en motivaciones estratégicas, gerenciales, culturales y ambientales-institucionales, así como la cantidad de factores asociados que influyen en las futuras decisiones de intercooperar. El estudio demostró aportes gerenciales y teóricos en cuanto a la identificación de factores impulsores y restrictivos y sus dimensiones, además de su impacto en la intención de las redes empresariales de adoptar estrategias de crecimiento a través de la intercooperación.
Palabras clave: factores predictivos. Intercooperación. Redes comerciales. Relaciones interorganizacionales.

1 Introduction

Intercooperation is promoted by management practices aimed at integrating business networks, promoting joint products and services, and creating new companies with specific purposes (GOES, 2011). Intercooperation occurs one level above interfirm cooperation since it involves cooperation between business networks.

This strategy emerges as an alternative for business networks to deal with market changes and increasing business competition (WEGNER; ALIEVI; BEGNIS, 2015). Intercooperation is associated with initiatives between business networks that share common objectives based on cooperative assumptions (ROSSI, 2005). The logic is repeated for business networks and their intercooperation actions (BRAGA, 2010).

Interorganizational cooperation is a strategy that organizations adopt to remain competitive in the market and maximize their results through business networks. Organizations participating in business networks obtain resources, skills, and results that could not be achieved individually. Thus, the benefits achievable through networks change the individualistic view to a conception of collective results (GULATI, NOHRIA; ZAHEER, 2000; BALESTRIN; VARGAS, 2004; WITTMANN et al., 2008; BALESTRIN; VERSCHOORE, 2016).

In the Brazilian context, business networks are formed by a small number of members, and most are regional in scope (WEGNER, PADULA, 2011). These characteristics limit the generation of relational rents (DYER, SINGH, 1998; DYER, SINGH, HESTERLY, 2018). Data collected by the Brazilian Observatory of Business Networks show there were approximately 500 active business networks in 2022. In this context, the intercooperation strategy can help small business networks become more competitive (WEGNER et al., 2015). The study of Carvalho, Wegner, Begnis and Antunes (2018) supports this proposition by demonstrating that small Brazilian business networks have followed the intercooperation strategy.

Given this, intercooperation as a strategy for network growth can provide market gains and economic performance increases (WEGNER; BORTOLASO; ZONATTO, 2016) by allowing adaptability to market changes, aiming for the sustainability of network gains (SOARES; WEGNER; DOLCI, 2016). Furthermore, the mobilization of companies in business networks contributes to the economic agents involved in a region for regional development (SABOURIN et al., 2020).

In this regard, there is an interest in the literature to understand and analyze strategies that result in business intercooperation (WEGNER; DOLCI, 2016; CARVALHO et al., 2018). However, the literature still neglects the factors that influence the intention of members of business networks to adopt the strategy of intercooperation, considering that decisions in business networks occur by common agreement among members of each network. Therefore, it is important to investigate this phenomenon to identify which predictors of intercooperation weigh in members' decisions.

Therefore, our research aims to identify the factors that impact the intention to engage in inter-organizational cooperation among business networks. Our goal is to fill the theoretical gap by identifying the factors that interfere with the decision-making of members and contribute to the discussion on the topic by presenting which factors are involved and what their impact is on the intention to cooperate. This article is structured in sections. Firstly, we present the theoretical framework, followed by the methodology, results, discussion of the results, and conclusion.

2 THEORETICAL FRAMEWORK

2.1 Business Networks

Interfirm cooperation is vital to the economy because it can generate cooperative interdependence among companies from different sectors. Relationships between organizations emerge when they seek new competitive advantages (GRANDORI; SODA, 1995; TODEVA, 2006). Additionally, interorganizational relationships are non-linear configurations of ties that relate to the various actors in the organizational field (KENIS; KNOKE, 2002). These configurations are relationships between two or more autonomous organizations that work together to constantly develop their resources and outcomes with individual and collective objectives (OLIVER, 1990; PROVAN; KENIS, 2008).

These interorganizational relationships take on various forms, one of which is known as a business network. These business networks are composed of independent companies with common objectives and are usually created with an unlimited lifespan (VERSCHOORE, 2004). The relationships in the business network are generally established to increase competitiveness (MARCON; MOINET, 2001; BALESTRIN; VARGAS, 2004; CENTENARO; LAIMER, 2017). In this way, organizations seek, through business networks, access to material and immaterial resources (BALESTRIN; VERSCHOORE; REYES, 2010).

This configuration can help companies to face market adversities, as it allows knowledge exchange through interactions between actors (GIBB; SUNE; ALBERS, 2017) and enables access to new technologies, generating scale gains. (BARCELLOS, BORELLA, PERETTI; GALELLI, 2012; BALESTRIN; VARGAS; FAYARD, 2008; BALESTRIN; VERSCHOORE, 2016). Therefore, coordinating relationships is necessary to ensure network efficiency (BALESTRIN et al., 2010).

Business networks generate a new form of organization based on a collective organizational identity shared by its members (WEGNER et al., 2023). These relationships become continuous, mainly focusing on generating competitive advantage over other organizations external to the business network. Thus, an institutional property is established in the organizational boundaries of the business network, defining the companies that are part of this business network and characterizing them as a unique organizational entity. It should be emphasized that, given the needs and intentions of the actors in a business network, the exchange of information and knowledge intensifies, increasing the synergy of participating companies (OLIVEIRA; RUBIN; DIAS; SILVA, 2011).

Business networks as organizational units contain the characteristics of business networks as well as the common characteristics of the organizations that are part of it, including the ties, actors, interorganizational relationships, as well as the business network's strategy, structure, coordination, processes, and relationships (BALESTRIN; VERSCHOORE, 2010).

2.2 Strategies for Business Network

Growth strategies are essential for business networks to expand their market power, generate greater attractiveness for participating organizations, and motivate new members (WEGNER et al., 2023). Turnover is one of the main factors for market competitiveness, whether for business networks or large retail corporations (WEGNER; PADULA, 2011). Two basic strategies can be used in business networks to expand the business network based on its current business: market penetration strategies and increasing the efficiency of companies, which serve to optimize the existing business and expand the scope of market activities (GROß, 2003).

Market penetration consists of attracting new members and optimizing results with existing members. It aims to increase members' loyalty to the business network, develop a proprietary brand, attract new suppliers, expand the services offered to members, and even create new business concepts (WEGNER; PADULA, 2011). However, it is unlikely that the market penetration strategy alone can ensure the network's survival capacity (GROß, 2003).

The presented strategies should be complemented by externally focused strategies: internationalization, diversification, vertical integration, and horizontal integration. Internationalization aims to seize growth opportunities by targeting markets that have not yet been explored. The diversification strategy involves expanding the range of products and generating new businesses. Vertical integration enables the business network to have a greater impact on the value chain, improving its profitability and competitive position. Finally, horizontal integration can be understood as a strategy of inter-cooperation, as it amplifies the effects of market scale through cooperation with other existing business networks (GROß, 2003).

Additionally, the network growth strategy involves adapting organizational structures, establishing governance mechanisms, and modifying management practices impacted by the network's business volume and number of participants (WEGNER; PADULA, 2011).

2.2.1 Intercooperation Strategy

Intercooperation involves collaboration among two or more business networks while maintaining their individuality and independence, carrying out activities for mutual benefit. (WEGNER; BEGNIS; MOZZATO, 2019). Thus, as a strategy, intercooperation can help strengthen business cooperation while respecting the independence of each business network and providing greater gains. (SOARES et al., 2016). Moreover, it enables greater competitiveness through the complementarity of the business networks involved in the process (CARVALHO et al., 2018).

This strategy is a way to overcome individual limitations in the business network. Intercooperation reduces risks and costs and offers the benefits of new markets (BORGES; DOMINGUES, 2017). Braga (2011) emphasizes that exchanging information or experiences can also be considered intercooperation.

Intercooperation is also considered a relevant concept for developing cooperatives and business networks, as it is associated with positive efficiency results in the market (GOES, 2011). Although business networks have distinct characteristics from cooperatives (from the legal format to the members' profile and the objectives of collective action), intercooperation also applies to them, envisioning the possibility of expanding their collective gains. This is because, in general, intercooperation consists of forming alliances between collaboratively oriented organizations (WEGNER; BEGNIS; MOZZATO, 2019).

Based on the principle that intercooperation is a horizontal growth strategy with potential benefits for business networks, we propose that there are propulsive and restrictive factors that influence the decision to adopt this strategy. These factors are present in the strategic, managerial, cultural, and institutional dimensions.

2.3 Predictors of Intercooperation

2.3.1 Strategic Dimension

The increasing relevance of studying strategy, combined with the interest in topics related to business networks, suggests the need to discuss the application of strategic ideas to business networks (BOAVENTURA; SIQUEIRA, 2008). The pursuit of association with other companies has as its main advantage the achievement of benefits such as sharing risks and costs for exploring new business opportunities. (WRIGHT; KROLL; PARNELL, 2000).

Strategy is about creating a unique and valuable position involving different activities. In this sense, strategic positioning means performing different activities than those carried out by rivals or performing the same activities differently. At the same time, operational efficiency consists of organizational activities that seek to achieve best practices, that is, operational efficiency. (PORTER, 1999). The greater the competition in the business field, the more relevant this understanding is. Environmental changes, such as political, economic, social, technological, and natural changes, affect competitiveness and, consequently, strategic organizational decisions (BRITTO; MAZZARINO; BARDEM, 2016).

The strategy used by small and medium-sized enterprises to join business networks to obtain synergies to achieve their objectives is increasingly common in the national sphere. This strategy tends to provide companies with access to new regions of operation. (GASPAR; BORGADO; Lima, 2013). Various strategies have been developed for SMEs (Small and Medium Enterprises) to leverage their competitiveness (PETTER; RESENDE; ANDRADE; HORST, 2014).

A strategic alliance is a type of cooperative action that contributes to the improvement of the performance of each participating organization. More than competition between them, for the creation of the cooperative alliance, there must be similarity of resources among the actors, as well as the sharing of their activities, providing greater visibility gains for the business networks. Moreover, operationalizing markets in intercooperation with other business networks allows the business network to maintain its independent management (Carvalho et al., 2018).

The collective construction of the strategy is crucial for a business network, as it aims to determine management policies, resource utilization, and network positioning, envisioning the achievement of the objectives proposed in its formation. (BORTOLASO; VERSHOORE; ANTUNES, 2012). The results of collective strategy formation are considered driving factors for intercooperation. It is noteworthy that, for each dimension, there are factors that drive intercooperation among business networks, and these factors arise from the perception of gains from cooperation among business networks.

The strategy is conceived as a perspective, complementing any organizational activity, central or peripheral. In this sense, the strategy is defined as the organization itself or agreed upon with other organizations. Such agreements should be explicit, allowing for adjustment throughout their execution. Porter (1999) highlights that external boundaries are subject to environmental changes. Threats, with their consequent potential risks and rewards, reflect the impact on the company of factors such as difficulty in aligning strategies, analyzing competition, and impacting the target audience, among others.

Olave and Amato (2001) suggest that some business networks are formed by competing companies that choose to cooperate in a certain specific domain. However, when joining business networks, companies risk having their strategies copied by their competitors. Restrictive factors demonstrate entrepreneurs' difficulty utilizing their strategic interaction capacity with other companies (MCGRAT; O'TOOLE, 2013). Table 01 compiles the independent variables found in the literature.

Table 01 – Strategic Dimension Variables

Strategic Dimension	Promoting knowledge and experience exchange between business networks
	Increasing the bargaining power of involved business networks
	Accessing new suppliers and customers for business networks
	Strengthening the brand of business networks
	Competing with large companies
	Reducing costs of involved business networks
	Increasing the visibility of business networks
	Accessing new regions of operation
	Improving the logistics of involved business networks
	The risk of having the strategies of your business network copied
	The lack of strategic thinking in business networks
	The need to change the visual identity of your business network
	Difficulty in aligning strategies between business networks
	Difficulty due to differences in the target audience
	Difficulty in aligning common suppliers
	Strong competition among business networks

Source: The authors (2023).

Therefore, the variables found in the literature refer to the factors that encompass the strategic aspects considered when deciding to cooperate with other business networks. Table 1 compiles the factors that either propel or restrict the decision to cooperate to some extent. In the next section, we discuss the variables of the managerial dimension.

2.3.2 Managerial Dimension

The managerial dimension is associated with the attempt of the business network to assert itself under the domination of the market, the material resources destined for production, the technology inherent in the development of activities, and the specific knowledge necessary for its area of operation (TAMAYO; MENDES; PAZ, 2000). Network management contributes to the development of products or services by helping companies respond to market stimuli, demanding innovative and competitive products (SAASTAMOINEN; REIJONEN; TAMMI, 2018).

Management is crucial for companies to obtain unique competitive advantages since the changing environment requires managers to accurately analyze the environment, allocate resources effectively, and choose markets where the organization will compete (ACQUAAH, 2003). This management of business networks should be guided by principles, including democratic organization of activities, participatory professional management, and intercooperation of information, which tend to boost members' collaboration (CHENEY *et al.*, 2014).

Correa (2009) argues that network communication is a management practice that involves disseminating common objectives and values that should be shared throughout the business network, as well as the propagation of competitive gain perspectives and interaction among members of a business network. In this sense, open communication is crucial to cooperation success. Successful cooperation requires a certain amount of transparency and trust in the relationships between network members (RITALA *et al.*, 2009).

Network management takes on multiple forms, including establishing committees, marketing cooperation, and using information technology to facilitate network management (MULLER, 2012). According to Mariotti and Haider (2018), network managers should promote collaboration and interaction among network members. Positive leadership within business networks is crucial to driving cooperation.

Manser *et al*. (2016) emphasize that network management should coordinate the other members, requiring mutual commitment between members and the business network. This combination tends to favor trust and minimize existing conflicts. However, no network leadership activity is entirely under the control of a single member. It represents a collaborative effort. Therefore, regulation and control systems must be applied to resolve potential conflicts (HUXHAM *et al*., 2000).

To sustain the network leadership capacity, innovation in network processes must be continuously pursued. Mutual knowledge through information exchange is essential for network success. Furthermore, member collaboration is fundamental, fostering trust among network members and mitigating fear of opportunistic behaviors (CAPALDO, 2007). In continuation, Sydow (2004) reports some unfavorable aspects that may harm network management, such as continuous conflicts and lack of uniformity.

Networks with members from companies that are part of the network in their management require systems that regulate and control management actions. Such actions restrict organizations from diverting relevant resources from the network to their activities outside the scope (NOSELLA; PETRONI, 2007). Furthermore, Saz-Corronza and Ospina (2010) reveal that network management should be clear, with structured processes. Therefore, managers should disseminate the network's objectives among members. These processes tend to unite the business network and support the legitimacy of management.

Additionally, a participatory structure with open and inclusive decision-making processes helps ensure network members' unity, reducing management uncertainties. The selection of members should occur in accordance with the criteria established at the network level, not based on the independent preferences of network members. This prevents members of each organization from obtaining unilateral advantages from the business network (SAZ-CORRONZA; OSPINA, 2010). The variables that make up the construct can be verified in Table 02.

Table 02 – Managerial Dimension Variables

Managerial Dimension	The business networks do not use similar management software
	The business networks do not have structured succession processes
	There is little transparency in business network information
	Internal negotiation processes are slow
	The business networks have a low level of maturity
	The controls in business networks are fragile
	Unpaid leaders discourage managers' commitment
	Professional management is essential for business network success
	Communication technologies are necessary to integrate members
	Positive leadership is necessary for business networks
	The lack of uniformity in business network information systems
	Poorly structured succession processes
	Difficulty in the transparency of information
	Slow internal negotiation processes
	Low level of business network maturity
	Fragile regulation and control systems in business networks
	The unpaid leadership model discourages commitment from managers
	Unprepared leaders and professionals for network management
	The lack of trust in the managerial competence of participants
	The lack of understanding of the concept of intercooperation
	Lack of successful management models in intercooperation.

Source: The authors (2023).

The factors addressed in the table above make up the restrictive managerial dimension, which restricts the intercooperation process in business networks. In the next section, we approach the variables of the cultural dimension.

2.3.3 Cultural Dimension

Business networks need to build a competitive, cooperative, and market-oriented culture. An appropriate cultural context can support the business networks in overcoming negative impacts from the market (GOPALAKRISHNAN; ZHANG, 2017). Business networks also change entrepreneurs' culture and behavior regarding previously used business strategies.

Interorganizational culture develops as a system of symbols and meanings shared by groups or individuals from different organizations which shape the network's culture (LARENTIS et al., 2018). Therefore, business networks that engage in intercooperation with dynamic and innovative business networks tend to absorb processes and dynamics, including innovation culture in their scope, reflected in their products and services (LEE; KIM; PARK, 2015).

Larentis *et al.* (2018) emphasize that the quantity and quality of interactions among different organizations generate greater trust, commitment, and cooperation, providing structured learning processes. However, such interactions interfere with the cultural issues of the business network, and it is noticeable that culture plays an important role in process and business innovation. Organizations that implement a culture of interorganizational development consistent with the organizations' goals exercise appropriate control over the market (BUSHGENS; BAUSCH; BALKIN, 2013). In addition, a culture of cooperation positively affects interorganizational relationships (LUND; SCHEER; KOZLENKORA, 2013). Companies should aspire to and develop cultural values that will allow them to continuously acquire knowledge from their partners and thus respond timely to market needs (GOPALAKRISHNAN; ZHANG, 2017).

The diversity of culture and values tends to restrict intercooperation since thoughts and attitudes are disconnected from each network's purpose (HALL, 2006). Yeung (2005) reveals that the differences in cultural values in each network produce different structures and meanings that guide the relationships of network members. The structure of the social relationships of network members generates concepts that can be considered the network's culture. Thus, the conservatism of network members should be reduced to generate greater involvement and commitment from them while identifying with the network's purposes (YEUNG, 2005). For business networks to succeed, all members must share the same information, objectives, and intentions, with culture and identity (Martino, 2001). Table 03 compiles the literature aspects regarding the cultural dimension.

Table 03 – Cultural Dimension Variables

Cultural Dimension	The perception of business networks as potential allies
	Existence of a culture of cooperation in the business network
	Business networks with divergent values
	The conservatism of entrepreneurs
	The lack of trust in the transparency of members
	Cultural and regional differences
	A culture of individualism within business networks
	A culture of rivalry between business networks

Source: The authors (2023).

We emphasize that the culture of a business network will be consolidated as a set of factors that allow access to common meanings, which guide the actions and common objectives of the business networks established (CORREA, 2009). To achieve this, the factors shown are restrictive to intercooperation since it requires a comprehensive vision around mutual benefit. The next section reviews environmental and institutional factors related to intercooperation.

2.3.4 Environmental-Institutional Dimension

In the environmental-institutional dimension, competitiveness is related to the ability of organization managers to understand and manage resources (BRITTO et al., 2016). Regarding the institutional environment, Presno (2001) highlights changes implemented by the State to change policies and markets. Subsidies created to protect specific business sectors were eliminated, thus changing the relationship between the State and economic activity, requiring organizations to adapt to a new reality.

In recent years, public policy instruments have been considered facilitators in interorganizational relationships by creating business networks, allowing access to learning and innovation (LATORRE et al., 2017). Bretos and Marcuello (2017) emphasize the advantages of intercooperation and collaboration with other local actors to face competition challenges and overcome potential disadvantages with more consolidated business networks. However, Cheney et al. (2014) highlight that this is a complex economic interaction with social factors that impact related companies. Market concentration and competition with large, established business networks drive business networks to engage in intercooperation processes, enabling them to compete with larger competitors.

The institutional environmental dimension is linked to cooperation with local associations, unions, educational and research institutions, and government organizations (Cropper et al., 2008). Companies are open and dynamic systems, a set of interdependent elements that interact, aiming at a common end in constant interrelation with the environment (Pereira, 1999). Sousa *et al.* (2014) emphasize that business networks have generated socioeconomic development in their operating environments. They foster income generation by encouraging job creation and productive qualification of companies through the promotion of courses, training and capacity building. Business networks strengthen the productive apparatus of their companies, placing them in a market-society and company-customer relationship.

Business networks of SMEs promote the demand for new products and services, both for companies and the public sector, producing higher returns associated with the acquisition of innovations in processes and services (SAASTAMOINEN et al., 2018). In this sense, public policies aim to provide better social conditions for individuals or groups associated with them (TEIXEIRA, 2002). Klein and Pereira (2014) complement that business networks have some unique characteristics, as their relationships are based on mutual trust and reciprocity among members. It is further complemented that business networks are important for supporting the development of the regions where they operate, generating environmental improvements and social contributions (JESUS; FRANCO, 2016). Table 04 summarizes what the literature understands as the institutional-environmental dimension.

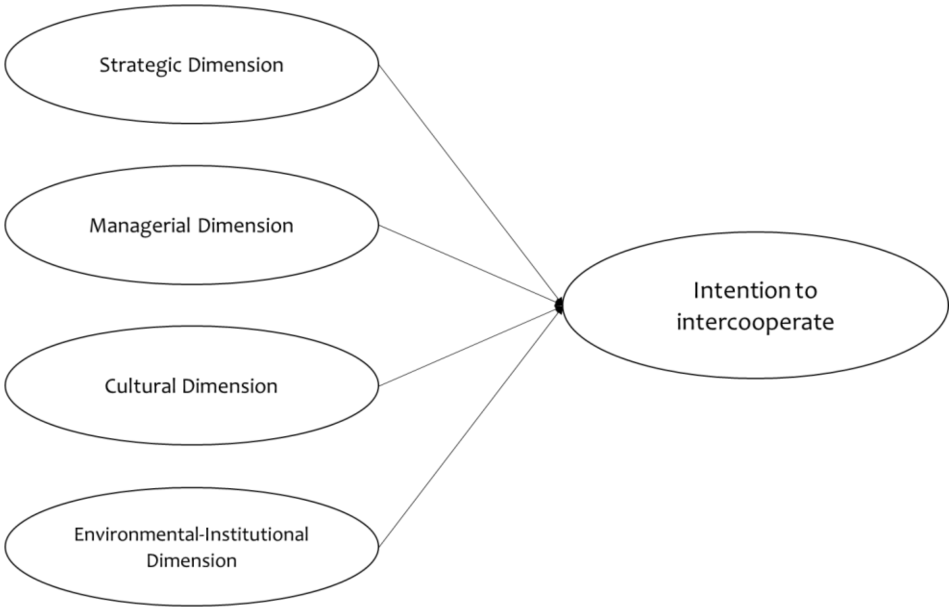
Table 04 – Institutional-Environmental Dimension Variables.

Institutional-Environmental Dimension	Market concentration trend
	Backing from support organizations to foster cooperation
	Economic recessions drive cooperation
	The number of business networks in the market
	Competition from more established business networks
	Suppliers demand high targets
	The lack of initiatives focused on intercooperation
	The lack of the institutional representation of business networks/approach environment
	The lack of successful cases

Source: The authors (2023)

In Figure 01, we present the proposed framework for the research, which lists the previously mentioned independent variables: strategic, managerial, cultural, and environmental-institutional dimensions.

Figure 01 - Proposed Research Model



Source: The authors (2023).

The proposed framework aims to identify the factors that impact the intention to intercooperate in business networks through the variables demonstrated by the (1) Strategic; (2) Managerial; (3) Cultural; (4) Environmental-Institutional dimensions. To achieve this, we discuss the methodology for operationalizing such a proposal in the next section.

3 Methodological procedures

As a methodological procedure, we used the descriptive exploratory quantitative method through a survey of 180 companies that operate in business networks. After removing the outliers, the sample population for statistical tests comprised 156 respondents. Data was collected through a survey, and we analyzed the data through multiple linear regression.

The research questionnaire was designed and validated by experts. The questionnaire's components contained control variables such as network existence time and number of members. The dependent and independent variables in our research instrument were measured using a 7-point Likert scale, with the independent variables being broken down into four dimensions: strategic, managerial, cultural, and institutional. The questions that comprise each dimension can be verified in Tables 1 to 4.

We contacted each business network member to perform the research. For this purpose, we built a database with the respective contacts of each member. This step was carried out between June and July 2017. We directly contacted the members of companies operating in business networks via phone. The decision to employ this approach was influenced by the search for a higher return rate and the speed in compiling the respondents' information. This step was carried out between July and October 2017.

The contact with the target audience was performed in the following stages: (a) telephone contact with the company; (b) member (owner) identification; (c) direct contact with the member to request participation and, if necessary, scheduling the interview via phone contact. We used multiple linear regression to analyze the data.

4 Results

The collected sample had the participation of 114 (73.10%) male and 42 (26.90%) female respondents. Most members (74.3%) reported not holding a position in the business network, while a minority reported having such participation (25.6%). The relative distribution regarding the time of existence of the business networks was heterogeneous, as seen in Table 05.

Table 05 – Business network existence time

Interval	Frequency	Percentage (%)
1 to 5 years old	5	3.20
6 to 10 years old	27	17.30
11 to 15 years old	58	37.30
16 to 20 years old	17	10.90
over 20 years old	49	31.40
Total	**156**	**100.00**

Source: The authors (2023)

We identified a certain maturity in the business networks, as out of the 156 respondents, 124 (79.49%) are part of business networks with more than 10 years of operation. Therefore, the sample is expected to represent business networks with market and management expertise. Another question asked to the companies was whether their business network had already adopted the strategy of intercooperation with another business network; 15 (9.60%) respondents answered yes, while 141 (90.40%) answered no. Considering that most of the sample did not carry out any intercooperation strategy with another business network, it is evident that the sample remains impartial. This analysis is appropriate to analyze the member's intention in adopting intercooperation strategies with another business network since past experiences could influence the responses and reduce the explanatory power of the independent variables.

To identify the predictive factors, we verified the correlation among the items of the strategic, managerial, cultural, and environmental-institutional dimensions as independent variables. The evaluated items can be checked in the appendix. Additionally, there were no correlation issues. In the next section, we will discuss the analysis employed.

For the regression analysis, we used multivariate linear regression (MLR) with the stepwise method including the control and independent variables of interest. We controlled for the company's number of employees, the number of network members, the experience of the member company, and whether the business network had already implemented any intercooperation strategy. Considering the stepwise method for selecting responses in the MLR, we arrived at the following model, represented by the data in Table 06:

Table 06 - Regression Coefficients of Independent and Control Variables

Y: Intention to intercooperate (N = 156) **Predictors**	**B**	**Standard Error**	**t**	**Sig.**
Constant	-0.068	0.966	-0.071	0.944
Bargaining Power	0.265** (0.268)	0.073	3.603	0.000
Number of Members	-0.004** (- 0.342)	0.001	-5.547	0.000
Communication Technologies	0.426** (0.281)	0.096	4.418	0.000
Economic Recession	0.179** (0.192)	0.055	3.233	0.002
Industry Rivalry	-0.132** (-0.149)	0.056	-2.358	0.020
Brand Strengthening	0.236* (0.222)	0.082	2.885	0.004
Accessing new regions of operation	-0.165 (-0.159)*	0.079	-2.086	0.039
*p < 0.05 **p < 0.01. Standardized beta in parentheses.			**R^2:**	**0.478**
			Sig.:	**0.039**

Source: The authors (2023).

Table 07 represents the summary of the model results found after performing the method (MLR):

Table 07 – Model Summary

Model	R	R^2	R^2 adjusted	Standard error of estimate	Change statistics: R square change	F Change	gl 1	gl2	Sig. F Change
1	.483	.234	.229	2.09287	.234	46.952	1	154	.000
2	.594	.353	.345	1.92887	.120	28.301	1	153	.000
3	.631	.398	.386	1.86719	.045	11.275	1	152	.001
4	.667	.445	.430	1.79934	.047	12.679	1	151	.000
5	.686	.470	.453	1.76271	.026	7.342	1	150	.008
6	.698	.487	.466	1.74154	.016	4.670	1	149	.032
7	.708	.501	.478	1.72228	.015	4.350	1	148	.039

Source: The authors (2022).

The analysis resulted in a statistically significant model [F (7.148) = 21.248; $p < 0.05$; $R^2 = 0.478$]. Furthermore, the Durbin-Watson test showed independence of residuals (1.993), indicating no autocorrelation between items. The results demonstrate that the control variable used for network size, the number of members, has explanatory power in the explained variable ($\beta = -0.342$; $t = -5.547$; $p < 0.01$). Thus, the higher the number of members, the lower the intention to intercooperate. In contrast, the other control variables did not show statistically significant influence on the intention to intercooperate and therefore are not included in the model.

Regarding the independent variables extracted from the dimensions that theoretically have a relationship with the intention to intercooperate, we found that the perceptions of bargaining power ($\beta = 0.268$; $t = 3.603$; $p < 0.01$), communication technologies ($\beta = 0.281$; $t = 4.418$; $p < 0.01$), economic recession ($\beta = 0.192$; $t = 3.233$; $p < 0.01$), and brand strengthening ($\beta = 0.222$; $t = 2.885$; $p < 0.01$) have a positive influence on the intention to intercooperate.

As for the independent variables of culture of rivalry between sectors ($\beta = -0.149$; $t = -2.358$; $p < 0.05$) and access to new regions of operation ($\beta = -0.159$; $t = -2.086$; $p < 0.05$), they showed a negative influence on the intention to intercooperate. In other words, the greater the perception of a culture of rivalry, the less interest in establishing intercooperation strategies. The higher the perception of new regions of operation, the less interest in intercooperating.

Thus, considering the explanatory potential of the model, as well as the statistical significance and coefficients generated from multiple linear regression, we estimate that intercooperation has a dependency relationship according to the following equation:

$$Y = -0.068 + 0.265X_1 - 0.004X_2 + 0.426X_3 + 0.179X_4 - 0.132X_5 + 0.236X_6 - 0.165X_7 + \text{Error}$$

Where:

X_1: Bargaining Power
X_2: Number of Members
X_3: Communication Technologies
X_4: Economic Recession
X_5: Industry Rivalry
X_6: Brand Strengthening
X_7: Accessing New Regions of Operation

Therefore, we found evidence that supports the influence of the strategic, managerial, cultural, and environmental-institutional dimensions on the intention to intercooperate in business networks. In the following section, we present the discussion of the results found through multiple linear regression.

5 Discussion

The model proposed in the results section identified that the intention to intercooperate depends on strategic, managerial, cultural, and environmental-institutional factors. Additionally, we identified that the number of network associates influences the intention to intercooperate. Regarding the strategic dimension, considering the items that compose the factors, we concluded that the search for strengthening the network brand contributes to the establishment of intercooperation in business networks. Furthermore, the pursuit of greater bargaining power also stimulates intercooperation, confirming the findings of Carvalho et al. (2018) on the relevance of bargaining power as a precursor to the intercooperation strategy.

Access to new regions of operation, new suppliers and customers, and improved shared logistics represent a possibility for expanding the scope of the business network and thus also influence the intention to intercooperate. The intention to cooperate also involves the expectation of cost reduction, scale gain, and visibility, as identified in previous studies. (MARTINS; FARIA; FARINA, 2016; WEGNER; PADULA, 2011; WEGNER et al., 2015).

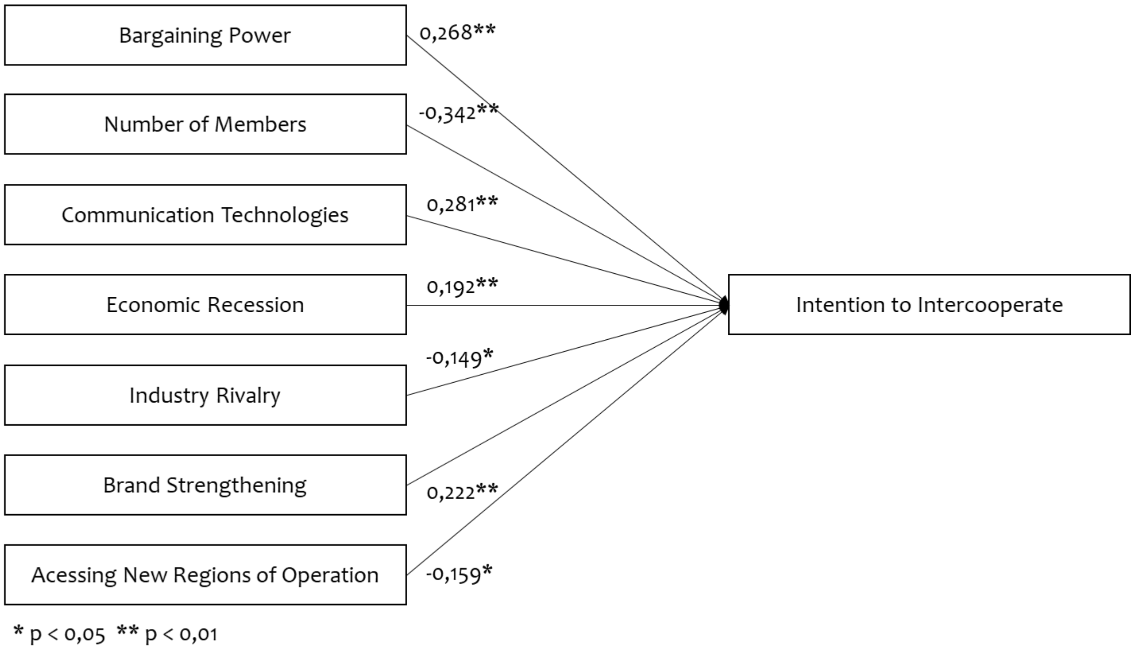
Furthermore, the intercooperation strategy enables sharing of risks, costs, and benefits, providing opportunities for growth in new markets (BORGES; DOMINGUES, 2017). However, the research results identified a negative factor regarding the perception of access to new regions of operation. Risk aversion and uncertainties can explain this negative factor when establishing this strategy. Uncertainty is a relevant factor in establishing partnerships, according to Carvalho et al. (2018). Therefore, managers may choose not to initiate intercooperation.

Regarding the managerial dimension, the literature points out that intercooperation motivates learning processes in each business network participating in the intercooperation process, demonstrating that exchanging information is crucial for this process (WEGNER et al., 2015). This fact reinforces our findings, highlighting the need for information and communication technologies to enhance information exchange between business networks as a predictor of intercooperation.

As for the cultural dimension, cultural proximity and shared values, among others, should be considered in the intercooperation process (SILVA et al., 2004). That is, business networks need to build a collaborative and market-oriented culture. In an appropriate context, the culture of business networks can serve as support to overcome the negative impacts of the market (GOPALAKRISHNAN; ZHANG, 2017). However, our results demonstrate that the cultural dimension negatively influences the intention to intercooperate. Concerning the existence of rivalry in the sector, the literature points out that strong competition among business networks can lead to the risk of copying strategies or generate conflicts that reduce the interest in starting intercooperation strategies (OLAVE; AMATO, 2001; ROMEIRO; COSTA, 2010; PEREIRA; DORNELAS, 2010; MCGRATH; O'TOOLE, 2013).

For the environmental-institutional dimension, our results demonstrated statistical evidence for the item economic recession, identifying that the intention to intercooperate is enhanced in an economic recession scenario. This can be verified by the influence of cooperation strategies among companies regarding coping with the dynamic market, competitive pressures, and recognition of collaboration as a differential for business survival (VERSHOORE; BALESTRIN, 2008). Figure 02 summarizes the research findings:

Figure 02 – Empirical model identified in the research



Source: The authors (2023).

The remaining tested relationships refer to control variables. Regarding the number of members in a business network, the negative influence can be explained: a larger number of members reduces the need to seek scale through intercooperation. Additionally, the complexity of larger business networks makes their members less inclined to seek intercooperation due to the managerial difficulties that may arise. This result is also reflected by the high number of interactions within a business network and can result in conflicts with management due to the lack of independence and failure to develop new relationships (HÅKANSSON; SNEHOTA, 2017). In the next section, we summarize the main findings, limitations, and directions for future research.

6 Conclusion

This study aimed to understand the predictors of intercooperation between business networks and the impact of such factors on the intention of members of business networks to adopt the intercooperation strategy. The objective was to identify the factors that impact the intention to intercooperate in business networks.

To achieve this objective, we surveyed 156 members of business networks. Data analysis identified strategic, managerial, and environmental-institutional dimensions that drive the intention to intercooperate. Additionally, the study identified the negative influence of the number of network members, rivalry in the sector, and the strategic factor of accessing new regions of operation.

Overall, our study showed managerial and theoretical contributions regarding identifying driving and limiting factors and their dimensions on the impact of these on the intention of business networks to adopt growth strategies through intercooperation. Through quantitative techniques, we demonstrated that strategic, managerial, and cultural factors influence the intention to intercooperate.

Cooperation between companies or business networks not only benefits the members but also benefits the regions where these companies operate. In the context of small and medium-sized enterprises, choosing this strategy is directly related to greater competitiveness and survival in the market (WEGNER et al., 2015). In addition, business networks composed of SMEs contribute to developing the region where they are located (ZONTA et al., 2015). This study, therefore, contributes to the context of SMEs and their role in regional development. It helps business networks to identify the factors that impact the intention to cooperate with other business networks.

Although our research achieved its objective, some limitations need to be acknowledged. The low ratio of participants who have already engaged in intercooperation and the total number of participants in the survey (15/156) does not allow for more robust tests to verify differences between the groups. Future studies could seek moderators of the initially identified relationship between the proposed propelling and restrictive factors in this study. Moreover, we suggest exploring why accessing new regions restricts the intention to intercooperate.

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