PREDICTING THE EFFECT OF SERVITIZATION ON CUSTOMER LOYALTY: EMPIRICAL EVIDENCE FROM EMERGING ECONOMY CONTEXT

1.*Obinna Christian Ojiaku
Nnamdi Azikiwe University, Awka
Anambra, Nigeria

2. Abude Peter
Department of Port Management
Warri, Delta State, Nigeria

ABSTRACT

The tangible and imitable nature of products has led to the commoditization of most manufactured goods. Manufacturing companies have recognized servitization as a strategic solution to avoid falling into the trap of product commoditization. This study examines the relationship between servitization and customer loyalty in indigenous cable manufacturing firms in Anambra State. Four hypotheses and research questions, formulated in line with the research objective, guide the study. A survey research design was adopted, and the primary instrument for data collection was a structured questionnaire. Data were collected from 270 customers across three cable manufacturing firms in Southeast Nigeria. The collected data were sorted, coded, and analyzed using the Statistical Package for Social Sciences (SPSS) version 25, and the study hypotheses were tested using multiple regression analysis. The study found a significant positive effect for advanced services, while basic services had a significant negative effect. However, the effect of intermediate services was not significant. It is concluded that servitization can increase customer loyalty, although its contribution is minimal. Furthermore, the study demonstrates that advanced services have the highest positive impact on customer loyalty. Based on the findings, the study recommends, among other things, that firms seeking to servitize should provide advanced services to customers to increase loyalty. Additionally, they should offer product support and consulting services, as well as provide technical training and seminars to help customers achieve their goals while using their products.

Keywords: Servitization; Customer loyalty; Service, product support services; Basic services; Intermediate services; Advance services

https://doi.org/10.56249/ijbr.03.01.37
* Corresponding author.
E-mail address: oc.ojiaku@unizik.edu.ng (Obinna Christian Ojiaku)

1. INTRODUCTION

Globally, the manufacturing industry has undergone significant transformation due to technological advancements and increasing competition. This shift has led to a move away from traditional product-based offerings towards including services or complete solutions (Brax et al., 2021). Incorporating services is an effective strategy for companies to differentiate themselves from competitors and achieve growth and profitability while minimizing operating costs (Alvarez et al., 2015; Wang Lai, & Shou, 2018). This trend is referred to as the "servitization of manufacturing" (Vandermerwe and Rada, 1988). According to Carlborg, Kindström, and Kowalkowski (2018), servitization denotes a significant shift in a firm's value proposition from a focus on product offerings to prioritizing additional services. This strategic shift has become increasingly imperative for product-based firms to actively involve customers in their services process and not solely restrict their offerings to core products and services add-ons. The literature categorizes the services add-ons into three types: basic, intermediate, and advanced. Basic services focus on installing and maintaining basic product functionality, while intermediate services aim to enhance product use and condition, such as providing helpdesks or monitoring. On the other hand, advanced services are tailored to customers' unique needs, usage situations, and behaviors, which can improve business performance by locking in customers, increasing customer satisfaction, and strengthening customer loyalty (Mathieu, 2001a; Smith, Maull, & Ng, 2014; W. Zhang & Banerji, 2017).

Achieving customer loyalty seems elusive in the face of increasing competition, prompting companies to seek ways to create a competitive advantage and survive. To attract loyal customers and maintain a strategic advantage, firms now compete on "service." Servitization offers manufacturing firms leverage to compete on tacit knowledge. However, for most firms, services are provided when necessary or as a complement to the product, rather than a

consciously pursued strategy. Moreover, the cost of providing the level of service that supports product sales may sometimes outweigh the benefits of service provision (Gebauer, Krempl, & Fleisch, 2008).

Typically, manufacturing firms sometimes provide services to support product functionality, but these services become too common and easily copied by competitors, losing their differentiating power (Mathieu, 2001). Furthermore, to strengthen their competitive advantage, firms co-create services with customers by investing in customer support services, training customers in using their products, and providing consulting services. These services should be sufficient to allow customers to differentiate a brand's offering from the competition and provide a strong basis to "lock in" customers and win their loyalty (Ulaga & Reinartz, 2011). However, customers still switch, and when they do, the investment in providing these services and the benefits of a loyal customer are lost.

Most studies investigating servitization have mainly examined its impact on supply-side outcomes such as firm performance, profitability, sales, and profit. For instance, Tenucci and Supino (2019) showed that servitization increased competition, led to price wars, and had no effect on performance. Zhou et al. (2021) found that basic services and advanced services interacted to affect market performance, and Sousa and Silveira (2017) demonstrated a non-significant effect for basic services on financial performance. However, studies investigating the effect of servitization on marketing outcomes, such as customer loyalty, are scarce to the best of our knowledge. Understanding how the strategic move to servitize manufacturing affects firm performance is important, but it is also imperative to ascertain its contribution to customer loyalty. Loyal customers are potential recommenders and advocates for a business. Furthermore, most of the debate on this topic comes from a Western adaptation, while business environments differ. Therefore, it is critical to understand how servitization affects performance in the sub-Saharan African context. Drawing on the service-dominant logic and dynamic capability theory, this paper seeks to examine the effects of servitization on customer loyalty. Specifically, the study investigates the effects of basic, intermediate, and advanced services on customer loyalty.

2. REVIEW OF RELATED LITERATURE

2.1 The Concept of Servitization

The tangible and imitable nature of products has led to the commoditization of most manufactured goods. Consequently, manufacturing firms have recognized servitization as a strategic response to escape the "commoditization trap" of products (Zhang, Wang, Gao, & Li, 2020, p.1). Servitization involves the integration of services into tangible products, combining both product and service offerings. Products, in this context, refer to offerings with physical properties that can be touched, held, and sold as tangible items. Baines et al. (2009) describe products as material artifacts such as TVs, phones, cars, etc., manufactured for sale. On the other hand, services are intangible offerings that competitors cannot easily replicate, providing a strong source of competitive advantage (Oliva & Kallenberg, 2003). Unlike products that are manufactured, services are performed (Vandermerwe & Rada, 1988), and they cannot be separated from the provider. Services can vary within a provider and from one provider to another, and they do not result in ownership of anything. However, products inherently provide service components. For example, cars provide transportation services, mobile phones provide communication services, and cables provide electrification services (Vargo & Lusch, 2016).

Manufacturing firms consciously make efforts to provide services as part of their value proposition and an explicit strategy to differentiate themselves from the competition by incorporating various service components into their products (Baines et al., 2009). These services range from the simple addition of basic services to manufactured products to the facilitation of advanced services such as training and the implementation of efficient delivery systems for goods (Mathieu, 2001). Mathieu (2001) explains that this broad range of services includes distribution or repair, financing, after-sales services, training, and consulting. However, firms can limit their service offerings to traditional after-sales services or attempt to sell more robust services, such as consulting. The practice of including a range of service components with a company's main product offerings is referred to as servitization (Desmet et al., 2003).

The concept of servitization has been interpreted differently by various scholars. However, most of them agree that servitization involves a shift from providing only products to offering product-service systems. Vandermerwe and Rada (1988) illustrate how firms initially started as pure producers, manufacturing tangible products like TVs, or pure service providers, offering services like banking solutions, and later evolved into firms that provide a combination of pure products with supplementary services, such as a motor car offered with maintenance, support, and financing services. Finally, they transformed into firms offering

total solutions. This phenomenon is referred to as "the servitization of manufacturing." By transitioning from a product-based business model to one that offers solutions, servitization provides manufacturers with more sustainable and value-added sources of competitive advantage (Bustinza et al., 2015).

According to Vandermerwe and Rada (1988), servitization can be defined as the business process of presenting a comprehensive package or bundle of customer solutions consisting of pure goods along with peripheral services, support, self-service options, and a deep understanding of customer needs, in addition to core product offerings. Similarly, Ren and Gregory (2007) define servitization as a business process in which goods manufacturers shift from a product-centric mindset to include a service orientation as part of their business model. This shift enables them to develop and provide added services that meet customers' needs and expectations, gain a competitive advantage, and ultimately enhance performance. For this study, we adopt the latter definition.

Servitization can take several forms, with most of them falling somewhere along the product-service spectrum. At one end of the continuum are purely goods, followed by a blend of tangible goods and added services, then pure services with tangible goods as an add-on, and finally pure services at the other end of the continuum. These approaches are adopted as customer-focused strategies designed to meet or exceed customer expectations (Baines, Lightfoot, Benedettini, & Kay, 2009). Mathieu (2001) proposed a typology of the product-service continuum, distinguishing between customer service, product services, and services as products. Customer service aims to support a company's overall sales and involves providing assistance to customers in areas such as order-taking, complaint handling, and problem-solving. Product services support the sale and operation of a company's tangible products and can include installation, repair, maintenance, and training. Service products, on the other hand, are stand-alone entities that can be purchased independently of a company's tangible offerings, such as consulting and training services. Similarly, Brax and Visintin (2017) attempted a more specific categorization of servitized value, including products with limited support, installed and supported products, complementary services, product-oriented solutions, systems leasing, operating services, managed service solutions, and total solutions.

2.2 Customer Loyalty

It is generally agreed that businesses spend more money to acquire a new customer than they spend nurturing existing customers. Therefore, firms focus on gaining customer loyalty. Customer loyalty is considered the "holy grail" of marketing as it has a significant impact on long-term profitability (Mohammad & Alam, 2018). According to Oliver (1999), loyalty refers to a customer's resolve to regularly repurchase or patronize a favored product or service, irrespective of situational pressures and marketing efforts that may encourage switching behavior. Loyal customers tend to buy regularly, spend more money exploring new items, advocate products to others, and provide suggestions (Reichheld & Sasser, 1990). Loyal customers can also spread positive word-of-mouth, enhance referrals, and are valuable assets for any organization (Mohammad & Alam, 2020). Companies may drive customer loyalty by providing superior goods, warranties, freebies, vouchers, credit at low rates, highly valuable swap-ins, extended warranties, discounts, bonuses, and loyalty programs. Customer loyalty is linked to service-oriented dimensions of marketing inputs such as customer relationship management, service quality, and customer experience (Mohammad & Alam, 2018). Therefore, relating the servitization of manufacturing to customer loyalty makes theoretical sense.

2.3 Previous Research

Since Vandermerwe and Rada (1988) conceptualized servitization, there has been growing scholarly interest in the domain. Empirical studies examining the concept have mainly linked it to firm performance with mixed and inconclusive findings. Most of these studies adopt a supply-side perspective using case studies, panel data, or survey research. Moreover, the construction of the servitization concept differed across studies, with the majority using the base (intermediate) and advanced services typology.

First, we present an empirical review based on the base, intermediate, and advanced services typology and their related constructs. Next, we present other empirical conceptualizations of the construct based on survey data. Finally, we discuss the empirical literature based on case studies.

Based on services typology studies involving survey data, Zhou et al. (2021) showed that basic services interact positively with advanced services to predict company market performance. Ruiz-Alba et al. (2019) observed that while base services do not affect performance in high or low co-creation intensity, advanced services influence performance

via the mediating effect of servitization when the degree of co-creation is high. Similarly, Sousa and Silveira (2017) demonstrated that basic services have no effect on financial performance but serve as a framework for giving advanced services, while advanced services have an impact on sales and profitability. Li et al. (2018) showed that advanced services enhance performance on three facets of market, financial, and operational performance, whereas basic services only improve market performance. Tenucci and Supino (2019) reported that product-, service-, and use-oriented PSS all have a persistently positive and statistically significant relationship with firm profitability. Additionally, they demonstrated that intermediate PSS levels have a positive impact on performance, but there is no support for the high PSS typologies.

In studies using alternative typologies of the base, intermediate, and advanced service levels, Vendrell-Herrero, Vaillant, Bustinza, and Lafuente (2021) revealed that when incorporating services as an added value, businesses selling goods with short lifespans do better than those selling products with lengthy lifespans. Firms selling goods with a long lifespan fare better than those selling products with a short lifespan as these firms approach medium- and high-intensity servitization. Kwak and Kim (2016) found that process operation outsourcing and technical consulting had a positive influence on return on sales, whereas repair, spare parts, and maintenance services have little impact on return on sales. Pei, Tian, and McAvoy (2019) found that service support products (SSP) have a positive impact on operational performance. Martín-Peña, Sánchez-Lopez, and Díaz-Garrido (2020) reported that the introduction of services, mostly in the form of support services, is made possible and easier by digitization, and that this driver eventually opens up opportunities for the introduction of advanced services. Moreno, Marques, and Arkader (2020) and Min, Wang, and Luo (2015) established a positive correlation between servitization and business performance. Finally, Wang et al. (2018), through a meta-analytic study, showed that servitization has a stronger positive effect on a firm's non-financial performance than financial performance.

Evidently, the discussions on servitization have mainly been linked to firm performance. These studies used survey data, case studies, and systematic reviews of empirical literature. The common theme is that servitization is operationalized based on the basic, intermediate, and advanced services categorization or their related sub-categorization. The relationship between servitization and performance is far from conclusive. Moreover, these studies investigated servitization from the perspective of firms from developed economies.

3. THEORETICAL BACKGROUND AND HYPOTHESES

This research draws on the service-dominant logic and dynamic capabilities theory of the firm. Service-dominant logic offers a framework for expanding on the notion of services, their role in business transactions and competition, and the innovation and co-creation of services (Lin, Luo, Ieromonachou, Rong, & Huang, 2018). Additionally, the development of a service-oriented culture is viewed as a critical success factor in the process of servitization (Kinnunen & Turunen, 2012). A key aspect of service-dominant logic is informing firms on how to compete by offering services (Vargo & Lusch, 2016). The SD logic is particularly suitable for explaining servitization in manufacturing firms, providing a framework for conceptualizing servitization and its types in firms. Therefore, this study relies on the SD logic to elucidate the impact of servitization on customer loyalty.

Dynamic capabilities are defined as a company's and its management's capacity to harness, grow, and transform both its internal competencies and those of its external collaborative partners so as to adapt to a rapidly evolving environment (Teece, 2016). These capabilities represent an organization's capacity to fulfill consumers' needs better and faster than competitors (Kim, 2014). In the context of servitization, the capabilities firms need to sell goods are different from those needed to sell product-support services. For example, Rönnberg, Parida, and Kohtamäki (2016) argued that providing advanced services indicates an important shift from a product-driven manufacturing to service-oriented offerings that depend on collaboration among various skill sets. Therefore, the servitization of manufacturing relies on the management's ability to deploy its competencies to meet customers' needs and strengthen their loyalty.

Based on the service-dominant logic and dynamic capabilities, firms can provide basic, intermediate, and advanced services to gain customer loyalty. Basic services are those that relate directly to the use of a product. They include services such as installation, repairs, transportation, maintenance, spare parts, product-use training, and demonstrations provided to support sales and product use (Sousa & Silveira, 2017). Base services aim to install and improve basic product functions, which prolong product life (Sousa & Silveira, 2017). They help customers to be more efficient and effective. They are also referred to as elementary services, low-level services, or low-intensity services. Base services may not generate income or profit, but they are required to break into the services market and help sustain lucrative business models (Sousa & Silveira, 2017). They are an effective means of preventing customer defections in product markets. Adoption of basic services in isolation is consistent

with a product-centric business model that views services as a "necessary evil" (Ulaga & Reinartz, 2011). According to Mathieu (2001), in today's business landscape, manufacturing companies must offer basic services as part of their product bundle, or else they risk losing their competitive edge. Although such services may serve as entry barriers, they do not necessarily provide a competitive advantage. Simon (1992) adds that services that increase the value of tangible products and facilitate their use are more effective as competitive weapons than general services. Li, Tian, & Tian (2018) posit that manufacturing firms provide basic services to ensure the proper functioning of product components, and by providing after-sales services, they create opportunities to interact frequently with customers in order to receive feedback and complaints that they can use to improve product design and overall performance. In the end, customers are satisfied, and when they are satisfied, they show loyalty by providing positive word-of-mouth for the company. Studies by Zhou et al. (2021) and Li, Tian, and Tian (2018) found that basic services interact positively with market performance. Queiroz et al. (2020) stated that SMEs typically offer basic services such as repairs and spare part provisions. Therefore, we hypothesize as follows:

H1: Basic services will have a positive effect on customer loyalty.

Intermediate services are additional services provided to enhance the product's usability and longevity (Confente, Buratti, & Russo, 2015). These services necessitate a more complicated collection of service components and may include after-sales services such as repairs and returns management (Confente et al., 2015). Manufacturing firms focus on service businesses to widen their service range and co-produce value with customers (Baines & Lightfoot, 2013). The combined product and service offering is far greater in value than independent items and provides additional benefits (Zhang et al., 2020). Routine maintenance, technical help-desk, repair, and training of operators are examples of intermediate services (Gebauer et al., 2008). According to Ruiz-Alba et al. (2019), intermediate services directly impact performance and indirectly affect servitization. Furthermore, Confente et al. (2015) found that small-sized footwear firms repair or replace faulty footwear, even without flaws, when retailers do not sell them. Accordingly, we hypothesize as follows:

H2: Intermediate services will have a positive effect on customer loyalty.

According to Gebauer et al. (2008), advanced services require personal delivery, have a low replacement rate, and reflect high levels of credence properties. Examples of advanced services include training in using the product, product upgrades, consulting, and product

rental. According to Vendrell-Herrero et al. (2021), advanced or high-level services can increase prospects for value co-creation with customers while removing exploitative conduct, both of which contribute to a company's positive outcome. Ulaga and Reinartz (2011) add that advanced services typically focus on satisfying specific customers' needs, which is capable of resulting in improved consumer satisfaction as well as creating a strong customer commitment and loyalty effects. Advanced services generally charge premium prices, resulting in higher service sales margins (Sousa & Silveira, 2017). Furthermore, servitization strategies are centered on strong customer centricity, where customers are not just provided with products but also broader, more tailored "solutions" (Baines et al., 2009). Zhang et al. (2020) added that servitization has become essential for addressing a broad range of customers' demands, increasing loyalty from customers, and winning new customers. Results from previous studies showed that advanced services have a non-significant effect on firm performance (Tenucci & Supino, 2019), while Ruiz-Alba et al. (2019) reported that servitization mediates the effect of advanced services on business performance. Accordingly, we expect advanced services to enhance customer loyalty and therefore hypothesize as follows:

H3: Advanced services will have a positive effect on customer loyalty.

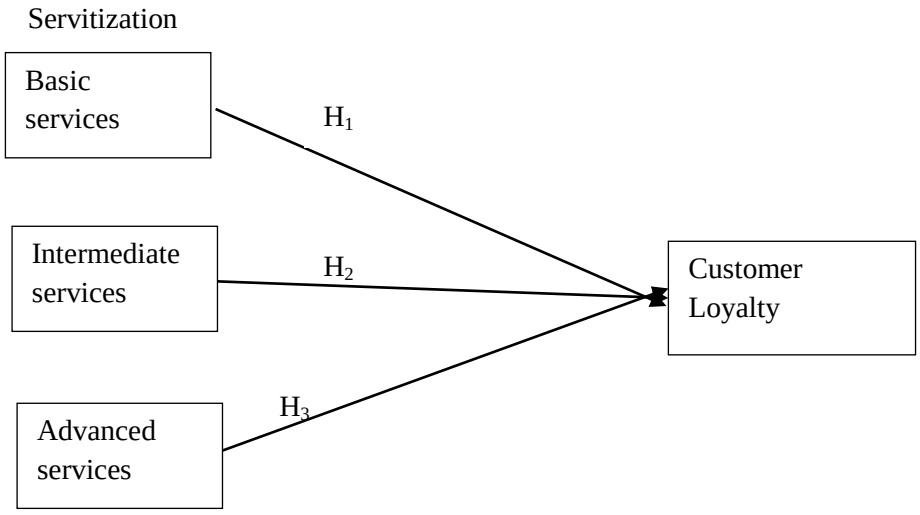

Fig. 1. Conceptual Framework
Source: Authors' conceptualization

4. RESEARCH METHOD

4.1 Design & Sample

A survey research design was adopted to collect data from 310 customers of indigenous cable manufacturing firms in Nigeria. The study employed a proportionate sampling technique. The proportionate sampling technique is a probability sampling technique used to collect data from respondents by ensuring that the different sampling groups are proportionately represented in the final sample. However, to select respondents and collect data, the mall intercept was used. This approach requires intercepting customers at the sales outlets of cable manufacturing firms. From the 310 surveys distributed, we retrieved 290 copies. Out of the 290 retrieved, 20 copies were not valid. Therefore, we used responses from 270 respondents in the final analysis. A majority of the respondents are between 20-35 years old (56%) and 36-50 years old (41%) respectively. This represents the population of the active workforce in the real sector. Most of the respondents are single (56%), while about 40 percent are married. An overwhelming percentage of the respondents (85%) are male, while only about 15% of them are female. This suggests that men dominate the customer base of cable and allied equipment manufacturers.

More than one-third of the respondents have a Bachelor's degree (70%), while about a quarter have a graduate degree (26%). Thus, the respondents are adequately educated and knowledgeable to read and understand the statements in the questionnaire. The respondents' working experience shows that a majority of them (40%) have been working for less than 5 years, while 37% of them have worked for between 5-10 years.

The demographic profile of the respondents is presented in Table 1.

Table 1. Respondents' Demographic Profile

		Frequency	Per cent			Frequency	Per cent
Age	Less than 20	10	3.7	**Highest qualification**	OND/NCE	10	3.7
	20-35 years	150	55.6		Bachelors' degree	190	70.4
	36-50 years	110	40.7		Post-graduate	70	25.9
Marital status	Single	150	55.6	**Working experience**	< 5 yrs	120	44.4
	Married	120	44.4		5-10 yrs	100	37.0

Gender	Male	230	85.2	16-20 yrs	10	3.7
	Female	40	14.8	>20 yrs	20	7.4
	Total	**270**	**100.0**		**270**	**100.**

4.2 Measurement Instrument

The primary instrument used for collecting primary data was a structured questionnaire. The questionnaire was divided into two sections. Section 1 focused on personal data and information about the respondents, while Section 2 centered on the categories of servitization: basic, intermediate, and advanced services. This section also included a measure of customer loyalty. The questionnaire utilized a five-point Likert scale for responses, ranging from Strongly Agreed (5), Agree (4), Undecided (3), Disagreed (2), to Strongly Disagreed (1). All the items in the questionnaire were adapted from previous studies.

5. RESULTS

5.1 Factor Analysis

Prior to conducting the hypotheses testing, a factor analysis was performed to reduce the data. The factor analysis involved a principal component analysis set at Eigen value of 1, Varimax Rotation Method and values less than four were suppressed. Also, the preliminary analysis involved a reliability analysis using cronbach alpha (Benchmark = 0.70, Nunnally, 1989) and a total variance explained. The test score showed the data converged on four factors with the first containing variables that measured customer loyalty and labeled accordingly. Items measuring basic services converge on the second factor and labeled as such. On the third factor, items measuring advanced services loaded on this factor and it was labelled accordingly. Finally, 4-items relating to intermediate services loaded on the fourth factor while one item “this manufacturer provides technical helpdesk” loaded below .50 and was deleted. The factor was subsequenetly labeled as “intermediate service”. The factors cumulatively explained 72.18% of the total variance while the reliability test score showed that all the items loaded above the benchmark of $\alpha = 0.70$. The factor analysis, reliability score and total variance explained is shown in table 2 below.

5.2 Test of Hypotheses

The hypotheses formulated were tested using multiple regression analysis and the p-value was set at a 5% level ($p < 0.05$). In other words, we accept the alternate and reject the null when p is less than 0.05 and *vice versa.* Before testing the hypotheses, we tested for model fit and multi-collinearity as a prerequisite for multiple regression analysis. The ANOVA result showed that the overall model is a good fit ($F = 8.39$, $p < 0.001$). The Variance Inflation Factor was all above the threshold of 3. Which suggests that the data is free from multi-collinearity problems. Also, the model summary result shows that the r-square is 8% and the adjusted r-square is 7%. This model explains less than 10% of the variance in the dependent variable. All the measures have a reliability score above 0.70. All the analysis was performed with the aid of the computer software, Statistical Package for Social Sciences (SPSS) 25.

To test the hypotheses, we regressed basic, intermediate, and advanced services on customer loyalty based on the hypotheses stated above.

Table 2. Factor analysis, reliability score and total variance explained

Constructs	1	2	3	4
Customer Loyalty				
I intend to do more business with this manufacturer in future	.88			
I will recommend this manufacturer to others	.86			
I am willing to commit to a Long-term relationship with this manufacturer	.78			
I am willing to wait for services with this manufacturer	.77			
I am likely to cross-purchase other products from this manufacturer	.64			
Base Services				
This manufacturer actively provides spare parts/consumables services		.82		
This manufacturer actively provides product upgrade services		.78		
This manufacturer is active in Installation services		.77		
This manufacturer provides product use training and demonstration services		.70		
Advanced services				
This manufacturer provides customer consulting and support services			.89	
This manufacturer actively provides customer seminars and technical users training			.83	
This manufacturer provides product rental or lease services			.72	
This manufacturer provides full maintenance contracts			.52	
Intermediate services				
This manufacturer provides scheduled maintenance services				.73
This manufacture actively provide repair services				.61
This manufacturer provides recycling services				.60

This manufacturer provides trainings for operators				.50
Cronbach alpha	.90	.86	.84	.80
Total variance explained	37.82	16.27	10.18	7.91

Rotation converged in 10 iterations.
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

The first hypothesis predicted a positive effect of basic services on customer loyalty. The decision criteria are based on the p-value of 0.05. The result shows that basic services have a significant but negative effect on customer loyalty (β = -.27, t = -3.80, p < 0.05). Thus, partially supporting H1. In other words, while the relationship between basic service and customer loyalty is significant, contrary to our expectations, the direction is negative.The result for the second hypothesis showed that intermediate services do not have a significant effect on customer loyalty. The second hypothesis predicted a positive and significant effect between intermediate services and customer loyalty but our result does not confirm H2 at a p-value of 0.05. Therefore, we conclude that there is a non-significant effect of intermediate services on customer loyalty (β = -.11, t = -1.53, p < .13). In addition, our result confirms hypothesis 3. The hypothesis predicted a positive effect of advanced services on customer loyalty. The p-value was below the 0.05 point. Therefore, we conclude that advanced service has a positive and significant effect on customer loyalty (β = -.21, t = 3.06, p < .05). Finally, the result shows that basic services have the most effect on customer loyalty. However, the direction of the effect is negative. Advanced services have the second strongest effect on customer loyalty. Since we predicted a positive effect for all the factors on customer loyalty then it is sufficing to say that advanced services have the most effect on customer loyalty.

Table 3. Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.895	.157		31.102	.000		
	Basic services	-.161	.042	-.268	-3.802	.000	.694	1.442
	Intermediate Services	-.052	.034	-.112	-1.533	.126	.644	1.553
	Advanced services	.113	.037	.214	3.064	.002	.705	1.419
	F- Stat	8.39				.000[a]		
	Adjusted R	.086						
	Adjusted R^2	076						

a. Dependent Variable: Customer Loyalty

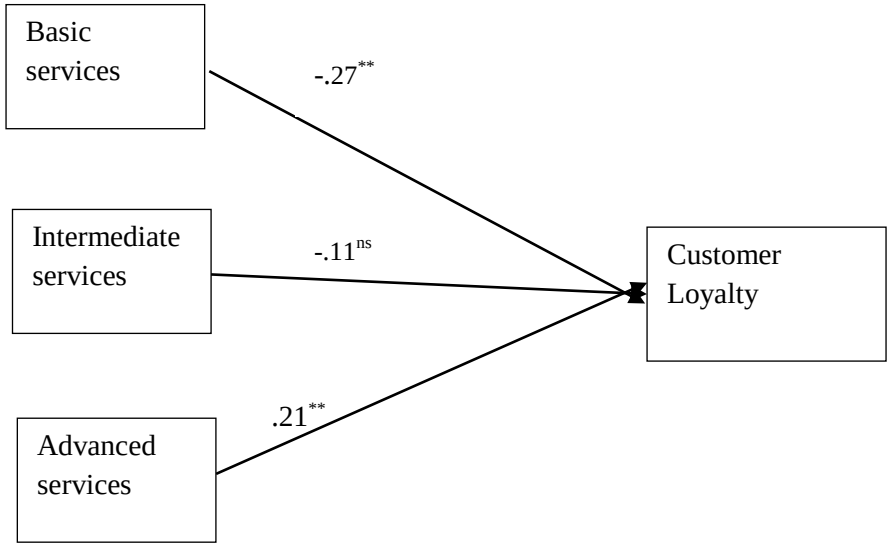

Fig. 2 Hypotheses result

** significant
ns: not significant

6. DISCUSSION

In the face of increased competition, firms are encountering challenges in attracting and retaining loyal customers. To remain competitive, many companies have integrated service components into their product offerings as part of their strategy. This study examines the impact of servitization on customer loyalty in indigenous cable manufacturing firms in Anambra State. The results indicate that advanced services have a significant positive effect on customer loyalty. This highlights the importance of providing consulting and support services to customers' businesses, such as helpdesk assistance and technical training. These findings are consistent with previous studies (Li et al., 2018; Zhou et al., 2021) that have shown the positive impact of advanced services on market performance and overall firm performance. However, it contradicts the findings of Tenucci and Supino (2019), who reported no significant effect of advanced services on performance. Advanced services, often requiring expertise and a premium cost, can contribute to increased customer loyalty, particularly in the underdeveloped manufacturing sector. On the other hand, the significant but negative effect of basic services on customer loyalty suggests that as manufacturing firms increase the provision of installation services, product upgrades, and product use training, customer loyalty tends to decrease. This finding is somewhat counterintuitive. Previous studies have found no significant effect of basic services on firm performance (Kwak & Kim, 2016; Ruiz-Alba et al., 2019), which differs from our findings. A possible explanation is that

as basic services become more commonplace and expected by customers, their impact on loyalty diminishes. Basic services may be viewed as a "necessary evil" that merely prevents customers from switching, and when customers are even slightly dissatisfied with these services, it can significantly reduce their loyalty. Interestingly, the study finds no significant effect of intermediate services on customer loyalty, contrary to the positive effect reported by Tenucci and Supino (2019). This suggests that providing repair services, spare parts, and scheduled maintenance alone is not sufficient to foster customer loyalty. In today's competitive landscape, customers may require exceptional and extraordinary services to truly inspire loyalty. In summary, while servitization has been shown to predict other firm performance indicators, such as profitability, growth, and sales, its impact on customer loyalty is relatively weak, explaining less than 10 percent of the changes in loyalty. Advanced services play a crucial role in enhancing customer loyalty, while the impact of basic services is more complex, leading to a decrease in loyalty. Intermediate services, despite their importance, do not significantly contribute to customer loyalty in this context. These findings provide valuable insights for indigenous cable manufacturing firms and highlight the need for strategic decision-making when integrating services into their offerings.

7. CONCLUSION AND IMPLICATION

In today's competitive landscape, achieving customer loyalty is increasingly challenging, especially for manufacturers of standardized and highly competitive products. This study aimed to explore how manufacturing firms can enhance customer loyalty by incorporating services into their business model. The findings indicate that while servitization can contribute to increased customer loyalty, its overall impact is relatively modest. The provision of advanced services, such as customer support and training, positively influences customer loyalty. However, basic services, including installations and product use training, can have adverse effects on customer loyalty. Additionally, the study found that intermediate services, such as spare parts, repair services, and operator training, do not significantly contribute to customer loyalty. Based on these findings, the following implications for manufacturers can be drawn. Firstly, firms aspiring to implement servitization strategies should focus on providing advanced services to customers in order to enhance loyalty. This involves offering comprehensive product support, consulting services, and organizing technical training and seminars to assist customers in achieving their objectives while utilizing the products. Secondly, firms aiming to cultivate customer loyalty should exercise caution when delivering basic services such as installations, product use training, and

upgrades. While there may be other factors influencing the negative relationship between basic services and customer loyalty, firms must be aware that providing these services could potentially diminish customer loyalty. Lastly, although intermediate services may have positive effects on other performance metrics of firms, they do not significantly contribute to customer loyalty. Therefore, firms seeking to foster customer loyalty must go beyond providing repair services, spare parts, and maintenance services, and explore additional strategies. Overall, these findings provide valuable insights for manufacturers and highlight the need for strategic decision-making when implementing servitization initiatives. By understanding the effects of different types of services on customer loyalty, firms can tailor their approaches to better meet customer expectations and maximize loyalty-building opportunities.

7.1 Suggestions for Further Research

There are several potential areas for further research on the effect of servitization and its impact on customer loyalty. Firstly, it would be worthwhile to investigate the effect of servitization in other sectors, such as fabricating firms, distributors, and suppliers of hardware and installations. This would provide a broader understanding of the applicability and outcomes of servitization across different industries. Secondly, future studies could explore the mediating effect of customer satisfaction and other relevant variables in the relationship between servitization and customer loyalty. Understanding the underlying mechanisms and pathways through which servitization influences customer loyalty can provide valuable insights for firms looking to optimize their service strategies. Furthermore, exploring the interactions among different levels of services and their impact on customer loyalty and other performance indicators could be an interesting avenue for future research. Investigating how various combinations of basic, intermediate, and advanced services interact and influence customer loyalty can offer a more nuanced understanding of the role and effectiveness of different service levels. By addressing these research gaps, scholars can further advance our understanding of servitization and its implications for customer loyalty in different contexts, industries, and service configurations.

REFERENCES

Alvarez, R. L. P., Martins, M. R., Paulo, S., Paulo, S., & Terra, M. (2015). Applying the maturity model concept to the servitization process of consumer durables companies in Brazil. Journal of Manufacturing Technology Management, 26(8), 1086–1106. https://doi.org/10.1108/JMTM-04-2014-0050

Baines, T. S., Lightfoot, H. W., Benedettini, O., & Kay, J. M. (2009). The servitization of manufacturing on future challenges. Journal of Manufacturing Technology Management, 20(5), 547–567. https://doi.org/10.1108/17410380910960984

Baines, T.S., Lightfoot, H.W., 2013. Made to Serve. How manufacturers can compete through servitization and product-service systems. John Wiley & Sons

Brax, S. A., Calabrese, A., Ghiron, N. L., Tiburzi, L., & Gronroos, C. (2021). Explaining the servitization paradox: a configurational theory and a performance measurement framework paradox. International Journal of Operations & Production Management, DOI 10.110. https://doi.org/10.1108/IJOPM-08-2020-0535

Brax, S.A. & Visintin, F. (2017). Meta-model of servitization: the integrative profiling approach. *Industrial Marketing Management,* 60, 17-32.

Bustinza, O.F., Bigdeli, A.Z., Baines, T. & Elliot, C. (2015). Servitization and competitive advantage: the importance of organizational structure and value chain position. *Research-Technology Management,* 58(5), 53-60, doi: 10.5437/08956308X5805354

Carlborg, P., Kindström, D., & Kowalkowski, C. (2018). Servitization Practices : A Co-creation Taxonomy. In M. Kohtamäki, T. Baines, R. Rabetino, A. Z. Bigdel, & I (Eds.), Facilitating Servitization: Practices and Tools for Managing Service Transition. Retrieved from www.palgrave.com

Confente, I., Buratti, A., & Russo, I. (2015). The role of servitization for small firms : drivers versus barriers. Int. J. Entrepreneurship and Small Business, 26(3), 312–331.

Crozet, M., & Milet, E. (2017). Should everybody be in services ? The effect of servitization on manufacturing firm performance. J Econ Manage Strat, (March), 1–22. https://doi.org/10.1111/jems.12211

Desmet, S., Dierdonck, R.V. & Looy, B.V. (2003). Servitization: or why services management is relevant for manufacturing environments", in van Looy, B., Gemmel, P. and van Dierdonck, R. (Eds), Services Management: An Integrated Approach, Pearson Education, Harlow, pp. 430-442

Gebauer, H., Krempl, R., & Fleisch, E. (2008). Service development in traditional product manufacturing companies. European Journal of Innovation Management, 11(2), 219–240. https://doi.org/10.1108/14601060810869875

Kim, H. (2014). The role of WOM and dynamic capability in B2B transactions. Journal of Research in Interactive Marketing, 8(2), 84–101. https://doi.org/10.1108/JRIM-12-2013-0082

Kinnunen, R.-E., & Turunen, T. T. (2012). Identifying servitization capabilities of manufacturers: A conceptual model. *Journal of Applied Management and Entrepreneurship*, *17*(3), 55–78.

Kwak, K., & Kim, W. (2016). Effect of service integration strategy on industrial firm performance. Journal of Service Management, 27(3).

Li, H., Tian, G., & Tian, Y. (2018). Servitization : Its preferred organization and impact on firm performance. 37(2), 181–193. https://doi.org/10.3233/HSM-18302

Lin, Y., Luo, J., Ieromonachou, P., Rong, K., & Huang, L. (2018). Strategic orientation of servitization in manufacturing firms and its impacts on firm performance. Industrial Management & Data Systems, https://doi.org/10.1108/IMDS-10-2017-0485.

Martín-Peña, M.-L., Sánchez-Lopez, J.-M., & Díaz-Garrido, E. (2020). Servitization and digitalization in manufacturing : the in fl uence on fi rm performance. *Journal of Business & Industrial Marketing*, *35*(3), 564–574. https://doi.org/10.1108/JBIM-12-2018-0400

Mathieu, V. (2001). Service strategies within the manufacturing sector: benefits, costs and partnership. International Journal of Service Industry Management, 12(5), 451–475.

Min, L., Wang, J., & Luo, Q. (2015). Does the Servitization Strategy Improve the Performance of Manufacturing Enterprises in China ? *American Journal of Industrial and Business Management*, *5*(281–287). https://doi.org/10.4236/ajibm.2015.55030

Mohammad, M., & Alam, D. (2018). The effect of service quality on customer loyalty of generation y – an empirical investigation on superstores in Bangladesh. *Malaysian Management Journal*, *22*(December), 153–173.

Mohammad, M., & Alam, D. (2020). The relationship between service quality, corporate image, and customer loyalty of generation : An Application of S-O-R Paradigm in the Context of Superstores in Bangladesh. *SAGE Open*, *April-June*, 1–19. https://doi.org/10.1177/2158244020924405

Moreno, R., Marques, L., & Arkader, R. (2020). Servitization impact on performance moderated by country development. *Benchmarking: An International Journal*, *27*(1), 302–318. https://doi.org/10.1108/BIJ-10-2018-0311

Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management*, *14*(2), 160–172. https://doi.org/10.1108/09564230310474138

Oliver, R. L. (1999). Whence consumer loyalty?. Journal of marketing, 63(4_suppl1), 33-44.

Pei, X., Tian, G., & Mcavoy, D. (2019). Relationships between Diff erent Types of Servitization and Operational Performance: Considering the Eff ect of Cross-Function Integration. *Revista De Cercetare Si Interventie Sociala*, *64*, 181–198.

Queiroz, S. A. B., Mendes, G. H. S., Silva, J. H. O., Ganga, G. M. D., Miguel, P. A. C., & Oliveira, M. G. (2020). Servitization and performance: impacts on small and medium enterprises. Journal of Business & Industrial Marketing, 35(7), 1237–1249. https://doi.org/10.1108/JBIM-06-2019-0277

Queiroz, S. A. B., Mendes, G. H. S., Silva, J. H. O., Ganga, G. M. D., Miguel, P. A. C., & Oliveira, M. G. (2020). Servitization and performance: impacts on small and medium enterprises. Journal of Business & Industrial Marketing, 35(7), 1237–1249. https://doi.org/10.1108/JBIM-06-2019-0277

Reichheld, F. F., & Sasser, W. E. (1990). Zero defections: quality comes to services. 1990, 68(5), 105-111.

Ren, G. & Gregory, M. (2007). Servitization in manufacturing companies. Paper presented at 16th Frontiers in Service Conference, San Francisco, CA, 4-7 October.

Rönnberg, D., Parida, V., & Kohtamäki, M. (2016). Capability con figurations for advanced service offerings in manufacturing fi rms : Using fuzzy set qualitative comparative analysis ☆. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2016.04.133

Ruiz-Alba, J., Soares, A., Rodríguez-Molina, M., & Frías-Jamilena, D. (2019). Servitization strategies from customers' perspective: the moderating role of co-creation. Journal of Business and Industrial Marketing, 10.1108/JB.

Simon, H. (1992). Service Policies of German Manufacturers: Critical Factors in International Competition. *European Management Journal*, 10 (4), 404-411

Smith, L., Maull, R. & Ng, I. (2014), Servitization and operations management: A service dominant-logic approach. *International Journal of Operations & Production Management*, 34(2), 242-269.

Sousa, R., & Silveira, G. J. C. da. (2017). Capability antecedents and performance outcomes of servitization: Differences between basic and advanced services. International Journal of Operations & Production Management, 37(4), 444–467.

Teece, D. J. (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (Entrepreneurial) Firm. European Economic Review, 86(C), 1–55. https://doi.org/10.1016/j.euroecorev.2015.11.006

Tenucci, A., & Supino, E. (2019). Exploring the relationship between product-service system and profitability. Journal of Management and Governance, (0123456789). https://doi.org/10.1007/s10997-019-09490-0

Ulaga, W., Reinartz, W.J., 2011. Hybrid offerings: how manufacturing firms combine goods and services successfully. J. Market. 75, 5–23

Vandermerwe, S. & Rada, J. (1988), "Servitization of business: adding value by adding services. *European Management Journal*, 6 (4), 314-324.

Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: an extension and update of service-dominant logic. Journal of the Academy of Marketing Science, 44(1), 5–23. https://doi.org/10.1007/s11747-015-0456-3

Vendrell-herrero, F., Vaillant, Y., Bustinza, O. F., & Lafuente, E. (2021). Product lifespan: the missing link in servitization. Production Planning & Control, 0(DOI: 10.1080/09537287.2020.1867773), 1–17. https://doi.org/10.1080/09537287.2020.1867773

Wang, W., Lai, K.-H., & Shou, Y. (2018). The impact of servitization on firm performance: a meta-analysis. International Journal of Operations & Production Management, (https:// doi.org/10.1108/IJOPM-04-2017-0204 Permanent). https://doi.org/10.1108/IJOPM-04-2017-0204

Zhang, W., & Banerji, S. (2017). Challenges of servitization : A systematic literature review. Industrial Marketing Management Journal, 65, 217–227. https://doi.org/10.1016/j.indmarman.2017.06.003

Zhang, W., & Banerji, S. (2017). Challenges of servitization: a systematic literature review. *Ind. Market. Manag*. 65, 217–227

Zhang, Y., Wang, L., Gao, J., & Li, X. (2020). Servitization and business performance : the moderating effects of environmental uncertainty. Journal of Business & Industrial Marketing, 35(5), 803–815. https://doi.org/10.1108/JBIM-03-2019-0123

Zhou, D., Yan, T., Dai, W., & Feng, J. (2021). Disentangling the interactions within and between servitization and digitalization strategies: A service-dominant logic. International Journal of Production Economics, 238(May), 108175. https://doi.org/10.1016/j.ijpe.2021.108175