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Dual Focus: Service-Product Orientation to Manage the Change Paradox Following Servitization Strategy

Abstract

This paper examines the change management process throughout the servitization strategy. Evidence was collected through 41 semi-structured interviews from four case studies. The study finds that synergistic interaction between product and service systems will create greater customer value when following the servitization strategy. This paper complements extant research on change management in servitization by proposing apparent change as a relaxed strategy to allow for changes following servitization with delicate alignment with existing organizational values and culture. The paper provides theoretical and managerial implications that draw on a balanced focus on both product and service instead of evolutionary or revolutionary strategies towards service.

1 Introduction

A growing number of industrial organizations that traditionally had a product-orientation logic are moving towards service-orientation to enhance their value propositions through an evolution in their core logic (Reim et al. 2019; Shipilov and Gawer 2020; Kukkamalla et al. 2021a). This change is accompanied by a shift from a competition-based strategy in terms of manufacturing a product towards a product-service system (Bikfalvi et al. 2013; Gaiardelli et al. 2021), which is a process that is widely recognized as servitization (Baines et al. 2017; Kowalkowski et al. 2017). Servitization is a term used to label the strategy of moving from offering a product to offering value-in-use through integrating services into products and eventually operating in product-service systems (Zighan et al. 2018). Since Vandermerwe and Rada (1988) introduced the servitization concept, several studies advocate the integrative view of products and services, emphasizing the importance of the service element in creating more customer value (Smith et al. 2014).

Nevertheless, previous research acknowledged that organizations undergoing servitization process and operating in product-service systems face several paradoxes such as service paradox (Gebauer et al. 2012), cost-profit paradox (Neely 2008), sales growth paradox (Kastalli and Looy 2013), coopetition paradox (Raza-Ullah et al. 2014), branding paradox (Nenonen et al. 2014), performance paradox (Wang et al. 2018), supply-demand paradox (Gölgeci et al. 2019) and innovation paradox (Kohtamäki et al. 2020). The servitization paradox is the contradiction of the anticipated results when offering services aimed to deliver enhanced economic benefits leads to sub-optimal performance (Kastalli and Looy 2013; Kohtamäki et al. 2020).

Change paradox is another challenge facing organizations and their supply networks following the servitization strategy (Benedettini and Neely 2018). Servitization involves substantial changes leading to substantial challenges during organizational transformation

(Kohtamäki et al. 2020; Martinez et al. 2017; Kukkamalli et al. 2021b). According to Hyun and Kim (2021), organizational change affects servitization performance, challenging manufacturing firms to maintain servitization profitability.

He et al. (2015) argue that organizational changeability is necessary and imperative for servitization, as it changes the business logic from being product-oriented to more service-oriented (Palo et al. 2019). A product-oriented organization is bound around the product, focusing on effectiveness, efficiency, economies of scale, quality, and operational sustainability (Kuula et al. 2018). It emphasizes high productivity and tends to be capital-intensive, highly standardized, and less divergent, with low customer involvement and contact (Smith et al. 2014). In contrast, a service-oriented organization is focused on intangible services that are co-produced and customized according to the customer's particular needs, preferences, and behaviors (Lindhult et al. 2018). Besides, operations systems in service-oriented organizations tend to be more visible, with high flexibility and diverse processes to meet a wide variety of customer demands. As a result, a product-oriented organization will need to make necessary changes following the execution of a servitization strategy (Nuutinen and Lappalainen 2012). This is because the service features are considerably different from the product features, which necessarily require a different or amended organizational design. Consequently, moving from product-oriented logic to service-oriented logic has ultimately faced significant complexity (Smith et al. 2014) that has been the focus of research recently (Raddats et al. 2019; Baines et al. 2020).

The extant literature on servitization paradoxes has focused more on paradoxes of outcome or content, with less focus on process paradoxes (Kohtamäki et al. 2020). In this context, Baines et al. (2017) stress the importance of studying change processes during servitization, as this is of great importance in understanding the micro-foundations of the change process from a single orientation to a dual-orientation. Baines et al. (2020)

investigated the servitization change process moving from product-oriented to services-oriented logic and the forces impacting this process, maintaining that this process is challenging with multiple catastrophes and tipping points. Kohtamäki et al. (2020) called this phenomenon a change paradox that could lead to contradictory results. Moreover, the extant literature suggests conflicting perspectives regarding whether the change should be evolutionary (gradual) versus revolutionary (Zighan et al. 2021).

Therefore, this paper seeks to answer the question of how the change process is managed when an organization moves from product-oriented to services-oriented logic and reduce the change paradox when adopting the servitization strategy? We argue that studying such micro-components of change management helps understand the micro-perspective of servitization, change capabilities, and managerial micro-practices that may shape this process. To this end, a case study design has been adopted. The remainder of this paper is organized as follows. The related literature is reviewed in section 2. Section 3 explains the selected research methodology. The study findings are presented in section 4, then the study's conclusion and implications are detailed in section 5. Finally, limitations and future research prospects are presented in section 6.

2 Literature Review

2.1 Servitization

The servitization journey implies a complex organizational transformation (Manresa et al. 2020) as it demands significant changes that businesses must undergo. These changes are reflected in organizational ability to develop a new business model, management practices, organizational culture, structure, operations system, and capabilities that fit the provision of services (c.f. Neely 2008; Fisk et al. 2011; Nuutinen and Lappalainen 2012; Kastalli and Van

Looy 2013; Finne et al. 2013; Baines and Lightfoot 2014; Benedettini et al. 2015; Zighan et al. 2018). Table 1 below summarizes the literature on the impact of service provision.

Table 1: The Impact of Service Provision

Category	Aspects of changes	References
Business Model	Moving into the service business, selling service contracts and capabilities.	(Kastalli and Looy 2013); (Palo, et al. 2019); (Baines et al. 2020)
	The notion of ownership and asset management.	
	The value and incentives for both customers and the provider.	
	Moving from a transactional relationship to relational marketing.	
	Managing multi-years partnerships.	
	Controlling and managing long-term risks.	
	Considering the customer's total cost of ownership.	
	Accounting for risk of ownership business model.	
Organizational Structure	A flat organizational structure with more power delegation and decentralized decision-making.	(Bustinza et al. 2015); (Bigdeli, et al. 2017)
	A narrow span of control with a multiple-dimensional control system.	
	Facilitating effective integration, communication, and high coordination of integrated activities.	
	Stimulating innovation and fast adaption.	
	Supporting long-term customer relationships.	
Organizational Culture	A customer-orientated culture that enforces the importance of customers.	(Kowalkowski et al. 2017); (Rabetino et al. 2017)
	An organization must revolve around the service element and the significant role of service in developing a competitive advantage.	
	Supporting long-term customer relationships.	
	An innovative culture that promotes the continual development of new ideas and solutions to meet customer needs.	
Management Practices	Empowerment and granting power, abilities, and authority to perform different actions resulting from offering services	(Baines and Lightfoot 2014); (Palo et al. 2019); (Kohtamäki et al. 2020); (Qi et al. 2020);
	New practices and procedures that fit with service operations.	
	Balancing the exploration and exploitation approaches of making decisions and solving customers' problems.	
	Emphasizing innovative thinking and experience awareness.	
	Working through details of a problem to reach a solution based on high customer interaction.	
Operational System	Changing from a standardized operation system to a flexible one can produce divergent, intangible, and perishable output.	(Smith et al. 2014); (Javed et al. 2021); (Zighan et al., 2021);
	Managing customer involvement and facilitating co-design and co-production.	
	Managing the simultaneous processes of production and consumption.	

	Managing customers' accessibility and dependability.	
	Reducing uncertainty and clearing up ambiguity by identifying potential events and establishing optimal responses.	
Organizational capabilities	System integration capabilities that bring products and services together into one system and ensure that they effectively function together as a system that adds greater value for customers.	(Raddats et al. 2019); (Sousa and da Silveira 2017); (Kukkamalla et al. 2020); (Qi et al. 2020); (Manresa, et al. 2020).
	Service operational capabilities help in designing, producing, and delivering services.	
	Flexible processes and dynamic capabilities for adapting to changes based on offering services.	
	Value co-creation capabilities focusing on customer needs, experiences, and interactive relationships by involving customers in both product and services system design and value creation processes through a more active customer involvement strategy.	
	A customer orientation capability to understand customer needs and develop better tailored and more advanced services.	
	Digital capability is important for servitization in terms of using digital devices in data acquisition, helping to make the manufacturing companies more agile.	
	Networking capability that provides the required collaboration between several actors to better adoption of servitization	

The literature emphasizes that product-oriented design is inappropriate for service provision (Oliva and Kallenberg 2003; Gebauer et al. 2012). Service features, such as heterogeneity and flexibility, contradict the traditional product-orientation features, such as productivity, standardization, efficiency, and effectiveness (Baines and Lightfoot 2014; Zighan et al. 2018). Nevertheless, moving to a services-orientation may cause inconsistencies in the organization's operation system, leading to a potential strategic failure, in which case, an effective organizational change process should be put in place (Oliva and Kallenberg 2003; Gebauer et al. 2012).

2.2 Organizational Change

Organizational change is broadly defined as the continual process of renovating different aspects of an organization to cope with changes in the business environment (Bamford and

Forrester 2003). Several change theories and models have been developed explaining organizational change management. The process theory is a management system describing how an organization changes and develops effectively and efficiently to achieve the corporate change objectives (Hernes 2014). A change strategy becomes valuable by its parts and as a whole in an integral way (Hernes 2014). The process theory explains change by outlining the fundamental associations of a change initiative's expected outcomes in the short-term, intermediate, and long-term, by which the change initiative is mapped – as the "outcomes pathway" – showing each effect in logical relationships to all the others, as well as chronological flow (Mento et al. 2002).

Therefore, an organization's change process should smooth and facilitate the change process and its transformation from its current state to the desired one, which as a consequence, represents a real managerial challenge. Furthermore, at any point in time, any organization could face more or less radical changes in its environment and with more or less fundamental changes in its characteristics (Burke 2017; Dmitrijeva et al. 2020). Within this context, Gagliardi (1986) illustrates three main strategies guiding the organizational change process. These strategies are revolutionary, evolutionary, and apparent change.

- The revolutionary approach is a radical change process based on rapid, impulsive, and large phases of evolution. It completely transforms the organization's values, rules, and behaviors by responding to an actual or anticipated crisis. Moreover, it works better when the new strategy's values contradict the previous organizational values (Burke 2017).

- The evolutionary approach is a progressive change process characterized by gradual and incremental modifications. It is adaptive and can be assimilated into implicit learning. Change is made through small cumulative steps, which can lead (in the long

run) to significant transformation and large-scale reconfiguration of the organization's profoundly held norms and values (Poole and Van de Ven 2004).

- The apparent change is a surficial change strategy, where stability is maintained. The change process aligns with the existing organizational assumptions and values and introduces new values that align with the existing ones (Poole and Van de Ven 2004). It is used to accumulate expertise and consolidate interaction models, with the ability to build and design collective skills. This approach works better when the new and old values are complementary, and no fundamental change is required (Gagliardi, 1986).

2.3 *Organizational Change towards Servitization*

Servitization implies a fundamental change of the traditional product-based business model towards a new business model of products and services (Gaiardelli et al. 2021). In reality, the process of organizational change following the execution of the servitization strategy is a grey area (Baines et al. 2020). The literature suggests different generic ways to manage the change process (Zighan et al. 2021). However, these recommendations are often contradictory. In this debate, servitization as a change process may incur paradoxes such as performing, belonging, and organizing (Luscher et al. 2006). The paradox of performing reflects the challenges organizations face when their roles change from product-oriented to product-service-oriented (e.g., mixed messages to their customer base). The paradox of belonging incurs conflicts of organizational identity. The paradox of organizing reflects structural challenges that accentuate paradoxes of performing and belonging. There is, therefore, some debate regarding the validity of revolutionary and evolutionary change processes (c.f., Nuutinen and Lappalainen 2012; Finne et al. 2013; Brax and Visintin 2017).

The first perspective views the embedded product-oriented logic as the main challenge facing implementing the servitization strategy. Product-oriented logic values contradict the service

provision strategy, where services are perceived as a secondary and inconsequential component (Lusch et al. 2006). Therefore, a revolutionary change process with radical and impulsive alterations to services-oriented logic is more appropriate when adopting servitization. This revolutionary change process is necessary to promptly enforce the services component across all organizational dimensions (Nuutinen and Lappalainen 2012; Brax and Visintin 2017).

On the other hand, other scholars argue that servitization is an incremental process. An evolutionary change process, therefore, is more appropriate when adopting servitization. This evolutionary change process agrees with the service provision's linear execution. The gradual change towards service-orientation logic is more likely to reduce resistance to change and the potential for strategic failure (Crowley et al. 2018). This evolutionary change process is based on the organization's learning ability and the development of changing capabilities towards service orientation. These capabilities are aligned to settle the tensions of a paradox between an organizational intent to change and the reluctance to enact the change (Crowley et al. 2018). This is supported by Baines et al. (2019), who argue that an incremental change process that is characterized as a business progress model with multiple-phases is more appropriate.

According to Kukkamalla et al. (2021a), radical change breaks with what existed previously, where incremental change builds upon what existed previously. Martinez et al. (2017) argue that change for servitization is neither logical nor structured but is much more emergent and intuitive. Thus, Abualqumboz (2021) suggests that agile transformation is based on iterative steps that allow greater flexibility and allow the change process to adapt to the different stages of servitization. The change process is a mix of evolutionary and revolutionary methods. During the early stage of servitization, more basic services are offered that rely on existing products, technology, and resources - this is, therefore, considered more

evolutionary. Meanwhile, the later stages of servitization involve fundamental changes in the underlying norms, competencies, technologies, and customer value source, for which a more revolutionary process is required.

To summarize this section, although service provision among manufacturing organizations has become more prevalent, the risk of failure is still significant. Many organizations struggle to manage the transition to a service-oriented business. The empirical evidence reveals the adverse effects of servitization (Benedettini et al. 2015). Other studies have highlighted organizational deservitization and failure (Kowalkowski et al. 2017), mainly when organizations offer advanced services and system solutions and face the challenges of servitization growth strategy (Kowalkowski et al. 2017). According to Lenka et al. (2018), the key challenge lies in managing the transition from product-orientation to service-orientation, which serves as an organizational compass guiding its strategic-development, decision-making, and operational activities. This strategic orientation requires a robust change process (Smith et al. 2014). The strategic transformation towards service-orientation is far from easy and could lead to substantial intractable cultural and attitudinal challenges (Kowalkowski et al. 2017). Extant literature is inconclusive in resolving this change paradox (Kohtamäki et al. 2020), and this paper seeks to fill this gap by unpacking the change management process that servitization goes through.

3   Research Design

3.1 *Choice of methodology*

This study explores how change is managed when an organization moves from product-oriented to services-oriented logic by adopting a servitization strategy. Given the nature of the study question, this paper has adopted a retrospective multiple case study to report on

several case studies, which will allow for a rich data set to detect the underlying dynamics of the research problem based on several cases (Rihoux and Lobe 2009).

3.1 Case Study Selection

Despite the proliferation of research on servitization, the research is focused on specific countries, leaving our understanding lagging in some other countries (Leoni 2019). Therefore, data were collected from business organizations in Jordan to contribute to theoretical and practical implications. Nevertheless, the critical criterion of this study was securing access to organizations actively involved in servitization in Jordan to allow for coherent cross-case analysis and establish more reliable findings. Therefore, purposive sampling (Robinson 2014) has been applied. The selection criteria were first according to the organization's outcomes in terms of providing a system of products and services. Second, those organizations that have gone through visible and documented servitization under their operational strategy. Finally, those organizations with economic activities target national and international markets to ensure that their products and added services are within international standards. This facilitated identifying cases containing relevant information on the study focal topic. Fifteen different organizations were contacted, with an official letter explaining the study's purpose, confirming that these organizations offer advanced services, and getting their approval for data access. Eventually, four large organizations operating in different manufacturing industries in Jordan were selected. These case studies were international corporations, which we assume they have more exposure to international practices in servitization than companies that operate in local markets only. These organizations have explicitly employed a servitization strategy and now generate revenue by selling products and advanced services in their respective market networks. We describe the four companies below and provide more details in Table 2 in Section 3.2.

ITCo is specialized in selling, repairing, and recycling hardware in Jordan since 1996. Having a strong heritage in hardware manufacturing, the company has built a reputable brand identity as a hardware company. Since 2016, the company has been developing a servitization strategy to offer differentiated managed services, including cloud-based computing, data security, recovery, and maintenance solutions.

EquipCo is specialized in manufacturing construction equipment and tools. Due to safety regulations and ergonomics, in 2017, the company repurposed its operations to target international market and transformed its business strategy to shift from product-based to product-service systems through a transformative servitization. The business now offers both construction products and services. The services include training (asynchronous videos, onsite training, and synchronous streaming), machine replacement consultancy, and a subscription-based business unit.

MediCo is a medical company established in 1984 and known for providing nationwide pharmaceutical products in the Middle East and North Africa. It has been servitizing its offerings since 2016 to include research and development consultancies on medical technology imaging systems software solutions for medical devices. The core value production comprises efficient delivery of products and services and process excellence in product and service delivery. This leads to a situation where services create a significant share of total revenue.

DevCo is a facility management company that started as a construction company in 1963, which now offers a wide range of services that include hard services (e.g., mechanical, electrical, plumbing, etc.) and soft services (e.g., cleaning, hygiene, concierge, etc.). The focus is on incremental innovation that enhances customer efficiency and innovative new solutions that support the customer's business.

3.2 *Data Collection*

As we seek to capture the changes and how those changes have been managed, we incorporated various data sources to provide rich details on the study's cases. Semi-structured interviews, document analysis, company visits, and non-participant informal observation have been conducted. In total, 41 interviews were conducted with respondents at different organizational levels. Table 2 below specifics the background of these organizations and the respondents' respective positions.

Table 2: The background of the case studies' organizations and data collected.

Case study	Industry	Level of Servitization	Respondents Positions	Number of Interviews	Other methods
ITCo	IT and Computer Hardware	Selling Hardware and Software	– General manager – Director of IT – Director of Engineering and Services – Chief Marketing Officer – Director of Operations Management – Director of Customer Support and After Sales – Marketing and Sales Manager	2 1 3 2 2 2 1	3 company visits 1-day observation 13 Institutional reports
EquipCo	Heavy Equipment Manufacturer	Equipment Service Agreements	– Strategic Business Development – Director of Emerging Markets – Operations Manager – R&D Manager – Supply Chain Manager – Marketing Manager – Customer Relationship Manager	1 2 2 2 1 1 1	2 company visits 1-day observation 5 Institutional reports
MediCo	Medical Industry	Distribution, Co-opetition and optimized R&D	– Director of Supply Chain Management – Service Operations Manager	1 4 2	4 company visits 2-day observation 2 Institutional reports

Case study	Industry	Level of Servitization	Respondents Positions	Number of Interviews	Other methods
			– Marketing and Sales Manager – Director of R&D – International Business Development	1 1	
DevCo	Real estate Development and Construction Industry	Customized Housing solutions	– Business Development Manager – Director of Marketing and Supply Chain – Operating Manager – Director of New Business Development – Manager of Customer Services – Sales and Distribution Manager	1 2 2 1 2 1	2 company visits 8 Institutional reports

We approached our empirical work questioning how changes are managed based on offering services. Data were gathered primarily through main stakeholders (Robinson 2014), as shown in Table 2 above, which provide insightful information and are focused directly on the research topic. The interviews ranged on average between 45 minutes and 110 minutes, consisting of three sets of questions. The first part focuses on understanding the firms' servitization strategy, including their vision for the future and critical ongoing service provision efforts. The second part focuses on understanding the underlying conflict between product and product operations and service orientation and the organization's servitization-related challenges. The third part focuses on understating the organization's transformational process from product-oriented to services-oriented and the change management strategy that underlies this transformation process. In addition to interviews, the company visits and observation augmented the interview's analytical insights by gaining familiarity with the businesses and observing some of the transformational processes that companies have implemented during the servitization journey. This included, for example, changing some

processes and shop-floor layouts and enhancing customer-facing premises. The archival data included reports and minutes of meetings that have taken place throughout the servitization journey, which assisted in reconstructing the history of servitization and pattern-mapping the change paradoxes and change management strategies and actions that have dealt with them.

4 Data analysis and findings

The data analysis was twofold; it was oriented toward understanding the organizational change and development corresponding to the servitization level. The data analysis was then oriented toward developing guidance to reconfigure the organizations toward successful service provision. First, a within-case analysis (Rihoux and Lobe 2009) was performed by organizing the data around the study's problem while simultaneously allowing new patterns and codes to be inductively developed (Braun and Clarke 2006). A cross-case analysis was then performed by summarizing the data from each case and developing a typology to reveal patterns and create comparisons, to identify differences and commonalities across cases. The analytic interest (Braun and Clarke 2006) was oriented around understanding organizational change management for service provision.

4.1 *Understanding organizational evolution of each case study corresponding to the level of servitization*

The within-case analysis was performed following three steps. The first step analyzed the data to understand the offered services for each case. Secondly, each case's route of service provision was contextualized according to the types of services offered. Finally, we identified the design for sustaining the taken route of service prevision. These three steps guide us to visualize the service provision for every case and trail the main activities and alterations for the organization's configuration and evolution.

The data analysis finds that all cases adopted the conceptual routes for servitization development, i.e., the incremental move of servitization. The services development process evolved gradually and took place on a case-by-case basis. At the start, the organizations started offering basic services as add-ons that support the product functions. As a result, value creation was restricted and covered a narrow range of product lifespans. They then have expanded the scope of service provision. The newly offered services were intended to support customers' activities and customized needs. Two companies moved from offering advanced services to more complex services and system solutions. The leading example of offering complex services and system solutions occurred in the IT and construction industries. Table 3 below explains the changes that the studied companies have gone through in three phases to move across levels of servitization. The use of the term "phase" does not necessarily demarcate clearly distinct phases due to some overlapping between every two adjacent phases.

In four case studies, we observed that companies went through the three phases with varying maturity, capabilities, and challenges. EquipCo, for example, engaged with the first phase, "Basic Services," smoothly, but it faced a great challenge in moving to the next two phases due to the entanglement of their business model with the products they offer. Initially, the company thought the first phase would be smooth due to the establishment of service provision of heavy machinery, but the lack of customer interest in the new business model that offers basic services was suboptimal. What exacerbated the severity of the challenges for the EquipCo was that it faced a difficulty in the rigidity of its products towards servitization, which was manifested in light machinery and tools that customers did not find benefit in adding services to, unlike heavy equipment. In the case of DevCo, it was reported that their supply chain did not support the company with the information needed to servitize its products.

Table 3: Servitization levels and relevant paradoxes in the observed case studies

Level	Observed process	Characteristics	Imminent paradox	Capabilities
Product-Oriented Services	– Companies started by offering basic services as add-ons elements to support the product functions. – Value creation was restricted and covered a narrow range of marketing offers. – Services were offered as an add-on element.	– Products are the focal point. – Offered services are simple and standard to add more intangible value to customers and fit with a large segment of customers. – The product-service system's output is the combined value of tangible assets supported by services intangible aspects.	– Reducing the cost and risk of offering services while gaining a competitive advantage by offering basic services. – Hence, a process for developing a product-service system considering the overall functionality to be delivered.	Product Functionality Enhancement – Offering a basic service bounded around organizational capabilities related to product functionality reduces service expansion risk and supports sales of the product
Use-Oriented Services	– Companies upgraded their offering from basic to advanced services to augment customers' value. – They have extended the scope of service actions. – The offered services are intended for supporting customers' activities and customized needs.	– Organizations moved from focusing on products' proper functioning to focusing more on customer interaction and supporting customer activities. – Services are the focal point, and the products are platforms and add-on elements. – Services are more notable, perceptible, and appreciable by customers and more strategically fruitful.	– Offering advanced services extends the scope of the operations system. It involves a significant number of customized modifications and changes. – Following the characteristics of services, the focus is more orientated toward services. This stage involves substantial changes leading to substantial challenges during organizational transformation. – Offered services related to customer activities are more sophisticated and riskier but more strategically rewarding.	Transformation capabilities – Service provision and sustainable operations capabilities are imperative for creating valuable customer value, and services are to be provided successfully

Level	Observed process	Characteristics	Imminent paradox	Capabilities
Result-Oriented Services	– Offering system solutions reflect the uppermost level of servitization. – The product-service system is designed to sell capabilities that deliver value in use rather than mere products. – The supplier-buyer relationship moves from transactional to be trust-based. In this model, organizations are transformed into networks and partnership	– Offering system solutions implies a new way of function fulfillment. – In this scenario, service becomes the central part of the marketing offerings and the primary source of organizational competitive advantage and revenue generation stream. – The product becomes the platform to deliver services. – The delivery of system solutions has demanded significant changes to management practices, organizational culture, technologies, organizational structure, and processes.	– The transformation to services-oriented is seen as fundamental to a servitization journey. – Efficient development of service capabilities is a critical success factor. – The failure to design and introduce an attractive service leads to loss of organizational competitive advantage and market failure. – The main difficulty seems to be a strongly manufacturing-oriented way of doing business. – There is an argument against change as a fit-for-all solution from a comprehensive and integrative perspective	<u>New customer value proposition</u> – A radical leap towards a new customer value proposition is necessary to deliver a complete set of customers' customized services. – The required capabilities are developing service-related capabilities and underlying resources creation of novel triadic or network level collaborative processes of delivering services.

In contrast to EquipCo and DevCo, we found that the servitization journey in ITCo and MediCo took a relatively smoother route which the two companies related to the fact that their client base was better able to understand the changes in the business model and the nature of the services provided. In addition, ITCo attributed the smoothness of their servitization journey to the prevalence of providing services in the IT industry.

In summary, our findings indicate the variations in the levels of the changes that every company has faced. Moreover, the four companies reported that despite the challenges they all faced in the early phases of the journey, the integrated services phase had a greater share of paradoxical changes. With this in mind, the four companies reported that initially, they had believed that this stage would have had more settled in the new business model due to the time factor and the adaptation of both employees and customers to the changes that have already taken place.

4.2 Configuring organizations towards successful service provision.

Following the within-case analysis, we further progressed with the cross-case analysis. The data analysis was dependent on an interactive perspective of the type of offered services, the strategic paths of servitization, and the organizational evolution that support the type of service provision. Therefore, we compared the servitization trajectories of each organization, then searched for similarities and dissimilarities in all cases. From this, we founded our primary themes around the organizational change required for the service business progression. The findings show that the four companies have advanced through their servitization journey (at varying paces) through three levels of change processes (Level 1: Offering Basic Services, Level 2: Offering Advanced Services, and Level 3: Offering System Solutions), as shown in Figure 1. The amalgamation of product and service at each level is evidenced by the intensity of either product and/or service provision.

For example, in Level 1 (Offering Basic Services), product orientation is stronger than service orientation which is shown in the emphasis in bold on "product orientation" in Figure 1. The intensity of product orientation and service orientation in Level 2 (Offering Advanced Services) is balanced. In this level, the four companies, through offering advanced solutions, maintained a reciprocal relationship between the two orientations. Lastly, in Level 3 (Offering System Solutions), the service orientation takes over product orientation by intensity, and service becomes the focus of orientation.

In line with the literature, the findings show that service provision has reshaped the studied case organizations. According to one Director of Operations Management at ITCo, *"the service operations system differs from the product operations system. Offering basic services to top up our product provision required different arrangements and practices that fit with service characteristics"*. The data analysis found that service characteristics, such as intangibility, variability, heterogeneity, and inseparability, require more flexible operation systems. These services are also co-produced and labor-intensive; thus, skilled employees are essential to produce these services and satisfy the various customers' needs. Besides, offering services increases the process's visibility, connects customers with the system, and requires professional customers touchpoints.

Some interviewees (especially from ITCo and MediCo) argued that offering basic services increases organizational complexity, task interdependence, and uncertainty. According to the Marketing and Sales Manager at ITCo, "*the service provision required a high level of differentiation that exists within different elements constituting the organization.*" Concerning that, The Director of R&D at MediCo noted that "*uncertainty has increased because of the great variety of customers' demands and the variation of service operations.*" Whereas, one Director of Emerging Markets at EquipCo argues, *"offering*

services requires team members to interact with each other to complete their tasks." The key changes that enable the service business development have been characterized as a continuum change process based on servitization level and the type of offered services, as shown in Figure 1 below.

4.2.1 Offering Product-Oriented Services

Interviewees confirmed that their companies had to change from focusing only on productivity, efficiency, and effectiveness to focusing on customers' value. For instance, the Director of New Business Development at DevCo said that *"the success of a service provision depends on our ability to focus more on customization and increasing customer value rather than on standardization and cost reduction."* The operating manager at DevCo was skeptical about resources at the company, which he believes they are constrained by the pressures of lead time, product reliability, and operational knowledge. In the same line of inquiry, the Operations Manager and the director of Strategic Business Development at EquipCo agreed that their company had to take a strategic approach to establish legitimacy for the new business model to deal with resource gatekeepers who might be reluctant to accept the new model. EquipCo started this level of servitization by companywide consultations engaging all levels of management to seek the "buy-in" for the new emerging model. This has been followed by focus group discussions with service encounter levels because of their proximity to market dynamics and key clients. One of the outcomes of such efforts is that EquipCo has assigned champions from different departments to provide support for employees and deal with problems that may arise (e.g., misinterpretations of the current level of servitization).

With the exception of EquipCo, the findings highlight that in this initial level of servitization, companies did not necessarily need to strategically change on the organizational level. Instead, only relevant business units that were most important for the

change to take place were transformed. The findings revealed that the transformation occurred in organizational units designed to deal with customers. The Customer Relationship Manager at EquipCo elaborated that "*the early involvement of customers in the servitization journey is key to success, especially at this early stage.*" The four companies recognized the importance of involving customers at this level to draw on the service add-ons to the product. However, ITCo admitted that excessive involvement of customers was time-consuming as they had to deal with and mediate between "*floods of erroneous asks and assumptions that key clients were giving [them]*" as explained by the Director of Customer Support and After Sales at ITCo. To resolve such issues, the Service Operations Manager at MediCo explained that: "*We invited key players to sit on a table and said we need to be as open as possible about what service add-ons to be included in our product provision (…) so we ask 'what service add-ons do you think we need to include to make a good product-service mix?' (…) definitely will get them on board as it creates a sense of ownership*". This view establishes the importance of knowledge sharing in a trusted environment that this level of servitization needs. However, this may pose issues such as knowledge leakage, which DevCo perceived as an issue due to their customer base's (e.g., construction subcontractors) inevitable engagement with other competitors in the market.
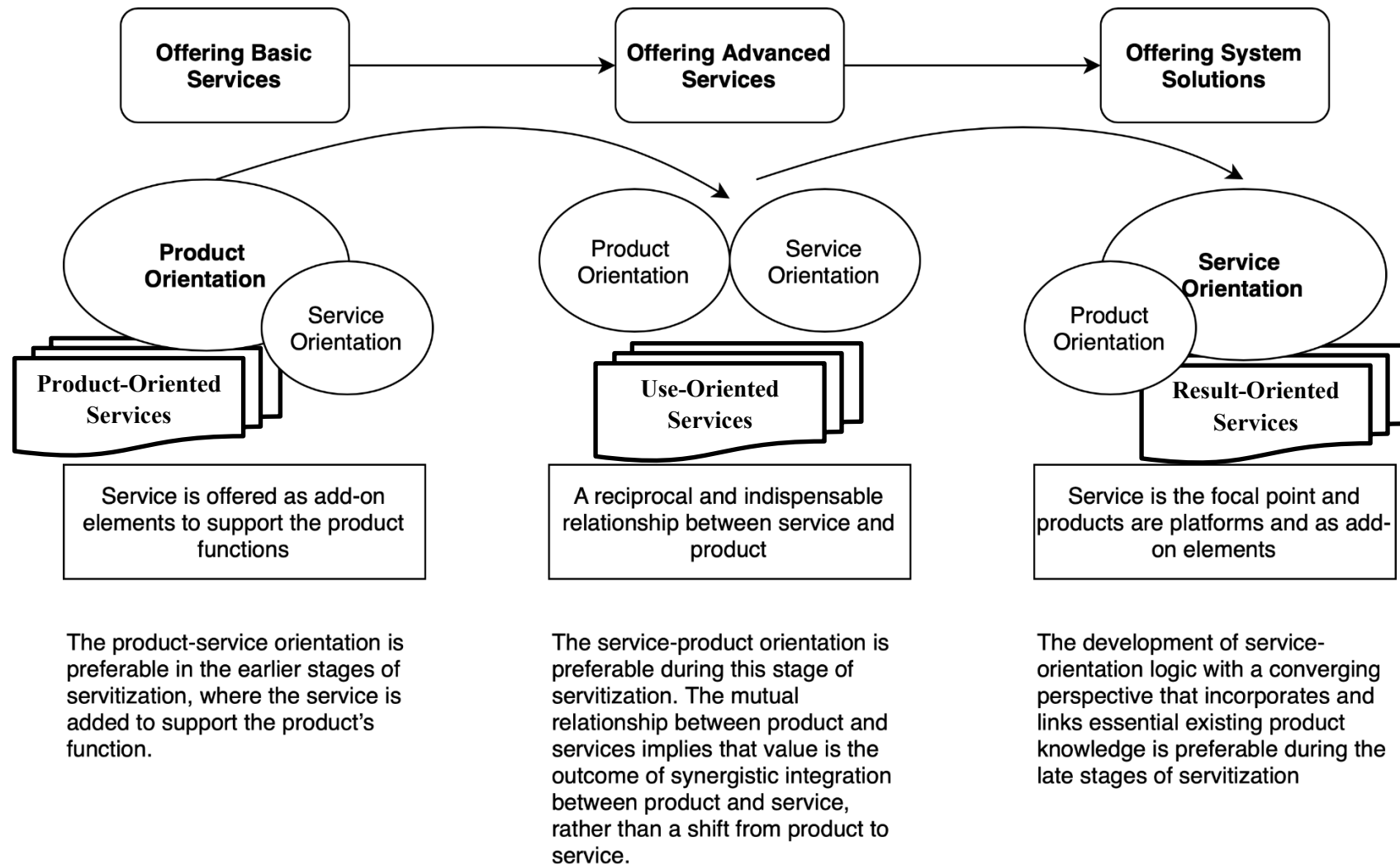
| Offering Basic Services | → | Offering Advanced Services | → | Offering System Solutions |

Product Orientation — Service Orientation

Product-Oriented Services

Product Orientation — Service Orientation

Use-Oriented Services

Product Orientation — **Service Orientation**

Result-Oriented Services

Service is offered as add-on elements to support the product functions

A reciprocal and indispensable relationship between service and product

Service is the focal point and products are platforms and as add-on elements

The product-service orientation is preferable in the earlier stages of servitization, where the service is added to support the product's function.

The service-product orientation is preferable during this stage of servitization. The mutual relationship between product and services implies that value is the outcome of synergistic integration between product and service, rather than a shift from product to service.

The development of service-orientation logic with a converging perspective that incorporates and links essential existing product knowledge is preferable during the late stages of servitization

Figure 1: Change process based on servitization level and the type of offered services

4.2.2   Offering Use-Oriented Services

The findings revealed that offering advanced services requires several modifications. For example, re-arrangements of operational setup and customer value re-mapping were needed to provide advanced services and balance product-orientation and service-orientation. As such, the four companies established a dedicated division for managing services, by which services have become visible, measurable, and controllable. Nevertheless, we found that the change process was cumbersome as companies faced several challenges such as inter-divisional barriers and re-shaping customer values. Having said that, interviewees indicated that there is a reciprocal and indispensable relationship between service-orientation and product-orientation that they need to focus on. For instance, the Operations Manager at EquipCo said that "*service has become an important element of marketing, yet its success depends on other elements related to the products, such as product cost and quality, along with the company's progress and delivery data.*".

When the companies offered more complex services and system solutions, they needed to achieve a higher degree of internal differentiation gradually and carefully. The reciprocal relationship between product and services, in this case, implies that servitization has been an amalgamation of product and service activities rather than a shift from product to service. For instance, the Chief Marketing Officer in MediCo said, "*the amalgamation of tangible products and intangible services is designed so that they are jointly capable of fulfilling the customer needs, and usually customers will choose the product that offers more value and the best quality at an affordable price.*". The Director of Engineering and Services in ITCo said, "*we have to focus on both offering high-quality services and producing high-quality products and improving it technically overtime*".

This level of servitization has prompted a mixed response from the interviewees. We observed in the case of MediCo that the amalgamation of product and service gained them

better financial returns throughout the economic cycle, which the company attributed to a greater margin of flexibility "*that our servitization process proved to offer*" as stated by the Director of Supply Chain Management at MediCo. The other three companies agreed that flexibility was a value-added at this level of servitization but found that this has mainly assisted in relieving some of the technical complexities that their product portfolio had. The four companies also agreed that a slightly more advanced level of integration (i.e., the amalgamation of product and service rather than a comprehensive integration) between service and product is needed to provide an advanced customized service that is key to improving customer value. In the two cases, Medico and ITCo attempted to adjust their current market position and enter a new business area to offer advanced services successfully.

The gains of the amalgamation of service and product orientations were imminent in the four cases. An example of this is the two companies DevCo and EquipCo, where this level of servitization has contributed to their organizational competitive advantage by adding more customer value. The changes that accompanied this level included, for example, the delegation of authority and training of employees, improved product quality, and customized service provision, which resulted in businesses attaining greater customer satisfaction and successful organizational performance.

4.2.3   *Offering Result-Oriented Services*
At this level, the four companies moved to offer system solutions and changed their business models to be an integrated system that is services-oriented. The participants shared a common view by stating that when offering system solutions, they had to pay more attention to the services side of the system. For instance, The Director of New Business Development at DevCo said, "*offering basic services [in the first level of servitization] such as delivery, installation and training are designed to support the*

product, and usually, these services are inconsistent with a product-centric strategy. Whereas offering integrated services [in the third level of servitization] is usually a required fundamental change towards a greater focus on services provision, to better fit with specific customer needs". Nevertheless, the Service Operations Manager at MediCo argued, "*the added integrated services should not disturb the product operations.*"

As pointed out by the respondents (above), it is important to emphasize the role of product in this level, as intensive focus on service may unintentionally keep the product out of sight. According to the participants, integrating both product-orientation and services-orientation led to better performance through, for example, re-designing the facilities layout and re-positioning their customer value. The Marketing Manager at EquipCo said: "*Frankly speaking, it has been tough, we had to move offices and relocate some of our staff to make sure customer support are physically close to our warehouses. They provided all sorts of service that we promised our customers... this is how we do business now*". Overall, the findings reveal that the four companies have undergone through long-term operational changes and adaptations to manage, maintain, and repair the product while the expansion of service provision has been taking place.

Moreover, our findings revealed that DevCo and EquipCo struggled to internally produce and deliver different types of services and resorted to externalizing their service delivery. Hence, they entered into contractual relationships with third parties to deliver services via partners or subcontractors. In that sense, some integrated service encounters have been outsourced to professional providers as it helped those focal organizations to focus on the key product functionality and some services within their resource capacity and capability. ITCo and MediCo reported that they had to outsource at a small scale for a fixed term until the staff had developed expertise in their designated service provision. However,

interviewees emphasized that partnership in offering system solutions allows to gain and develop specific service capabilities.

5 Discussion, Conclusion, limitations and future studies

5.1 Managing organizational change towards the successful service provision

This paper explains how companies might navigate the required changes to servitize their product offering without excessively focusing on service orientation and further explains why an excessive focus on service might not be a preferred route to servitization. To date, most research on servitization is largely dependent on revolutionary and evolutionary change strategies with more focus on mapping the enablers and challenges on the journey to servitization (Martinez et al. 2017). Our findings highlight the changes that the studied organizations have faced with both evolutionary and revolutionary change strategies in addition to an emergent change strategy (i.e., apparent change).

The analysis of case companies indicates that neither the evolutionary nor the revolutionary change paths were indicative of a "healthy" servitization. It was observed throughout the data analysis that the transformational power of evolutionary and revolutionary change strategies seems to imply that there is a relationship between the type of offered services and the extent of servitization (cf. Finne et al. 2013; Gaiardelli et al. 2021; Benedettini and Neely 2018; Baines et al. 2020). The studied organizations sought to keep an incremental pace (evolutionary or revolutionary) to move from product orientation to service orientation. We agree with this approach to a certain extent; however, we observed several challenges in the transformation journey with the studied organizations. The counterbalance to the benefits of servitization is complex.

The data analysis demonstrated that the four companies were in a dilemma to choose between the two orientations (i.e., product-orientation and service-orientation). For example, on the one hand, the EquipCo case demonstrates that excessive service provision may impair incentives to improve product quality. Conversely, the case demonstrates that a balanced focus that considers contextual factors (Dmitrijeva et al. 2020) on both product and service is a conclusive indicator of mutual benefit on both orientations. The aspects of dual focus, as observed in the case companies, are better manifested in a change strategy that carefully considers the organizational core values and artifacts (See, for example, Bustinza et al. 2015; He et al. 2015) such as organizational culture, organizational structure and operational systems as shown in Table 4 below. We argue that the apparent change helps to cope with the change paradox (Kohtamäki et al. 2020) as it aligns the balanced focus on service and product with the existing organizational assumptions and introduces some new values that align with the existing ones. This, as Gagliardi (1986) concluded, maintains stability while organizations change towards a servitization model based on a dynamic and incremental learning process (Kuula et al. 2018), considering the level and type of offered services. As such, we argue that an apparent change strategy is more appropriate for a servitization strategy that does not take focus away from product but at the same time considers service, which we call dual focus.

Table 4: The necessary change for offering product-service systems

Change level	How organizational enacted them
Organization culture	Promoted a customer focus revolving around customer values, preferences, and behavior.
	Directed the organizational activities toward successfully delivering both a high-quality product and customized services.
	Directed employees to understand and consider the significant role of customers.
	Motivated employees to interact effectively, positively, and adequately.
	Motivated entrepreneurial thinking inspires a problem-solving approach and encourages innovations.

	Considered the outcome of a product-service system as the main element of the business model and value proposition.
	Mitigated the negative influences of service provision over the product operation.
	Mitigated inconsistencies between highly harmonized production activities and heterogeneous services.
Organization structure	Promoted the delegation of authority and empowered employees to solve customer problems.
	Linked different organizational tasks, increased coordination between different functions, and provided a different control mechanism.
	Created common corporate practices and routines to suit high task uncertainty.
	Offered more flexibility with fast decision-making and a problem-solving approach.
	Facilitated communication and coordination and balanced the focus on both innovation and productivity.
	Offered an effective inter-organizational control system to offer product-service systems successfully.
Operations system	Designed to reduce the gap between production and service provision.
	Designed to promote a systematic workflow and increase productivity.
	Designed to achieve the required competitive priorities in terms of a product-services system.
	Enhanced customer satisfaction with a commitment to offering a high-quality product, improved product functionality, and improved service quality and convenience.
	Promoted both stability and standardization, as well as flexibility and adoption.
	Promoted an effective alignment between production and service provision.
	Promoted the outputs of a product-service system as the value of both tangible assets and intangible services.

5.2 *The case for a dual focus*

Offering advanced services needs to simultaneously manage two strategic activities (i.e.,

product-orientation and service-orientation) to offer a successful product-service system

(Baines et al. 2020; Dmitrijeva et al. 2020). This is because the value created of the product-

service system becomes an outcome of both the product's physical features and the

intangible value of the services. This approach advances an internal capability base

(Mansera et al. 2020; Sousa and da Silveira 2017) that is attuned to the clients'

requirements where the resource has improved, and value that the organization wants its clients to see has been created through the utilization of organizational talent (Mansera et al. 2020). We argue that services provision can be developed through the changes proposed in Table 4 (i.e., changes to organizational culture, value, and operations system). This signposts to organizational dimensions that needs to significantly change toward a balanced product service-orientation (i.e., dual focus), including, for instance, new organizational arrangements, behaviors, innovation practices, customer relations, and activities that are necessary to produce and deliver various services that form the value of a product-service system (c.f. Kowalkowski et al. 2017). Inevitably, organizations will face challenges inherent to their business model, management practices, organizational structure, culture, and operations system (Nuutinen and Lappalainen 2012). However, based on the cross-analysis of the four case studies, with an apparent change strategy that considers the current organizational values and artifacts, the transition process, we argue, is more likely to be smooth than evolutionary and revolutionary change strategies.

5.3   *Conclusion*

This paper empirically explored how four companies servitized their product offering and the changes that they have implemented to facilitate the successful execution of servitization. In doing so, we present a number of contributions to theory and practice. First, we respond to a recent call to further research on organizational issues in servitization by Baines et al. (2020) and Gaiardelli et al. (2021). This paper advocates a dual focus that equally considers both service-orientation and product orientation in a balanced way that would alleviate several challenges when implementing servitization, that otherwise would crop up in the evolutionary and revolutionary change strategies. This dual focus on service-orientation and product-orientation has been found to be more effective in reducing complexities and increasing engagement between products and services orientations. The

capacity to sustain the values of product and service orientations, rather than substituting one for the other, is better at delivering a more successful product-service system. This involves continuous development and nurturing change, though without fundamentally changing the whole organization. In comparison with Baines et al. (2020), who proposed a descriptive model of change (i.e., strong process-driven model), this paper complements this by proposing an apparent change strategy that fosters a balanced focus on service and product. As such, this paper focuses on organizational issues (value, structure, and system) as means to understand the change that has taken place in the four case studies.

Second, the existing literature has identified two main approaches to adopting servitization: the revolutionary and evolutionary change processes (Nuutinen and Lappalainen 2012). This paper complements extant literature by suggesting that the apparent change is a more appropriate change method that revolves around product and service. This relaxed change strategy develops new values without adverse effects on those already embedded. As such, this paper contributes to a better understanding of the change management process when an organization moves towards servitization.

Third, this paper provides managerial implications. While companies navigate their pathways to servitize, this paper presents practical recommendations on change strategies that minimize complexities and disruptions. Table 4 provides the changes that can take place in organizational culture, organizational structure, and operations system. We suggest that companies take a balanced approach towards servitization, in which case they do not necessarily have to augment their service provision at the expense of product provision. Instead, they need to make the required changes that do not deplete their resources or create resistance and fatigue in their human resource. The key to developing such a servitized model is the alignment between suggested changes and current

organizational culture and artifacts. We also suggest that while a company progresses towards a higher degree of servitization, this does not necessarily mean higher exposure to service but rather a dual focus on both product and service that may be initiated by focusing on improving product quality and reliability.

5.4   Limitations and Future Research

This research is not exhaustive and necessarily has some limitations. Firstly, the paper investigates servitization in Jordan. The similarity of Jordanian socio-economic context to other countries in the region (a Middle Eastern and Levantine country) makes it reasonable to assume that the findings are generalizable, at least to that region. However, we believe that the nuances of market structures in surrounding countries or other comparable countries mandate further research. Secondly, the sample draws on Jordanian companies that focused on international markets, which we assume they have more exposure to international practices in servitization. Although we believe our sample provides sufficient and significant findings at this stage, the lack of exclusively local market-oriented companies due to access barriers presents a generalizability barrier to findings. Therefore, enriching the sample will cement the current findings and provide further insights into the investigation of servitization in Jordan and potentially in other comparable markets.

Despite our efforts to spotlight the different changes that organizations need to implement, which we presented in Table 4, further research would find more organizational issues that organizations may have to change to achieve a dual focus on service-product orientation. This is mainly due to our inability to capture every aspect of organizational issues and their micro-foundations that the four companies have had to undergo to servitize in a balanced approach (i.e., dual focus). Finally, future research could further examine the capabilities required to enact the apparent change in servitization. For example, using an ambidexterity

lens might be useful in understanding how a dual focus can be achieved where organizations can focus on continuous improvement of the product and augmenting the value of services provided in line with the improved product.

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