

Navigating Strategic Networks (SNs): Unravelling the Dynamics of Governance and Management for Network Growth

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Abstract

This study aims to examine which configurations of governance and management dimensions facilitate the growth of Strategic Networks (SNs) composed of small firms. We interviewed 77 managers and members from 20 SNs to determine their governance and management structures. The data were classified according to six governance dimensions and four management dimensions. We then performed a qualitative comparative analysis to identify which configurations most effectively support network growth. The findings reveal that three specific configurations of governance and management are highly consistent and have been implemented by SNs with high growth rates. These configurations are called "Highly-Monitored SN," "Strategically-Oriented SN," and "Specific-Service SN." This research advances the theory by demonstrating that various configurations can achieve the same outcome and provide practical implications. It can help network managers define the governance configuration that better adapts to their context to support network growth, thereby enhancing the effectiveness of their strategic decisions.

Categories: SME Entrepreneurship, Strategic Operation management

Keywords: network governance, network management, network growth, qualitative comparative analysis, collaboration, strategy, small firms, smes, retail, developing country

Introduction

Interorganizational collaborations have garnered attention from scholars and managers due to their capacity to support their members in achieving strategic goals [1, 2]. They are especially relevant for small firms since they help these companies overcome the liability of smallness and compete against larger corporations [3, 4]. Several studies have increased our comprehension of the governance of interorganizational collaborations [5, 6] and the management framework they may use to pursue collective goals [7]. While governance pertains to the rules of collaboration and how these rules motivate firms to cooperate [8], network management involves defining strategies, designing structures and processes, and providing a portfolio of services to participants [9].

Recent studies contend that governance and management of interorganizational collaborations are interrelated dimensions [10-12]. Scholars acknowledge that both governance and management are essential for fostering collaboration because governance defines the rules of cooperation, and management refers to playing the game of cooperation according to the limits and rules defined by governance [10-12].

However, the extant literature does not adequately address the interplay between these two elements in supporting interorganizational collaboration [10, 13]. One exception is the recent study of Wegner et al., which focused on the combination of governance and management dimensions for the growth of SNs.

To contribute to this stream of research and build on recent studies, we ask the following research question: Which configurations of governance and management contribute to the growth of Strategic Networks (SNs)? We performed a qualitative comparative analysis (QCA) using data obtained from 20 SNs composed of small firms. We collected data through 77 interviews with network members, managers, and representatives to understand how the SNs are governed and managed. SNs operating in traditional retail sectors must continuously grow and attract new members to compete against large corporations and reduce power asymmetries regarding their suppliers [14]. SNs play a relevant role in several countries by strengthening small and medium-sized enterprises and generating a positive local impact [15, 16].

Our findings show that governance and management must be analyzed together, especially for managers of SNs whose evergreen goal is to foster network growth. In addition, our study shows three different

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configurations of associate governance and network management, which can explain the growth of SNs. The findings contribute to the theory of collaboration and strategic networks [6, 12, 14] by explaining how governance and management dimensions can be combined to foster growth. As a practical contribution, we show that network managers can follow different paths to stimulate the growth of their SNs.

Strategic Networks (SNs): structural configuration and functioning

Since an assertion has been rolled out that network-playing mode is beneficial to overcome a firm's standalone barriers, a long road has been traveled in the domain of Organizational Networks [17, 18].

Networks embody the commitment to uphold, foster, and enhance institutional trust and generate social and intellectual capital among members. They have become subjects of significant interest within the field of Management Sciences, alongside interdisciplinary literature in Cooperation, Alliance and Coalition Strategy, accompanying the advancements in Information and Communication Technologies [19-24].

Consequently, a range of new conceptualizations arose (including platforms, network roles, ties, centrality, power, learning, and reciprocity), leading to a more sophisticated and nuanced understanding of this subject [25-29].

Previous literature regards the phenomenon of cross-organizational networking as a long-term agreement between independently held entities. It assumes that it yields positive competitive implications to the ones affiliated with it over competitors outside the network [30]. At the firm level, this notion of competitive gain/advantage is embedded into the core function of networking, i.e., collaboration [31]. However, SNs must adequately organize their governance and management to reach collective goals and benefit the participants. The following sections explore these dimensions and propose that they have an intertwined influence on how SNs acquire new members and grow over time.

Network Governance

Network Governance stands out as a primary factor influencing the growth and sustainability of SN [32, 12]. This concept involves configuring and utilizing distinctive structures and procedures that enable agents to determine the optimal path for collaborative efforts [8]. Governance plays a crucial role in fostering participation in collective actions, cultivating support among network members, resolving conflicts, and ensuring effective acquisition and utilization of resources [33, 13]. The literature indicates that network governance can be decomposed into five dimensions: centralization, specialization, formalization, incentives, and control.

The centralization of decision-making concerns the process by which strategic and operational decisions are determined within SNs, and whether these decisions are centralized among a restricted group of members or democratically made by all participants [34, 35]. Higher centralization levels imply smaller groups of members making the most important decisions [34]. As the size of the network grows, there may be an increased necessity for centralization to uphold an effective decision-making process [36].

Specialization refers to the organization of teams or departments responsible for specific tasks [35]. A governance structure is specialized when different network activities are designated to specific teams. The greater the number of areas, positions, and teams in an SN, the greater the degree of specialization [34]. When thinking about governance with specialized work structures, some people are responsible for dealing with specific issues in the organization, focusing their attention on a single area, thus making the work more efficient [37]. Marconatto et al. [38] analyzed a set of solidarity economy organizations and verified that a higher level of specialization positively contributes to the performance of such organizations.

Formalization constitutes the third dimension of network governance, encompassing the norms, rules, and standards that regulate the behavior of network members [35]. Formalization is essential to protecting the rights of the agents that make up the SN and stimulating collaborative behavior among them [39]. Vlaar et al. [40] analyzed SNs and identified that formalization focuses on control and coordination functions and treats issues such as legitimacy, cognition, and learning.

Another relevant dimension of network governance is incentives. These aim to stimulate collaboration toward network goals and foster members' willingness to follow the defined rules [34]. Douglas et al. [32] investigated 26 cases of local collaborations and explored the different paths they used to achieve performance. They found that incentives were the essential starting point for achieving performance in most cases. Furthermore, the study underscores that network performance benefits from strong combinations of incentives and a clearly defined institutional design.

Several studies discuss the role of control in strategic alliances [41, 42]. According to Das and Teng [43],

control mechanisms are used for two reasons: to control the behavior and the performance of this behavior. Stouthuyse et al. [42] investigated 236 organizations involved in strategic alliances to understand the use of formal control in different types of alliances (exploitation, exploration, ambidextrous). As a result of exploitation alliances, the emphasis on outcome and behavioral controls increases the alliance's performance.

Hence, network governance should steer network members toward an integrative vision to catalyze genuine collaborative dynamics, thus addressing fundamental challenges such as in-group bias, hoarding-of-expertise problems, the needle-in-a-haystack problem, and the stranger problem [44].

Network Management

Network management involves a combination of strategies, structures, and processes to define an SN's direction and effectively distribute resources to achieve its objectives [45, 46]. Network management establishes structures and procedures to facilitate coordination among SN actors [47]. Several scholars have investigated the management of SNs [46, 48, 49]. Although previous studies provide various models for analyzing network management, four dimensions are consistently emphasized in the existing literature: strategy, structure, processes, and service portfolio.

Strategy plays an essential role in guiding SNs and their members. This cooperative strategy view extends the notion of relationships among companies beyond pure competition, redirecting SN member companies' particular interests to collective ones [50]. The essence of this strategy is to assist in achieving objectives set by the group [51]. This transforms the planning process into aligning strategic guidelines among network members. As SNs are consciously created as social organizations to achieve common goals [52], they must formulate strategies that allow members to exploit opportunities or neutralize external threats.

Regarding structure, SNs use dedicated ones to support the strategies and overcome problems members face [53]. The structure must support collective strategies, making

it possible to gain a competitive advantage [54]. Moreover, the complexity of SNs requires organizational processes designed for easy collaboration and joint work. By mapping and designing processes, SNs can improve efficiency, enable knowledge and resource acquisition, and organize collaborative work to foster synergies and joint activities [55]. Processes can also ensure that their members achieve a successful collective result by following defined procedures [53].

Finally, network management must also build a service portfolio to support the network members. The service portfolio must adhere to member interests and needs. A complete service portfolio's advantages lie in the collective solutions it provides to network members and the availability of services that member companies lack individually [56].

Although SN governance and management used to be analyzed independently, we suggest they are intertwined dimensions that influence network growth. Previous studies followed a similar approach and confirmed that both dimensions are connected. For instance, Wegner et al. analyzed 73 SNs and found they choose between two governance and management configurations [12]. The initial configuration is termed "Piloted Strategic Networks," which hinges on specialized teams, organized decision-making procedures, and the absence of motivational factors. The second configuration, known as "Atomized Strategic Networks," operates based on incentives and control, avoiding specialization and rigid decision-making procedures. We build on the study of Wegner et al. to verify whether the configurations identified by the authors for high-performance strategic networks also apply to SNs that look for growth over time [12].

In the following section, we outline the methodology employed to address our research question and achieve this study's objectives.

Research Method

There is little evidence about how particular individual governance and management attributes impact SN growth (for an exception, see Wegner et al. [12]). Rather than identifying one single way to achieve network growth, we believe there are some configurations with a varying set of causal conditions. Thus, our objective is to identify configurations of governance elements (specialization, centralization, incentives, control, formalization) and management dimensions (strategy, structure, processes, services portfolio) that contribute to the growth of networks.

Thus, the QCA method transforms qualitative information into quantitative data using Boolean algebra, binary variables, operators, and configurational logic [57]. QCA is usually applied to issues with several hard-to-separate causes—those that operate together and can become different or even reverse their

consequences depending on the context [57]. Therefore, QCA is a method particularly suited to our study.

Empirical setting and case selection

Around 500 SNs operate across Brazil in dozens of business sectors. We started this study by selecting SNs from a database of 250 cases used in previous empirical research [58]. We searched this extensive database for SNs operating in the five business sectors that concentrate the most cases. Supermarkets, building materials, pharmacies and drugstores, auto parts, and furniture comprise 77% of all Brazilian SNs.

We chose four SNs, each with a different size (number of members) and lifetime for each business sector. By choosing heterogeneous SNs, we aimed to capture information on how governance and management are organized in networks with different characteristics.

We then invited four members of each SN (the president, the executive manager, and two members) to answer a semi-structured interview script. The interviews aimed to understand how the SNs were governed and managed. Two researchers conducted 77 interviews, which were transcribed and coded according to the previously presented theoretical dimensions.

Creation of the fuzzy data table

We calculated a growth rate for the outcome measure (QCA code: N.G.) using three variables derived from the interviews: the network's establishment year, initial membership count, and membership count in 2020. The formula applied is outlined below:

After coding the data, we performed a content analysis and discussed the results. Three researchers agreed upon the essential criteria to frame the content analysis results into 0-1 binary causal conditions. They assigned a grade of 0 for the dimensions for which interviewees did not present enough evidence to prove their existence. On the other hand, they assigned a grade of 1 to dimensions for which the interviewees mentioned evidence that confirmed their presence in the SN's operation.

Two researchers individually conducted a blind codification of the content and assigned a binary quantitative score (0 or 1) to all governance and management dimensions. The two researchers diverged in only 8% of the codifications (i.e., one researcher attributed the grade of 0, whereas the other attributed 1 to the same dimension). A third researcher analyzed the data to resolve the differences and attributed a third codification. The third researcher was chosen to solve the divergence problems, given his extensive experience with academic research and practice in the field of inter-organizational networks. We ended up with an Excel table containing the governance and management dimensions of the 20 SNs, coded into 0-1 binary causal conditions.

Causal conditions and outcomes

We utilized QCA to explore how different combinations of governance and management paths explain the growth of SNs. Table 1 presents the questions we used during the phone interviews related to each causal condition. For example, we asked the following question to understand the Network Performance Control (PC) dimension: "Does the SN control and monitor the performance of its members (for example, through a data analysis service)?" We assigned a "0" score when the respondents answered that the SN does not control the performance of its members. Otherwise, we assigned a "1" for all cases where the SN controls the performance of its members.

	Causal Conditions	Questions	Answers	QCA code
	Specialization	Is the SN organized into work teams or sectors? How do members participate in these teams?	(0) The SN does not divide specific tasks into teams or working groups. There are no specialized people (NAO employees or SN members) allocated to specific tasks. (1) The SN divides tasks into teams. Specialized people (NAO employees or RSN members) may be assigned to these teams.	S
	Centralization	How are your SN's strategic decisions	(0) All decisions are made collectively by members. (1) The SN teams, management committee, or board make strategic	C

	Causal Conditions	Questions	Answers	QCA code
Governance	Incentives/Rewards and Sanctions/Punishments	How does the SN encourage members to commit to defined actions? Are there financial and non-financial incentives? How does the SN enforce sanctions or penalties against members who fail to comply with the established goals? Are there financial and non-financial punishments? Can you give an example?	(0) The SN does not have clear rules and mechanisms for incentives and sanctions. (1) The SN has clear rules and tools for incentives and sanctions.	R
	Members Behavioral Control	Does the SN have access to information (e.g., through some data analysis service)? How does the SN control members, that is, if they are carrying out the actions they have committed to do? Can you elucidate?	(0) The SN does not have control mechanisms. (1) The SN has at least some tools for controlling members through meeting memos, software, analysis conducted by on-site auditors, and meeting minutes.	B.C.
	Network Performance Control	Does the SN control and monitor the performance of its members (e.g., through a data analysis service)?	(0) The SN does not control the performance of its members. (1) The SN controls the performance of its members.	P.C.
	Formalization	What documents govern the SN? How often are these documents reviewed? Are members clear about all the rules that govern the SN?	(0) The SN does not have control instruments (statutes, code of ethics or written rules), or they are unclear to the members. (1) The SN has control instruments (statutes, codes of ethics, or written rules).	F
Management	Strategy	Does the SN have clearly defined strategies? How do members get involved in defining these strategies? Does the SN have a long-term strategy? Can you give some examples?	(0) The SN has not clearly defined its strategies. (1) The SN has clearly defined its short-, medium-, and long-term strategies, which are understood by at least some of the members.	Stra
	Structure	What is the SN management structure? How many people work in the RSN, and in what positions? Does the RSN have a physical structure? Can you describe it?	(0) The SN does not have a specific management structure to carry out internal activities. (1) The SN has at least a minimal degree of infrastructure and management structure, embracing executives, employees, and resources to support the strategy.	Stru
	Processes	Has the SN defined and formalized managerial processes? Can you give examples?	(0) The SN processes are not mapped and formalized. (1) The SN processes are mapped. The processes may or may not be formalized through macro flows, written standard operating procedures, or work instructions.	P
	Service Portfolio	Number of services that the RSN offers to its members	(0) Absent service portfolio; (0,5) Partial-service portfolio; (1) Full-service portfolio	SPc
	Growth	Membership count at the Foundation's inception and Membership count in 2020	(-1) Negative growth (0) Flat (1) Growth	NG

TABLE 1: Causal Conditions and Outcome

Source: Authors' Elaboration. SN, Strategic Networks; NAO, Network Administrative Organization; RSN, Regional Strategic Network; QCA, qualitative comparative analysis

We calculated a growth rate for the outcome measure (QCA code: N.G.) using three variables derived from the interviews: the network's establishment year, initial membership count, and membership count in 2020. The formula applied is outlined in Equation (1).

Equation 1: Calculation of network growth rate

$$[NG = \frac{(\text{nr. of members in 2020} - \text{nr. of members at the foundation})}{(\text{nr. of members at the foundation})} \times 100]$$

$$(2020 - \text{foundation year of the SN})$$

After that, we calibrated the outcome network growth with the calibration function in fsQCA software [59]. We designated 1 to indicate growth when the SN has had $NG > 0$; 0.5 when the SN had no growth, and 0 to indicate negative growth when the SN has had $NG < 0$. After this, we calibrated the service portfolio (QCA code: SPc). We designated 1 to indicate full-service availability when the SN offered 10 types of services to the members, 0.5 that is neither full nor absent when the SN offered 5 services to the members, and 0 to indicate an absent service portfolio. We denoted the calibration of the causal condition by appending the letter "c" to its code.

Data analysis

We employed a dual-phase fuzzy set qualitative comparative analysis (fsQCA), encompassing both necessity and sufficiency assessments [60]. Initially, we assessed the indispensability of each causal condition (necessity assessment). These specific conditions are crucial in management theory and practice because their absence prevents achieving the desired outcome, and other factors cannot make up for this shortfall [61].

A necessity consistency cutoff of 0.9 was established to identify essential causal conditions [60]. This measure evaluates how consistently cases sharing a specific condition demonstrate the outcome [62]. Bol and Luppi [63] define it as the ratio of the sum of minimal values of a condition and outcome across all cases to the sum of outcome values across all cases.

Additionally, we examined necessary coverage, which indicates the proportion of cases displaying both the conditions and the outcome among those exhibiting the conditions [60]. This metric underscores the significance of the necessary condition, with lower coverage suggesting a more limited impact [60].

Subsequently, we conducted a sufficiency analysis to ascertain how effectively the causal conditions lead to a successful outcome. According to Schneider and Wagemann [60], a condition is deemed sufficient if its occurrence invariably results in the outcome. These sufficiency analyses employed the truth table methodology in the FsQCA Tool [64] following guidance from Rihoux and De Meur [62]. To address contradictory configurations-where both positive and negative outcomes occur-we applied an 80% consistency threshold [60].

Configurations exceeding this criterion were assigned outcome values derived from observed cases. After resolving contradictions in the truth table, consistency reached 94.88%, indicating that numerous configurations consistently lead to the outcome when specific factors are present. The subsequent section will interpret these findings.

Results

Necessity analysis

The necessity analysis shows that Specialization (S), Centralization (C), Network Performance Control (PC), and Structure (Stru) are four necessary causal conditions (Table 2). These four causal conditions fulfill the standard 0.9 threshold set for necessity. This research found a consistency ranging between 0.952774 and 0.990255 for these four causal conditions. In addition, they have necessary coverage above 0.67, which can be considered not trivial. We then considered these four causal conditions (Specialization, Centralization, Performance Control, and Structure) in a sufficiency analysis as directional expectation causal conditions that should be present in the solutions.

	Conditions Tested	Consistency	Coverage
Governance Dimensions	S	0.952774	0.747647
	~S	0.047226	0.210000
	C	0.962519	0.675789
	~C	0.037481	0.500000
	R	0.711394	0.790833
	~R	0.288606	0.481250
	BC	0.605697	0.808000
	~BC	0.394303	0.526000
	F	0.892804	0.700588
	~F	0.107196	0.476667
Management Dimensions	PC	0.990255	0.733889
	~PC	0.009745	0.065000
	Stra	0.616942	0.685833
	~Stra	0.383058	0.638750
	Stru	0.952774	0.747647
	~Stru	0.047226	0.210000
	P	0.883058	0.736250
	~P	0.116942	0.390000
	SPc	0.706896	0.881308
	~SPc	0.506747	0.726882

TABLE 2: Necessary Analysis of Individual Governance Dimensions for Growth Outcome
FsQCA Software

Sufficiency analysis

The fsQCA results reveal that our sample includes three highly coherent configurations, each with a consistency greater than 80%. These configurations are detailed in Figure 1.

TRUTH TABLE ANALYSIS												
Model: NGc = f (S, C, R, BC, F, PC, Stra, Stru, P, SPc)												
Algorithm: Quine-McCluskey												
INTERMEDIATE SOLUTION												
frequency cutoff: 1												
consistency cutoff: 0.948895												
Assumptions: S (present); C (present), PC (present), Stru (present)												
Configurations	S	C	PC	Stru	SPc	R	BC	Stra	P	Raw Coverage	Unique Coverage	Consistency
S*C*F*PC*Stru*SPc*R*BC *P	●	●	●	●	●	●	●		●	0.40629	0.08620	0.95929
S*C*F*PC*Stru*SPc*R*Stru*P	●	●	●	●	●	●		●	●	0.43328	0.11319	0.95222
S*C*F*PC*Stru*~SPc*~R*BC*Stra*~P	●	●	●	●	○	○	●	●		0.06746	0.06746	1.00000
solution coverage: 0,586957												
solution consistency: 0,964286												
Note: ● Necessary condition present; ○ Necessary condition absent; ● Non-necessary condition present; ○ Non-necessary condition absent.												

FIGURE 1: Main Findings: Configurations that Generate Increased Network Growth

FsQCA Software

Equation (2) depicts these three configurations, aiding in recognizing the governance and management arrangements contributing to network growth.

Equation 2: Configurations found in the QCA analysis

$$S^*C^*F^*PC^*Stru^*(SPc^*R^*BC^*P + SPc^*R^*Stra^*P + \sim SPc^*\sim R^*BC^*Stra^*\sim P)$$

The minimized expression should be analyzed as follows: S = specialization; C = centralization; R = incentives, rewards, and sanctions/punishments; BC = members' behavioral control; F = formalization; PC = performance control; Stra = strategy; Stru = structure; P = process; and SPc = services portfolio. The character "+" signifies the logical operator "or," "*" denotes "and," "~" represents "negation," and "→" indicates logical implication [62].

The outputs identify three configurations highly consistent with network growth, with cohesiveness ranging from 95.22% to 100%. This indicates that over 9 out of 10 SNs arranged in these ways experienced membership growth since their inception. The raw coverage percentages were 40.62%, 43.32%, and 6.74%, meaning SNs with these configurations accounted for 26.79%, 43.32%, and 6.74% of cases with increased growth, respectively. Unique coverage, determined from cases sharing the same path, was 8.62%, 11.31%, and 6.74%, indicating the proportion of a configuration that can drive growth without any additional causal conditions [62]. Configurations with 0% unique coverage completely intersect with other trajectories in the model regarding the cases they encompass [62].

Discussion

Prior research has explored how SN's governance design improves network effectiveness [33, 34]. Other studies have investigated how SNs can improve performance and impact the competitiveness of members [9, 49]. Governance portrays the "rules of the game" in SNs, guiding members' roles and behavior toward collective objectives [13, 33]. Previous research has indicated that governance tends to be inflexible and resistant to modification, largely due to its entrenched institutionalization in documents and practices. On the other hand, network management represents the strategies, structures, processes, and services the SN offers to reach collective results [54].

Our study takes an integrated approach based on the premise that governance and management are interrelated dimensions that should be examined together in SNs. Empirical research identifies three distinct governance and management configurations that explain network growth. All three configurations include five necessary conditions: Specialization (S), Centralization (C), Formalization (F), Performance Control (PC), and Structure (S). These SNs follow a centralized decision-making process that allows a small group of members to make decisions and adapt to market changes, as predicted by Wegner and Padula [36]. These SNs also rely on specialized teams [38] responsible for dealing with specific activities and finding solutions in negotiation, human resources development, marketing strategies, and acquiring new members. Moreover, the configurations include Formalization and Performance Control

[40] as governance dimensions that reduce opportunistic behavior, define rules and obligations, and monitor network activities. As a fifth necessary condition included in all three configurations, structure indicates that SNs with higher growth rates have a physical, human, and technological structure that supports their activities [53].

These five necessary causal conditions can be combined with three sets of other causal conditions to facilitate network growth. The first set includes Service Portfolio (SPc), Rewards/Incentives (R), Behavioral Control (BC), and Processes (P). We call this configuration a "highly-monitored SN." SNs that follow this configuration attract new members due to their service portfolio [56] and clear governance rules that reward their members' cooperative actions while maintaining control of members' behavior. Rewards [32] and control programs [41, 42] ensure members remain engaged and pursue SN growth. As commented on by Alpha's executive manager: "We have a scoring program for members to remain exclusive in their region." In Alpha's case, management pressured members to achieve goals to the detriment of their exclusivity in operating in a specific region. This behavioral control pressure creates higher barriers to entry for new members once current members maintain a high level of commitment, especially in populated regions where members seek to maintain exclusivity at the point of sale. This sense of elitism can generate a sense of scarcity, attracting new members to the SN.

The second configuration includes the causal conditions Service Portfolio (SPc), Rewards/Incentives (R), Processes (P), and Strategy (S). We call this configuration a "strategically-oriented SN." SNs that follow this configuration offer a clear long-term strategy [51] and seem to attract new firms based on this orientation. SNs that follow this configuration are organized and have documented processes [53, 55]. As Beta1's executive manager commented: "[Beta 1 has] bylaws, internal rules ... revised in the creation of the network, everything that is planned and discussed goes to the report book" (Beta1). New members can be intrigued by the fact that the network has a well-defined strategy (Stra). In Beta's case, members know where they want to go as a group. According to one of the interviewees: "It is part of the future, we [need to] plan ... [We need] goals for the coming years, to know where we can go" (Beta3).

The third configuration includes Behavioral Control (BC), Strategy (S), and the absence of Service Portfolio (~ SPc), Rewards (~R), and Processes (~P). We call this configuration a "specific-service SN." The absence of a Service Portfolio (~ SPc) does not mean any service because SNs may focus their strategy on a specific service. This configuration attracts new members who demand specific services. In Gamma's case, members were looking for access to a specific service (e.g., collective shopping), as mentioned in an interview: "We have a group of network supplier partners. So, if all members buy from this supplier, we get a purchase discount" (Gamma1). In this case, members felt a great sense of belonging and cooperation. The SN's executive manager acted as a team motivator. According to one member: "No member receives benefits for participating ... we go there for the love of the shirt No member receives any kind of remuneration, it is all voluntary work" (Gamma2).

The causal conditions of the Service Portfolio, Rewards, Processes, Behavioral Control, and Strategy were critical for the two configurations. Proactive control of members can occur through incentives, rewards, or sanctions/punishments, and individual performance assessment metrics. This shows that controlling members is important but not essential for all configurational approaches to SN growth. Likewise, strategic formulation and a vast service portfolio could potentially increase the chances of survival and differentiation of this SN on the market, giving it a competitive advantage. Surprisingly, not all configurations require a deliberate strategy to succeed. Although important for the SN, this dimension was not present in the three configurational approaches.

Different authors have shown the important role of network management for SNs [45, 46]. Network management may support SNs in the challenges they face [50], such as market disruptions, technological changes, and internal problems. Network management also allows SNs to design scenarios to achieve strategic goals [51], taking a holistic perspective of the organization regarding processes and structures necessary to achieve such goals.

The study of Wegner et al. [12] combined the dimensions of governance and management in strategic networks in Brazil. The authors found two specific sets of configurations that foster the growth of SNs (the proxy for network performance). According to their study, both configurations showed that all four management dimensions-strategy, structure, processes, and leadership-have been adopted by SNs that achieved high growth rates. Our study corroborates Wegner et al. [12] by finding the elements of the management dimensions (Strategy, Structure, Processes) as highly important in almost all configurations. Regarding the Governance dimension, the element of Formalization was found in three configurations, confirming the same findings as Wegner et al.'s [12] study, which also showed that this element is fundamental to all configurations that lead to network growth that emerges in their study.

Regarding the Incentives/Rewards and Sanctions/Punishments dimension, we observed that, both in this study and in Wegner et al.'s [12] study, the presence or absence of this element can lead to superior SN performance.

Conclusions

Governing and managing SNs have challenged network leaders due to the complexity of such interorganizational forms. The large number of network members, the activities SNs must perform to support their members, and the service portfolio they should develop and maintain represent significant challenges for those in charge. Moreover, SNs operating in traditional business sectors must continually employ growth strategies to attract new members, reach scale gains, and minimize industry pressures. Our study contributes to the field of interorganizational networks by examining 20 Brazilian SNs and identifying the governance and management configurations that explain network growth.

As a first theoretical contribution, our results show that governance and management are interconnected. These dimensions should not be considered separately. Only a few studies have explored the intersection of governance and management as a unified whole that influences SN development and growth. The study reveals that both dimensions are complementary to fostering SN's growth, as found in previous studies. Governance allows SNs to achieve better results in terms of member engagement. Properly governed networks can more easily manage the resources allocated to achieve the group's goals.

As a second theoretical contribution, we found three patterns of governance and management that produce network growth. Our findings offer a distinct contribution to the field of interorganizational networks by illustrating that SNs can pursue various governance and management structures to attract new members and facilitate growth. While previous studies focus on network governance and network management, our findings underscore the interconnected nature of these concepts, emphasizing the importance of considering them together to foster growth.

The result confirms by showing the interrelation of governance and management as necessary to foster SNs development. The authors identified two configurations of governance/management-which they call Piloted and Atomized SNs-that support network performance. On the other hand, we found three configurations we called "highly-monitored SN," "strategically-oriented SN," and "specific-service SN."

We also contribute to managerial practice by showing how network leaders may design the governance and management of SNs to foster network growth. Besides focusing on clear rules for decision-making processes, specialized teams, formal rules, and performance control, our findings suggest that network structure significantly influences SNs with high growth rates. Therefore, having a human, physical, and technological structure seems relevant for SNs that want to acquire new members. We assume that such a structure promotes network activities and makes potential new members feel confident they are joining a well-organized SN that will effectively assist them. Said differently, potential members perceive the network structure as a signal that the SN can support the members. Therefore, SNs that want to grow and attract new members should invest in their structure.

As a second managerial contribution, our findings reveal that no single configuration of governance and management exclusively fosters network growth. Indeed, our study reveals that SNs may follow three different configurations to attract new members. All three configurations require five causal conditions: Specialization (S), Centralization (C), Formalization (F), Performance Control (PC), and Structure (S). However, these five conditions can be combined with specific sets of other causal conditions that can entice new members.

Our results also offer insights to policymakers, governments and entities that aim to support SNs. For instance, public policies could offer training programs to help SNs develop their governance and management. Moreover, they could develop a playbook for network leaders explaining how they can improve the governance rules of their SNs and implement management practices and routines that support network growth.

While our study offers new insights, it also has limitations. The number of cases we analyzed represents a small sample compared to the large number of Brazilian SNs. We attempted to mitigate this by selecting SNs of various sizes and ages across the top five business sectors hosting SNs in Brazil. Moreover, we believe that the number of interviews in each case (between three and four) enabled us to obtain a comprehensive understanding of the governance and management of these SNs. We also reduced possible interpretation bias by using two experienced researchers who categorized the data and attributed a binary score according to specific criteria previously defined. Such procedures make us confident that our results are valid and offer reliable insights.

Future studies can further advance the comprehension of the configurations we identified by performing in-depth case studies. Another suggestion for future research is to perform surveys to test relationships between the causal conditions and network growth in large samples of SNs. A broader study of these configurations would be important to validate whether the patterns found can be confirmed on a large scale by a wider number of SNs.

Additional Information

Author Contributions

All authors have reviewed the final version to be published and agreed to be accountable for all aspects of the work.

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Disclosures

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