

THE IMPACT OF SOCIAL MEDIA MARKETING AND CUSTOMER ENGAGEMENT ON STARTUP SUCCESS: THE MEDIATING ROLE OF DIGITAL LITERACY

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Abstract

As growing businesses in the present society demand the use of social media marketing and consumer engagement coupled with varying levels of digital literacy to attain at least basic growth The lack of these developments poses the following research questions, which explore the correlation between social media marketing, consumer engagement, digital literacy and basic growth, as well as the mediating effect of this digital literacy on the effects of social media marketing and the resultant media defines the method used in this study as predominantly. The first variable investigated was social media marketing (IV). The second variable was customer engagement (DV for social media marketing but IV for other variables). The third variable was called 'digital literacy', which was the mediator of both consumer engagement and startup success. The last variable studied in this research was the startup success. It has also been found that all four effects are statistically significant and all the specific relations are also significant. SM marketing influences customer engagement which in turn affects startup success positively. Digital literacy is becoming a significant moderate, positively influencing customer engagement and startup success. From these findings, we can conclude that the effective use of social networks, the use of customer relations, and, finally, digital competencies are critical for startups.

Keywords: Social Media Marketing, Startup Success, Customer Engagement, Digital Literacy, Entrepreneurship.

1. Introduction

The use of social media has greatly enhanced in the current world compared to the previous years and has affected the communication channel between the organizations and consumers and also the competition that is found in the market. In the current society, social media marketing is one of the most effective strategies for developing a brand image, customer loyalty, and sales opportunities. When startups experience competition and limited resources, it is essential to establish the relationship between social media marketing, customer, and digital awareness, and successful startups. The researches show that social media marketing results in consumers' engagement, the chance to make the purchase, and purchasing frequency (Susiyanto et al., 2023; Bororing, 2023; Rini, 2023).

Additionally, customer engagement—defined by the emotional and interactive relationships between brands and their customers—plays an important role in startup success. Customer

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independence involvement is critical in creating profitability, increasing loyalty, and generating new revenue, thus contributing to the growth and sustainability of the start-up business (Nauen, 2022, Roy and others, 2023). In addition, demand forecasting and operational efficiency can be improved by using social media data to inform customer interaction patterns (Liu et al., 2022). Despite the relationship between social media marketing and consumer engagement, the role of digital literacy as a mediator in this dynamic has not been extensively explored. Digital literacy—with skills and knowledge to use effectively—enables startups to create successful digital marketing campaigns and increase business performance (Umboh & Aryanto, 2023).) This is key to bridging the gap between digital marketing capabilities and start-up success, to encourage innovation and customer-centric strategies (Joel et al., 2024).

While the use of social media marketing, consumer engagement, and digital literacy concerning startups is acknowledged, it is essential to study the effects and interactions of these factors. This research therefore fills this gap by examining the correlation between these variables and likewise the moderating role of digital literacy. Therefore, the study seeks to identify such dynamics with an intention of providing information that start-ups seeking to operate in the modern-day digital economy can use.

Conclusively, this paper affirms that marketing on social media positively impacts the level of engagement of the customers (H1) which determines the success of startups (H2). Also, the study sought to establish the relationship between the level of consumer engagement and digital literacy (H3) and the impact of digital literacy on the success of start-ups (H4). Finally, the level of engagement of consumers is also explored as the independent variable in relation to the success of a start-up, with digital literacy being used as the mediator variable in this case (Hypothesis 5). Awareness of this correlation will aid in identifying the path that startups need to follow to guarantee that they build on the SMM and the overall digital competency of the customers in order to boost engagement and ultimately drive sustainable growth. Figure 1 shows the research framework of this study,

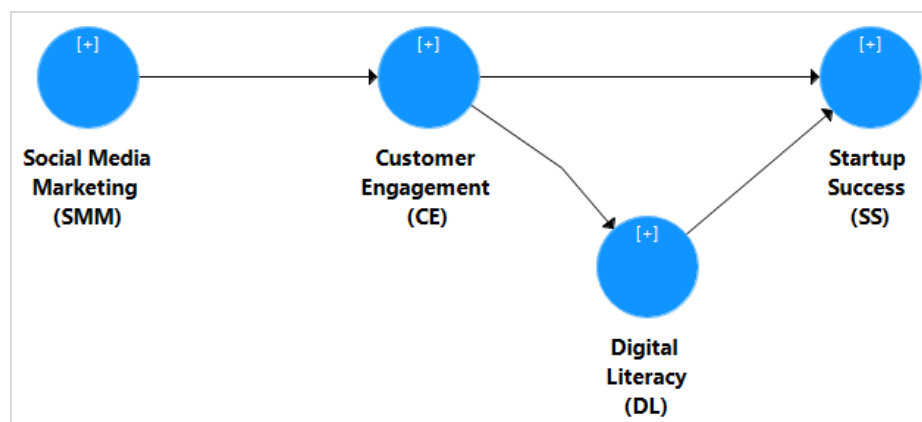


Figure 1: The Research Framework

2. LITERATURE REVIEW

2.1 Social Media Marketing and Customer Engagement

Social media marketing has a significant impact on customer engagement, increased purchase intent, and brand loyalty. Research studies have shown that social media marketing activities, such as social networking, information sharing, and monitoring, positively influence consumer engagement and ultimately affect consumer intentions (Susiyanto et al fellows, 2023;

Furthermore, customer relationships through customer engagement play an important role in brand loyalty, especially among Generation Z customers who use platforms such as Shopee (Patria, 2023). Furthermore, trust through social media marketing and brand trust influence consumers' brand engagement, especially among electronic payment users, highlighting the importance of these factors' importance in customer engagement and loyalty (John and Rezi, 2023). Overall, these findings highlight the important relationship between social media marketing strategies and consumer engagement in terms of brand loyalty and purchase intentions. Ultimately, this will affect the startup's success.

In this study, social media marketing refers to the strategic use of social media platforms and technologies to promote products, services, and brand visibility. Customer Engagement refers to the degree of interaction and emotional connection between customers and a brand through various digital marketing activities. Thus, this study develops its first hypothesis,

Hypothesis 1: There is a relationship between social media marketing and customer engagement.

2.2 Customer Engagement and Startup Success

Customer engagement plays an important role in the success of a start-up by creating value, increasing customer loyalty, and generating new revenue (Nauen, 2022). Research emphasizes the importance of satisfying basic psychological needs such as autonomy, relationships, and skills used in various aspects of consumer engagement, such as cognitive, emotional, and behavioral interactions (Roy et al., 2023; Japutra et al., 2024). Utilizing customer engagement through digital channels can increase psychological well-being and positive outcomes for start-ups, ultimately contributing to their long-term success (Roy et al., 2023). Furthermore, using social media data to increase customer engagement can improve the accuracy of demand forecasting and improve inventory management, leading to operational cost-effectiveness and improved productivity for start-ups Liu et.al, 2022. Thus, customers are actively engaged and managed through various channels Demand can develop as well as sustainability which will have a profound effect on a start-up.

In this study, consumer engagement refers to the level of interaction and emotional connection between consumers and a brand through digital marketing activities. Startup Success is defined by various indicators such as revenue growth, market share, customer acquisition, and longevity in the market. Thus, this study develops its second hypothesis,

Hypothesis 2: There is a relationship between customer engagement and startup success

2.3 Relationship between Customer Engagement and Digital Literacy

Customer engagement and staff's digital literacy are interconnected in various ways. Customer engagement, as described in (Eigenraam, 2023), involves consumers positively interacting with a brand through various activities like social media interactions and brand recommendations. On the other hand, staff's digital literacy, as highlighted in (Kabakus, 2023), is crucial for administrative personnel in higher education to effectively use digital technologies. Moreover, the study in (Chan, 2021) emphasizes the role of digital literacies in enhancing employee engagement in the digital workplace, showing that improving digital literacy strengthens employee acceptance of workplace digitalization. Therefore, staff's digital literacy influences their ability to engage with digital tools and platforms, ultimately impacting customer engagement through the quality of service and interactions provided by digitally literate staff. Customer engagement is influenced by staff's digital literacy, encompassing dexterity,

proficiency, and awareness. A skilled workforce enhances interactions within digital ecosystems, benefiting overall engagement levels (Grefen, 2021).

In this study, customer engagement refers to the degree of interaction and emotional connection between customers and a brand through various digital marketing activities and digital literacy encompasses the knowledge, skills, and competencies required to effectively utilize digital technologies and platforms. Thus, this study develops its third hypothesis,

Hypothesis 3: There is a relationship between customer engagement and digital literacy

2.4 Relationship between Digital Literacy and Startup Success

Staff's digital literacy plays a crucial role in the success of technology startups, as highlighted in various research papers. Studies emphasize that higher digital literacy competency enhances the potential for entrepreneurship by increasing technical knowledge, creative thinking, and technology commercialization feasibility, ultimately boosting technology startup opportunity capabilities (Kim, 2024). Additionally, the relationship between digital literacy and transformability is positively significant, with transformability mediating the link between digital literacy and socialization, indicating the importance of digital skills in organizational dynamics and social integration (Bichranloo & Khakhiani, 2022). Moreover, the positive impact of entrepreneurial and digital literacy on students' interest in entrepreneurship underscores the significance of these skills in fostering entrepreneurial endeavors among the younger generation (Setiawati et. al, 2022). Furthermore, in the context of higher education, administrative staff's digital literacy directly influences their intention to use digital technologies, highlighting the necessity of identifying and training personnel with low digital literacy skills to enhance technology acceptance and utilization in educational settings (Kabakus et. al, 2023).

In this study, Digital Literacy encompasses the knowledge, skills, and competencies required to effectively utilize digital technologies and platforms. Startup Success is defined by various indicators such as revenue growth, market share, customer acquisition, and longevity in the market. Thus, this study develops its fourth hypothesis,

Hypothesis 4: There is relationship between digital literacy and startup success

2.5 Digital Literacy as a Mediator

Staff's digital literacy can indeed mediate the relationship between customer engagement and startup success. Research has found that digital literacy plays an important role in bridging the gap between digital marketing capabilities and SME business performance (Umboh & Aryanto, 2023).

Furthermore, the analysis highlighted digital literacy as a mediator which means that the relationship between digital literacy and SME success can be mediated by the use of digital resources for business operations (Bakashaba et al., 2024). In this way, through the training of the employees, start-ups will be able to enhance the digital marketing approach and customer relations hence experiencing improved digital success business Analysis So by focusing on innovation culture and customer-oriented strategies for start-ups, the following is stressed: Digital transformation strategies (Joel et al., 2024). Moreover, the investigation points to the effects of the psychological need satisfaction of the humanity in consumer interactions with digital and interactive technologies in achieving subjective well-being (Roy, 2023). Moreover, the right application of the digital media improves the interaction between customers and

businesses, and enhances the performance of the businesses; all of these factor are major determinant of success in the digital world (Tarmizi et al., 2023).

Moreover, customer engagement in the business process is mandatory for the business longevity and the successful execution of the digital venture, and, therefore, customer engagement in business processes (Danarahmanto et al., 2019). Consumer behavior through digital communication is also crucial for marketing decisions and organizational success since it gives insight into the consumer's preferences and their behaviors (Bheekharry, 2020). Staff's digital literacy helps to improve customer relations and, consequently, the success of startups.

In this study, digital literacy encompasses the knowledge, skills, and competencies required to effectively utilize digital technologies and platforms. Thus, this study develops its fifth hypothesis,

Hypothesis 5: Digital Literacy mediates the relationship between customer engagement and startup success.

3 Methodology

This is an explanatory study that adopted the positivist philosophy and used a deductive approach, a survey method was used to collect the data from 152 respondents, the respondents were selected using convenient sampling technique and data was collected using a questionnaire. This was a cross-sectional study. SmartPLS software was used to analyze data. Initially, the measurement model was analyzed and then the structural model was used for hypothesis testing.

4 Results

4.1 Measurement Model Assessment

4.1.1 Reliability and Validity

The model's validity and reliability are determined using Cronbach's alpha, composite reliability, and average variance extracted (AVE). Table 1 illustrates that for social media marketing, customer engagement, digital literacy, and startup success, Cronbach's alpha values, composite reliability (rho c), and composite reliability (rho a) are all greater than 0.700. These results demonstrate the satisfactory level of reliability of the model (Hair et al., 2014). The AVE values for digital literacy, customer engagement, social media marketing, and startup success are, in order, 0.68, 0.67, 0.67, and 0.68. According to Hair et al. (2014), all of these values are greater than 0.500, indicating sufficient convergent validity.

Table 1: Reliability and Validity

Latent variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average Variance Extracted
Social Media Marketing	0.91	0.91	0.93	0.68
Customer Engagement	0.90	0.90	0.92	0.67
Startup Success	0.87	0.88	0.91	0.67
Digital Literacy	0.88	0.88	0.91	0.68

4.1.2 Discriminant Reliability

The discriminant validity is confirmed and analyzed according to the Fornell-Larcker criterion. As Hair et al. (2014) observe, this is to determine how different each of the latent variables is

from other concepts. The reliability coefficients of the construct's measures are represented by the AVE, which is the square root of the construct's average variance expressed as a vector and presented in bold on the diagonal of the Fornell-Criteria Larcker's correlation matrix in the correlation matrix (Table 2). The relationships of the other numbers with other constructs, however, are diverse. The square root of each individual AVE (bolded on the diagonal) must be shown to be greater than the relevant inter-construct connections in order to establish discriminant validity. It is discovered that all diagonal values are greater than their non-diagonal equivalents. As such, the discriminant validity of the framework is good.

Table 2: Fornell-Larcker Criterion

Latent variable	Customer Engagement	Digital Literacy	Social Media Marketing	Startup Success
Customer Engagement	0.82			
Digital Literacy	0.74	0.82		
Social Media Marketing	0.64	0.73	0.83	
Startup Success	0.72	0.80	0.76	0.82

It is also shown that an improved way to assess the reliability of the discriminant is the Heterotrait-Monotrait (HTMT) ratio. Henseler et al. (2016) state that Table 3's HTMT ratios are all less than 0.9, indicating strong discriminant reliability.

Table 3: Heterotrait-Monotrait (HTMT) Ratio

Latent variable	Customer Engagement	Digital Literacy	Social Media Marketing	Startup Success
Customer Engagement				
Digital Literacy	0.75			
Social Media Marketing	0.63	0.74		
Startup Success	0.73	0.82	0.77	

4.1.3 Factor loadings

Figure 2 displays the types of latent variables and the factor loadings that correspond to them. Their factor loadings indicate the several construct indicators' strengths. In order to be taken into consideration, the factor loading needs to be more than 0.700. In this study, there is positive factor loading for each indication for a single construction.

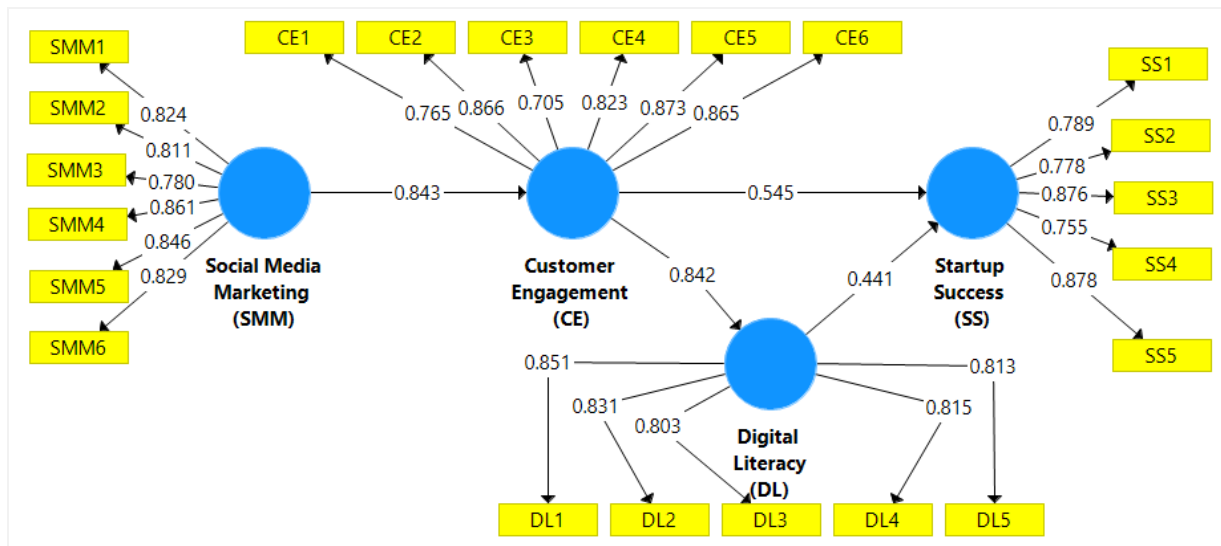


Figure 2: PLS Path Model

4.1.4 R-Square

The latent variable values for R square and Adjusted R square are shown in Table 4. The R statistic has valid ranges for significant ($R=0.750$), moderate ($R=0.500$), and weak ($R=0.250$) results (Hair et al., 2014). The analysis finds that although digital literacy = 0.90 is significant, latent variables consumer engagement = 0.71 and startup success = 0.71 are modest.

Table 4: R-Square

Latent variable	R-square	R-square adjusted
Customer Engagement	0.71	0.71
Startup Success	0.71	0.71
Digital Literacy	0.90	0.89

4.2 Structural Model Assessment

One approach to assess a model's significance is through bootstrapping. Route coefficient importance is shown by the t-statistic value. At the significance level of 0.05, Figure 3 indicates that four associations warrant further investigation. Customer engagement and social media marketing together had a significant overall impact of 0.843, $t = 29.730$ ($p < 0.05$). At 0.547, $t = 8.127$ ($p < 0.05$), there is a substantial overall relationship between customer engagement and startup success. At 0.842, $t = 27.554$ ($p < 0.05$), the combined impact of digital literacy and customer engagement is considerable. However, at 0.439, $t = 6.564$ ($p < 0.05$), the overall relationship between digital literacy and startup performance is substantial.

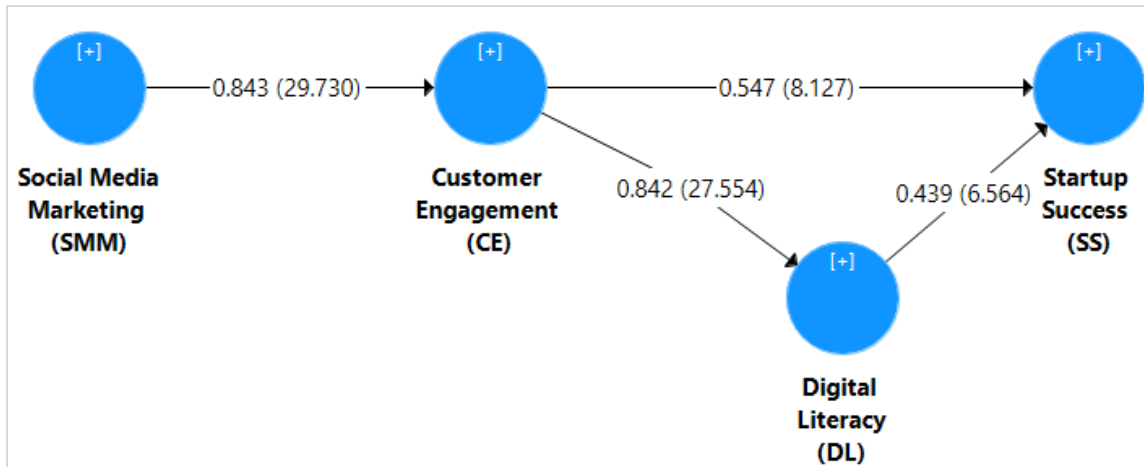


Figure 3: Structural Model

4.3 Hypotheses Testing

The total effect and specific indirect effects are obtained for the mediation analysis. Tables 5 and 6 show what happens as a result.

Table 5 shows the significant direct relationship between social media marketing and customer engagement (Original sample = 0.84, $t = 29.73$, $p < 0.05$), supporting Hypothesis 1. The direct relationship between customer engagement and digital literacy (Original sample = 0.84, $t = 27.55$, $p < 0.05$), supports Hypothesis 2. The direct relationship between customer engagement and startup success (Original sample = 0.92, $t = 80.43$, $p < 0.05$), supports Hypothesis 3. Whereas, the direct relationship between digital literacy and startup success (Original sample = 0.44, $t = 6.56$, $p < 0.05$), supports Hypothesis 4.

Table 5: Total effects

	Relationships	Original sample	T Statistics	P values	Decision
H1	Social Media Marketing -> Customer Engagement	0.84	29.73	0.00	Supported
H2	Customer Engagement -> Digital Literacy	0.84	27.55	0.00	Supported
H3	Customer Engagement -> Startup Success	0.92	80.43	0.00	Supported
H4	Digital Literacy -> Startup Success	0.44	6.56	0.00	Supported

The results in Table 6 show that digital literacy (original sample = 0.37, $t = 5.92$, $p < 0.05$) is the significant mediator between customer engagement and startup success. This means that hypothesis 5 is true.

Table 6: Specific indirect effect

	Relationship	Original sample	T statistics	P values	Decision
H5	Customer Engagement -> Digital Literacy -> Startup Success	0.37	5.92	0.00	Supported

5 DISCUSSION

5.1 Implication

The study's implications are significant for startups, marketers, and researchers. Startups can enhance social media marketing strategies to boost customer engagement and success, emphasizing the need for strong customer relationships. Investing in digital literacy is crucial, as it mediates these effects and aids in adapting to technological changes. Policymakers and educators can develop programs to improve entrepreneurs' digital skills. Researchers can explore innovative change and long-term impact, while start-ups can gain competitive advantage by integrating social media marketing, consumer engagement, and digital literacy into their strategies

5.2 Limitation

Limitations of the Study include the possibility of having a small and diverse sample, possibility of Bias from the self-reported data, and being a cross-sectional study, which does not include variation as time goes on.

5.3 Future Recommendations

Future studies should include follow-up research designs, larger samples, and employ qualitative research to have a better understanding of how things are. To stay abreast the technological advancement and other changes that affect success of start-ups, it is more advisable to analyse the intermediaries and other moderators.

6 CONCLUSION

In conclusion, this restates the significance of the social media marketing, customer engagement and digital literacy as the support to the success factors of the startup and also acknowledges that all the discussed factors are intertwined and it is their responsibility to ensure that the aforementioned goals and objectives are achieved.

The Impact of Social Media Marketing on Customer Engagement: The research also found out that social media marketing also has a positive effect on the customers. This therefore suggests that the right implementation of the social media programs enhances the activity and interaction of the customers. Therefore, startups can post more interesting and unique content and pay additional attention to the community aspect because customer relations are essential for startups.

The Role of Customer Engagement in Startup Success: In this case, the study shows that the first performance is strongly influenced by the level of customers' involvement. Every time customers are associated with specific brands, they are most probable to remain faithful to the brands hence the possibility of acquiring more of the brands' products. These sharing lead to enhanced relations between the startups and the customers which is crucial for a steady development in such a competitive context.

Digital Literacy as a Mediator: This paper shows that customer engagement is positively related to digital literacy, which determines the success of startups. The firms with high digital literacy are more capable of exploiting the higher digital technologies and application concerning the overall customer interaction strategies. This digital entrepreneurship creates elaborate marketing strategies for such startups and profile assessment and market changes that can be done to such enterprises.

Therefore, it is possible to conclude that the usage of social media marketing is effective for the success of the startup since it enables appealing to the consumers and enhancing their digital competence. According to this perspective, each operand contributes a small amount towards

success while the system effect ensures that success is achieved; If Startups are provided with these factors and forced to incorporate them into their business plans, they are likely to yield higher returns, profits, and growth..

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