

The Impact of Digital Marketing Adoption on Sustainable Growth Mediated by Firm Performance: An Empirical Study of SMEs

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Abstract

MSMEs embrace the strategy of sustainable growth through firm performance by adopting digital marketing after the Covid-19 pandemic. The purpose of this study is to explain the direct effect of the adoption of digital marketing on the sustainable growth mediated by firm performance of MSMEs. The population in this study was all MSMEs operating in Salatiga City. The sample and limiting samples were 100 respondents who used a purposive sampling method. The data was collected using a questionnaire with a Likert scale. The data was analyzed using covSEM-PLS and the data was processed using the SmartPLS application Version 4.1.1.2. The conclusion of the study is that the variables of adoption of digital marketing have a direct influence on sustainable growth in MSMEs. Firm performance is able to mediate the effect of the variables of adoption of digital marketing on sustainable growth in MSMEs.

Keywords: Digital Marketing Adoption, Sustainable Growth, Firm Performance, SMEs, Salatiga.

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1. Introduction

Digital technology gets attention: In the fast developing of digital era, adopting technology is a must for business; included MSMEs. A good example of such adaptation is an establishment of a digital marketing which will provide several advantage for MSMEs upon their exposure and market expansion, including the competition in global scope. Notwithstanding these, MSMEs in the conventional food industry continue to face various hurdles ranging from lack of resource and digital capabilities to poor infrastructure. However, with digital marketing, MSMEs can not just improve company performance but also ensure long-term sustainability and growth.

Abstract Background and Literature Review Digital marketing has brought about radical changes in the operations of SMEs even in the wake of global economic turn around. The COVID-19 crisis has acted as a huge accelerator of this transformation, driving companies to quickly adopt digital channels for the survival of their businesses and any form of customer contact [1]. As SMEs increasingly rely on digital, they are transforming not only their marketing approach but also the measurement of this KPI and positioning themselves for long-term expansion within the present market.

The use of digital marketing is one of the ways which SMEs have to apply in order to ensure a competitive outlook and performance maximisation as well. The above literature review includes much of the research that was done and explains how adoption of digital marketing has multidimensional effects with regard to the effects on company performance in different types of settings. Digital marketing is also reported as a

factor that seduces performance improvement and influencing the livelihood of SME In India. Furthermore, there is no explanation as to which particular channel significantly contributes to its improvement [2]. The confusion is still significant despite accurate evidence having emerged that shows a direct relationship of digital marketing techniques, for instance, SEO, social media interaction, and content marketing, as an accurate correlate to better business performance [3] [4].

When examining the effects of digital marketing adoption on firm performance, several mediating factors emerge as significant contributors. Among these, Customer Relationship Management (CRM) cloud services have been identified as a crucial intermediary that enhances the success of digital marketing initiatives [5]. CRM systems enable firms to manage customer data more effectively, personalize marketing strategies, and strengthen customer engagement all of which directly impact organizational performance. Moreover, digital marketing creates substantial value for firms by improving operational efficiency, brand visibility, and market responsiveness. Therefore, developing a comprehensive digital strategy should be positioned at the core of business operations to ensure that marketing activities are aligned with overall performance objectives and sustainable growth [6].

It is an established fact that technology in marketing capability development cannot be overemphasized and the mediation role of social media on firm performance was evident [7]. Additionally, firms with the higher digitalization level perceive competitive pressure and speed of digital transformation in a better way [8]. In this context, the integration of digital tools and

platforms not only enhances marketing effectiveness but also enables firms to respond more swiftly to market changes and consumer demands. The ability to leverage data analytics, automation, and customer engagement through digital channels creates strategic advantages that drive innovation and sustain firm competitiveness in the rapidly evolving business environment.

With the speedy processing of global economy, sharing could be able and led to reach much more benefits on the digital marketing application in addition extending far beyond a mere direct performance optimization. One holistic view is examining how these digital behaviors fall in to a hierarchy for sustainable growth. Benefits of successful practice adoption in DM by SMEs for social environmental sustainability firms may profit, as there might be an increase in their operational efficiency and market Indices along the road [9].

This study is an attempt to explore the intricate association between digital marketing adoption, firm performance and sustainable growth in the context of Tertiary food SMEs. The finding of this study is expected to contribute a clear picture on how much traditional food MSMEs in Central Java Province could develop their performance potential, in order to increase the sustainable growth which mediated by firm performance through effective utilization of digital marketing adoption. H1: Digital marketing adoption has a positive and significant effect on SME sustainable growth. H2: Digital marketing adoption has a positive and significant effect on SME sustainable growth. H3: Firm Performance has a positive and significant effect on SME Sustainable Growth. H4: Firm Performance mediates the relationship between Digital Marketing Adoption and SME Sustainable Growth. This study aims to explain the relationship between variables, namely Digital Marketing Adoption, SMEs Sustainable Growth, and Firm's Performance, as depicted in the research conceptual model attached in Figure 1 below.

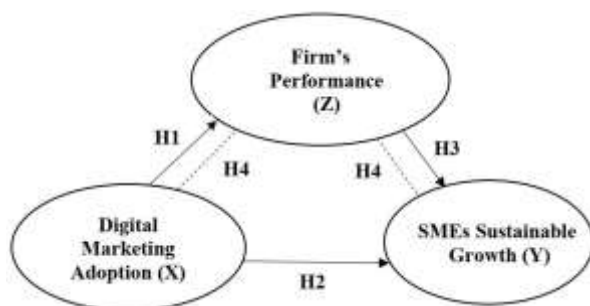


Figure 1. Conceptual Research Model

2. Research Method

The study used a quantitative approach with an associative method, which aims to determine the relationship between two or more variables that have the characteristic of connecting the independent variable and the dependent variable [10]. The population in this study was all MSMEs in Salatiga

City. The researcher used a purposive sampling technique in sampling as an internal delimiter. Purposive sampling is a sampling technique carried out by selecting subjects based on specific criteria determined by the researcher. The researcher determined 100 respondents as both the sample and the delimiter in the study. Data collection used a questionnaire and measurement using a Likert scale. This study used the Structural Equation Modeling Partial Least Square (SEM-PLS) analysis technique. SEM-PLS is used to predict and develop theories and is used to identify key variables. Research aimed at developing theories and predictions is very suitable for using SEM-PLS (Yusuf, 2022). SEM-PLS analysis consists of an outer model and an inner model [11].

3. Results and Discussion

Convergent validity is part of the measurement model called the outer model in SEM-PLS. Parameters with outer loading values between 0.5 and 0.6 are still acceptable, but a construct will be recognized as having a substantial influence if its correlation value exceeds 0.7 [11]. All indicators shown in Figure 2 have values above 0.7, so the results are considered valid. Next outer loading on Figure 2.



Figure 2. Outer Loading

The Average Variance Extracted (AVE) value in this study shows that all latent variables have an AVE value above the minimum criterion, namely 0.5 [12]. The results of the discriminant validity test in Table 1 show an AVE value of more than 0.5 and it is stated that the AVE value in this study is good.

Table 1. Discriminant Validity

Variable	Average Variance Extracted (AVE)
DMA	0.824
FP	0.712
SSG	0.783

The variable values for the reliability test can be said to be good using Composite Reliability or Cronbach Alpha because the Cronbach Alpha value for each variable is >0.60 and the Composite Reliability value for each variable is >0.70 [12]. The results in Table 2 can be concluded that the tested variables are reliable so that they can carry out the structural testing stage. Next Composite Reliability on Table 2.

Table 2. Composite Reliability

Variable	Cronbach's alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)
DMA	0.929	0.930	0.949
FP	0.918	0.926	0.937
SSG	0.930	0.931	0.947

An R-square value of 0.75 is categorized as a strong model, 0.50 as a moderate model, and 0.25 as a weak model [13]. Table 3 shows that the R-square value for the Firm's Performance variable is 0.518, which is included in the moderate category, and the R-square value for the SMEs Sustainable Growth variable is 0.814, which is included in the strong category.

Table 3. R-Square

Variable	R-square	R-square adjusted	Category
FP	0.518	0.693	Moderate
SSG	0.814	0.699	Strong

To test the hypothesis, and estimate of significance level or probability both for direct effect and indirect effect is given by using bootstrapping. The subsequent step is the path coefficient analysis, which is presented in Table 4.

Table 4. Path Coefficients

Variable	OS	SM	Pv	Result
DMA → KP	0.720	0.713	0.000	accepted
DMA → SSG	0.465	0.459	0.000	accepted
FP → SSG	0.507	0.510	0.000	accepted
DMA→FP→SSG	0.365	0.364	0.000	accepted

The results of the Path Coefficient analysis are shown in Table 4, showing the results of testing five hypotheses. The accepted hypotheses are H1, H2, H3, and H4. The analysis results in Table 4 show several findings, namely: Digital Marketing Adoption has a significant effect on Firm Performance, with a path coefficient of 0.720 and a significant P-value of 0.000, which is less than 0.05. Therefore, this hypothesis can be accepted.

Digital Marketing Adoption has a significant effect on SME Sustainable Growth, with a path coefficient of 0.507 and a significant P-value of 0.000, which is less than 0.05. Therefore, this hypothesis can be accepted. Firm Performance has a significant effect on SME Sustainable Growth, with a path coefficient of 0.465 and a significant P-value of 0.000, which is less than 0.05. Therefore, this hypothesis can be accepted. Digital Marketing Adoption has a significant effect on SME Sustainable Growth, mediated by Firm Performance, with a P-value of 0.000. This means that the p-value is <0.05, and the coefficient is 0.365. Therefore, it can be concluded that this hypothesis is accepted.

Goodness of Fit is a statistical test that assesses how well a statistical model fits the observed data. In a structural equation model, the model is considered fit if and only if the SRMR value is 0.15 [14]. A model can report a good Chi-square value if it has a range > 0.05 [15]. A good model is one with an NFI of less than 0.90. Based on the attached results in Table 5, with an

SRMR of 0.081, a Chi-square of 311.571, and an NFI of 0.760, this research model is said to have an adequate fit. Next Goodness of Fit on Table 5.

Table 5. Goodness of Fit

Model Fit	Saturated Model	Estimated Model
Srmr	0.084	0.084
Chi-square	616.019	616.019
NFI	0.686	0.686

The F-square value is used to measure effect size. An F-square value of 0.02 is considered a small effect, an F-square value of 0.15 is considered a medium effect, and an F-square value of 0.35 is considered a large effect [13]. Based on the data in Table 6, the influence of the independent variable Digital Marketing Adoption on the dependent variable Firm's Performance has an F-square value of 1.074 (a large effect). The F-square value of the influence of Digital Marketing Adoption on SMEs Sustainable Growth is 0.559 (a large effect). Meanwhile, the Firm's Performance variable has a large impact on SMEs Sustainable Growth at 0.666. Next Effect Size on Table 6.

Table 6. Effect Size

f-square - Matrix	FP	SSG
DMA	1.074	0.559
FP		0.666

Digital marketing adoption on firm's performance. The data analysis results indicate that the Digital Marketing Adoption variable significantly influences Firm Performance. This is consistent with the studies of Anggraini et al. [16], that digital transformation, including digital marketing, supports the competitiveness and performance of MSMEs. Digitalization brings operational efficiencies, wider market reach and productivity gains.

Digital marketing adoption on smes sustainable growth. The results exhibited the significant impact of Digital Marketing Adoption on SMEs Sustainable Growth. The research results with a path coefficient of 0.465 and P-value < 0.05 are as follows. Information found in the study of Bruce et al. [9], reveals that digital marketing creates a positive impact on SMEs Sustainable Growth in Ghana. The result is not in line with research of Lusianty & Rojuaniah [12], that concluded Digital Marketing Adoption has no positive effect on Sustainability.

Firm's performance on smes sustainable growth, and additional testing of hypotheses indicates the statistical significance that Firm Performance has on SMEs' Sustainable Growth. This result directly resonates studies of Indriastuti and Mutamimah [17], which further studied a model in which financial performance as a mediating effect between green accounting strategies was exerted on sustainable performances for MSMEs. Their findings show that enhancing the financial performance represents an important step for the business sustainability. Research by Trisnawati and Rifka [18], also confirms that SME adaptive behaviour and sustainability are motivated with efficiency and

product heterogeneity as key factors.

Firm's performance mediates the effect of digital marketing adoption on smes sustainable growth, the findings also revealed that the Firm's Performance variable mediates the effect of Digital Marketing Adoption variable on Sustainable Growth for MSMEs in Salatiga City. These results can be inferred from the value of path coefficient, which is 0.365 with P-value 0.000 (<0.05). This research corroborates the findings of Sharabati et al., [19], who reported that digital marketing contributes to enhancing MSMEs' performance through both operational efficiency and increasing market [20]. This study highlights that the firm's performance is a sign of successful digital marketing adoption and leads to sustainable development.

4. Conclusion

According to the research findings, it can be recommended that the adoption of digital marketing has a direct effect on sustainable growth in MSMEs in Salatiga City and company performance plays an influential role as a mediating variable. This suggests that digital marketing activities contribute not only to improving the marketing visibility and efficiency of the company, but also to enhancing internal performance, which ultimately promotes sustainable business. Hence, the study suggests MSMEs still need to invest in building and incorporating digital marketing strategies into their business practice while strengthen managerial and operational capabilities in order to perform better. Local governments and institutions that are supporting them also need to continue providing trainings and mentoring so MSMEs can use digital technology to grow their businesses in a sustainable way.

Acknowledgment

The author would like to thank the Ministry of Higher Education, Science, and Technology of the Republic of Indonesia (KEMENDIKTISAINTEK) for the 2025 Fiscal Year Research Grant for Novice Lecturers (PDP).

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