



Research Article

Effect of Digitalization and Servitization on Micro Enterprises' Financial Performance: Basis for Implementation of Digitalization Strategies

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ABSTRACT

Digital transformation was proven to be truly relevant in providing better value for products and services among small businesses. This fact has been backed up by extensive literature and studies, yet the application of this aspect in actual business scenarios was found to be inadequate. The purpose of this study was to determine the effect of digitalization and servitization on the financial performance of microenterprises in Lipa City, Batangas, with company size as a control variable. The researcher used a causal quantitative research design to determine if digitalization and servitization among firms affect their financial performance. Using a purposive sampling method, data was gathered online and through in-store visits. The collected data were analyzed using regression. Results showed that digitalization affects servitization significantly. Digitalization also significantly affects financial performance, while servitization's positive effect on financial performance is not statistically significant. This concluded that firms' advancement in terms of technology alone influenced the financial performance of their business. Furthermore, results showed that company size does not significantly control the effects of both variables on financial performance. The researcher proposed a technology-themed event that aimed to help the microenterprise community in utilizing the available digital solutions which may raise their level of technology adaptation and thus, improve the financial situation of their business.

INTRODUCTION

A. Background of the Study

With increased unemployment due to the pandemic, business startups became prevalent in the Philippines. To cope with the loss of previous livelihood and employment, people were forced to create new ventures, translating to 957,620 business enterprises operating in 2020 (DTI, 2020). The CALABARZON region held 14.62% of the total MSMEs in the country, next to the major contributor region, NCR with 21.10%. Although all these numbers meant well in the short-term perspective, several determinants affected how these micro-sized businesses had a chance of

performing well in the financial aspect. With changing consumer behavior, new market entrants and competitors who could leverage on modern technologies rising, micro-business owners were challenged to innovate in order to grow and hopefully level with the big players in their respective industries (Vial, 2019). As the pandemic entered abruptly in people's lives, the whole business scene of all industries was affected drastically (Kasim, Shahzad & Wan Ibrahim, 2020). While some businesses managed to cope with the lockdowns and restrictions through new virtual habits and digitalization, there were still some who could use the opportunity to adapt and implement effective





strategies through digital transformation.

The rise of online and omnichannel businesses has led to the more digitized solutions emerging every now and then. Firms use technologies to improve their products and services, so as to increase competitive advantage against many players who have the same goal as well. However, tackling about the importance of improving business processes and systems, especially for micro retailers, stays hidden. Servitization, or the strategy of a firm to increase value through by adding services to products, remained to be a process yet to be explored among firms (Martin-Peña, et al., 2019). According to studies by Fliess and Lexutt (2017, 2020), this strategy is a result of firms seeking to generate more financial value by offering customer services on top of selling their innovative products. With strong competition rising in modern times, some companies such as Caterpillar, Hitachi, and Rolls-Royce, and the likes, practice servitization by means of providing outcome-based services to their clients to increase their profits (Visnjic, Jovanovic, Neely, & Engwall, 2017).

According to Kowalkoski et al. (2017), servitization is a term that encompasses, but is not limited to, the service infusion across businesses. Based on studies by various authors, this word refers to a company's transition from a "product-centric business strategy to a service-centric one." Moreover, a study by Vendrell-Herrero et al. (2017) explored the benefits of digital servitization in the supply chain, confirming the ties between servitization and digitalization. As firms apply strategic changes to improve or create a more customer-centric business model (through ser-

vitization) and be more data-driven (with digitalization), assumptions to gain a sharper competitive edge lead to superior financial performance (Coreynen, Matthyssens & Van Bockhaven, 2017).

Further, a case study by Rapaccini et al. (2019) resulted in a conclusion that strategic transformation of firms through establishing service elements in business models was a relevant phenomenon. Another case study by de Souza, Trento, and Dauer (2020) revealed that firms, in fact, use servitization as their tool to increase their market share and, relatively improve their revenues. In fact, some manufacturing firms kept striving to execute business models which revolved around servitization because it was proven that these types of service contracts resulted to repetitive stream of revenues (Kohtamäki et al., 2020) from their regular patrons (Kohtamäki, Parida, Oghazi, Gebauer, & Baines, 2019). Moreover, the popularity of servitization among firms appeared to be extensive as it was forecasted to grow approximately from 4.5 billion euros to 33 billion on 2025, bearing more profit margins in services than on products by manufacturing firms (Probst, Frideres, Cambier, Ankerkaa, & Lide, 2016).

Through the use of digital technologies, efficiency and effectiveness of service operations were improved (Baines et al., 2017). Examples of this included collection and processing of real-time data to deliver better results. Adrodegari et al. (2017) supported this by showing that businesses use digital technologies to improve the efficiency of service delivery and add value to their systems.

Furthermore, in this context, digitalization refers



to businesses' adoption of digital technologies to create valuable changes in the firms' business model (Tomos et al., 2019). Through this transformation, micro enterprises aim to utilize the current dynamics of digital networks and information in order to produce value in their products and services. As one of the major trends that influence business and societal aspects (Tihinen & Kääriäinen, 2016), the micro-sized firms' whole being is greatly affected by how it is shaped by this phenomenon. On top of information technology, companies' internal and external processes, business model, strategies, culture, and products and services are also swayed with the changes brought by this digital transformation (Leino, 2017).

According to a report by OECD (2021), several MSMEs' lag in technology adoption continued to occur despite the evident benefits and business opportunities gained from applying digital technologies. As digitalization served to be a significant driver of productivity and wage growth, the gap between firms with digital progress and those which stalled adoption of these practices has shown increased inequalities among firms. Yet, the Covid-19 crisis imposed rethinking of business models for the firms which involved shifting to online operations or implementation of smart working solutions that engage continuity in business and overcome supply chain disruptions (OECD, 2020). For years now, applying digitalization has offered many approaches to automate workflows, reduce transaction costs and promote flexibility when dealing with customers and business partners (Bley et al., 2016). The digital transformation also took part among the crucial steps for micro enterprises (MSEs) to achieve growth and resiliency in times of uncer-

tainty, along with innovation (PwC, 2020).

In the Philippine MSEs' context, fostering environments that embrace innovation to deliver significant changes leading to positive outcomes among firms was seen to be a good opportunity for consideration (PwC, 2020). As the micro enterprise sector accounted for the majority of the country's businesses, competitiveness and innovativeness were expected to be developed as they become equipped with the proper digital tools available to them. A report from World Bank (2020) said that Filipinos were becoming more and more familiarized with digital technologies such as online payments, e-commerce, telemedicine, and virtual courses or online education, which contributed to how individuals, business sectors and the government have coped during the pandemic.

The same report by World Bank discussed some issues that hinder competitiveness in the country's business environment. One of which was the difficulty for businesses to enter the market due to regulatory limits and tedious administrative work that was often non-electronic and required onsite appearances in various offices. Moreover, the report suggested for businesses be equipped with proper knowledge on using digital technology in a large amount in order to keep up with the fast digital transformation occurring nowadays.

Small Businesses Corp. (SB Corp.) discussed in a formal event that promoting financial technology and digitalization would lead the micro enterprises to the Fourth Industrial Revolution. Advantages of digitalization adoption among MSEs included efficiency



in terms of increased productivity and reduced costs, diversified product lines, improved competitiveness, and growth in sales (DTI, 2021). In fact, a publication by Torneo and Hecita (2020) mentioned that the digitalization efforts from MSEs, as they become more familiarized with the usage of new technologies, could contribute as much as \$28 billion to the annual domestic output by the year 2024. However, based on a survey conducted by DTI e-Commerce Group (2019), seventy-three percent (73%) of MSEs were still having difficulty when it comes to digitalizing their businesses. With a lack of access to digital resources, some businesses were forced to shelf their entrance despite existing government policies that allowed them to (Business World, 2021).

In addition, Bain and Co (2018) concluded that only 16% of micro, small, and medium enterprises (MSMEs) in ASEAN are truly digitalized. The study categorized these MSMEs into three levels, namely: basic, intermediate, and advanced. Of these digitalized enterprises, fifty-six percent (56%) were in the basic level who, as described, apply minor use of technology mostly to conduct the operations and communication. Thirty-four percent (34%) of these consisted of those in the intermediate level who use digital tools in the sales and marketing aspects. And just ten percent (10%) were in the advanced category who can sophisticatedly utilize digitalization across the firm's different business functions. This small portion implies that a huge chunk among MSMEs has not yet utilized digital platforms and tools to their fullest potential.

According to a report by Huawei Technologies (2020), the Philippines remained to be a starter in

terms of digital transformation as it only ranked 59th among 79 countries in the 2020 Global Connectivity Index (GCI). Classifying regions as Starters, Adopters, and Frontrunners was based on their information and communications technology (ICT) investment, ICT maturity, and digital economic performance. The GCI ranked these nations along an S-curve graph based on their scores, wherein the Philippines garnered an average of 38 over 120—translating the country's poor performance in terms of the index's four pillars, specifically: levels of supply of ICT products and services, demand for connectivity, connectivity experience, and potential for future development of the digital economy.

A study by Kohtamäki et al. (2020) stated that businesses may find that digitalization alone is insufficient to provide favorable financial performance effects, and hence require portfolios of advanced services to assure value captured from digitalization and achieve positive performance effects. This strategy not only has the ability to create new business opportunities, but it also has the potential to boost efficiencies. Several firms and sectors are being considered from a variety of viewpoints, including IoT, the industrial internet, industry 4.0, and digitalization, to name a few. The same study related digitalization to the downstream activities at the front end of a firm's value chain, where the company collects, warehouses, analyzes, and uses market data for greater value co-creation and appropriation (Kohtamäki, Paridaa, Patelc, & Gebauerd, 2020).

With current studies focusing on the effect of digitalization and servitization on companies in the manu-



facturing industry (Abou-foul, Ruiz-Alba, and Soares, 2020; Martin-Peña et al., 2019; Ribeiro-Navarrete et al., 2021; Kohtamäki, Paridaa, Patelc, & Gebauerd, 2020), further studies have the opportunity to delve into the possible effects of the same variables among small companies.

Lipa City is an urbanized area that offers convenient access to businesses. The community of concern in this project is the group of micro-sized business owners. With the ongoing implementation of restrictions and promotion for contactless business transactions, access to customers, suppliers, and even business partners are still part of the current challenges despite all the virtual adaptations. Entrepreneurs face either technical, financial, or social barriers which keep them from the success or growth they aim for even once the economy resets after the pandemic's surge (Yoshino & Farhad Taghizadeh-Hesary, 2016).

As one of the micro-enterprise owners, the proponent of this study aimed to know how digitalization can improve their business. Additionally, the proponent also related to a community of young entrepreneurs – young in terms of firm maturity and entrepreneurial experience – who found it quite questionable whether their new endeavors could last for a couple more years or so. As the economy tries to gradually climb amidst the virus, it would be vital for the business sector to acknowledge the possible effects of applying strategies related to digitalization in micro-enterprises and further examine the best ways to have the results implemented within each micro-sized enterprise. Moreover, the project proposed in this study highlighted the modern trends and possible opportunities for tech-

nological advancement which could add value to the products offered by small businesses. Among these possible opportunities, innovating internal processes that aim for higher financial performance was one of the small areas in which micro-sized businesses can manage to achieve sustainable results for the firm (Hastuti, Sanjaya & Koeswoyo, 2019).

From the context of innovation and delivery of modern solutions in micro enterprises, this paper aimed to address the effect of servitization strategies and digitalization on MSE's financial performance. Further, the research also sought to reveal the effect of digitalization on the servitization of MSEs in the wholesale and retail industries. With various negative impacts brought by the pandemic on businesses (Jung & Jeon, 2021), the paper aimed to address these challenges by providing digitalizing solutions that might help improve the financial performance of the subject businesses.

In the same aspect, the paper intended to achieve Sustainable Development Goal (SDG) #8, which aimed to promote sustainable economic growth and employment for the citizens of the subject locale. With this goal in mind, the paper encompassed improvement of Lipeños' living standards by providing decent jobs and ways of living, most especially now as the country tries to restore its economic status post-COVID. Furthermore, the paper was also guided by SDG #9, which seeks to encourage innovation among businesses, powered by new technologies to enable efficiency. Through these models, this study directed towards helping the Lipeño entrepreneurs achieve a better way of doing business operations and



thus, succeed in their businesses.

Along with the publication of a thesis paper, the results of this study will be presented to the public by utilizing social media platforms. Informational videos and posters will be uploaded to gain internet traffic on the proposed tech-related event. To help launch the project, the proponent will seek partnership with the founders of local mobile applications who can collaborate together to promote their business-themed mobile app and help improve the MSE’s automation as well. Through these means, more members of the community will be reached and aided with the new system intended for their business.

In summary, the general objective of this study is to identify the effect of servitization and digitalization on a micro enterprise’s financial performance. To serve as a product of this research, the proponent targeted to conduct a series of events that would help the business owners know the big impact of becoming automated, data-driven, and technologically adept. The proposed action was directed towards helping the community to apply digital solutions in their business processes in order to grow their profitability.

B. Research Framework

This study adapted the conceptual framework from the study entitled, “The impact of digitalization and servitization on the financial performance of a firm: an empirical analysis” (Abou-foul, Ruiz-Alba, and Soares, 2020) wherein a model illustrated servitization’s linkage with financial performance.

Likewise, digitalization was linked with servitization and financial performance. Company size, company age, slack resources, and industry were the four control variables drawn to have confounding effects on financial performance. In this study, the authors sought to determine how manufacturing firms can transform business processes through the application of technology.

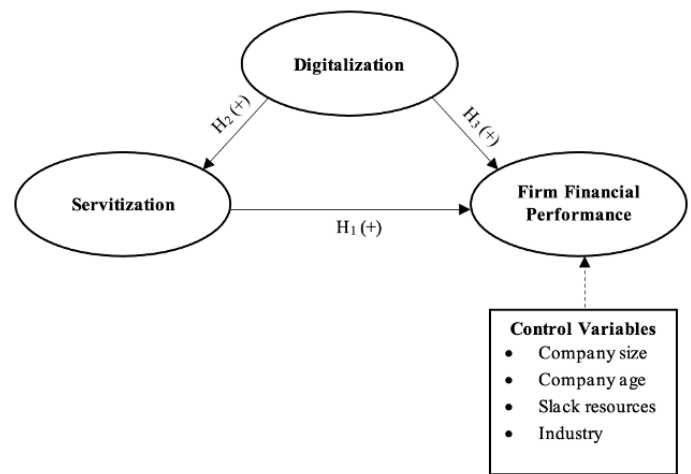


Figure 1. Conceptual framework

Source: *The Impact of Digitalization and Servitization on the Financial Performance of a firm: An empirical analysis* (Abou-foul, Ruiz-Alba and Soares, 2020)

The results of the study showed that there was a significant positive relationship between digitalization and firm performance, and between digitalization and servitization. In the same way, the study concluded that servitization played a significant role in improving firm financial performance. On the other hand, only the company size and slack resources resulted in significant relationships that control the relationship between servitization and financial performance, and digitalization and financial performance. Company age and industry did not result in significant relationships as control variables. US and European manufacturing firms that provide industrial services were the targeted population of the study. Abou-foul,



Ruiz-Alba, and Soares recommended conducting the same research in another nation or culture to show a comparison of assessment.

While Abou-foul, Ruiz-Alba, and Soares (2020) focused on digitalization and servitization's effect on financial performance among manufacturing businesses across US and Europe, the current proposal focused on the microenterprise sector in Lipa City, Batangas, Philippines. Using the operational framework in figure 2, Abou-foul et al.'s framework was simplified so that the readers may easily understand the concept intended for the Philippine setting. Following the results of their study, only company size was retained as a control variable since it was assessed to have a significant effect on the variables. Although slack resource was found to significantly control the variables in Abou-foul et al.'s study, insufficient data hindered testing its controlling effect. The computation for the current ratio, which would have been derived from the respondents' current assets and current liabilities, was not applicable for most participating MSEs due to undisclosed or zero current liabilities. Thus, slack resource was also eliminated as a control variable of this study's framework.

Still channeled by Abou-foul et al.'s model, this study aimed to verify if the same case exists among MSEs who are in the wholesale and retail trade segments. Hence, the study explored the effect of digitalization and servitization on MSEs' financial performance as illustrated in Figure 2.

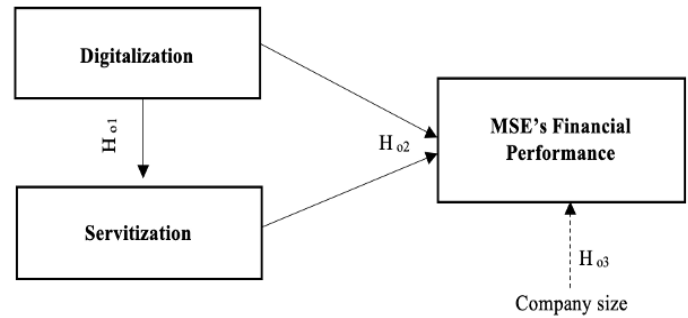


Figure 2. Operational framework

In this paper, digitalization was defined as the application of digital technologies to create beneficial values such as automation and optimization within a company (Sommarberg & Makinen, 2019; Parida et al., 2019; Scott et al., 2019). On the other hand, servitization served as a firm's strategic transformation that infuses service elements into its value proposition (Brax & Visintin, 2017). Moreover, financial performance was discussed in this paper as the ability of a company to create revenue, end up with a positive income and grow its market value (Açikgöz & Kilic, 2021).

Following the results of Abou-foul's study, one of the four significant control variables, company size, was included in this research. This study related company size to MSEs' financial performance. Companies with a large number of employees, such as corporations, tend to have more resources to implement servitization and digitization strategies (Abou-foul, 2020). Company size was identified by determining the number of employees of the participating micro-businesses.



C. Research Objectives

The general objective of this paper was to study the effect of digitalization and servitization on a micro enterprise’s financial performance. This paper specifically aimed to determine the following:

1. If digitalization does not exert a significant effect on servitization,
2. If servitization and digitalization strategies have no significant effect on a micro enterprise’s financial performance, and
3. If company size does not significantly control the effect of servitization and digitalization on micro enterprise’s financial performance.

Hypotheses

Thus, the following hypotheses was tested to address the need of this study:

H₀₁: Digitalization does not exert a significant effect on servitization.

H₀₂: Servitization and digitalization strategies have no significant effect on a micro enterprise’s financial performance.

H₀₃: Company size does not significantly control the effect of servitization and digitalization on micro enterprise financial performance.

MATERIALS AND METHODS

The causal quantitative research design was used to determine the effect of digitalization and servitization on the financial performance of a micro enterprise. Primary data was obtained from a self-administered survey questionnaire. Secondary data was acquired as well through a review of relevant literature.

In this study, the instrument used was adapted from the study of Abou-foul, et al. (2020). The constructs of the questionnaire were divided into three sections. Section 1 was comprised of the consent cover letter that requested permission from the respondents to participate in the survey. Meanwhile, Section 2 determined the profile of the MSE owners. This portion included their gender, registration status, level of digital adaptation, number of employees, and capitalization. The registration status and capitalization became the qualifying items for the responses to be considered in this study. The last section (Section 3) asked about the respondents’ agreement and current view on their firm’s digitalization, servitization, and financial performance. The value of current assets and current liabilities were also asked along with questions under financial performance, to seek information regarding the entity’s slack resources. The respondents evaluated all the items based on a seven-point Likert scale (1 = ‘poor’ and 7 = ‘excellent’). Each question was translated into Filipino for a better understanding of the respondents. The researcher sought help from a professional to confirm the translation.

Table 1. Questionnaire Specification

Part	Variable	Item No.
I	Digitalization	1-9
II	Servitization	10-15
III	MSE’s financial performance	16-21

Before applying statistical tools, the study tested the reliability of its scale to ensure the consistency of its measures. The pilot test was conducted among 20 respondents who owned micro enterprises. With this, Cronbach Alpha values resulting from reliability analysis of the variables involved is presented in Table 2.



Table 2. Reliability and Validity of Variables

Variables	Cronbach's Alpha	N of items
Digitalization	.942	9
Servitization	.873	6
Financial Performance	.981	5

The Cronbach alpha of this study research resulted to .933, which depicted that all variables were acceptable, and items in the questionnaire showed internal consistency reliability. This is in line with Hamid, Sami, and Sidek's study (2017) which confirmed that it is acceptable to get a Cronbach alpha value of 0.60-0.70.

To gather the data, the proponent set up an online survey through Google Forms which was distributed either through social media or e-mail addresses. Aside from using online platforms, the researcher also distributed the questionnaire through store visits while still complying with health protocols such as wearing masks, physical distancing, and hand sanitizing.

The sample population required 132 micro-enterprise owners in Lipa City with primary Standard Industrial Classification (SIC) codes in the range of 50-59 (wholesale trade and retail trade) as shown in Appendix A. Aside from the industry, the study also focused on registered business owners from the micro enterprise segment, or those with capitalization of not more than Php3,000,000. G Power was used to identify the sample size for this study. The researcher utilized a purposive sampling method in gathering data due to anticipated constraints in time and resources. Data gathering was accomplished by mid of April 2022.

A total of 149 business owners participated in the survey, but only 137 responses (91.94%) were considered qualified after filtering the registered micro enterprise owners. Table 3 presents the matrix for screening the respondents according to registration status and capitalization.

Table 3. Reliability and Validity of Variables

	Registered	Not Registered
Micro (up to Php3,000,000 capitalization)	137	5
Small (Php3,000,000 to Php15,000,000)	6	-
Medium (Php15,000,000 to Php100,000,000)	1	-

Upon passing the reliability test, data were analyzed using linear regression to test the direct effect of the independent variable on the dependent variable. To analyze if digitalization significantly affects servitization (H_{01}), the study used simple linear regression. Meanwhile, multiple regression analysis was done to test if digitalization and servitization significantly affect financial performance (H_{02}), and if company size significantly controls the effect of digitalization and servitization on financial performance (H_{03}).

RESULTS AND DISCUSSION

Out of the 149 filled-out questionnaires, only 137 were considered qualified based on the registration status of the companies. Data showed that 57% of the respondents were attributed to females, and most of them were from the Gen Y or Millennials bracket (47%). This is supported by BNP Paribas Global Entrepreneur's report (2016) that says millennials, as compared to other generations, start businesses at an earlier age. Moreover, a study by Cargo and BRANDthro (2020) explained that millennials got a huge chunk among fastest-growing small business owners.



Table 4. Profile of the Respondents

Items	Details	Frequency (N=137)	%
Gender	Male	59	43%
	Female	78	57%
			100%
Age	18-22 (Gen Z)	4	3%
	23-38 (Gen Y or Millennials)	65	47%
	39-54 (Gen X)	48	35%
	55-70 (Boomers)	22	16%
	71-90 (Silent)	1	1%
			100%
Level of Computer Knowledge	Basic	67	49%
	Intermediate	15	11%
	Advanced	55	40%
			100%

Almost half (49%) of the participants had a basic level of computer knowledge. This result agreed with Bain and Co's study (2018) that MSMEs used digitalization mostly for communication and operation aspects of the business.

A. Descriptive Statistics

In general, Table 5 presents the composite means and the indication of the data being spread out from the mean.

Table 5. Composite Means and Standard Deviations of Measurement Variables

Variable	Mean	Std. Deviation
Digitalization	4.50	1.1078
Servitization	4.76	0.9070
Financial Performance	4.66	1.2069

Digitalization had a composite mean of 4.50 which translates to an above average level of digitalization. Out of all the questions asked regarding digitalization, it was revealed that the technological adaptation of the respondents was reflected in their usage of digital

channels such as social media. For instance, the use of digital channels to provide customer service (M=4.61, SD=1.7075) and marketing and selling products and services (M=4.53, SD=1.7659) was not yet fully experienced in the participating firms. Conversely, when it comes to automation, analytics, and business models, the respondents only perceived their digitalization to be on an average level. This implies that although the pandemic unleashed new opportunities for small businesses to grow through online platforms and make economic decisions based on the data received when selling products or services, business owners still had an average level of application of digital strategies. A publication by Asia Pacific Economic Cooperation (2020) mentioned some of the challenges that MSEs encounter when it comes to digitalization. Despite the benefits of being advanced technologically, concerns about cybersecurity and data privacy, fear of being scammed, and issues related to infrastructure hinder businesses to be digitally adept. Additionally, studies revealed that despite the demand of most businesses to use digital applications to aid in making economic decisions, entrepreneurs still consider the expectancy context factors, such as budget, growth, and profitability, in shaping the value of digitalization among MSEs (Eze et al., 2021). Such factors were related to the respondents' current level of technology adaptation.

Servitization, on the other hand, resulted in an above-average level with a composite mean of 4.50, indicating that firms somehow infuse their companies' strategies and business models into their product offerings. In a specific context, the participants shared the risk and reward with their customers in the way they



provide products and services (M=5.30, SD=1.0666). Meanwhile, most business owners were still not aware of the benefits brought about by servitization change in their companies (M=3.98, SD=1.3255). This coincides with Iriarte et al.'s study (2016) that suggests practical methodologies and tools for companies in able to design integrated product service offers, implying the need for businesses to still strategize more customer-centered approaches in their value propositions.

In terms of financial performance, the composite mean resulted to 4.66, which indicates that the businesses still had room for improving their profitability. Notably, growth in profits had the lowest agreement among all the questions asked (M=4.56, SD=1.2653). This relates to the firsthand impact of the pandemic on the sales and profits of small businesses. It is implied in these results that the industry is still gradually trying to recover financially from the crisis experienced in the past couple of years. This is supported by JP-Morgan Chase Institute's report (2020) that financially, businesses were affected due to the restrictions imposed by the government and the amount of spending that increased relatively during these times. Findings of the report by World Bank (2021) confirmed these results by saying that 66% of the participating firms in the Philippines were not liquid enough to pay for all their dues and costs related to suppliers, taxes, loan repayment or payroll. The same report revealed that sales were continuously shrinking due to the limited operation and the inability of patrons to visit the physical stores.

B. The Effect of Digitalization on Servitization

Table 6 presents the regression matrix showing digitalization as a predictor variable of servitization. The R2 of 0.383 (F-value = 85.483, p-value < 0.05) indicates 38.3% of variance in servitization can be predicted by digitalization. The results show that digitalization has positive and significant effects on servitization ($\beta = 0.402$, t-value = 9.246, p-value < 0.05). So, when digitalization is improved, servitization of the micro enterprise is likely to improve as well.

Table 6. The Effect of Digitalization on Servitization

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value	Interpretation
	B	Std. Error	Betas			
1	(Constant)	2.945	.205		14.368	.000
	Digitalization	.402	.044	.623	9.246	.000 Significant
R ² = .383		F-value = 85.483		p-value = .000		

a. Dependent Variable: Servitization

This result supports the study of Boehmer et al. (2019) who revealed that implementing digital technologies in the ecosystem can enhance the buyer-supplier relationship and integrate customers' views in the way services are processed. Data showed how micro enterprises are familiarized with their business' top management service orientation, the way they mobilize their resources to add more value to their products, and the market offering of their products and services. Abou-foul et al.'s study (2020) also revealed that digitalization and servitization had a significant and positive relationship. Likewise, this result is in line with the study of Dmitrijeva et al. (2019) which says that operational excellence is affected when firms carry out digitalization strategies.



C. Effect of Servitization and Digitalization Strategies on MSE's Financial Performance

Results showed that digitalization has a positive and significant effect on financial performance with servitization ($\beta = 0.450$, $t\text{-value} = 5.856$, $p\text{-value} < 0.05$). This is related to a literature by Kohtamäki et al (2019) that says there are potential financial effects when firms invest in technological advancements. With the current digitalization strategies available, these are studied to involve the reconstruction of vision, along with business processes and capabilities, and organizational culture and structure, thus improving the financial bottom line (Warner and Wäger, 2019). This result is also in line with Capgemini Consulting's survey on global companies, which revealed that the financial indicators of companies are improved as digital transformation activities are executed (2021).

Meanwhile, Table 7 also showed the not significant effect of servitization on financial performance with digitalization ($\beta = 0.130$, $t\text{-value} = 1.092$, $p\text{-value} > 0.05$). Overall, the regression analysis indicated that digitalization and servitization explained 34.6% of the variance financial performance ($R^2 = .346$, $F = 35.483$, $p\text{-value} < 0.05$).

Table 7. The Effect of Servitization and Digitalization on Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value	Interpretation
	B	Std. Error	Beta			
(Constant)	2.019	.481		4.48	.000	
Digitalization	.45	.077	.523	5.856	.000	Significant
Servitization	.13	.119	.097	1.092	.277	Not Significant
$R^2 = .346$		$F\text{-value} = 35.483$		$p\text{-value} = .000$		

a. Dependent Variable: MSE's Financial Performance

This was somehow related to studies by various authors who explained that although there have been

valuable insights regarding servitization, the proof that it is related to MSE's financial performance remained limited and a bit vague (Baines, 2017; Ambroise, Prim-Allaz & Teyssier 2017; and Ziaee Bigdeli et al., 2016). Also, this result opposed that of Abou-foul et al.'s study (2020) which concluded that financial performance was significantly influenced by servitization.

D. Controlling Effect of Company Size on the Relationship of Servitization and Digitalization on Financial Performance

The first model shown in Table 8 revealed the effect of digitalization and servitization on financial performance. On the other hand, Model 2 portrayed the effect of the control variable, company size, on the effect of digitalization and servitization on financial performance. The p-value for digitalization in the first model was 0.00, while servitization was 0.277, indicating that digitalization was the only variable that affects financial performance significantly. As company size was added as a control variable in Model 2, it was revealed that digitalization remained significant ($\beta = 0.45$, $t\text{-value} = 5.665$, $p\text{-value} < 0.05$), and servitization was still not significant ($\beta = 0.13$, $t\text{-value} = .988$, $p\text{-value} > 0.05$). Minimal changes were observed in R Square from Model 1 to Model 2. Together, digitalization, servitization, and company size explained 36.8% of the variation in the dependent variable of this study ($R^2 = .368$, $F = 25.875$, $p\text{-value} < 0.05$). These results revealed that the effect of digitalization and servitization on financial performance was not completely controlled by company size. This was in contrast with Abou-foul et al.'s study (2020) that re-





vealed the controlling effect of company size on the effect of servitization and digitalization in companies' financial performance.

Table 8. Controlling Effect of Company Size on the Relationship of Servitization and Digitalization on Financial Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t-value	p-value	R Square Change	F Change	Sig. F Change	Interpretation
	B	Std. Error	Beta						
1. (Constant)	2.019	.451		4.48	.000				
Digitalization	.45	.077	.523	5.856	.000	0.546	35.483	.000	Significant
Servitization	.13	.119	.097	1.092	0.277				Not Significant
F-value=35.483 (p-value=0.000)									
2. (Constant)	2.019	.451		4.233	.000				
Digitalization	.45	.077	.502	5.685	.000				Significant
Servitization	.13	.119	.087	.988	.325	0.022	4.699	.032	Not Significant
Company Size	.1	.046	.152	2.188	.032				Significant
F-value=25.875 (p-value=0.000)									

Dependent Variable: MSE's Financial Performance

CONCLUSION AND RECOMMENDATIONS

The present study is an attempt to determine if digitalization and servitization have significant effects on the financial performance of micro enterprises in Lipa City. It also aimed to determine if company size can control the effect of servitization and digitalization on financial performance.

The results of the study revealed that digitalization exerts a significant and positive effect on servitization. This further proves the statement that as businesses improve in terms of digitalization and technology, servitization is expected to improve as well. Therefore, H₀₁ is rejected. Moreover, the study also proved that servitization has no significant effect with digitalization on the financial performance of a micro enterprise. This result supported the statement that digitalization may still significantly influence a small business' financial performance even if servitization practices are not implemented. Thus, the study failed to reject H₀₂ stating that servitization and digitalization strategies have no significant effect on MSE's financial performance. Lastly, this research showed

that company size did not serve as a controlling variable in the effect of servitization and digitalization on financial performance. This supports the statement that regardless of the company size of a firm, the effect of imposing digitalization and servitization strategies on financial performance will not be significantly affected, thus, failing to reject H₀₃.

Not only did this study provide relevant literature in the Philippine setting, but it also gave a perspective from the industries with the largest distribution in the country—wholesale and retail trade. With implications of implementing digital strategies on the financial aspects of a business, this research concluded that investing in adapting technologically would result in improved profits.

As the country still has a huge chunk of internet users with a basic level of digital adaptation, it is highly recommended to engage micro business owners with training and programs that allow not only classroom training but also practical application regarding effective use of technology in their business processes. Social media's influence was proven to be truly rampant these days, and it is high time to learn about utilizing this tool from operations and communications up to all the functions of the firm.

Based on the descriptive data collected in this study, it was found that the millennials held the largest portion of the participating business owners, covering almost half of the respondents. It is suggested for this generation to explore more ways to not get left behind as new techniques emerge now and then. With all the available resources on hand, it would be vital





for them to keep learning especially when it comes to restructuring business models in times of need and strategizing more effective solutions to gain a larger market share in their respective industries.

Respondents of this study had a moderately high agreement when it comes to linking their business with customers in new ways, and this is evident through the new normal ways of dealing with clients due to physical restrictions brought about by the pandemic. While this was a fair level of relatedness from the respondents, micro business owners in Lipa City were still left with room for improving technological adaptability to connect with customers. The average agreement related to automation, analytics, and new business models was received from respondents. With digitalization's positive effect on financial performance, business owners may use these results as an opportunity to review their manual processes and research for systematized ones to save time and resources. Infusing digitalization would also help produce data analytics more easily that would allow sound decision-making simple and realistic as well.

As investing in digitalization has been proven to affect the financial performance of a firm, it is suggested for companies to take chances, even with the lowest risks, to implement new processes that engage with technology. Little steps such as recording transactions online or automation of payments would help the performance of the firm, not only financially but also operationally.

To explore other controlling variables which may affect the relationship among digitalization, serviti-

zation and financial performance, future researchers may consider testing company age and industry in the chosen community and locale. Other ways to test the effect of slack resource may also be further researched.

Like all kinds of research papers, this study entailed limitations that offer opportunities for future researchers. One of which was having to ask for some confidential information that may be too personal from the perspective of the respondents. Although most of them disclosed figures, there were some who skipped the question—leaving the researcher wondering if it meant 'zero' or 'undisclosed.' Future research is also suggested to include qualitative comparative analysis to further explore how digitalization can be effective in improving the profitability of a business.

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