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Abstract

Purpose- Research examining the joint role of serial acquisitions and subsidiary autonomy in holistic value provision within servitizing industrial firms is scarce. Thus, this research investigates the role of serial acquisition and subsidiary autonomy in providing value within servitizing industrial networks.

Design/methodology/approach- A conceptual framework is developed based on the case study of a large Swedish industrial group specializing in selling industrial products and providing industrial solutions to business customers through its numerous subsidiaries.

Findings- The analysis of 14 interviews with the five subsidiaries and seven customer firms and secondary data reveals interesting findings concerning the role of serial niche acquisition strategy and subsidiary autonomy in customer value provision in servitizing organizations. In particular, we find that the role of acquisitions in industrial firms extends beyond growth to customer sensing and proximity. Likewise, we find that subsidiary autonomy facilitates value provision to customers in industrial networks.

Originality/value- Our paper provides a more nuanced understanding of how serial acquisitions and subsidiary autonomy are intertwined and jointly affect industrial firms' value provision activities amidst the servitization transition in an intraorganizational network.

Keywords

Servitization; industrial networks; value provision; serial acquisition; subsidiary autonomy

1. Introduction

Success in business-to-business (B2B) firms hinges on enhancing the ability to holistically identify and satisfy customer demands (Liu *et al.*, 2020). Servitization -a process of transitioning from product- to solution-based business by combining products with services (Salonen & Jaakkola, 2015)- requires rethinking resources and capabilities for the focal firm, often outside the organizational boundaries (Alghisi & Saccani, 2015; Gölgeci *et al.*, 2021). Hence, the firm may need to re-engineer the organizational structure and boundaries to facilitate service design and delivery (Salonen & Jaakkola, 2015).

The extension of the servitization resources could stem from the organic development of the organization or, alternatively, from the acquisitions. However, literature has overlooked acquisitions' role in developing service capabilities (Xing *et al.*, 2017). Firms can use acquisitions to reconstitute their resources and business models (Salonen & Jaakkola, 2015), obtain necessary skills, and align with product-service strategies (Huikkola & Kohtamäki, 2017; Xing *et al.*, 2017).

Nevertheless, there is a scarcity of research examining the joint role of serial acquisitions and subsidiary autonomy in holistic value provision within servitizing industrial firms. For instance, the pace and coordination of acquisitions may respond to servitization imperatives from the external environment. Furthermore, the focal firm's ability to orchestrate relationships across acquired units within the intraorganizational network may influence its value-creation activities (e.g., K. Kapoor *et al.*, 2021). In this context, it is important to stress the importance of serial acquisitions, which are interrelated and complimentary acquisitions undertaken by firms to enhance value creation through synergies (e.g., Degbey, 2015; Pehrsson, 2020). Likewise, extant research on acquisition has established the critical role of subsidiary autonomy (e.g., Xing *et al.*, 2017), which refers to decision-making privileges that are granted by the focal firm (Gammelgaard *et al.,* 2012). High autonomy occurs when subsidiaries are able to make most decisions, while low autonomy indicates that most decisions are made by the focal firm (Birkinshaw & Morrison, 1995).

There are two separate streams of research that underline both the positive and negative aspects of providing autonomy to subsidiaries. The first research stream suggests that while serial acquisitions may help generate synergetic effects in servitization processes, providing acquired subsidiaries with greater autonomy may reduce intraorganizational network interactions due to increased distance between autonomous subsidiaries and the focal firm (Phelps & Fuller, 2000), negatively impacting intraorganizational (i.e., focal firm–subsidiary) knowledge sharing (Gammelgaard *et al.*, 2012). A second stream, which we subscribe to, emphasizes the potential advantages of subsidiary autonomy in servitization, manifesting as increased interorganizational (i.e., subsidiary–external actors) network relationships (Lindstrand, Eriksson, Sharma, 2009) that will be beneficial to both the subsidiary and the focal firm (Birkinshaw *et al.*, 2015). Autonomous subsidiaries are more effective in managing interorganizational relationships and fostering growth in the knowledge reservoir (Cohen & Levinthal, 1990). The subsidiary firm's knowledge reservoir, cultivated through autonomy-driven interorganizational relationships, aids in internalizing knowledge. The subsidiary's standing within the intraorganizational network is improved in direct proportion to its capacity to establish "resource-dependency" network linkages (Boehe, 2007), enhancing intraorganizational network relationships (Gammelgaard *et al.*, 2012), thus assisting in servitization efforts. Providing autonomy to acquired subsidiaries can create intraorganizational and interorganizational relationships, addressing servitization challenges through internal and external alignment (Algishi & Saccani, 2015).

Successful value provision and servitization may require subsidiary autonomy, as subsidiary autonomy may enable subsidiaries to develop a deep understanding of local customer needs, preferences, and market dynamics and adapt and tailor service offerings to meet specific local requirements (Puranam *et al.*, 2006). It may also foster local innovation and expedite the servitization process (Gammelgaard *et al.*, 2012), and accordingly play a crucial role in enabling effective service delivery and adaptation. Nonetheless, serial acquisition strategy coupled with subsidiary autonomy may introduce tensions due to the clash between centralization and decentralization stemming from the different goals, strategies, and operational practices of different subsidiaries. Such tensions can manifest themselves in terms of tensions between alignment vs. autonomy, standardization vs. flexibility, and resource allocation vs. integration (Gölgeci *et al.*, 2019). However, despite the potential criticality of both serial acquisition and subsidiary autonomy to servitization, research examining the joint role of serial acquisitions and subsidiary autonomy in holistic value provision within servitizing industrial firms lacks, which our paper addresses.

This research aims to investigate the role of serial acquisition and subsidiary autonomy in value provision in intraorganizational networks that go through servitization. Accordingly, the focal question of the present study is *'What is the role of serial acquisition and subsidiary autonomy in value provision in intraorganizational networks that go through servitization?'* In this vein, our focus is primarily on the interplay between serial acquisition and subsidiary autonomy in enabling the firm to view offerings as propositions for the customers to facilitate (and propose) value creation to generate solutions.

To answer our research question, we adopt the intraorganizational network theoretical lens and examine a case of a large Swedish firm with numerous subsidiaries specializing in providing industrial products and solutions to business customers. We adopt the intraorganizational network theoretical lens because it is highly relevant for studying the dynamics of serial acquisition and subsidiary autonomy in the context of value provision in servitization, focusing on relationships, interactions, and resource and information flow within the organization (Ahlf *et al.*, 2019; Carnabuci & Operti, 2013; Nelson, 1989; Tsai & Ghoshal, 1998; Yamin & Andersson, 2011). The intraorganizational network lens enables scrutiny of social networks established through serial acquisitions and understanding their role in outcomes like knowledge transfer, product development, innovation, and value provision (e.g., Caimo & Lomi, 2015; Tortoriello & Krackhardt, 2010) within servitizing industrial networks. This approach avoids the assumption that informal organizational relationships exist independently of more formal components, allowing us to unpack how serial acquisition and subsidiary autonomy influence value provision within intraorganizational networks (Raja *et al.*, 2022), which is relatively untapped in comparison to the role of social (interpersonal) networks that have been thoroughly investigated (e.g., Yeniaras, Kaya, & Dayan, 2020). To that end, we analyze 14 interviews with the five subsidiaries and seven customer firms and secondary data available through company reports and online documents. We find that serial acquisition strategy is a key enabler of greater value provision during the servitization transition. We also find that subsidiary autonomy is essential for creating greater value for firms that follow a serial acquisition strategy in servitizing industries.

A major contribution of our study is its pioneering exploration of the interplay between serial acquisition and subsidiary autonomy in effective value provision, aligning the firm's offerings with changing customer requirements (Liu *et al.*, 2020). It offers an empirically supported conceptual framework for value creation and growth in servitizing industrial networks linked to serial acquisitions. While we acknowledge the potential role of acquisitions in ensuring continuous service growth (Kowalkowski, Gebauer, & Oliva, 2017), we also highlight their role in customer sensing and proximity. In particular, our paper makes important contributions to the literature on B2B marketing. As our key contribution, we provide a nuanced understanding of how serial acquisitions and subsidiary autonomy affect value provision in servitizing organizations.

2. Background and literature review

2.1. Servitization in industrial networks

Servitization refers to transformative processes where manufacturing/industrial firms set out to create greater value by increasing the share of services in their offerings in relation to products (Vendrell-Herrero *et al.*, 2017). Due to increasing competition and commoditization of products, manufacturing firms aim to provide additional services together with their products to differentiate their offerings and secure their competitive positions (Feng *et al.*, 2021; Weigel & Hadwich, 2018; Zhang *et al.*, 2023). The extant research on servitization proposes various understandings of servitization (for an inclusive coverage of this research area, see Kowalkowski, Gebauer, Kamp, *et al.*, 2017; Rabetino *et al.*, 2018). The relevant literature on the topic highlights that internal and external alignment are essential for overcoming the servitization challenges (Alghisi & Saccani, 2015).

Servitization is a business model transformation that entails collaborating closely with multiple suppliers, partners, and customers (Gölgeci *et al.*, 2021; Jaakkola & Hakanen, 2013; Windahl & Lakemond, 2006; Yeniaras & Golgeci, 2023; Wang *et al.*, 2023), enhancing networks' role in the firm's strategy and behavior. Servitizing manufacturers and solution providers are compelled to develop a network-based relational approach underpinned by trust and long-term partnerships for greater success in business strategy and to meet evolving market needs (Bigdeli *et al.*, 2018). In servitizing firms, value creation hinges on experience, necessitating a greater focus on network interactions and relationships (Hakanen *et al.*, 2017; Weigel & Hadwich, 2018; Windahl & Lakemond, 2006). Networks are deemed suitable for knowledge-rich product-service domains due to their information processing capacity and flexible governance structures (Jaakkola & Hakanen, 2013). However, little is known about how firms utilize servitization during such transformation in hybrid networks where intraorganizational network forces are entangled with interorganizational network forces.

Furthermore, business units and subsidiaries are at different servitization stages with corporate culture and product and market characteristics, which poses a challenge for parent firms managing diverse subsidiaries toward unified market behavior (Hakanen *et al.*, 2017). Intraorganizational networks are important domains of business interactions and value creation, especially in larger firms and business groups (Ahlf *et al.*, 2019; Carnabuci & Operti, 2013; Nelson, 1989; Tsai & Ghoshal, 1998; Yamin & Andersson, 2011). Their fundamental difference from interorganizational networks is the hub firm's (i.e., HQ in MNCs) formal authority and power to control the network and network members (Yamin & Andersson, 2011).

The intraorganizational network approach is especially better suited to explain structure and connections in organizations that are organized as a loosely interconnected network of autonomous subsidiaries/business units/teams. In the context of serial acquisitions, it aids in analyzing relationships between the acquiring firm and subsidiaries, examining their evolution and impact on value creation (Ahlf *et al.*, 2019). Furthermore, when studying the role of subsidiary autonomy in value provision within the context of servitization, it provides a comprehensive framework (Tsai, 2002) to investigate subsidiaries' integration within the organizational network and how their autonomy influences their contribution to service development and delivery. Additionally, it highlights the importance of network ties, both internal and external, in facilitating value provision in the servitization context.

Relationships in which subsidiaries and their employees are embedded influence their activities, development, and performance (Carnabuci & Operti, 2013; Yamin & Andersson, 2011). Nonetheless, cooperative and competitive dynamics may simultaneously be present in intraorganizational networks as many subsidiaries' activity domains may overlap, and subsidiaries may face the possibility of cannibalizing each other's market (Tao *et al.*, 2019; Tsai, 2002).

2.2. Serial acquisition and subsidiary autonomy as value provision strategies in industrial networks

In this research, through applying an intraorganizational network theoretical lens, we examine serial acquisition strategy and subsidiary autonomy as interconnected elements of value provision strategies in industrial networks. We argue that these elements are intertwined and together may form a unique approach to creating and delivering value in industrial networks amidst the servitization transition. Each element is defined and discussed as the theoretical background of the current paper.

2.2.1. Serial acquisition strategy

Acquisition, a much-researched phenomenon in B2B marketing, is integral to firms' competitive strategy (Degbey, 2015; Holtström & Anderson, 2021). Many different acquisition strategies, including s*erial acquisition* -a strategy of engaging in streams of mutually interrelated and complementary acquisitions- can be used for different long- and short-term strategies, including improving manufacturing capabilities (Degbey, 2015; Laamanen & Keil, 2008). Serial acquisition's critical pillars are temporal dynamics and platform-building effects, where the former pertains to the number of acquisitions within a specified period, and the latter involves buy-and-build doctrines of one or more platforms utilizing accumulated capabilities and resources for broader contextual, product, or customer expansion (Degbey, 2015).

The drivers of serial acquisitions are well documented in the literature (Angwin, 2007; Pehrsson, 2020). Often, serial acquisition is executed to create synergies between highly specialized firms with unique technological expertise/niche positions and a relational know-how/network position (e.g., R. Kapoor & Lim, 2007). Other drivers include accessing resources, acquiring new capabilities, achieving economies of scale and diversification (Angwin, 2007), and accessing experiential knowledge (Pehrsson, 2020). Nonetheless, serial acquisition strategy is not free of challenges and may provoke a series of pitfalls. Likewise, the coordination of potentially competing acquired subsidiaries can emerge as a unique challenge to the firms following a serial acquisition strategy.

Serial acquisition of smaller niche firms with exclusive value offerings can generate synergies stemming from network orchestration and value bundling toward greater complexities involved in the servitization transition (Raddats *et al.*, 2016). It enables tackling the challenge of customers needing unified, one-stop solutions to complex problems. Thus, serial acquisition can remedy the challenges faced by smaller firms operating in niche areas by orchestrating intraorganizational networks.

Operating in a new network may pose challenges of acclimatization and adaptation for acquired subsidiaries and the acquirers in steering changing network dynamics and adjustments to keep the network cohesive (Tao *et al.*, 2019). Rapid acquisitions may lead to perceptual and cognitive dissonances, unsettling existing roles and causing tensions among existing and new coming subsidiaries (ibid). Their perception of time and space in intraorganizational networks could be warped due to the rapid pace of new acquisitions and evolution in the network dynamics (ibid). Thus, a better understanding of serial acquirers' intraorganizational network dynamics and orchestration. To this end, we concentrate on subsidiary autonomy as the serial acquirers' orchestration capability and means of leveraging the acquired firms in the pursuit of customer value provision while keeping their identity and culture intact.

2.2.2. Subsidiary autonomy

Subsidiaries are indispensable elements of relatively large firms with complex structures and value-creation systems (Kawai & Strange, 2014; Yamin & Andersson, 2011). Subsidiaries often maintain a distinct identity within the organization, influenced in part by their level of autonomy (Moore, 2012; Yue, 2007). Subsidiaries play an essential role in the value creation of large industrial firms, especially (Gammelgaard *et al.*, 2012; Kawai & Strange, 2014). Their autonomy instrumentally shapes this role (Gammelgaard *et al.*, 2012; Johnston & Menguc, 2007). Accordingly, B2B marketing has paid extensive attention to subsidiaries and subsidiary autonomy (Pehrsson, 2020; Zhu *et al.*, 2022)

Subsidiary autonomy is a sensitive and paradoxical issue for many firms (Ferner *et al.*, 2004; Puranam *et al.*, 2006). On the one hand, integrating subsidiaries into the organizational structure may improve organizational cohesion and help standardize value offerings. Subsidiary integration may also help reduce subsidiary deviance in case of discrepancies in the organizational vision. On the other hand, subsidiary autonomy can spur innovation and responsiveness to diverse market needs. It may reduce organizational redundancies and enable market differentiation (Puranam *et al.*, 2006). Likewise, autonomous subsidiaries may be more effective in interorganizational relationships (Gammelgaard *et al.*, 2012), which are even more essential for industrial firms undergoing the servitization transition (Jaakkola & Hakanen, 2013; Windahl & Lakemond, 2006).

2.2.3. The interplay between serial acquisition, subsidiary autonomy, and servitization

Acquisitions can expand access to new technologies, capabilities, and knowledge bases and help gain a stronger market position (Puranam *et al.*, 2006; Zhu *et al.*, 2022). However, effective coordination is crucial for the acquiring organization to harness the benefits of acquisitions, including knowledge transfer and synergies (Aghasi *et al.*, 2017). The challenge lies in balancing the autonomy of the acquired firm, preserving its unique characteristics, and ensuring adequate knowledge transfer, known as the 'integration vs. autonomy dilemma' (Graebner *et al.*, 2010).

Two competing approaches to market entry and resource access are discussed in prior literature: greenfield investment and acquisition of an existing firm (Aghasi *et al.*, 2017). A servitization strategy often entails substantial challenges in accessing the necessary service capabilities (Alghisi & Saccani, 2015). As such, the servitization strategy can also be implemented by creating a new subsidiary or through the (serial) acquisition of firms that currently possess a higher level of servitization in the market. Striking the right balance in the integration vs. autonomy dilemma becomes crucial for the acquirer, preserving the qualities of the acquired subsidiary and ensuring subsidiary autonomy (Degbey, 2015).

In view of the above discussion, it becomes clear that serial acquisition and subsidiary autonomy are inextricably intertwined. Both serial acquisition and subsidiary autonomy are integral and interconnected components of firms' inorganic growth and value creation strategy. While serial acquisition involves acquiring new resources—in the form of acquired firms—for value provision, subsidiary autonomy is a post-acquisition management approach coordinating subsidiaries within the intraorganizational network. As such, serial acquisition and subsidiary autonomy function in tandem toward greater value creation and provision (Degbey, 2015). Subsidiary autonomy first follows serial acquisition by coordinating and leveraging acquired firms while maintaining their identity and culture then allows for further serial acquisition by incorporating existing subsidiaries into the intraorganizational network.

Despite growing attention to serial acquisition and subsidiary autonomy, research lacks insight into their interplay in providing value during servitization. Research fails to capture how firms in dynamic networks manage their subsidiaries and face servitization challenges. Our literature review reveals that insights into serial acquisition and subsidiary autonomy remain fragmented and entail an integrative approach. As such, this study aims to develop a more nuanced understanding of the role of serial acquisition and subsidiary autonomy in affecting value provision in servitizing industrial networks and utilizes the intraorganizational network theoretical lens to this end.

3. Methodology

3.1. Research design

Given our research's exploratory nature, we adopted a qualitative case study to generate rich and deep insights into how managers of the subsidiaries and customer firms understand the role of serial acquisitions and subsidiary autonomy in providing value within the servitizing networks (Yin, 2017). Our choice is justified for four main reasons. First, considering the infancy stage of this body of research, we used a case design for a theory-building purpose. Hence, applying case studies in our research helps capture new layers of reality and develop new theoretical insights (Vissak, 2010). Second, case study research allows a phenomenon to be examined in relation to its context and enables fruitful dialogue between theory and the evidence (Bonamigo *et al.*, 2022), as followed in this study. Our study aims to understand the complex dynamics of serial acquisition and subsidiary autonomy, which act interdependently in this specific case. As Matthyssens et al. (2013) highlighted, the case study is an appropriate methodology for understanding the complexity and interdependency of social realities and understanding their underlying causal explanations. Third, focusing on case research provides the opportunity to gain a detailed understanding by following the processes and strategies of servitization followed by the focal firm in our research (Ketokivi & Choi, 2014). Fourth, despite its potential time-related and generalizability-related challenges, case study research has been suggested as a suitable method for studying industrial network contexts, as it enables investigating a complex contemporary phenomenon in depth within its dynamic setting (Halinen & Törnroos, 2005). In conclusion, given the focused nature of our research question and the depth of analysis required, we opted for a single-case study design to offer a comprehensive understanding of the focal phenomenon. This approach allowed us to explore the intricacies of the role of serial acquisition and subsidiary autonomy in providing value within servitizing industrial networks in detail, offering valuable insights that contribute to the existing literature.

3.2. Case selection

The case of Sindcom (pseudonym) and interviews within the Sindcom network were chosen following a purposive sampling approach (Eisenhardt, 1989; Yin, 2017). In particular, subsidiaries were selected based on their connection to Sindcom's flow technology division and the complementarity of their offerings to customers. That is, we chose subsidiaries that are more centrally, rather than peripherally, connected to Sindcom's flow technology division and subsidiaries that offered diverse, rather than similar, sets of products and services in collecting and analyzing data. This allowed us to capture a more holistic view of Sindcom, its subsidiaries, and their strategies for providing value throughout the servitization transition. Likewise, interviewed customers were chosen based on the strength of their connections to Sindcom and the focal subsidiaries. Specific effort was made to select customers who are simultaneously connected to multiple subsidiaries and have a clear view of Sindcom, its structure, and its value offerings, rather than those loosely connected to a single subsidiary and not aware of Sindcom as a group.

The following characteristics make Sindcom an ideal case for our research. Sindcom is a Swedish international industrial group that develops and sells high-tech products and solutions, helping customers improve their own products and streamline customers' production processes. At the start of primary data collection in 2009, Sindcom had 4 business divisions and about 100 subsidiaries in 14 countries with over 3000 employees. Following an acquisition-based growth strategy, it operates in 31 countries and four continents through 8 divisions, over 200 subsidiaries, and 6000 employees as of early 2019. Its success has heavily relied on acquisition and network orchestration strategies. In its unique acquisition model, Sindcom targets independent niche industrial/technology firms. As such, it focuses solely on acquiring independent firms and not part of other organizations. It gives acquired firms autonomy in managing their operations by keeping their name, culture, and management. Sindcom mainly orchestrates complex network relationships amongst subsidiaries, customers, suppliers, and other market actors to sustain long-term cooperation. Sindcom's observed success in providing value and growth through serial acquisitions and subsidiary autonomy prompted our longitudinal study of Sindcom, its network, and its evolution over time.

3.3. Data collection

The study uses both primary and secondary data. Primary qualitative data was collected by conducting fourteen in-depth semi-structured face-to-face interviews with the directors and managers of Sindcom's five subsidiaries within one of its business divisions operating as niche industrial solution providers and seven customer firms in Sweden. We use interviews from both subsidiaries and customer firms to complement subsidiaries' perspectives of value provision with those at the receiving end, customers, and to enhance the validity of our findings. Interview questions were designed carefully to ensure their alignment with the research objectives and research question. Before conducting interviews, the questions were piloted with a group of academics and practitioners who were both knowledgeable about the subject-field to check face validity, interview timing, and questions' wording. Following our pilot interviews, we refined the interview questions to increase their effectiveness and clarity. We purposively chose managers and directors as participants as they have extensive knowledge about the issues under investigation. The interviews with the subsidiaries lasted for 60–120 minutes, while those with customer firms took 45–90 minutes. Customers were primarily interviewed to gather additional insights into the value provision in the servitizing networks and verify customers' perspectives with subsidiaries. Table 1 summarizes the key characteristics of the interviewed subsidiaries and customer firms. The inclusion of both subsidiaries and customer firms allowed us to obtain complementary and rich insights from different stakeholders in Sindcom's value provision network. Additionally, we held several meetings with the division director of Sindcom to evaluate and validate our findings and gather first-hand information on Sindcom's strategy and perspective toward value provision, servitization, acquisitions, and subsidiary management.

[Insert Table 1]

The interview participants were asked about the servitization transition of Sindcom, including its acquisition strategies, the role of sales in providing value, subsidiary autonomy, and the nature and extent of relationships amongst subsidiaries as well as between subsidiaries and their customers (please see Tables 2 and 3 for the interview protocol for subsidiaries and customers, respectively). The interview questions were customized for subsidiaries and customer firms. We followed a discovery-oriented approach in conducting interviews, which allowed us to balance structure and flexibility and encourage insightful input from participants. To build a detailed case description and triangulate findings, we collected secondary data from Sindcom's websites and documentary material, including annual and planning reports, both by Sindcom and its subsidiaries, and interviewed customers. We continuously monitored Sindcom's and its relevant subsidiaries' evolution over time to document Sindcom's growth and how it conducts its serial acquisition activities while undergoing the servitization transition. Secondary data sources were especially relevant for drawing conclusions on serial acquisition and subsidiary autonomy strategies and their outcomes. Likewise, they provided additional evidence on the product/service mixture of Sindcom's subsidiaries and changes in its product/service range, market penetration, and the nature of its value provision between 2009 and 2019. Using multiple sources of evidence enhanced the validity and enabled a holistic understanding of the issues under focus (Yin, 2017).

[Insert Tables 2 and 3]

3.4. Data analysis and trustworthiness

The primary unit of analysis in this research is Sindcom's intraorganizational network with its acquired subsidiaries. At the same time, Sindcom's subsidiaries' ties with a select set of customers were also included in the analysis to arrive at a fuller picture of the subsidiary-customer relationships and the implications of these linkages for Sindcom's intraorganizational network. We followed 'systematic combining', i.e., abductive approach (Dubois & Gadde, 2002), to elaborate theory on intraorganizational networks in servitizing industries. This approach's key tenet is the systematic synthesis of inductive and deductive approaches in advancing knowledge through backward and forward procedures of uniting observations and empirical insights and continuously conferring with pertinent literature (ibid). This included drawing on network theory, particularly intraorganizational network theory, without deliberately attempting to form priori biased views about subsidiary autonomy and network orchestration under the unique circumstances of serial acquisitions. This allowed the concurrent and collaborative evolution of data and theory as well as the attainment of a pertinent framework for theory elaboration (Dubois & Gadde, 2002; Ketokivi & Choi, 2014).

We commenced analyzing our data shortly after the first round of data collection. Our analysis comprised both within-case analyses of each participant firm, especially that of Sindcom subsidiaries in our sample, and cross-case analyses of subsidiaries and customer firms to disclose consistent patterns as well as differences across participant firms (Eisenhardt, 1989). As the primary unit of analysis of our research is the intraorganizational network of Sindcom with its subsidiaries, we analyzed Sindcom's five subsidiaries and the relationships between these five subsidiaries and seven customers. Each subsidiary represents one case in this study, in line with our focus on the serial acquisition of subsidiaries, subsidiary autonomy, and their role in value provision.

We first employed a thematic analysis to detect, scrutinize, and account for patterns (Braun & Clarke, 2006). This approach fits well with our research objective, offering a flexible and informative method. Following Miles and Huberman's (1994) suggestions, we identified key themes concerning serial acquisition and subsidiary autonomy within servitizing industrial networks.

Following the thematic analysis, we also conducted a content analysis to rigorously derive useful information from the data. We analyzed our data by classifying the narratives into content categories via an iterative process involving the continuous interplay between the theory, method, and empirical world (Dubois & Gibbert, 2010). Using theory on intraorganizational networks and empirical insights guided us to identify two main issues at the center of our analysis: value provision through serial acquisitions and subsidiary autonomy. We set the detected categories based on themes we identified in the earlier phase. Having completed these two forms of analysis, we accumulated and organized the resulting data with the following themes: *challenges and opportunities associated with servitization*, *serial acquisitions*, and *subsidiary independence as drivers for new means of value provision in business networks.*

We followed several iterative steps when analyzing the data (Corbin & Strauss, 2008). Those steps were applied to assist data analysis rather than the full-fledged application of grounded theory, as grounded theory principles can be applied to varying degrees for varying purposes, including theory elaboration (Gligor *et al.*, 2016). First, we identified interim categories and patterns based on carefully reading interviews and firm documents. During this phase, we constantly compared each piece and aspect of the data to pinpoint similarities and differences among them. Afterward, we conducted further analysis to generate conceptual categories and combine emergent dimensions (Corbin & Strauss, 2008). Eventually, our proposed framework emerged from analyzing codes, memos, and resulting categories.

To ensure trustworthiness and analytical rigor, we followed the following remedies. Regarding *credibility and construct validity*, we triangulated various data sources, including interviews with different groups and secondary sources (Dubois & Gibbert, 2010). Moreover, we employed multiple coders and conducted member-checking to validate our interpretations. By elaborating on these steps, we provided a clear framework through which readers can understand the robustness of our qualitative approach. Furthermore, we followed a continuous process to match the case findings with the extant theory and applied constant comparison to validate emergent themes and findings from the data. This helped us formulate a clear research framework, which was considered a crucial measure of ensuring logical validity during data analysis (ibid).

4. Findings

This section presents subsidiary case overviews as within-case analysis and empirical findings from the cross-case study analysis examining mechanisms of providing value in business networks and two core elements in providing value within servitizing industrial networks.

4.1. Subsidiary case overviews

Table 4 provides a comprehensive overview of the five subsidiaries, detailing their acquisition timelines, background, and other relevant information. As depicted in Table 4, all subsidiaries offer distinct and often complementary products. This diversity allows S1 to act as a resource and network orchestrator, bundling and coordinating the offerings of other subsidiaries to create a consolidated value proposition.

While each subsidiary offers a combination of products and services, S1 stands out by not having its own products. Instead, it specializes in developing large turnkey projects by integrating and bundling products from other subsidiaries with its advanced services. Despite all subsidiaries maintaining direct customer relationships, S1 focuses primarily on orchestrating the internal network, integrating resources for holistic solutions, and empowering other subsidiaries to act independently while coordinating and bundling their offerings when necessary. This approach strengthens connectivity within the network.

Our research findings highlight that S1's orchestrator role goes beyond internal coordination. It actively promotes knowledge-sharing and collaboration among subsidiaries, fostering a dynamic learning environment. This culture of information exchange enhances innovation and enables rapid adaptation to market shifts. Additionally, S1's orchestrating function optimizes resource allocation, minimizing redundancy and maximizing collective capabilities. This streamlined approach contributes to operational efficiency and cost savings across the network. Furthermore, S1 acts as a unifying force, aligning subsidiary efforts under a common strategic umbrella and fostering cohesion within the network. The multifaceted role of S1 as an orchestrator results in interconnected benefits that extend beyond internal coordination.

[Insert Table 4]

4.2. Cross-case analysis findings

4.2.1. Challenges and opportunities associated with servitization as an external driver for new means of value provision in business networks

Figure 1 below illustrates a simplified relationship structure amongst subsidiaries (niche industrial solution providers) and customers, who were either our interview participants or whose names were mentioned in the interviews and later included in data analysis using secondary data. We have included main subsidiaries and customers for simplicity reasons, while a few other firms were also mentioned. Figure 1 serves as a simplified depiction of Sindcom's interviewed subsidiaries' network structure. It also illustrates the product/service bundling and network orchestrating role of S1, the only subsidiary that was not acquired but was formed for the sole purpose of bundling the value offerings of other acquired subsidiaries and network orchestration. S1 acts as a central hub in leveraging a loose network of interdependent autonomous subsidiaries that might not be able to work with each other effectively in the absence of S1.

[Insert Figure 1]

During the initial meetings with the division director of Sindcom, it became apparent that Sindcom wanted to reconsider its organizational structure and re-identify itself from being 'a technical trade company' to 'a complete solution provider within specialized niche industrial areas' via a strategic plan. Sindcom, as a group managing around 200 subsidiaries, developed strong communication and linkages with its subsidiaries, whereas its efforts to develop horizontal relationships amongst subsidiaries were limited. This strategy created structural holes in Sindcom's overall network structure.

Our analysis showed that the primary motivation for Sindcom's service-centered value provision strategies was to respond to customers who increasingly demanded holistic solutions and services (Sindcom webpage, 2019). This motivation was clearly emphasized in the firm's public communication. For instance, the firm aimed to grow by broadening customer offerings based on relevant knowledge, such as extended service support, training, and aftermarket services (Sindcom annual report, 2019). As such, the official position of Sindcom was to move to providing complete solutions rather than selling components through which they aimed at adding more value to the customers. Together with its acquired subsidiaries, Sindcom has transformed into a knowledge-based firm with high-quality products, system solutions, and a comprehensive range of technical knowledge (Sindcom webpage, 2019; Subsidiary 3 report, 2019). However, despite Sindcom's transition from product-centered to service-centered market positioning, customers still perceived services as secondary to the products.

Some customers highlighted the quality of the products as the main reason for them to work with Sindcom, even though they were aware of the changing industry dynamics toward servitization. They also believed Sindcom had created value for them by providing support services like technical advice and solutions. Furthermore, they emphasized that the good-quality service and feedback Sindcom provides facilitates business operations between Sindcom and customers. For instance, the customers indicated:

> *'They provide good-quality product… also if something goes wrong, they are reacting good [in providing support], that is important for us to know they are doing that.' (C2)*
>
> *'Let's say I have 5 [company] deliver the same type of equipment, then I would look at Sindcom because of good relationship, good service, good feedback; they always follow up and these are very important...they provide us good quality in service.' (C1)*
>
> *'They have the product we want, and also why we work with them is because of how they are acting on our needs, how they live up to the delivery times, how much failure they have in*

products, how they give us service if we get some problems, how they act in supporting us…that is also important for us.' (C2)

Most services labeled as a 'service' by the customers were augmented services to the products, such as technical support and training on product usage; implementation, commissioning, installation, and maintenance of the products; and problem-solving when something wrong happened with the products and sub-systems provided. Complex systems would require a higher share of services with project management for implementation at the initial phase and high expertise to run and maintain the systems. Nonetheless, the nature of Sindcom's products engendered challenges for Sindcom in terms of creating a service-dominant perception for the customers and exposed major challenges toward Sindcom's transition to a service-centered value provision strategy.

Participant subsidiaries knew they could not compete anymore, relying only on product features, and had to distinguish themselves from services that get attention. From Sindcom's perspective, customers prefer Sindcom's subsidiaries over other suppliers because of the combination of high-quality products and additional supporting services they provide. Our secondary data from subsidiary websites also confirms that providing effective and quick solutions with high-quality products to specific customer requirements is how they create value for their customers (Subsidiary 2 webpage, 2019). Subsidiaries aim to solve customer needs by providing sustainable solutions of the right quality and price with good relationships and a high level of service and technical competence (Subsidiary 4 webpage, 2019). Similarly, S4 emphasized its advantage as *'it is [our] technology, quality level of documentation and services in addition to the products*.' Another subsidiary indicated its key strength as a comprehensive range of technical knowledge in providing system solutions in addition to its high-quality products (Subsidiary 3 report, 2019). Furthermore, Sindcom sees improving service quality as one effective strategy to be more competitive in the market. For instance, S5 developed and successfully implemented 24/7 phone service, creating higher customer satisfaction with low investment costs. Thus, limited immigration/incremental movements toward a higher share of services were observed within the subsidiaries while they did not follow a specific path.

While every subsidiary claimed to have good relationships with its customers, S5 was found to be more committed to the relationships with its customers than other subsidiaries. S2 and S4 almost overlapped with each other on the offering/complexity of the products or sub-systems sold. However, for the sake of S2 representing a clear strategy of having 'niche' products, it can be labeled as having slightly more sophisticated offerings. S2, S4, and S5 were closely located because both their product and operation structures were quite similar, and thus, it wasn't easy to make sharp distinctions between them. S3 has been distinct in Sindcom for having an immensely wide range of products, mostly based on plastic components, and it also has long-term relations with its major customers.

Nonetheless, S1 was a unique case. S1 was Sindcom's most service-focused firm when counting unconventional and unstated services, such as 'integrating suppliers into one contract', 'providing purchasing efficiency', and so on, with complete offerings and deep relationships with customers and other subsidiaries. Such a holistic service focus of S1 is due to its foundational objective of value bundling and network orchestration. It has a broad network utilized for handling different inquiries and long and deeply involved relationships with its partners. As such, the servitization imperative led to the creation of S1 to coordinate autonomous subsidiaries, bundle value offerings, and orchestrate subsidiary and customer networks to reconfigure Sindcom's value offerings.

4.2.2. Serial acquisitions and value provision

A group of this size with such a loosely integrated structure is not common in the industry (OMX Nordic, 2019). Its idiosyncrasy had major implications on its subsidiaries' offerings. The future growth of Sindcom was planned to be achieved primarily by acquiring new subsidiary firms. Indeed, at first glance, the subsidiary firms' offerings and operations do not seem to be influenced by Sindcom. However, Sindcom has 'shadow' effects on each subsidiary that shape them somehow unconsciously.

This argument might be exemplified by Sindcom's aggressive and successful acquisition strategy of buying small firms with improvement potential and scarce resources. Consequently, the offerings of each subsidiary and Sindcom, their relationships with customers and suppliers, and Sindcom's network structure are heavily influenced by this strategy.

Our findings confirm that Sindcom's primary motivation for serial acquisition strategy is identifying and leveraging complementarities for value provision. In fact, the managing director of the flow technology group division of Sindcom was the owner of one of the earlier acquired subsidiaries. Since then, he has spearheaded the division's serial acquisition strategy as a form of fast inorganic growth and as a means of bundling resources for greater value provision in the face of the servitization transition. Our secondary data also demonstrates that Sindcom has a long record of experience in acquisitions, which accounted for a large share of its sales growth. Besides, acquisitions are seen as fundamental for their future growth strategy (Sindcom webpage, 2019). More than 100 firms have been acquired over the last decade. Sindcom follows a goal-oriented governance mechanism focusing on growth, margins, and tied-up assets (ibid). The acquired firms are expected to meet profitability goals that can support Sindcom's growth objectives. For instance, the MD of S5 stated that:

> *'If this is my own company, I would perhaps run the company in another way than I am doing now. My job is now giving [Sindcom] as much profit as possible. If it was my company, I could have lived with less profit.' (S5)*

Sindcom's acquisition strategy was based on two fundamental approaches: (i) acquiring niche industrial/technology firms in countries and regions with a strong trading tradition, such as Benelux, Denmark, Norway, Sweden, Finland, Switzerland, the UK, Austria, Central Europe, and Asia; (ii) acquiring international niche firms (Sindcom webpage, 2019). Through its network relationships with customers, suppliers, and other market actors, along with its excellent reputation, Sindcom has a good understanding of potential acquisition targets and continues to acquire several firms each year operating in niche industrial areas and net sales exceeding SEK 30 million. Nonetheless, in contrast to what the past research suggests concerning serial acquisition criteria (Degbey, 2015), Sindcom also focuses on relationships and network connections of the target firms beyond their products and technical expertise. Sindcom's serial acquisition strategy bred success over time and helped expand Sindcom beyond Nordic and European markets.

Our findings from the secondary data show that Sindcom follows a well-structured and flexible acquisition process (Sindcom report, 2019). Sindcom applies a strategy of engaging with potential acquisition firms at an early stage before a potential takeover. Its acquisition process involves different steps, including identification, evaluation, negotiation, implementation, and follow-up (Sindcom webpage, 2019). The firm focuses on the evaluation and due diligence processes to create sustainable growth. Accordingly, not every firm that is aware of Sindcom's acquisition success and wants to be a part of Sindcom is acquired, but only those that succeed in due diligence processes. Sindcom also carefully follows negotiation, implementation, and follow-up phases to achieve successful acquisitions that respond to the relevant shareholders' concerns—namely, the key individuals of the acquired firms (i.e., owners, management team), customers, and leading suppliers build continuous dialogue amongst them. Such serial acquisitions, in turn, propel future acquisitions' success and enhance Sindcom's value provision in line with the servitization transition. In this vein, Sindcom's past acquisition experience facilitates its subsequent strategies and effectiveness in its value provision activities.

On the other hand, serial acquisitions also create challenges for the acquired subsidiaries and Sindcom. Respondents have repeatedly highlighted the competition between the subsidiaries as the biggest challenge Sindcom has faced through the serial acquisition process. For instance, the MD of S3 stated that:

> *"The disadvantage for the Group is when the sister companies are competing against each other – which erodes Sindcom's profit in some cases."*

Besides, the overlap of product offerings from the subsidiaries is seen as another challenge. Sindcom has invested in creating cooperative relationships and communication between the subsidiaries to reduce the competition.

4.2.3. Subsidiary autonomy

Sindcom has very distinctive characteristics when it comes to its organizational structure. Its entire network, consisting of subsidiaries, suppliers, and customers, has vast horizons with fuzzy boundaries, while it is loosely controlled with weak links, especially between subsidiaries. Our analysis reveals that a high degree of autonomy is granted to the acquired firms' management teams to run their operations and make operational and strategic decisions. Sindcom's division director's philosophy of '*I do not believe in synergies*' constitutes one of the strategies that distinguish Sindcom from typical industrial firms in the market. Due to this logic, Sindcom leaves the majority of its bought subsidiaries as they are, and thus acts as a shadow organization with a very streamlined workforce and no operational directives to the acquired firms. Findings drawn from the secondary data of subsidiary firms also confirm that the acquisitions have not changed how the acquired firms operated and managed, as they have been given high autonomy in running their operations (Subsidiary 5 report, 2019; Subsidiary 3 report, 2019). Therefore, it has a minimal organizational structure dealing with the coordination of Sindcom subsidiaries. On the other hand, the subsidiaries are left mainly autonomous, acting mostly independently and solitarily in the network.

Regarding the relationships with the customers, our research participants indicated that their customers not only valued a product-service mix that forms 'offerings' in the conventional view but also placed considerable weight on relationships. Hence, Sindcom has focused on developing effective network relationships and communication with customers to sustain value provision. As subsidiary autonomy gave some degree of freedom to engage directly with the customers, the subsidiaries worked on more effective subsidiary-customer relationships. Moreover, the subsidiary firms also emphasized that many final customers wanted to focus on their operations and core competencies, so they had less time and resources to deal with suppliers.

Moreover, the self-determination exercised by the subsidiaries' managing directors is also essential for retaining key employees in acquired firms. In Sindcom's serial acquisition model, acquired firms retain their name, culture, and management when they become part of Sindcom. Several participants emphasized Sindcom's decentralized structure and autonomy given to them as long as they perform well. For example, MD from S5 indicated:

> *'Comparing to what I know about other competitors, [Sindcom] is a more decentralized organization and lets the MDs run their business without interfering—as long as it is going well, of course.' (S5)*
>
> *'The biggest advantage of being part [Sindcom] is that it is very decentralized. They do not care what I am doing as long as we are performing well. I like that, of course, very much.' (S5)*

Likewise, the manager from S4 stated:

'[Sindcom] is a very good owner that gives a lot of freedom to each individual company.' (S4)

Sindcom keeps the identity and business culture of the acquired firms as before the acquisition. Sindcom's division director noted, "The best decisions are made by the people who best understand customer needs and processes", and this approach was followed within Sindcom across all subsidiaries. Subsidiary autonomy was partly made possible because Sindcom has acquired profitable and well-managed firms that can continue business as usual. This was also emphasized by our participants. For instance, changes to S3's identity and business culture were minimal after the acquisition. The main changes were about the financial side—Sindcom requires more reporting—and about the use of Sindcom's institutionalized practices to foster the newly joined subsidiaries' professionalization. The manager of S3 stated that

'It is an important issue for [Sindcom] not to change the culture of companies they are acquiring. Because if the company is successful and profitable, why would you do some changes?' (S3).

'The main changes [after the acquisition] were on the financial side…that we have to do more reporting, budget and strategic plans now… these are the changes.' (S3)

Some of the acquired firms publicly shared the information that they are part of Sindcom, as they believed this gave some reputational advantages (i.e., being a part of Sindcom, which is listed in the stock exchange and has high brand recognition/value stemming from its reputation of assuring quality and reliability) in the eyes of their customers (Subsidiary 4 report, 2019). However, they further highlighted that Sindcom's strategy is to keep the identity of every acquired firm. The MD of S3 described this as;

'We are not obliged to show that we are part of [Sindcom] group. It is free to show or not. It is important in the [Sindcom] group that every company has their own identity.' (S3)

The acquiring firm granted autonomy as they believed it 'creates a favorable environment for nurturing an entrepreneurial spirit in the organization'. The autonomy was also reflected in the retention of managers and executives of acquired firms. In the case of our sample subsidiary firms, all managers have remained in their positions after the acquisitions.

In addition to the high degree of autonomy granted to the acquired subsidiaries, close cooperation and communication were built between Sindcom and acquired firms, which helped balance centralized policymaking and subsidiary autonomy. Our case analysis shows that Sindcom concentrated on developing strong relationships with the suppliers that eliminated risks associated with high subsidiary autonomy. For instance, the MD of S5 emphasized the quality of communication with Sindcom as:

'The communication with [Sindcom] works fine...we have worked very close together.' (S5)

5. Discussion

Drawing on our findings explained above, we develop a conceptual framework (Figure 2) where an effective combination of serial acquisition and subsidiary autonomy is considered essential for success in providing value when industrial groups face a servitization challenge. Our framework also highlights that serial acquisition and subsidiary autonomy are sophisticated activities with multiple components and important interplays between each other. Sindcom's unconventional approach to each of these activities and its effective integration of subsidiary autonomy and network orchestration following serial acquisitions underlie its success in its journey toward offering holistic solutions rather than goods and observed growth over the years.

5.1. Challenges and opportunities associated with servitization

In line with Zhang and Banerji's (2017) argument that market demand has shifted from manufactured goods to integrated solutions in the industrial sector, our analysis confirms that one key driver for Sindcom was to act on increasing customer demand for integrated solutions. The extant literature recognizes that firms are motivated to provide additional service offerings that can help develop stronger customer relationships and address customers' complex requirements (Bigdeli *et al.*, 2018; Raddats *et al.*, 2016; Weigel & Hadwich, 2018). Similarly, shifting to a complete solution provider that matches customer needs enabled Sindcom to create value for the customers and develop stronger long-term relationships with them (Kastalli & Van Looy, 2013).

Furthermore, previous research suggested that competitive motivations can drive servitization if manufacturing firms see services as an effective strategic tool for creating competitive advantage (Kowalkowski *et al.*, 2015) and market differentiation (Gölgeci *et al.*, 2021; Raddats *et al.*, 2016). Our findings also confirm that the challenges in differentiating their products and services in the customers' view motivated Sindcom's efforts to adopt servitization strategies.

Existing research outlined several challenges manufacturers face in the servitization transition, such as network re-configurations, supplier competition, and integration capabilities (Raddats *et al.*, 2016). For instance, Raja *et al.* (2022) identified the lack of a common understanding of the value and cost of servitization among intraorganizational network members as one of the main challenges in the servitization process. Also, tension within intraorganizational networks can lead to value-eroding effects (ibid). Similarly, Toth *et al.* (2022) also highlighted that servitization adds complexity to intraorganizational relationships, which in turn increases coordination costs and risks. As a company involving serial acquisitions of suppliers, Sindcom also faces challenges emerging from its changing intraorganizational network configuration. This requires capabilities in orchestrating relationships and managing suppliers competing with similar offerings. Sindcom has mainly focused on subsidiary autonomy strategies in transitioning to a niche industrial solution provider. Therefore, we expect challenges and opportunities associated with servitization to operate as external drivers for firms in reconfiguring the value provisions through subsidiary autonomy. These observations led us to develop the following proposition:

Proposition 1: *Challenges and opportunities associated with the servitization of niche industrial solution providers' value offerings trigger re-configuration of these solution providers' value provision through serial acquisition and subsidiary autonomy.*

5.2. Serial acquisitions and value provision

Makri *et al.* (2010) suggested that complementary knowledge contributed to firms' post-acquisition performance and argued that firms should identify and acquire firms that possess complementary resources and capabilities. Similarly, Xing *et al.* (2017) asserted that manufacturers could acquire other firms to obtain the knowledge and capabilities required for undertaking servitization strategies. For instance, a manufacturer can augment its service offerings by acquiring another firm possessing a service business unit with high engagement levels with its customers due to most services involving simultaneous delivery and consumption (Gölgeci *et al.*, 2021). Such a firm would have closer and more direct access to customers, supporting the serial acquirer's proximity to customers.

As Huikkola *et al.* (2016) emphasize, servitizing firms can develop a competitive advantage by leveraging knowledge, realigning sources, and creating synergies. Firms with prior acquisition experience may develop the routines required to make successful acquisitions, increasing their confidence in making subsequent acquisitions. Furthermore, previous research demonstrated that niche firms create value by offering unique products/services or practicing processes that differ significantly from rivals (Echols & Tsai, 2005). Hence, a niche identification strategy targeting niche service providers can create value for the servitizing acquirer. Our analysis also confirms that serial acquisitions function as an effective strategy to obtain complementary knowledge and skills required to provide service solutions for different customer needs and thus gain a competitive advantage. Serial acquisition strategy, driven by niche identification, acquisition experience, and resource synergies, as elaborated in our findings, also enabled Sindcom to access the knowledge and skills needed for sustainable service-oriented growth and customer value provision in an era when business customers are increasingly looking for holistic solutions rather than fragmented delivery of products. Accordingly, we put forward the following proposition.

> ***Proposition 2:*** *Serial acquisition of niche industrial solution providers facilitates their value provision to customers in industrial networks through niche identification, acquisition experience, resource synergies, and proximity to customers.*

5.3. Subsidiary autonomy and value provision

Our findings show that Sindcom follows a decentralized structure and grants its subsidiaries a high degree of autonomy. That said, results also confirm that Sindcom successfully integrates its subsidiaries through close cooperation and communication between the parent firm and the acquired subsidiaries. The parent firm's proactive and deliberate actions as a network orchestrator enabled cooperative intraorganizational relationships and strong communication and integration channels within the intraorganizational network. Gammelgaard *et al.* (2012) argued that autonomy is also associated with some degree of freedom to engage in intra- and interorganizational network relationships and transactions. Birkinshaw *et al.* (2005) empirically demonstrated that subsidiary autonomy facilitates the development of inter-firm relationships. In our research context, the acquired firms are given autonomy in managing their operations, building intra- and inter-firm relationships, and making operational and strategic decisions, while being integrated into Sindcom's overall intraorganizational network through close cooperation and communication.

Furthermore, previous research revealed that autonomy could lead to the risk that subsidiaries take a peripheral position in an intraorganizational network, which reduces the level of support received from the parent firm (Gammelgaard *et al.*, 2012). The development of cooperative relationships and communication between Sindcom and the acquired firms ensured that each subsidiary received sufficient support but was also allowed to maintain its unique identity. The autonomy of acquired subsidiaries also allowed Sindcom to exercise its network orchestration role within the network for value provision. Kawai and Strange (2014) showed that subsidiary autonomy creates more impact on overall performance when subsidiaries can exploit the full benefits of their unique strengths and entrepreneurial capabilities and when conditions are uncertain. Similarly, giving autonomy to the subsidiaries helped Sindcom deal with the uncertainty that emerged from the transition toward a niche service solution provider.

Additionally, Sindcom's other key motivation to provide subsidiary autonomy was to enable the subsidiaries to reap their entrepreneurial capabilities, as they believed autonomy creates a favorable environment for nurturing an entrepreneurial spirit in the organization. Sindcom did not need to deal with post-integration challenges for the acquired subsidiaries. They could develop effective cooperation and communication networks via Sindcom's brokerage position across autonomous subsidiaries and customers. These findings lead us to the following proposition:

> ***Proposition 3:*** *Subsidiary autonomy of niche industrial solution providers facilitates their value provision to customers in industrial networks through decentralized structure, post-acquisition integration, identity maintenance, and entrepreneurial culture.*

[Insert Figure 2]

6. Conclusions

Servitization may prompt serial acquirers to rethink their business model and the fundamental premises of their value offerings. Nonetheless, providing superior customer value while undergoing servitization can be challenging amidst a highly fluid network structure and dynamics resulting from the serial acquisition strategy. Remaining relevant to customers and maintaining a competitive edge in the market may be daunting in such circumstances. This research explores the underpinnings of value provision within industrial networks through the exemplary strategy and success of a large industrial business group from Sweden. In doing so, we concentrate on the role of serial acquisition and subsidiary autonomy as enablers of superior value provision and propellers of firm growth amidst a maturing industry context and servitization transition.

Research on servitization amongst industrial firms has been accelerating over the last several years (Hakanen *et al.*, 2017; Kowalkowski, Gebauer, Kamp, *et al.*, 2017; Rabetino *et al.*, 2018). However, less attention has been paid to how firms integrate serial acquisition with subsidiary autonomy while facing unprecedented changes in their value offerings (Degbey, 2015; Ferner *et al.*, 2004). This study explores how serial acquisition and subsidiary autonomy jointly influence industrial firms' value provision while experiencing the servitization transition and makes several contributions.

6.1. Theoretical implications

Our research contributes to the B2B marketing literature by shedding light on acquisition as an alternative strategic tool for servitization and the role of subsidiary autonomy in providing value and offering holistic solutions. It weaves a cohesive narrative that aligns with the complexities of the servitization journey. First, this study contributes to our understanding of holistic value provision by demonstrating how serial acquisition strategy is utilized to develop service capabilities (Huikkola & Kohtamäki, 2017). Previous research has mainly focused on organic development and internal growth and paid little attention to alternative strategies (Xing *et al.*, 2017). The role of acquisitions as a tool for servitization remains an unexplored research area (Kowalkowski *et al.*, 2017). Thus, our findings offer a timely and more nuanced understanding of holistic value provision through evidencing serial acquisition as an alternative strategy for successful value creation. To do so, we explore unique aspects of the serial acquisition strategy the participant firm applies and how they are leveraged to drive growth and transformation of the acquired subsidiaries and Sindcom as a whole. Although frequent acquisitions were adopted early in the evolution of Sindcom, Sindcom has relatively of late started to apply it as a systematic strategy to boost growth and transform subsidiaries, especially concerning the servitization transition adopted by the acquired firms. It was revealed that the past serial acquisition experience and the popular success of the acquired firms propelled the subsequent acquisitions like a snowball (cf. Haleblian & Finkelstein, 1999). This finding adds to the extant research on serial acquisition (e.g., Degbey, 2015; Laamanen & Keil, 2008) by highlighting how it can be utilized as a strategic tool to succeed in providing value while experiencing rapid network growth and a growing need for servitization. However, servitization through serial acquisitions entails various challenges. Hence, we extended our focus further to understand how and to what extent subsidiary autonomy affects the success of the acquisition-based servitization transition.

The second theoretical implication relates to our paper's specific input to subsidiary autonomy within the unique context of industrial groups. Post-acquisition integration is often seen as a *sine qua non* of most acquisition strategies, albeit being dilemmatic (Aghasi *et al.*, 2017). However, our findings reveal that decentralized approaches may also bring unique benefits, and post-acquisition integration is not always necessary when subsidiary autonomy is successfully combined with network orchestration. Subsidiary autonomy and ensuing enhanced network agency of the subsidiaries (due to synergy) lead to a higher value for firms that follow a serial acquisition strategy in servitizing industries. Subsidiary autonomy can empower subsidiaries to be more responsive to unique market demands and better coordinate overarching goals. Subsidiary autonomy allows ample room for subsidiaries to develop customized solutions to complex customer demands through product-service bundles, while subsidiaries benefit from being part of the coordinated intraorganizational network. Accordingly, our findings reveal that subsidiary autonomy is not mutually exclusive with exerting influence over subsidiaries, and subsidiary autonomy strategies can be applied to rise to the challenge of servitization. Therefore, our research further highlights the relevance of subsidiary autonomy to the effectiveness of servitization transition beyond the much-researched context of subsidiary-headquarter relationships (Ferner *et al.*, 2004; Johnston & Menguc, 2007; Kawai & Strange, 2014).

6.2. Managerial implications

Our research speaks to managers who seek to succeed in holistic value provision while tackling network complexity resulting from serial acquisition and subsidiary autonomy. First, we highlight that serial acquisition can be a viable strategy to overcome servitization-driven challenges by enlisting the resources and capabilities of niche firms that offer unique yet complementary offerings. Our findings reveal that such firms could be acquired serially and integrated in the pursuit of value provision to customers that increasingly consolidate their supply base and demand one-stop holistic solutions to their problems rather than shopping around for specific components. Consequently, we suggest that firms can rely on serial acquisition to tap into the untapped possibilities to navigate the servitization journey successfully. In this vein, our research highlights the potential of serial acquisition as a means to succeed in value provision amidst servitization.

Second, our findings concerning the role of subsidiary autonomy in creating greater value provide a new angle for successful servitization transformation and sustained value provision to firms that follow a serial acquisition strategy. When firms follow a serial acquisition strategy, enabling greater autonomy to subsidiaries can alleviate prospective subsidiaries' concerns and potential tensions linked to pre- and post-acquisition processes. If subsidiaries are ensured that they can keep their identity while utilizing the prospective benefits of being part of a larger industrial network, they may be better prepared for servitization transformation and integration into the acquiring firm's organizational structure. They can then be better positioned to capitalize on synergies and network resources to maintain and develop their competitive position while undergoing the servitization transition. Thus, our research brings forth an unexpected benefit of subsidiary autonomy and suggests that it can be a viable strategic tool to apply for serial acquirers' servitization success.

6.3. Future research directions

Despite the limitations, our findings and the exploratory nature of this research allow new research possibilities. First, our research is a single case study, which is constrained in terms of generalizing findings to a broader population or context and may not fully represent the diversity or variability within the phenomenon of interest. Future research may address this limitation through comparative case studies, longitudinal research, or mixed-methods approach.

Second, the interplay between serial acquisition and subsidiary autonomy entails further exploration. For example, it is not clear whether subsidiary autonomy can be a facilitator to the serial acquisition. Likewise, examining how subsidiaries can maintain their autonomy and distinctness within rapidly evolving networks due to the constant penetration of new network actors can be intriguing. Furthermore, these questions can be investigated in contexts dissimilar to the current study, e.g., larger, more established subsidiaries that are not subject to the prevalence of servitization.

Third, there might be interesting insights into network identities and dynamics within the context of serial acquisitions and high network fluidity. While autonomy can allow for maintaining distinct identities and characteristics of subsidiaries, it is not entirely clear how serial acquisitions and ensuing network fluidity shape network identities and dynamics of headquarters-subsidiary networks. For example, examining how a constant infusion of new members influences existing network relationships, group identities, and coopetitive dynamics can reveal fruitful insights and open up fresh research avenues. Most network research focusing on intraorganizational networks rarely examines the network dynamics of a loosely coupled network of serial acquirers. Thus, there might be promising opportunities for examining serial acquirers' networks and network dynamics in such contexts.

Fourth, the servitization transition might reshape the salesforce's role in industrial business groups (Hakanen *et al.*, 2017). However, the nature of such influence and how salesforce is interlinked with factors such as network characteristics, products sold, and servitization remain underexplored. Hence, future research may examine salesforce vis-à-vis servitization and delve into how the salesforce's role can be transformed along with the servitization transition.

Fifth, given the unique role S1 assumes in orchestrating the intraorganizational network of the participant firm, future research can explore the possibility of incorporating additional cases that involve subsidiaries without an orchestrator role to validate the generalizability of this specific networking pattern. By comparing the outcomes across different contexts, scholars can ascertain the extent to which these results hold true and whether similar networking dynamics emerge.

Finally, our findings highlight the positive consequences of serial acquisition and subsidiary autonomy in industrial networks. However, we acknowledge that each of these strategies may come with caveats. As such, they may have subtle costs and less positive consequences. For example, there is a need for further inquiry into the coordination costs in such loosely coupled networks, the negative aspects of having subsidiaries competing with each other, or unforeseen challenges of serial acquisition. Every strategy includes a trade-off between costs and benefits, and it is essential to shed light on these different sides.

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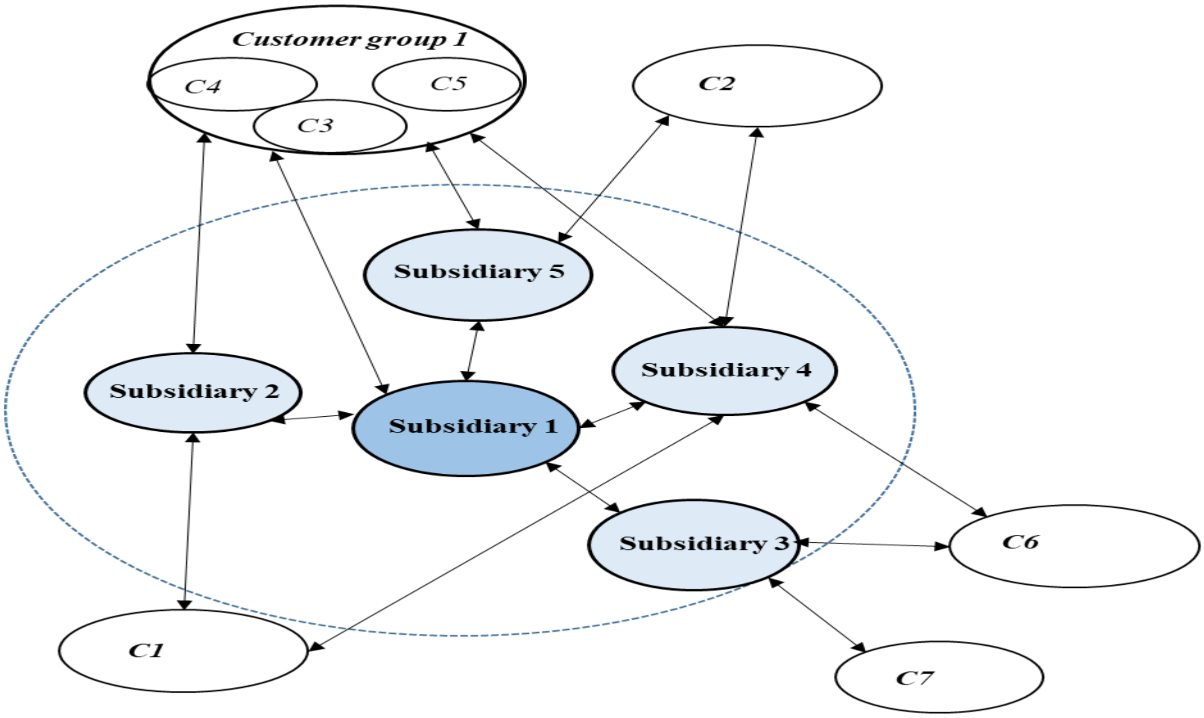

Figure 1. A simplified relationship structure of the value network of Sindcom's examined division and its interviewed customers

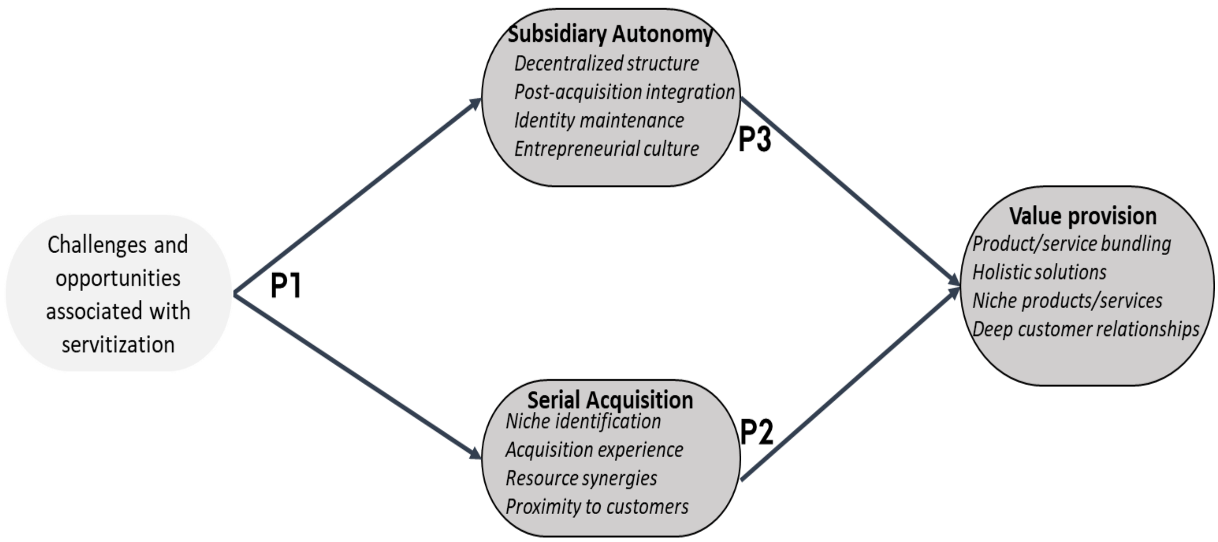

Figure 2. The role of serial acquisition and subsidiary autonomy in providing value within servitizing industrial networks

Table 1. Overview of interviewees

Subsidiaries (S) /Customers (C)	Core products/services	Size	Location	Interviewee Position
S1	Capital investment projects and large contracts	Small	Östergötland	Managing Director
S2	Corrosion-proof fluids technology	Small	Östergötland	Managing Director
S3 (2 interviews)	Application specialist in the field of flow technology	Medium	Östergötland	1) Sales & Marketing Manager Sweden 2) Managing Director
S4 (2 interviews)	Control and measurement of flows: valves and instruments (flow meters, pressure equipment)	Medium	Östergötland	1) Product Manager 2) Project Manager
S5	Valves, measuring instruments, gas instruments, and spare parts, as well as services of maintenance, repairs, training	Small	Scania	Managing Director
C1	Engineering and technical consulting services	Small	Östergötland	Automation Engineer
C2	Engineering services and equipment such as valves, instruments to chemical plants	Large	Scania	Project Manager
C3	Specialty chemicals for the pulp and paper industry	Large	Östergötland	Maintenance Manager
C4	Coatings and chemicals	Medium	Östergötland	Site Manager
C5	Maintenance and technical projects.	Large	Östergötland	Instrumentation and Automation Engineer
C6	Flue gas cleaning and energy recovery services for waste	Small	Östergötland	Manager Projects
C7	Consulting and process engineering for recycling, recovery, and cleaning metals from different wastes.	Small	Östergötland	General Manager

Table 2. Interview protocol for subsidiaries

Interview themes	**Questions and issues covered**
Value offerings and company	Probe into how subsidiaries provide value and how they are influenced by servitization (*i.e., What is your core activity? What do you produce/sell (beyond the information we can find on your webpage and brochures)? What are the balance and characteristics of the product-service mix of your offerings? How was the product-service mix, for example, five years ago, and how do you think it will be in 5 years? What are the services that you specifically provide to the customers? Could you explain this in detail? What kind of analysis did you make to fit the products with the services provided?)*
Customers	Probe into how leaders perceive (present and future) disruption and challenges at work *(i.e., How does the communication with the customers work in the company? What kind of relationships do you maintain with your customers (transaction-based/partnership)? Are customers involved in the development process, and are there any possibilities of making customized products? What are the main characteristics of your products when it comes to customization and standardization? (If standardized, how do you differentiate them from customer to customer?) Are customers segmented? If yes, how? What are the different approaches to the segments, if any?)*
Network	• Headquarters Explore the focal subsidiary's relationship with the headquarter (*i.e., What are the benefits you gained being in the […] Group compared to being independent? Are there any disadvantages that you face? How does the […] Group help create and add value? How does it help to provide the customers with the right offering? Did/do you have business culture differences with the […] Group? How do you overcome it? Do you feel any pressure from the Group? Would you like to be more/less independent? Would you like to be more associated with the Group by the customers or with the company brand?)* • Other subsidiaries Explore the focal subsidiary's relationship with other subsidiaries (*i.e., How and to what extent do you communicate with other subsidiaries? Do you know what the other subsidiaries' value offerings are? When you are collaborating with the other subsidiaries to create combined/ integrated offerings, how does the communication work? How are the activities synchronized? What are the main problems that might occur? Do you feel the competition with the other companies within the Group? How does it work to be in competition and collaboration at the same time?*) • Suppliers Explore the focal subsidiary's relationship with its suppliers *(i.e., Why, in your opinion, is it beneficial for your suppliers to work with you? Are you looking for new suppliers to initiate a relationship with? What are the responsibilities of your suppliers to you and to your customers other than supplying goods, e.g., in terms of transportation/Vendor Managed Inventory, etc.? What do you think is your supplier's positive difference from alternatives when creating value for you and for your customers?)*

Table 3. Interview protocol for customers

Interview themes	Questions and issues covered
Suppliers' (subsidiaries') value offerings	Probe into how customers see value provision by their supplier(s) (subsidiaries) and how they perceive their relationship with their supplier(s) vis-à-vis servitization (*i.e., For how long have your company and you been personally working with one of the Group companies? How did the cooperation begin? What are the balance and characteristics of the product-service mix of their offerings? How was it, for example, five years ago, and how, do you think it will be in 5 years? What are the services that you specifically need from your suppliers? What does the supplier(s) provide, and what it fails to provide? What is the significance of the supplier(s) or the offerings of the supplier(s) to you? What type of support and service do you receive from the supplier(s)? How does the communication and information flow with the supplier(s) work?)*
Relationships with the (subsidiaries) suppliers	Probe into how leaders perceive (present and future) disruption and challenges at work *(i.e., What are the main benefits you get working with Group Company? What are the sacrifices? What values do you expect your supplier(s) to provide? How do they change the time? Do you think that your supplier(s) provides you with enough information regarding anything that might be valuable for you, such as product information, market information etc.? Do you have value generation or co-creation activities with the Group subsidiary that is apparent? If it exists, how does it work? Are your needs for relationship depth or communication patterns with your supplier(s) changing? Would you like your supplier(s) to take more of your operations on themselves?)*
Relationships with the headquarter	Explore the focal customer's relationship with the headquarters (*i.e., Are you aware of the Group behind your supplier(s)? Would you like to work with more of the Group's other subsidiaries, and would the fact that they are from the same Group be attractive to you? Did/do you see the advantages that your supplier(s) being part Group? If yes, what kind of advantages? Did anything change after the Group acquired your supplier(s)? What do you think is the current competitive advantage and disadvantage of the product/service package offered by your supplier(s) compared to its (their) competitors?)*

Table 4. Overview of the five subsidiaries

	Subsidiary				
	1	**2**	**3**	**4**	**5**
Time of acquisition	Not acquired (Established)	1999	1995	2001	1994
Primary reason for acquisition /establishment	Coordinating the other acquired subsidiaries and their value offerings.	Accessing complementary resources and capabilities in flow technologies.	Accessing expertise and knowledge in the application of flow technologies in different countries.	Acquiring competence and quality systems for advanced control, management and measurement of flows.	Acquiring technical expertise in valves, actuators, boiler monitoring, and gas analysis.
Product or service offered for the market	S1 positions itself as a flow technology and service company offering complete project solutions with a range of products, such as valves, pumps, and instruments.	A comprehensive range of pumps, piping systems, valves, tanks, and all accessories. On-site support service.	Safe flow solution applications. Fast and close personal service to customers by phone and email.	Products and services for control and measurement of flows: valves and instruments (flow meters, pressure equipment, etc.)	Valves, measuring instruments, gas instruments, spare parts and also provides services such as maintenance, repairs, and training.
Proximity to the customer	Strong long-term yet indirect relationships with most customers. S1 operates as a single-source partner in flow technology projects and efficiency concepts for its customers.	Close direct relationship with customers; customers visit and follow-ups after the delivery of products and services.	Develops strong direct relationships with customers as business partners. Builds dialogue with its customers to understand their needs and adjust its product/service range.	Runs long-term direct relationships with many customers, visits them, and tries to find the best products for its customers.	Strong direct relationships with customers through their experienced sales managers who provides on-site solutions.
Relationship to Sindcom	A lead subsidiary coordinating other acquired subsidiaries and bundling their value offerings.	Close relationship with S1. Operating under flow technology business area of Sindcom	Operating independently and having a close relationship with S1.	Operating independently and having a close relationship with S1.	Operating independently and having a close relationship with S1.