

Collaborative partnerships in the automotive industry: Key motives and resource integration strategy

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Abstract

The research communities of international marketing, strategic partnerships have produced extensive knowledge on strategic alliances. But still silent on collaborative partnerships (CPs) in the servitization context. This paper aims to analyze CPs in the automotive industry and to present key motives and the resources integration strategy. It adopts a document-based multi-case method. The data is analysed through thematic analysis. The analysis identifies five key motives - new revenue streams, resource acquisition, competitive advantage, market demand and customer relationship, and it also reveals the service strategy of case firms by tracing their strategy on resource integration. This is the first study that attempts to provide new insights into CPs in the automotive industry in the servitization context. This paper contributes to customer relationship management by revealing that customer relationship is one of the key motives for a firm's strategic alliance.

Paper type: Research paper

"The challenges we face are far too great to go it alone, that's where teamwork and collaboration come into play" - James E. Lentz III, CEO Toyota Motor.

1 Introduction

Strategic alliances have been attracting enormous attention from academics, policy makers and practitioners (Albers *et al.*,2016). A strategic alliance is cooperation or collaboration between two or more independent companies to cooperate in the process, production or sale of products and services or other business objectives. Scholars have defined it as a mutual agreement between two firms to pursue common objectives and benefits (Simandan, 2018) and to achieve long-term benefits (Gulati *et al.*,2012). Firms can build skills and capabilities by establishing networks with partners in the form of M&A or by means of a strategic alliance (Alaaraj *et al.*,2018). Through a strategic alliance, the partners may provide resources such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise or intellectual property. These alliances are well discussed in operations management from various perspectives, such as cooperative behavior and resolving competitive conflicts, dealing with turbulence and market uncertainty and improving technical skills (Yang *et al.*, 2014).

Automotive firms have been using cooperative alliances for many decades to deliver products and services in the same ecosystem (a network of organizations). The technological giants Apple and Google, and even start-up technology companies have entered automotive businesses with their disruptive technological solutions. This competitive environment increases pressure and at the same time opens new opportunities for automotive firms. In these dynamic conditions, firms need to cooperate with other actors and form new alliances across and beyond the industry to continue being competitive (McKinsey, 2016). Competitive pressures have been encouraging firms to seek additional sources in cooperation with other firms (Ćetković, 2016). These cooperative arrangements have focused on achieving common

strategic objectives, which may lead to a significant and lasting exchange, and to sharing and joining in the new development of knowledge, products, services or technologies, providing access to complementary competencies that are expensive to develop within a company (Krupnik and Jolly, 2002).

Recent studies on strategic alliances offer greater knowledge on objectives, goals and motives for alliances between firms (Cohen,2010; Yang *et al.*,2014; Junni *et al.*,2015; Un *et al.*,2010; Cefis and Triguero,2016; Miozzo *et al.*,2016; Saxena ,2012;Gottinger,2007;Christensen *et al.*,2011; Gomes ,2015). Much of the literature produced up to now has focused on strategic alliances, while automotive firms' collaborations in the service integration context are less discussed. Consequently, the interest in this paper is in researching how multinational automotive firms form collaborations with technology companies, what motivates them, how they work together to add more value to the services they offer, and how they remain competitive in the market. The goal is to identify key motives and the service integration strategy through CPs and to produce new knowledge on the practices needed to promote the adaptation of CPs. The study answers the following research questions:

RQ1- What are car manufacturers' key motives for collaborating with technology companies, including start-up companies, and

RQ2- How do car manufacturers set up these collaborations to enhance servitization?

The paper adds to the strategy literature that calls for research in different industrial settings (Xing *et al.*, 2017) by revealing the firm's strategy. The research contributes to the debate on CP strategy by identifying car manufacturers' key motives. We have purposefully focused on car manufactures as previous research has not covered this research direction.

The paper is structured as follows. The next section discusses the literature on service integrations and strategic alliances. The methodology section describes the research design, the

nature of the data and the characteristics of the case firms. The results section presents the findings of the study. In the discussion section, the case firms' key motives are presented and why these strategies would be more advantageous than other types of alliance methods is discussed. Last, the conclusion briefly presents the findings, implications, and limitations of the study, and suggests future research directions.

2 Literature review:

The competitive landscape has grown more complex and the pace of change is accelerating. Margins are being squeezed in capital-intensive industries. Competitors are increasing in number, becoming more formidable and global, and some destroy more value for incumbents than they create for themselves. As profit growth slows, more companies will be fighting for a smaller slice of the pie, and incumbent industry leaders cannot focus simply on defending their current market niche (Richard and Jonathan, 2015).

2.1 Service integration in manufacturing firms

To survive in this dynamic environment, firms have shifted their core business from a pure product offering to a product-service offering. Many scholars have shown the benefits of service integration as a source of competitive advantage by offering new possibilities for growth and extending the range of existing offers into services (Mont, 2002; Baines *et al.*, 2009). Furthermore, (Goedkoop *et al.*, 1999), companies often consider service infusion to protect their market share or as a response to a legislation threat, customer demands, and expectations, or a competitor's dominance.

Market players focus on core competencies and on increasing technological complexity, which leads to greater specialization, to become more flexible organizations (Oliva and Kallenberg, 2003; Tukker, 2004). In order to be successful, the company must generate a variety of revenue streams from both product and service transactions and find new ways to make services tradable (Araujo and Spring, 2006). Developing a services business also requires

a new structure and new forms of organization in the company (Araujo and Spring, 2006; Cook *et al.*, 2006). Davies *et al.* (2006) suggest that the new organizational structure should consist of front-end customer-facing units, back-end capability providers and strong strategic centers.

In a context of global competition and falloff profits from vehicle sales, automotive firms have focused their attention on service offerings. This transition in the automotive industry has been studied by a few scholars. For example, Mahut *et al.* (2016) studied product-service systems for the servitization of the automotive industry, pointing out that after-sale services remain an important part of companies' activities in the automotive industry. The authors expanded this view, stating that part of the automotive industry turns into user-oriented services and result-oriented services as part of their strategy to survive the competition. Lay *et al.* (2014) said OEMs (original equipment manufacturers) increasingly resort to mergers, acquisitions or alliances to survive in a complex, global market characterized by heavy research, development and innovation costs, together with high fixed production capacity costs. Services are not just offered to improve vehicle performance but also to enhance customers' operations, to improve the efficiency or effectiveness of their activities or to advance their skills. Some automotive firms offer advanced services such as sport and eco-driving courses, mobility solutions for disabled persons, training and consultancy for fleet maintenance and management and spare-parts management optimization, all of which are examples of the large range of advice, training and consultancy services (Pistoni and Songini, 2017).

Hence, scholars have discussed the importance of servitization in manufacturing firms to be competitive in the market. However, previous research has not yet produced sufficient evidence of how servitization can be enhanced through collaborations. There is a need to understand why automotive firms enter into collaborative agreements with other firms, and how this cooperation helps to create and/or enhance service offerings. The authors expanded the literature review on strategic alliances to address these issues.

2.2 Strategic alliance

A strategic alliance is a relationship between two commercial companies, usually formalized by one or more business contracts. Two companies typically form a strategic partnership when each of them possesses one or more business asset or have expertise that will help the other by enhancing their businesses. Strategic partnerships can develop in outsourcing relationships where the parties desire to achieve long-term win-win benefits and innovation based on mutually desired outcomes (Supriyadi and Ekawati, 2014). Cooperation takes place on different levels of the value chain, ranging from a collaboration between a firm and its suppliers to a full-fledged joint venture between ardent competitors (Sydow and Windeler, 1998). Firms' collaborations and customer collaboration have an effect on both incremental and radical service innovation, while business partner involvement has an effect on radical service innovation.

CPs are common in many industries and are designed for firms to benefit from different perspectives. Nishimura (2010) defined CPs as certain business processes of two or more companies, which may effectively augment the competitive strategies of the firms involved while providing mutual benefits through exchanging technologies, skills, resources or products. Collaboration is an important strategy for firms to generate new products and services (Schleimer and Faems, 2016), mutually complementary assets (Teece, 1992) and/or new technology (Rothaermel, 2000). Companies utilize these partnerships to increase their dynamic capabilities to create value for their products and services. Table 1 is a list of the potential goals of CPs.

Table 1*2.3 Research need*

By summarising the literature review, the authors acknowledge that a considerable amount of literature has been published on strategic alliances from different perspectives such as strategy, competitive advantage, market position, and customer satisfaction. But knowledge of the service offering perspective still unexplored. Hence, we believe that research work on the influence of CPs on the service offering of car manufacturers is a novel contribution to the servitization and alliance literature.

3 Research methods*3.1 Research design and selection of case firms*

The focal point of this research is CPs in the servitization context in automotive industries, more specifically car manufacturing companies. In contrast to earlier studies that focus on manufacturing firms and government institutions, this qualitative multiple-case research paper strives to reveal car manufacturing firms' interest in CPs rather than mergers and acquisitions. A qualitative method is a powerful tool for management scholars and has several merits beyond those of traditional quantitative methods, demanding rigor in its procedures to ensure the reliability and validity of the results obtained (Shah and Corley, 2006). According to Yin (2003, p.2), "the distinctive need for case studies arises out of the desire to understand complex social phenomena, because the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events, such as organizational and managerial processes." The multiple-case design offers more benefits - such as vitality, versatility, and replication - than single case studies (Yin, 2003).

This study follows the document analysis method (Bowen, 2009) to collect information on the collaborations that took place during the 4-year period 2013-2016. The data search period lasted 6 months (January 2017-May 2017). First, the authors searched for collaborations

and partnerships announcements in different issues of specialist magazines and newspapers (The Economist, Automotive News, TechCrunch, The Wall Street Journal¹) and on the internet. The keywords used in the search process were: ‘collaboration in automotive’ and ‘strategic partnerships in the automobile industry’. The authors then checked the authenticity of the news announcement by cross-checking with company websites, press releases, and news sections. After cross verification of the partnership announcement, five collaborations were chosen for further analysis. In total 10 public documents (5 press releases and 5 annual reports) were collected. The firms’ annual reports were collected for the strategic plans for collaborative agreements. These documents help the researcher to develop understanding, discover insights relevant to the research problem and produce a solid description of what is under examination (Bowen, 2009). Description of the case firms, collaborations, and data sources are presented in chronological order in Table 2. Four car manufacturing firms were chosen with the expectation of revealing their motives and strategy.

Table 2

The reason for selecting just these firms was that they have been offering value-added services and making collaborative agreements with firms for many years. Hence, the authors believe that the data from these firms justify the study objectives. Table 3 is a summary of the characteristic features of the chosen companies participating in partnerships.

Table 3

¹ The Economist - <https://www.economist.com>
Automotive News - <http://www.autonews.com>
Techcrunch, - <https://techcrunch.com>
The Wall Street Journal - <https://www.wsj.com>

3.2 Data analysis

The thematic analysis technique was used to analyze the data. The documents were organized and imported into Excel spreadsheets. The excel cells were named as the firm, year, partner firm and key announcement. The data were initially coded using the open coding method, based on the researcher's understanding and interpretation of the data (See table 4). Subsequently, these codes were categorized into the themes that emerged from the literature (Walker and Myrick, 2006). The analysis procedure followed Bowen's (2009) approach.

Table 4

4 Results

Five key motives were identified among the selected case firms during the CPs. This section is divided into two parts. The first section presents the case firms collaborations and their announcements, and the second discusses resources integration strategies of the case firms. The data analysis showed that the case firms were associated with 4 multinational technology firms and 1 startup firm. The case firms' key motives for collaborations are presented in Table 5.

Table 5

Case 1: The BMW Group is one of the most successful makers of cars and motorcycles worldwide and among the largest industrial companies in Germany. With BMW, MINI, and Rolls-Royce, the BMW Group owns three of the premium brands in the automotive industry. The firm launched a ParkNow service platform in 2012 for parking related services. In order to expand the ParkNow service portfolio, BMW initiated collaborative agreements with companies that offer parking related services. The strategy for partnerships was stated in the 2013 Annual report, as:

Working together with other business partners helps to increase market coverage, expand the range of solutions on offer and encourage the development of forward-looking technologies. Co-operations of this kind generally result in the greater availability of a wider range of new technologies for the customer and increase the likelihood of successful market launch in the long term. (p.78)

To expand the ParkNow service portfolio, BMW iMobility (a sustainable mobility venture) Services signed an agreement with the Estonian-born tech company NOW! Innovations in 2013. This partnership aimed to provide mobile parking solutions for BMW customers. Its functionality includes dynamic billing mechanisms and multiple payment sources. The director of BMW iMobility Services commented the following during the announcement:

“Now! Innovation is a perfect match for us. The current scope of our ParkNow service is off-street parking. With the on-street capabilities of Now! Innovations we will soon be able to strategically enhance our product offer and be even more attractive for our customers. The integration of on-street parking is a major step in creating a one-stop parking experience.”

Three years later, in 2016, BMW introduced a parking payment service through the ParkNow app for their fleets in Germany and Austria. Since 2017, this service has been available to all BMW customers.

Case 2: In a line to expand customer-focused services, BMW teamed up with Accenture in 2015, to develop the ‘Business Integration Platform’ (BIP), which supports product management, customer management, and ordering and contract management capabilities for Connected Drive service (web-based in-car services) within the BMW Group (BMW, MINI and Rolls Royce). This collaboration led BMW to add new services to the ConnectedDrive catalogue, as the Managing director of Accenture’s automotive practice explained:

Car buyers want the latest consumer technologies and services integrated into connected vehicles, so the ability to add services in the future is very important. Leading car companies that sell a range of connected vehicle services directly to customers gain a much closer relationship with their buyers, establishing a new sales channel (Hatter, 2015).

BMW Connected Drive service has been available in the US market since 2016. In August of the same year, its availability was extended to all European countries. This partnership was set up not only to obtain technology from Accenture but to create a new revenue channel for BMW through these services.

Case 3: Porsche AG is a German automobile manufacturer specializing in high-performance sports cars, SUVs and sedans. Porsche AG has its headquarters in Stuttgart and is owned by Volkswagen AG. Porsche has been offering customized service though Porsche connects internet-based service for its customer in 40 Countries. As part of the mobility services launch, Porsche established a partnership strategy with technological firms. This partnership strategy was disclosed in the 2016 Annual report, as:

As part of the future program ‘TOGETHER – Strategy 2025’, Volkswagen is setting up a new mobility solutions business with which it will press ahead with its transformation into a global leader in sustainable mobility. Volkswagen will develop and market mobility services independently or in partnership with others. (p.76)

Porsche and AT&T signed a multiyear agreement in 2016. As part of this collaboration, AT&T provides technology for services like Wi-Fi hotspot, navigation, news and weather alerts, and other infotainment services. A senior vice president of Internet of Things described this collaboration as:

Porsche’s technologies have advanced performance and spurred improved innovations within the automotive industry. Our work with Porsche will continue that innovative tradition and deliver a connected experience in their cars for drivers and passengers (AT&T story, 2016).

AT&T initiated wireless connectivity services in the Porsche Macan, Boxster and 911 models in 2017. The Connect Plus module ensures maximum connectivity services in the Porsche fleet. It features a built-in LTE module with a SIM card slot for an excellent wireless Internet access point, which provides in-car online access from WLAN-enabled client devices like laptops, tablets or smartphones.

Case 4: General Motors (GM) is an American multinational corporation headquartered in Detroit, which designs, manufactures, markets and distributes vehicles and vehicle parts, and sells financial services. GM has been offering in-vehicle services through Cadillac CUE, a service platform, since 2012. To keep their market position and technological resources, GM initiated cooperation agreements with other firms. This partnership strategy was highlighted in the 2015 annual report as:

‘We continue to monitor and evaluate opportunities to strengthen our competitive position over the long term while maintaining an investment-grade balance sheet. These actions may include opportunistic payments to reduce our long-term obligations as well as the possibility of acquisitions, dispositions, investments with joint venture partners, and strategic alliances that we believe would generate significant advantages and substantially strengthen our business (p.38).

GM and Bosch announced a collaboration to introduce the supply of an infotainment system in the fleet. As part of this collaboration, Bosch would develop and supply the head unit, i.e. the central operating device, for a number of different General Motors car models. Uwe Thomas, President of the Car Multimedia division at Bosch, commented on this collaboration:

With our new head unit for General Motors, we will connect the car driver to the internet world in a way that is adapted to the special environment in the automobile. New technology is based on the extensive experience in vehicle technology of the world's largest supplier for the automotive industry. Another highlight is the device's easy operation using natural voice input (Bosch press release, 2013).

In February 2017 Cadillac introduced the Cadillac user experience system, which offers personalized, intuitive interface services.

Case 5: The Volvo Group is a Swedish multinational manufacturing company headquartered in Gothenburg. Its core business activities include the production, distribution, and sale of cars, trucks, buses and construction equipment. Volvo also supplies marine and industrial drive systems and financial services. In 2013, Volvo Group’s sales amounted to about SEK 273 billion. Volvo Car Corporation has been offering the infotainment system Sensus since 2012. Sensus was the interface that promoted instinctive communication with the car, connecting it

to the driver's digital world. The firm strongly focused on research developments and collaborations with other partners to design vehicle and customer-centric services. This study found the firm's strategy in the 2013 annual report:

We invest in advanced research and development and collaborate with key partners to develop smart technology and vehicle safety and security solutions that improve conditions for drivers, road users, pedestrians, vehicles, and cargo. As a global manufacturer of transport solutions, the Volvo Group works to help develop solutions adapted to the specific needs of each society and market and strives to find ways to collaborate on raising traffic safety standards (p.1)

In 2013, Volvo announced a partnership with Apple to introduce an operating system known as Apple Carplay in their fleets. President and CEO of Volvo Cars commented as follows:

Apple's clean and intuitive user interface is a perfect match with Volvo's Scandinavian Design approach and our focus on fluid functionality,we have created a wholly-integrated user experience in our large portrait-oriented touch screen that takes the in-car mobile device experience to a new level. That, coupled with the obvious driver safety benefits of an advanced voice control system like Siri, made Apple a perfect match for Volvo (Volvo Press release, 2014).

Three years after the collaboration announcement, Volvo introduced Apple Carplay technology in the V90 Estate and the XC90 crossover models in the USA and UK market. The 2016 model XC90 became the first Volvo vehicle in the U.S. to support Apple's CarPlay, enabling iPhone owners to access some apps from the crossover SUV's dash display. Apple Carplay provides access to Apple Music and to apps such as Spotify, Beats Music, iHeartRadio and Stitcher.

4.6 Resources integration strategy

Figure 1 shows the resources integration strategies of the case firms. This section discusses the findings through the three integration strategy perspectives proposed by Xing *et al.* (2016).

Figure 1

This study observed that three firms, GM, Volvo, and BMW adopted reconfiguration strategies, in other words, these firms modified existing services or designed new services with

the help of the partner's knowledge and resources. As part of an agreement with GM, Bosch develops and supplies the head unit, the central operating device of the cars. This technology is only designed for GM fleets. Volvo Cars enhance Apple's capabilities by linking them to a specially-developed interface that allows drivers to use voice and steering wheel controls to access Apple features and services, ensuring the entire interaction is always safe and easy to use. By using the Apple operating system, Volvo designed a user's interface to access Apple features and services in Volvo cars. As a result, Apple CarPlay integrates with Volvo Cars' new user interface, becoming part of the onboard system and displaying well-known icons for Apple applications. As part of the agreement, Accenture designed the Business Integration Platform to enable the BMW Group's connected vehicle to offer ConnectedDrive. Using the new BIP, the BMW Group is able to add new services for ConnectedDrive customers through the product catalogue and will increase the range of services in the future. The ConnectedDrive Store enables the sale of new services to existing customers depending on vehicle capabilities. It also enables used car buyers to tailor their vehicles' ConnectedDrive services to their needs.

Two case companies, BMW and Porsche adopted utilization strategies to introduce new services for their customers. Prior to its collaboration with NOW! Innovations, BMW was only capable of providing off-street parking solutions to its customers. However, as part of the collaboration agreement, the firm has now integrated on-street parking technology into their fleets. With the knowledge accessed from NOW! Innovations, BMW started both off-street and on-street parking solutions for their fleets. As a partner, AT&T delivers Wi-Fi and Infotainment Services to Porsche Macan, Boxster, and 911 models. These services are either standard or are an available option in several models and include a Wi-Fi hot spot, navigation, news and weather alerts, and other infotainment services.

5 Discussion

With this study, the authors contribute to the research debate on CPs by revealing the firm's strategic choice. By focusing on CPs, attention is drawn to the motives and servitization strategy of car manufacturing firms. The study was designed to respond to two research question: the key motives for a car manufacturer collaborating with technology companies, including start-up companies, and how car manufacturers configure these collaborations to enhance servitization.

We explored the key announcements, media releases, press notes, press releases, official websites, and annual reports of five case firms. The discussion part is presented under two subheadings; the first part discusses the key motives for the CPs and the second part focuses on the servitization strategies of the firms.

5.1 Key motives for CPs

The study identified the five key motives for collaborations; market demand, customer relationship, enhance the product or service portfolio, and new revenue streams. These motives are categorized into internal motives and external motives. Figure 2 shows a model for key motives for CPs. Among these five motives, three motives play a key role in collaborations; competitive advantage, enhance service portfolio and customer demand.

To strengthen their competitive position in the market, firms design and develop products and services that are hard to imitate. This strategy creates a competitive advantage for their services and products. The firms' announcements emphasize that they choose partners for the best services and technology, for example, GM collaborates with Bosch to design their driver information system, which is completely new in the market. Our finding shows that to keep their market position firms collaborate with another market leader to access technology or to develop new services or products. This finding coincides with the results of Pateli and Giaglis's (2005) study called "Technology innovation-induced business model change: a

contingency approach". Firms choose their strategic incentives to apply technology innovation and to differentiate themselves from the competition.

The study found that the case firms collaborate with other partners to access services, technology, and knowledge to integrate them into their service portfolio. The firm only chooses services that are already well accepted in the market or that respond to customer demand. This kind of strategy can help firms to deliver high intellectual-value-added services (Muller and Doloreux, 2009). Firms engage in strategic alliances for different business needs. Koza and Lewin (2000) emphasize that the main reason for entering into alliances is to augment and support the adaptation strategies of the firm.

Figure 2

Another motive found in this study is customer demand. Firms constantly strive to meet customer demands. To create more value for products and services, firms should identify customer needs and respond to them by introducing new products and services. Several key people and documents in our analysis provide strong evidence to support the fact that customer demand is a key motive behind their collaborations. Goldman *et al.* (1995) claim that companies must be very sensitive to losing their customers to be able to survive in rapidly changing markets. Firms must relentlessly improve their product and add services to achieve customer enrichment. They must introduce services that satisfy the new demands of customers in order to remain in the increasingly competitive market (Goldman *et al.*,1995).

Creating a new revenue stream is another motive in the set of key motives for CPs. In advanced industrial environments, manufacturing firms struggle to generate income from a pure product business. For this reason, they have moved to a product -service business, where customer services could generate additional revenue. In our study, we find that firms make collaboration agreements with technology firms to introduce new services. These services

provide new revenue channels for the firms. More specifically these services are customized; in other words, services are provided in a premium model where the customer can opt for the services they want when they want, by paying; for example, BMW and Accenture offer premium services. Koza and Lewin's (2000) study confirm that firms achieve new sources of income by combining complementary resources acquired through partnerships. This goal is in line with the motives for collaboration listed by Settanni *et al.* (2014). One of the key drivers for servitization is the desire to increase revenue and reduce cost.

Our study identified a new motive for collaborations: customer relationship. This motive was witnessed in two case firms: the BMW and Accenture and the Volvo and Apple partnership agreements. These firms aim to expand their service offering by integrating services complemented by partner firms and creating a better customer relationship.

The key motive 'customer relationship' has not yet been explained in the servitization context in previous research and offers a novel contribution to the research on CPs in the automotive industry.

5.5 Resources integration and servitization strategy

By adopting the Xing *et al.* (2016) resources configuration model, the study found that the case firms configure resources in two directions, *utilization* and *reconfiguration* modes. We observed that two firms, BMW and Porsche, extended their service offerings by utilizing the partner's capabilities and skills. In other words, these two firms take advantage of their partners' resources and services to increase their services portfolio. These collaborations illustrate that the case firm may utilize partners' existing services to empower their services system. A recent study by Story *et al.* (2017) confirmed that firms can develop and deliver more customized services by combining complexly interconnected capabilities found within a network.

Three other case firms – BMW, GM, and Volvo - adopted the integration strategy to enhance their service system. These firms form collaborations to develop new services and products with the help of a partner's resources and knowledge. This kind of approach leads both parties to reconfigure their resources to build new technology, services, and products, which ultimately fulfills the partner's business needs.

Our analysis highlights firms' intentions behind CPs and their service integration strategy. This perspective is less debated in the literature and we expect that the findings of this study will motivate researchers to focus more on collaborations in the servitization context.

6 Conclusion

The analysis of press notes and key person expressions from car manufacturing firms revealed a set of key motivations for CPs. We found that four out of the five collaborations were with multinational technological firms, and only one partnership was with a start-up company. By presenting a set of key motives for collaborations, this study contributes to the literature on CPs. This study also observed that car manufacturing firms have a keen interest in integrating customized services into their core business operations and are pro-active for value creation for their services. Possible explanations for this transition are the decline in product sales revenues and changes in customers behavior. In order to survive in this competitive environment, these firms introduced or enhanced customer-based services. For a quick market launch of the services, these firms chose a different partner that had prior knowledge or the resources to design services. The study also discussed how these firms integrate the resources and technology accessed through collaborations. As mentioned previously the goal of this study to understand why automotive firms make collaborative agreements instead of mergers or acquisitions, and what motivates them to make partnerships with technological firms. In this line, the study attempted to reveal firms' motives, but it does not study the entire partnership process nor post-partnership performance. The model presented

in this study is context-based and should not be generalized. This study observed that automotive firms in advanced economies (Europe and North America) are continuously ideating ways to shift their core business operations from product-centric to product-service-centric to meet market challenges, gain competitive advantage and ultimately meet sophisticated customer demands. This study is among the first attempts to frame service strategy through CPs.

6.1 Theoretical implications

The present study initiates a debate on collaborative partnerships in the automotive industry during servitization. The findings support and extend our understanding of CPs and the role of network partners in the firm's strategy. The study framed a model that illustrates the key motivations of firms' CPs. As a novel finding, this study reveals customer relationship as a key motive of car manufacturing firms for making collaborative agreements. The strategic alliance literature mostly focuses on resource-based and transaction theory, and our findings extend the view to the customer relationship management theory, highlighting how firms use this strategy to improve customer relationships with new service offerings. This finding suggests that firms' CPs in the customer relationship perspective should be explored further (Lostakova and Pecinova, 2014). The study finding indicates that collaboration could play a role in value creation for the services offered by automotive firms. Earlier studies (Rodrigues, 1999; Rosenberg *et al.*, 2010) have also stated that strategic networks, including alliances, are actions that companies take to expand their service market and acquire resources.

6.2 Practical implications

The findings of the study offer practical possibilities for automotive firms to prepare themselves to launch services more rapidly in the market. The collaborative partnership not only reduces time and costs, but it also migrates the financial risk. To meet market demand, not only multinational OEMs but also SMEs also need to consider collaboration partnerships as a strategy to access technology and resources. Especially in servitization context, these

kinds of agreements could help to offer customers the best services and ultimately they can create competitive advantage. Moreover, the findings of this study act as primary information to help the practitioner to view collaborative partnerships as an alternative strategy in the servitization context.

6.3 Limitations and future research

Though this study offers new insights it also has some limitations. It was restricted to secondary data since the authors could not access information in a direct way such as through interviews. It used only publicly available data from the firm's websites, which is the primary limitation of this study. Another limitation is that the data was collected and analyzed, and the findings discussed, only from the servitization perspective.

For future studies, it would be interesting to focus on the empirical analysis of partnerships with a few case studies that focus on the service transition process and a firm's competitive advantage. Another research area could be the analysis of CPs from the target company perspective. Studies on barriers and difficulties during collaborations would be much more fruitful when compared with different industrial settings and context.

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Table 1 Key goals or benefits of CPs in the literature

Goals /Benefits	Authors
Acquire dynamic capabilities	Harrison and Leitch (2005); Junni <i>et al.</i> (2015)
Acquire physical assets and talent	Cohen (2010)
Enter into new markets	Chung and Alcácer (2002); Yang <i>et al.</i> (2014)
Improve skills, competencies and organizational learning	Vermeulen and Barkema (2001)
Improve firm performance and competitiveness	Van <i>et al.</i> (2011); Cohen (2010)
Improve firm innovation	Un <i>et al.</i> (2010); Cefis and Triguero (2016)
Acquire licences, patents and R&D facilities	Danzon <i>et al.</i> (2007); Miozzo <i>et al.</i> (2016)
Gain a competitive advantage	Saxena (2012); Gottinger (2007)
Reinvent a business model	Christensen <i>et al.</i> (2011)
Create potential value for a product or services	Gomes (2015)

Table 2 Description of the case firms, announcement and data sources

Cases	Automotive company	Technology company	Collaboration announced	Data source
Case 1	BMW	NOW! Innovations	March 14, 2013	BMW Press Information
Case 2	BMW	Accenture	February 27, 2015	Accenture Newsroom
Case3	Porsche	AT&T	February 22, 2016	AT&T Story
Case 4	GM	Bosch	February 4, 2013	Bosch Press release
Case 5	Volvo	APPLE	March 3, 2014	Volvo press release

Table 3 Characteristics of the case companies

Companies	Tagline / Slogan	Mission/ Vision	Core services	Employees (2016)	Total Assets (Billions/ Euros)	R&D Expenditure (2016) (Millions/Euros)
BMW Group	Sheer Driving pleasure	“To become the world’s leading provider of premium products and premium services for individual mobility”	Drive now, Reach now, Charge now, Park now, Digital energy solutions, Alphabets, Design work Financial Services, Spare parts, maintenance and service	124,729	€ 188.04	€ 5,164
General Motors	People in motion	“We are dedicated to providing products and services of such quality that our customers will receive superior value while our employees and business partners will share	Vehicle financing, spare parts, maintenance and service and Maven car-sharing service	215,000	€ 198.23	€ 8100

		in our success and our stockholders will receive a sustained superior return on their investment”				
Porsche Holding	There is no substitute	“Porsche doesn't simply build sports cars. Porsche is more. Much more. And Porsche is different. We love to carry engineering skills to the extremes”.	Leasing, loans, insurance, maintenance, fleet management, car rentals, and mobility services	35,631	€ 26.82	€ 13672
Volvo	For life	“Driving prosperity through transport solutions”	Financing solutions, insurance, rental services, spare parts, preventive maintenance, service agreements, assistance services, and IT services	94,914	€ 42.06	€ 398.66

Table 4 Sample coding process

First code	Themes (Motives)
“establish a new sales channel.”	New revenue streams
“strengthen our competitive position” “generate significant advantages and substantially strengthen our business” “increase market coverage”	Competitive <i>advantage</i>
“expand the range of solutions on offer” “provide capabilities for ConnectedDrive” “enhance our product offer” “provide a game-changing solution” “open up completely new forms of communication” “develop smart technology and vehicle safety and security solutions” “expand value-added services” “offer a wide range of new technologies for customers” “develop mobility services” “on-street capabilities for parking solutions”	Enhance service offerings
“offer the latest consumer technologies and services” “serve individual needs” “adapt to the specific needs of each society and market” “availability of a wider range of new technologies for the customer” “car-buyers want the latest consumer technologies”	Customer demand
“enhance product offer and be even more attractive for our customers” “gain a much closer relationship with their customers” “Customers feel completely at home”	Customer relationship

Table 5 Key motives for collaborations

Case 1	Case 2	Case 3	Case 4	Case 5
Enhance service offerings	Enhance service offerings Customer demand	Enhance service offerings	Enhance service offerings Customer demand	Enhance service offerings Customer demand
Customer relationship	Customer relationship New revenue stream		Competitive advantage	Customer relationship

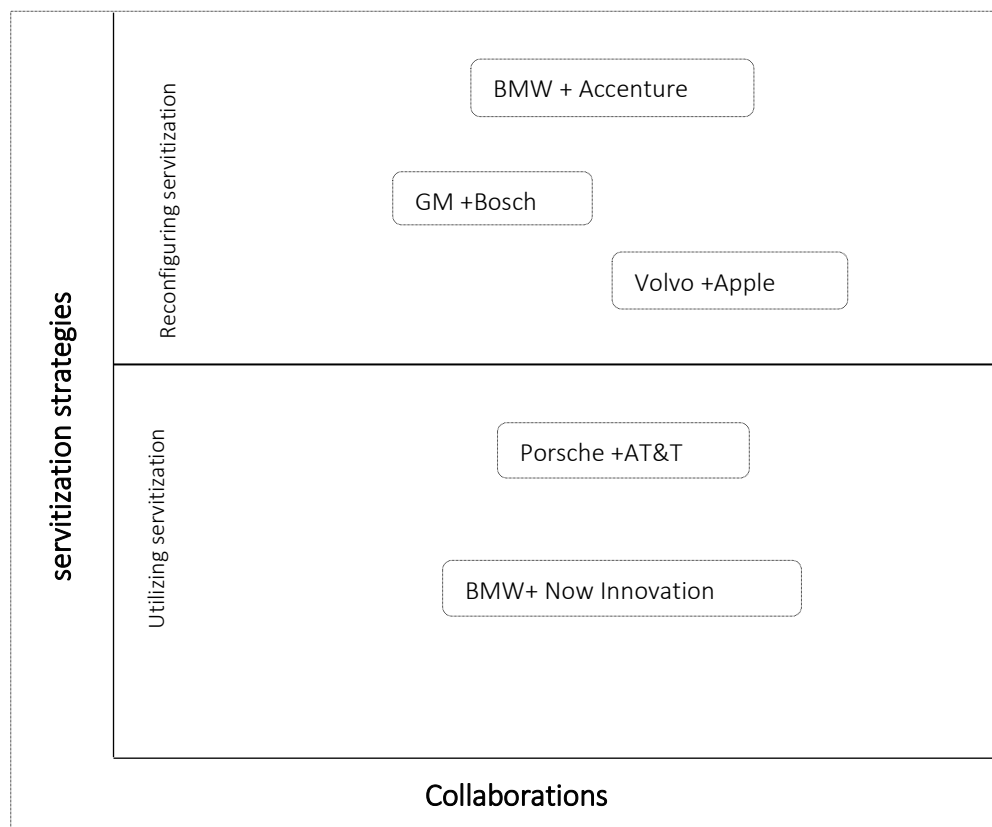
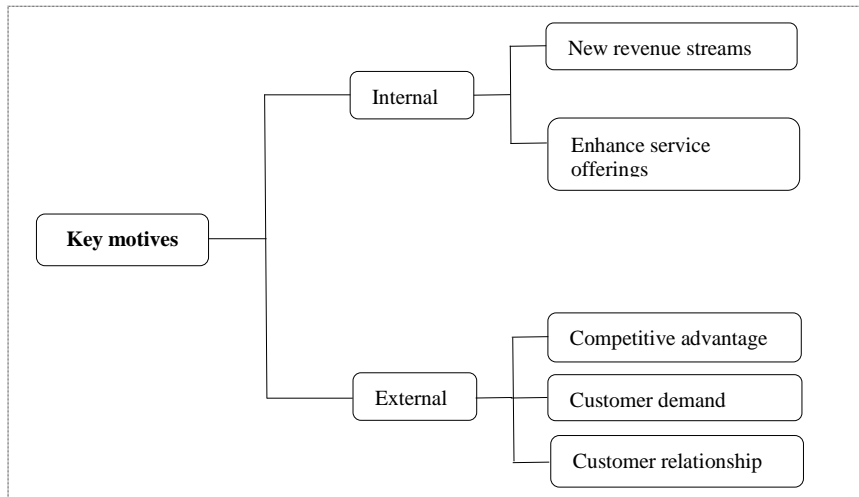
Figure 1 Resources integration strategies of firms

Figure 2 Firm's motives for Collaborative partnership for value-added services



Keywords:

Collaborative partnerships, Automotive, Servitization, Strategy, Strategic alliance, Service integration, Service innovation, Resource configurations, customer relationship, Partnerships agreements, Car manufactures.