“Optimizing manufacturing firm performance in Indonesia through strategic orientation and servitization”

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OPTIMIZING MANUFACTURING FIRM PERFORMANCE IN INDONESIA THROUGH STRATEGIC ORIENTATION AND SERVITIZATION

Abstract

This study aims to investigate factors influencing servitization and firm performance within Indonesian national manufacturing companies, focusing on export-oriented entities such as automotive, electronics, textile, and food processing industries. Strategic orientations – market, technology, service, and learning – are investigated as key dimensions guiding firms' strategic decisions amidst dynamic business environments. A comprehensive survey involving 100 companies representing a diverse spectrum of the Indonesian manufacturing sector is conducted. These companies encompass a range of statuses, including joint ventures (12%), multinational companies (2%), and national companies (86%). Through a purposive sampling strategy, representation across different company types is ensured to capture the breadth of perspectives within the industry. The quantitative approach involves surveying managers across various organizational levels, including top-level executives, middle managers, and front-line supervisors. Input from different managerial tiers is solicited to understand strategic orientations and their impact on firm performance. Data analysis, employing validation, descriptive statistics in MS Excel, and inferential statistics using Smart PLS yields significant insights. Market, service, and learning orientations emerge as influential factors in both basic and advanced services ($p < 0.05$), while technology orientation lacks statistical significance. Notably, market orientation significantly impacts advanced services ($p < 0.05$). Furthermore, the findings underscore the significant influence of service provision on firm performance across both basic and advanced services ($p < 0.05$). The critical role of strategic orientations, encompassing technology adoption, market positioning, service delivery, and organizational learning, in driving servitization and enhancing firm performance in Indonesian manufacturing is emphasized.

Keywords technology orientation, service orientation, learning orientation, basic service, advanced service, performance, servitization

JEL Classification D83, L25, O14, O32

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INTRODUCTION

A prolonged debate surrounds the role of the service industry. Vargo and Lusch (2016) advocate service-dominant logic, positing service as central to business operations. Conversely, servitization in the manufacturing sector is acknowledged (Baines et al., 2009). Embracing servitization can create a unique strategy for consistent service-related income, higher prices, customer loyalty, and increased profits (Baines et al., 2009; Eggert et al., 2014; Fang et al., 2008; Guajardo et al., 2011). Moreover, services can separate customer satisfaction from material consumption, enhancing resource efficiency (Doni et al., 2019; Lingegård, 2020; Santos et al., 2019).

There remains a lack of consensus among researchers regarding the consistent positive impact of servitization in highly competitive markets. Benefits from product-oriented services, like maintenance, can

be offset by manufacturers intentionally creating "inherent obsolescence" (Laird, 2007). Similarly, use-oriented services like leasing may lead to indifferent user behavior (Heshmati, 2017). While literature primarily relies on qualitative analyses (Reim et al., 2017), empirical studies on social services' association with performance are lacking. Studies need to focus on identifying sustainability strategies for producers to balance profit growth and corporate sustainability (Akadiri et al., 2019).

Indonesia's manufacturing industry has seen continuous growth, making an increasingly significant contribution to the Gross Domestic Product (GDP) annually. Since 2010, the industrial sector's share of the national GDP has consistently risen, even amidst the peak of the pandemic in 2020–2021. In 2021, the industrial sector contributed 2,946.9 trillion IDR to the GDP, up from 2,760.43 trillion IDR in 2020. Additionally, investments in manufacturing reached 325.4 trillion IDR in 2021, exceeding the Ministry of Industry's projected target of 280 trillion to 290 trillion IDR by 19%. This figure notably surpassed the 2020 investment of 272.9 trillion IDR and the 2019 realization of 215.9 trillion IDR (IDN Financials, 2022).

1. LITERATURE REVIEW

The servitization paradox poses challenges to manufacturers despite the potential for corporate growth and profitability through servitization (Lexutt, 2019). While servitization offers benefits, studies indicate that its realization can be complex for service-oriented companies, sometimes resulting in inferior financial performance compared to traditional product manufacturing (Benedettini et al., 2015; Fang et al., 2008; Neely, 2008). This study explores two paradigms: service-dominant logic, emphasizing the service industry perspective, and servitization, with a focus on the manufacturing viewpoint (Crozet & Milet, 2017; Martín-Peña et al., 2020; Moreno et al., 2020; Ruiz-Alba et al., 2019). The servitization paradigm, connecting factors leading to servitization and manufacturing performance, offers advantages in development.

Servitization involves enhancing a company's core offerings by providing services, a strategy that attracts and retains loyal customers, ultimately leading to a sustainable competitive advantage (Fang et al., 2008; Eggert et al., 2014). This approach positively contributes to overall performance (Abou-Foul et al., 2021; Kharlamov & Parry, 2021; Vendrell-Herrero et al., 2017). However, challenges, uncertainty, and risks associated with service implementation are acknowledged (Alghisi & Saccani, 2015; Kreye, 2019; Benedettini et al., 2015). To embrace servitization, industrial companies must undergo organizational changes, adapt operational processes, and modify operant resources, but these changes can introduce heightened process unpredictability and internal and external vulnerabilities (Zhang & Banerji, 2017; Benedettini et al., 2015). Previous servitization research has generated diverse findings, highlighting positive impacts, adverse effects, and non-linear relationships (Eggert et al., 2014; Neely, 2008; Fang et al., 2008; Visnjic et al., 2019). These varied results underscore the need for additional research to delve into specific service types and contextual elements, including integration with supply chain partners, that shape the intricate relationship between servitization and firm performance, as Dmitrijeva et al. (2020) emphasized.

In transitioning to servitization, manufacturing companies enhance their core product offerings by introducing additional service components (Axelsson & Gunnarsson, 2019). During this transformation, a range of services can be offered. Due to the diverse nature of these service categories, it is vital to differentiate servitization approaches to ensure their effective implementation (Antioco et al., 2008; Manresa et al., 2021; Sousa & da Silveira, 2019). Various categorization frameworks have been proposed from different perspectives (Eggert et al., 2014; Neely, 2008). Following the approach suggested by Sousa and da Silveira (2019), servitization is classified based on the type of service provided by the manufacturer, which includes product-centered services (referred to as BAS – basic services) and customer-oriented services (referred to as ADS – advanced services). These services are associated with distinct value-creation processes.

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Basic services ensure product access, running, and extended product cycles, covering aspects such as preservation, preparation, setting, application, and management (Sousa & da Silveira, 2019). This transactional service is characterized by low customization and partial customer interaction (Eggert et al., 2011; Kumar et al., 2017; Sousa & da Silveira, 2019). On the other hand, advanced services (ADS) are more intricate and professional, creating shared value with customers beyond basic product operations in specific contexts. ADS typically include a help desk, customer support, training, business consulting, product adaptation, and top-notch operational processes personalized for customers (Eggert et al., 2014; Liu et al., 2020; Szász et al., 2017). ADS involves a relational approach characterized by high customization and intense customer interaction (Liu et al., 2020; Sousa & da Silveira, 2019). Prior research has emphasized significant distinctions between basic and advanced services concerning fundamental operant and operand resources, knowledge requirements, and associated risks and benefits. Accordingly, serviced producers must cultivate the necessary expertise and establish suitable organizational structures to effectively implement their chosen servitization strategy (Axelsson & Gunnarsson, 2019; Sousa & da Silveira, 2019; Ulaga & Reinartz, 2011). Thus, a logical classification of servitization considers key enablers and their impact on performance outcomes.

Industrial firms can provide consumers with diverse services (Calabrese et al., 2019; Oliva & Kallenberg, 2003). Sousa and da Silveira (2019) emphasize that basic and advanced services represent distinct business models. Basic services primarily focus on efficiently handling essential operational tasks for customers, aligning with the traditional servitization concept where services serve as extensions to the core product, prompting additional business model transformations (He & Lai, 2012; Visnjic et al., 2019). According to Sousa and da Silveira (2019), there are notable distinctions in the nature and risk levels between advanced and basic services. While a manufacturing company can offer the same basic service to different customers when selling identical products, advanced services demand deeper customer involvement, especially in process and design. Companies providing advanced services must cater to customers with unique processes and specific needs, underscoring the crucial role of customization and tailored solutions in delivering advanced services (Zhang & Banerji, 2017; Sousa & da Silveira, 2019).

A focus on technology orientation enhances an organization's adaptability to new perspectives and adoption of new technologies, which is crucial for building consumer trust in product-based services (Ulaga & Reinartz, 2011). Leveraging technical expertise, technology-oriented companies can provide services such as access to rare spare parts and technical support, elevating the overall customer experience. However, an orientation toward advanced technology may prioritize efficiency and standardization over variety, limiting its support for advanced services. While technology is vital for servitization, a balanced approach is recommended to avoid overemphasis (Eloranta & Turunen, 2015; Ulaga & Reinartz, 2011). Moreover, expanding research to include customer and market orientation and inter-functional organization is essential for advancing services. Servitization, depicted as a shift from technology-centric assets to relationship quality, underscores the significance of relationships with competitors, customers, and internal functions, particularly for advanced services (Crozet & Milet, 2017; Eloranta & Turunen, 2015; Rondi et al., 2021).

Advanced services, characterized by direct consumer interaction, benefit from a technology-oriented approach (Sousa & da Silveira, 2019). The delivery of advanced services (ADS) necessitates a synergy between products and services, creating innovative solutions through the leverage of their relationship (Benedettini et al., 2015). Emphasizing technology orientation is crucial for fostering an environment conducive to exceptionally innovative integrated solutions. ADS, tailored to individual customer requirements, demands expertise in product knowledge and treatment methods, instilling greater customer confidence in companies with advanced technology capabilities (Sousa & da Silveira, 2019).

Market orientation, a strategic approach aligning companies with the market environment, involves three dimensions: competitor orienta-

tion, customer orientation, and inter-functional coordination (Slater & Narver, 2000). This strategic approach guides companies in prioritizing and responding to customers and competitors at the organizational level. Market orientation enables companies to utilize market information to adapt their product range to customer needs, fostering affordability and innovation (Altindag et al., 2011; Feng et al., 2020; Slater & Narver, 2000). Prioritizing competitors encourages the discovery of new ideas and the introduction of innovative value propositions to the market. Opponent-oriented firms will likely focus on value-added services and co-create hybrid offerings with customers, enhancing affordability and preference (Green et al., 2017).

Hybrid offerings exemplify a co-production model, where both the company and the customer contribute to the service component (Shah et al., 2020). Building close relationships with customers aids in developing service offerings by reducing complexity and uncertainty tied to customer reliance (Shah et al., 2020). Inter-functional coordination involves synchronizing a company's resources to enhance customer value (Green et al., 2017). Effective resource distribution and collaboration among operational units are crucial to the company's ability to utilize resources for successful servitization (Shah et al., 2020). All operational units are organized to adapt to changes, evaluate service requests, and deliver various services logically and efficiently.

The synergy between technology and market orientation in servitization is evident when enhancing basic services individually, creating an efficient solution-provider entity delivering tailor-made products and services. However, the combined impact of various strategic orientations is intricate, necessitating companies to integrate technological advancements with a deep understanding of customer value (Alobaidi & Kitapci, 2019; Huikkola et al., 2020; Shah et al., 2020). Mennens et al. (2018) emphasized the link between service strategy and service orientation, which is crucial for gaining a competitive edge in hyper-competitive markets by offering customer service benefits (Lin et al., 2019). Industrial companies prioritize expanding the quantity and quality of service offerings to enhance their capabilities (Kowalkowski et al., 2017; Lin et al., 2019). Nonetheless, implementing service orientation presents challenges and contradictions for serviced industrial companies (Baines et al., 2009).

Organizational learning is a dynamic capability pivotal in propelling servitization, as Žitkienė et al. (2015) highlighted. Companies emphasizing learning and development exhibit higher innovation levels (Pastor Pérez et al., 2019). Companies dedicated to learning will improve their invention capabilities by having advanced technology, monitoring opponents' actions, and adopting and transforming customer value (Calantone et al., 2002). Furthermore, organizational aspects and learning will significantly contribute to the field of information systems (IS). Although these connections have been extensively examined within the service industry, there is a notable scarcity of research in the industrial sector.

Prior research on strategic orientation primarily focused on its impact on product innovation or firm performance (Gotteland et al., 2020; Hurley & Hult, 1998; Tseng et al., 2019). There has been a questioning of the performance outcomes related to servitization, with instances showing neutral or negative effects on industrial firms, contrary to the predominantly positive effects reported in many servitization studies (Sousa & da Silveira, 2019). Diverse outcomes suggest that the impact of servitization could hinge on the type of service offered and specific company circumstances (Crozet & Milet, 2017; Queiroz et al., 2020). Basic services contribute to insights into product functionality and usage, enhancing core competencies, making products user-friendly, facilitating sales, and establishing a reputation as a competent provider, which is particularly beneficial for smaller companies in competitive markets. Advanced services, on the other hand, involve substantial business model changes, being more knowledge and people-intensive (Eggert et al., 2014; Sousa & da Silveira, 2019; Shah et al., 2020).

Therefore, drawing upon relevant literature, this study formulates the subsequent hypotheses and research model (Figure 1):

H_{1a}: *Technology orientation positively influences basic service provision.*

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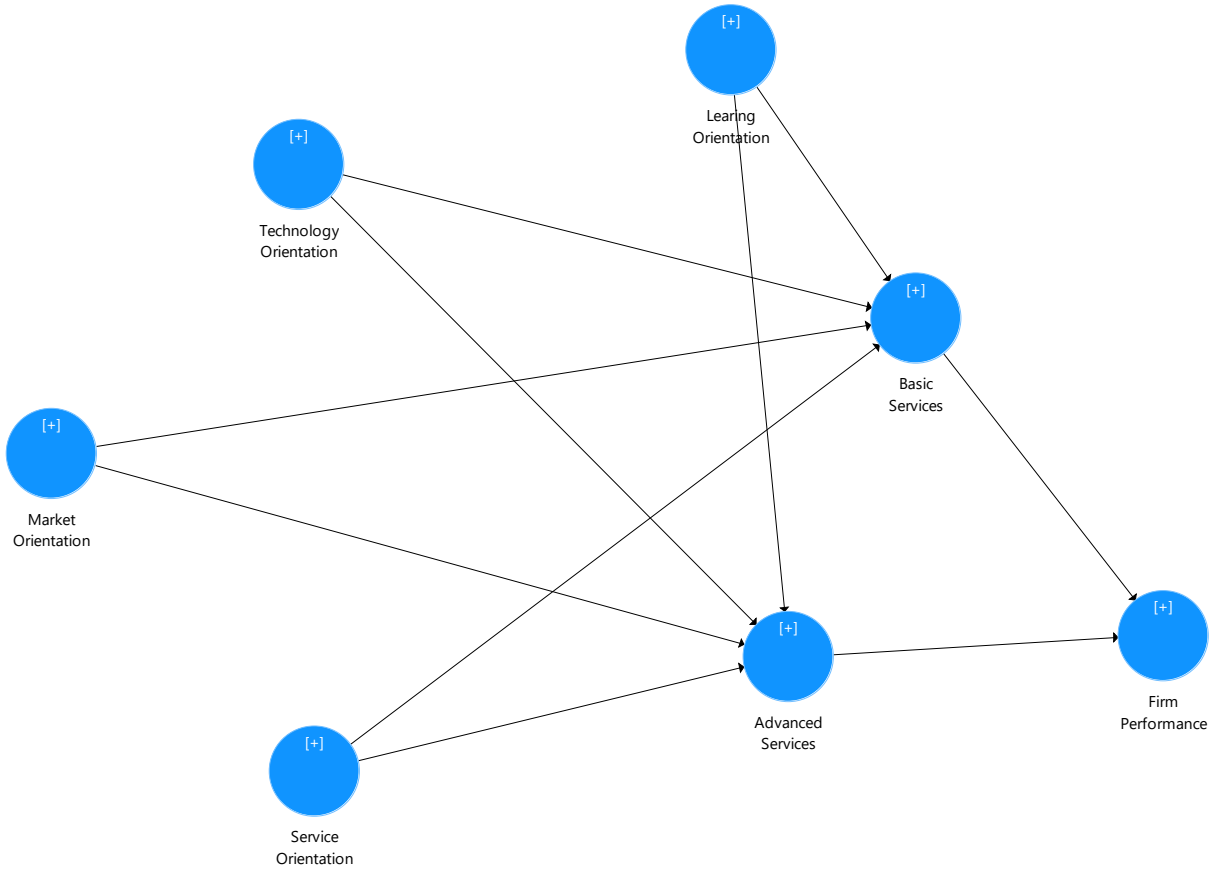

Figure 1. Conceptual model

H_{1b}: *Technology orientation positively influences advanced service provision.*

H_{2a}: *Market orientation positively influences basic service provision.*

H_{2b}: *Market orientation positively influences advanced service provision.*

H_{3a}: *Service orientation positively influences basic service provision.*

H_{3b}: *Service orientation positively influences advanced service provision.*

H_{4a}: *Organizational orientation positively influences basic organizational learning.*

H_{4b}: *Organizational orientation positively influences advanced service provision.*

H_{5a}: *Basic service provision positively influences firm performance.*

H_{5b}: *Advanced service provision positively influences firm performance.*

2. METHODS

This study comprised a sample of 100 participants from the manufacturing sector, providing representation across a diverse array of managerial roles and organizational sizes. Participants were selected from national manufacturing companies, which included export-oriented entities operating within the Indonesian market. The sample encompassed managers from various levels of the organizational hierarchy, comprising top-level executives, middle managers, and front-line supervisors. The companies exhibited a varied size distribution, ranging from smaller organizations with fewer than 100 staff members to large corporations with a broader workforce. This diverse composition was instrumental in ensuring a comprehensive perspective on strategic orientations, servitization dynamics, and firm performance within the Indonesian manufacturing context.

Most respondents were 22 to 35 years old, with many holding at least a bachelor's degree. Within this research framework, the constructs examined encompassed a comprehensive array of organizational performance and orientation facets. For instance, firm performance was evaluated using key metrics such as sales growth, market share growth, profit growth, and return on assets, drawing upon the framework established by Zhang et al. (2021). Similarly, the distinction between basic services and advanced services encompassed essential and specialized service offerings, including maintenance, installation, and consultancy services, inspired by Zhang et al. (2021). The assessment of technology orientation involved a meticulous examination of strategies for technology adoption, with a particular focus on innovative technologies and technology acquisition, as adapted from the same source. Furthermore, the study delved into market orientation, which encompassed competitor orientation, customer orientation, and inter-functional coordination, aiming to gauge aspects such as customer-centricity, competitor responsiveness, and cross-functional collaboration, drawing upon the framework by Zhang et al. (2021). The exploration of service orientation probed the fundamental role of service in exchange and competitive advantage, guided by Lin et al. (2019). Lastly, learning orientation was employed to investigate the integration of resources and the determination of value from the beneficiary's perspective, building upon Lin et al. (2019). All constructs were evaluated through a rigorous assessment utilizing a five-point Likert scale.

Table 1 reveals a diverse profile of the respondents' demographic data. In terms of the size of the companies they work for, the majority (57%) are employed in organizations with fewer than 100 employees, while 29% work in companies with 101 to 500 employees. Notably, there is a small representation in larger organizations, with 0.01% in companies with over 501 to 1,000 employees and 0.13% in companies with over 1,001 employees. Regarding working experience, 39% have less than five years of experience, and 22% have 6 to 10 years of experience. The distribution is pretty even in age, with 44% falling in the 22 to 35 age bracket and smaller percentages in other age groups. In education, the majority (76%) have a bachelor's degree, and in terms of company status, 86% are employed in national companies. Market segment and annual turnover data show an almost equal split between national and export-focused companies and various annual revenue ranges. Lastly, company age distribution indicates a diverse range, with the highest percentage (38%) in companies aged 16 to 20.

Table 1. Descriptive analysis

Respondent profile	Frequency	Percentage
Number of employees		
< 100 persons	57	57%
101-500 persons	29	29%
> 501-1,000 persons	1	1%
> 1,001 persons	13	13%
Work experience		
< 5 years	39	39%
6-10 years	22	22%
11-15 years	18	18%
16-20 years	11	11%
21-25 years	7	7%
> 25 years	3	3%
Age		
< 21 years	1	1%
22-35	44	44%
36-45	22	22%
46-55	19	19%
> 56	14	14%
Education level of the employees		
Senior High School	6	6%
Diploma	6	6%
Bachelor	76	76%
Master	6	6%
Doctoral	6	6%
Company status		
Joint venture	12	12%
Multinational company	2	2%
National company	86	86%
Market segment		
National	52	52%
National (Export-oriented)	48	48%
Annual revenue		
< 5 billion IDR	12	12%
6.1-10 billion IDR	52	52%
10.1-15 billion IDR	10	1%
15.1-25 billion IDR	2	2%
25.1-30 billion IDR	18	18%
> 30.1 billion IDR	6	6%
Company age		
< 15 years	26	26%
16-20 years	38	38%
21-25 years	9	9%
26-30 years	10	10%
> 31 years	17	17%

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3. RESULTS

Smart-PLS version 3.3 was employed for a three-stage statistical analysis: gathering demographic information, assessing measurement model reliability and validity, and evaluating the proposed structural model's effects on firm performance. The analysis followed the methodology by Kurniadi and Rana (2023).

Table 2 thoroughly examined latent variables in this study, assessing internal consistency, convergent validity, and collinearity. Advanced services, basic services, firm performance, market orientation, service orientation, and technology orientation demonstrated strong internal consistency and convergent validity without discernible collinearity issues, as indicated by composite reliability, Cronbach's alpha, AVE, and VIF values. However, learning orientation exhibited a slightly lower Cronbach's alpha, suggesting a potential concern with internal consistency. Despite this, given its acceptable convergent validity and VIF values, the learning orientation construct was carefully retained in the analytical framework.

Table 3 displays the outcomes of the Fornell-Larcker criterion, a technique for evaluating the discriminant validity of latent constructs. Discriminant validity is confirmed when the diagonal AVE values exceed the correlations between each construct and all others (off-diagonal cells). The study's results confirm strong discriminant validity among the analyzed constructs. In each case, the square root of the AVE exceeds the correlations with other constructs, indicating their distinctiveness and the absence of multicollinearity concerns. This underscores the reliability of the measurement model and the validity of the constructs employed in the study.

To enhance internal consistency and convergent validity, three items (specifically, COMO2, COMO3, and COMO4) were eliminated from the analysis, as indicated in Table 4. Subsequently, the measurement model met all required criteria after removing these elements. All the retained items exhibited factor loadings of 0.60 or higher. Cronbach's alpha, composite reliability, and Average Variance Extracted (AVE) results all surpassed the thresholds, implying that the measurement model's constructs are valid and reliable without collinearity issues.

The study successfully meets the established cut-off points, affirming the constructs' validity, reliability, and absence of collinearity. Tables 2, 3, and 4 furnish compelling evidence supporting the va-

Table 2. Latent variable validity, reliability, and collinearity measures

Latent constructs	Internal consistency		Convergent validity	Collinearity
	Cronbach's alpha	Composite reliability	AVE	VIF
Cut-off values	> 0.70	> 0.70	> 0.50	≤ 3.3
Advanced Services	0.847	0.887	0.567	2.609
Basic Services	0.907	0.931	0.731	2.609
Firm Performance	0.84	0.884	0.604	-
Learning Orientation	0.48	0.787	0.651	1.408
Market Orientation	0.823	0.872	0.534	2.328
Service Orientation	0.885	0.92	0.743	1.511
Technology Orientation	0.773	0.853	0.594	2.441

Table 3. Discriminant validity

Constructs	AS	BS	FP	LO	MO	SO	TO
Advanced Services (AS)	0.753						
Basic Services (BS)	0.785	0.855					
Firm Performance (FP)	0.68	0.653	0.777				
Learning Orientation (LO)	0.681	0.61	0.558	0.807			
Market Orientation (MO)	0.657	0.58	0.672	0.428	0.731		
Service Orientation (SO)	0.66	0.694	0.566	0.468	0.476	0.862	
Technology Orientation (TO)	0.645	0.606	0.623	0.452	0.743	0.503	0.771

Table 4. Analysis of the indicators, outer loading, and collinearity

Constructs	Measurement Items	Outer Loading	VIF
Firm Performance	FP1: Sales growth.	0.777	1.722
	FP2: Market share growth.	0.850	2.215
	FP3: Profit growth.	0.795	2.36
	FP4: Return on assets.	0.751	2.222
	FP5: Return of sales.	0.703	1.674
Basic Services	BAS1: Maintenance and repair of products sold to customers.	0.771	2.022
	BAS2: Installation/implementation services.	0.890	3.196
	BAS3: Spare parts/consumables provision for customers.	0.898	2.316
	BAS4: Product documentation.	0.896	3.76
	BAS5: Product recycling and dismantling	0.814	2.292
Advanced Services	ADS1: Rental/lease of products.	0.674	1.494
	ADS2: Product modifications and customization.	0.755	1.915
	ADS3: Help desk/customer support center.	0.776	1.79
	ADS4: Training in using the products.	0.767	2.017
	ADS5: Consultancy services.	0.768	2.173
	ADS6: Outsourcing services.	0.774	2.132
Technology Orientation	TO1: Emphasize using sophisticated technologies.	0.631	1.306
	TO2: Emphasize applying the latest technology.	0.839	1.77
	TO3: Emphasize acquiring new technologies.	0.794	1.495
	TO4: Emphasize adopting technology innovations.	0.801	1.689
Market Orientation	**Customer orientation (CUSO)**		
	CUSO1: Emphasize customer satisfaction.	0.639	2.369
	CUSO2: Emphasize understanding customer needs.	0.674	1.996
	CUSO3: Measure customer satisfaction frequently and systematically.	0.734	2.649
	CUSO4: Increase customer value or reduce costs frequently.	0.658	2.038
	CUSO5: Emphasize the high quality of products.	0.644	1.761
	Competitor orientation (COMO)		
	COMO1: Responded to competitors' actions rapidly.	0.618	2.12
	COMO2: Share competitors' strategic information in the firm. *	0.593	2.03
	COMO3: Top managers discuss competitors' strengths and strategies. *	0.573	1.764
	COMO4: Have a competitive advantage in targeting customers. *	0.663	2.293
Service Orientation	SO2: Service is the fundamental basis of exchange.	0.887	2.959
	SO3: Indirect exchange masks the fundamental basis of exchange.	0.861	3.686
	SO4: Goods are distribution mechanisms for service provision.	0.858	2.961
	SO5: Operant resources are the fundamental source of competitive advantage.	0.815	1.771
Learning Orientation	LO1: All economic and social actors are resource integrators.	0.717	1.111
	LO2: The beneficiary always uniquely and phenomenologically determines value.	0.888	1.111

Note: *removed from the analysis due to lower outer loading.

lidity of the measurement model. Figure 2 presents the model findings in the research model.

Following the recommendations of Hair et al. (2014), evaluating the structural model involves assessing predictive ability, inter-construct relationships, and other relevant criteria. Collinearity is checked using Table 4, ensuring values are below 3.3. As outlined by Hair et al. (2014), critical criteria in PLS-SEM analysis include path coefficient significance, effect sizes (f^2), predictive relevance (Q^2), and R^2 values, providing crucial insights into the model's dynamics and predictive performance.

Table 5. Results (summarized)

Latent construct	f^2	Q^2	R^2
Firm Performance	0.566	0.271	0.500
Basic Services	0.074	0.453	0.640
Advanced Services	0.146	0.375	0.705

Table 5 reveals valuable insights into its predictive power and inter-construct relationships. Notably, the latent construct firm performance exhibits a moderate effect size (f^2 = 0.566) and a substantial R^2 value of 0.500, indicating its significant role in explaining variance. Additionally, basic services demonstrate a small effect size (f^2 = 0.074) but a

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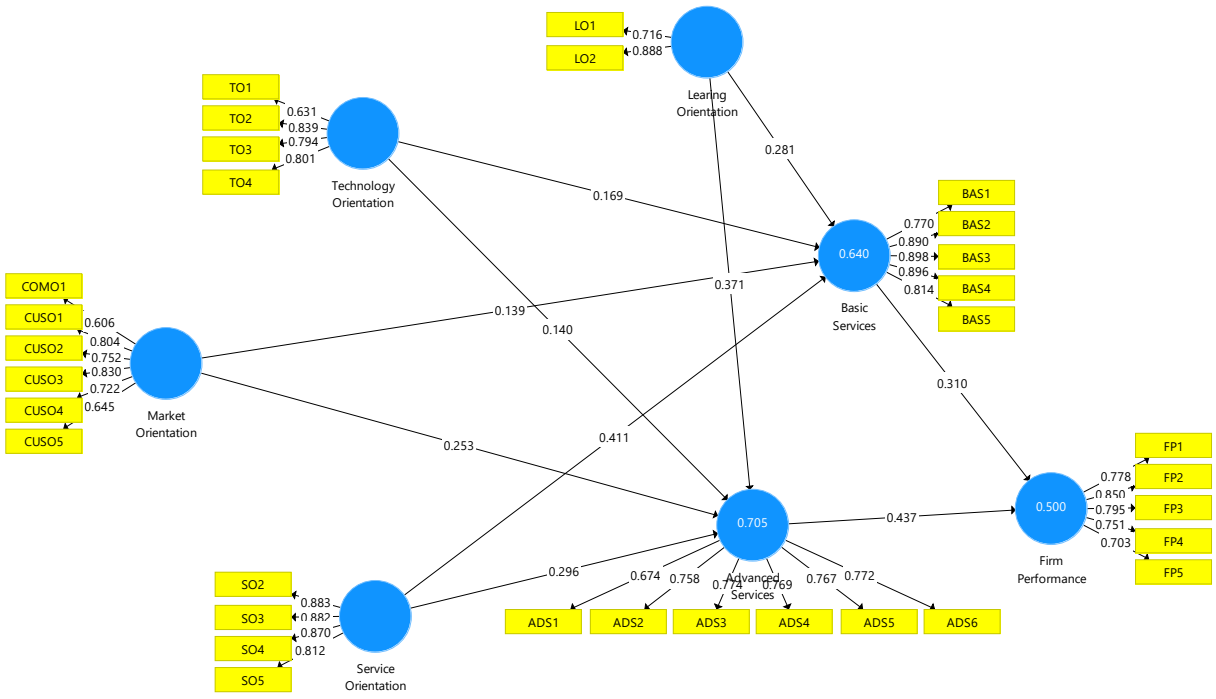

Figure 2. SEM-PLS structural model output

noteworthy R^2 value of 0.640, underscoring its contribution to explaining variance in the model. Similarly, advanced services display a moderate effect size (f^2 = 0.146) and a substantial R^2 value of 0.705, emphasizing its importance in elucidating variance. Furthermore, the predictive relevance (Q^2) values indicate the model's ability to predict the respective constructs, with all values surpassing the threshold of zero. Thus, the structural model exhibits predictive capabilities and robust inter-construct relationships, bolstering its validity and explanatory power. The structural model analysis reveals a significant impact of both basic services and advanced services on firm performance. These findings emphasize the pivotal role that service offerings play in shaping overall firm performance, highlighting the importance of effective service strategies in achieving positive outcomes.

The structural path analysis, detailed in Table 6 and Figure 2, reveals critical insights into the relationships within the study's framework. While positive associations between technology orientation and service provisions (basic and advanced) exist, they lack statistical significance (H_{1a} and H_{1b}). Market orientation positively and significantly affects advanced services (H_{2b}), contrast-

Table 6. Structural path model

Hypotheses	Structural Paths	Path Coefficient	Bootstrapping		Result
			t-value	*p*-value	
H_{1a}	Technology Orientation → Basic Services	0.169	1.516	0.065	Not supported
H_{1b}	Technology Orientation → Advanced Services	0.14	1.597	0.055	Not supported
H_{2a}	Market Orientation → Basic Services	0.139	1.318	0.094	Not supported
H_{2b}	Market Orientation → Advanced Services	0.253**	2.921	0.002	Supported
H_{3a}	Service Orientation → Basic Services	0.411**	4.430	0.000	Supported
H_{3b}	Service Orientation → Advanced Services	0.296**	3.422	0.000	Supported
H_{4a}	Learning Orientation → Basic Services	0.281**	3.080	0.001	Supported
H_{4b}	Learning Orientation → Advanced Services	0.371**	4.656	0.000	Supported
H_{5a}	Basic Services → Firm Performance	0.31**	2.269	0.012	Supported
H_{5b}	Advanced Services → Firm Performance	0.437**	3.021	0.001	Supported

Note: ** *t*-value is significant at $p < 0.05$.

ing with the non-significant influence on basic services (H_{2a}). Strongly supported by low *p*-values, service orientation and learning orientation positively affect both basic and advanced services (H_{3a}, H_{3b}, H_{4a}, and H_{4b}). Additionally, service provision significantly influences firm performance for both basic and advanced services (H_{5a} and H_{5b}). These findings contribute valuable insights into the nuanced relationships among various strategic orientations and service provisions, shedding light on their collective impact on firm performance.

4. DISCUSSION

This study explored the connections among diverse strategic orientations within the industrial context, including technology orientation, market orientation, service orientation, learning orientation, and firm performance. It sought to comprehend how distinct strategic orientations influence a company's capacity to deliver both basic and advanced services and how these services, in turn, affect the firm's overall performance. Additionally, it aimed to contribute to the literature on servitization by investigating these relationships within an industrial setting, shedding light on the intricacies of service provision and their consequences for firm performance.

Contrary to expectations, the research findings challenge the conventional belief that technology orientation positively influences basic and advanced services (Sousa & da Silveira, 2019; Ulaga & Reinartz, 2011). Despite prior literature emphasizing the pivotal role of technology orientation in service integration and innovation, the non-significant path coefficients suggest that a firm's emphasis on technology may not necessarily enhance service provision. This discrepancy with existing studies underscores the need for further investigation and theoretical refinement (Sousa & da Silveira, 2019; Ulaga & Reinartz, 2011). The study aligns with the notion that a technology-centric approach in manufacturing may prioritize standardization over customization (Ezenwakwelu et al., 2021; Fang et al., 2008). The results highlight the importance of a comprehensive approach, including customer and market orientation, especially for advanced services, emphasizing relationships with customers and competitors and collaboration across functions, consistent with the advocated paradigm shift (Crozet & Milet, 2017; Eloranta & Turunen, 2015; Rondi et al., 2021). This study contributes to understanding technology orientation in servitization and emphasizes the need for multifaceted orientations for effective service delivery.

The research findings support existing literature on the positive impact of market orientation on advanced services, aligning with previous studies highlighting the role of understanding customer needs and market dynamics in advanced service provision (Feng et al., 2020). This finding reinforces the idea that companies prioritizing competitor and customer orientation and inter-functional coordination are better equipped to adapt their offerings to customer needs and explore innovative value propositions (Altindag et al., 2011; Slater & Narver, 2000). The study contributes to understanding market orientation's role in advanced service provision, consistent with existing literature. However, the non-significant result for basic services prompts consideration of market orientation's differential influence on service categories. Being more straightforward and standardized, market orientation may affect basic services less, suggesting that the same level of customer co-creation or inter-functional coordination may not be necessary. This aligns with the evolving literature on market orientation as a strategic tool requiring customization for specific service offerings and customer segments to maximize its impact in servitization initiatives (Green et al., 2017; Shah et al., 2020).

The robust support for the hypotheses on service orientation underscores its crucial role in shaping the delivery of basic and advanced services. Companies prioritizing service excellence and viewing it as a foundational element of their operations are better positioned to offer a comprehensive range of services, from basic to advanced. This study's findings align with and support existing literature, emphasizing the significance of customer-centric strategies in service industries (Mennens et al., 2018). The pivotal role of service orientation in gaining a competitive edge by providing unique service advantages to customers is consistent with Lin et al. (2019). Moreover, the result aligns with industrial firms' practice of enhancing both the quantity and quality of ser-

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vice offerings, strengthening their overall capabilities (Kowalkowski et al., 2017; Lin et al., 2019). Acknowledging the challenges and contradictions in implementing service orientation for industrial companies in the service sector, the study aligns with Baines et al. (2009), who showed the complex yet crucial role of service orientation in the context of advanced service provision. These findings contribute to and extend the understanding of the significance of service orientation in industrial settings, enriching the broader literature on customer-centric strategies.

The significant influence of learning orientation on service provision underscores the importance of fostering a culture of continuous learning and resource integration within organizations to offer a comprehensive range of basic to advanced services. This aligns with the principles advocated in previous articles, emphasizing the critical role of cultivating a learning-oriented culture for firms seeking to enhance their service capabilities. The study's findings contribute to and support existing literature in several ways. Firstly, they confirm the significance of organizational learning as a dynamic capability that drives servitization (Žitkienė et al., 2015). Additionally, the results support the positive association between higher levels of innovation and organizations prioritizing learning and development (Pastor Pérez et al., 2019). The paper also reaffirms the role of organizational learning in enhancing innovation capabilities, adapting to customer needs, leveraging advanced technology, and monitoring competitors' actions (Calantone et al., 2002). While these relationships have been extensively explored in the service industry, the study fills a research gap by emphasizing the crucial role of learning orientation in advancing service provision within the industrial sector's context.

The research findings underscore the significant impact of basic and advanced services on a firm's overall performance in the industrial sector, aligning with Gotteland et al. (2020), Hurley and Hult (1998), and Tseng et al. (2019). This emphasizes the strategic importance of services in enhancing competitiveness, financial performance, and operational outcomes. The study contributes to the discourse on servitization's influence, addressing questions raised by Sousa and da Silveira (2019). It acknowledges the nuanced effects of different service types, noting that basic services enhance product functionality and core competencies, while advanced services entail substantial changes and intensive resources (Sousa & da Silveira, 2019). This enriches the understanding of the complex dynamics between service provision and firm performance within the industrial sector (Sousa & da Silveira, 2019; Kowalkowski et al., 2017; Tseng et al., 2019).

This study contributes valuable theoretical and practical insights by highlighting the intricate connection between different service types (basic and advanced) and firm performance within the context of servitization. It emphasizes the importance of service orientation and learning orientation for companies seeking to excel in service provision. Practical implications suggest tailoring market orientation strategies to specific service types, prioritizing service excellence, fostering a culture of continuous learning, and strategically planning and evaluating service offerings. However, study limitations, including the use of cross-sectional data, industry-specific focus, and potential common method bias, should be acknowledged. Future research could address these limitations through longitudinal studies, exploring diverse industries, and employing objective performance measures.

CONCLUSION

This study empirically examines the influence of strategic orientations on servitization within the Indonesian manufacturing industry, including market, technology, service, and learning orientations. Drawing insights from a sample of 100 managers in Indonesian manufacturing companies, the findings elucidate the intricate relationship between these strategic orientations and servitization. Specifically, technology, service, and learning orientations directly and positively affect servitization, spanning both basic and advanced services. This underscores the importance of fostering innovation, service excellence, and continuous learning within manufacturing firms to thrive in the evolving landscape. Furthermore, the study reveals a direct positive

impact of servitization on firm performance in manufacturing industry. It also identifies opportunities for improvement within the Indonesian manufacturing industry, particularly in advancing service technology, to enhance firm performance. While contributing significantly to the understanding of servitization, it is essential to acknowledge the study's limitations and the need for further exploration across different industry settings and extended timeframes. In the dynamic business environment, this study serves as a valuable foundation for future research endeavors, aiding companies in navigating the challenges and opportunities presented by servitization and its impact on industrial firm performance.

AUTHOR CONTRIBUTIONS

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