

Drivers and Barriers of Digital Marketing Adoption among MSMEs in Andhra Pradesh

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ABSTRACT

In this research, we look at the small and medium-sized businesses (MSMEs) in Andhra Pradesh to see what makes them use digital marketing. Perceived utility, perceived simplicity of use, and obstacles to digital marketing practice adoption by MSMEs are the primary foci of the research. Using primary data gathered from structured questionnaires administered to MSME entrepreneurs enrolled under the Udyam Registration program, this study employs a quantitative research approach. We used statistical tools to examine 120 valid replies from 140 questionnaires to determine the key elements impacting the adoption of digital marketing. Problems with content production and digital platform administration, privacy and regulatory concerns, and a lack of technological expertise are just a few of the obstacles that micro, small, and medium-sized enterprises (MSMEs) confront. Micro, small, and medium-sized enterprises (MSMEs) can boost their digital presence, company performance, and competitiveness by fixing these issues. Keywords: MSMEs, digital marketing, perceived usefulness, perceived ease of use, difficulties.

INTRODUCTION

The growth of any nation's economy is closely tied to the success of its micro, small, and medium-sized businesses. They help industrialise underdeveloped and rural regions, add a lot to the GDP, and create jobs (Rao, 2018). A thriving micro, small, and medium enterprise (MSME) sector is a key driver of economic growth in the state of Andhra Pradesh, which is renowned for its varied sectors and entrepreneurial spirit (Ganesan, 2021). The rise of digital technology in the last several years has completely altered the commercial landscape. Marketing in the digital realm, in particular, has grown in importance as a means for companies to connect with consumers, expand their consumer base, and increase revenue (Chaffey & Ellis-Chadwick, 2019). According to Tiago and Veríssimo (2014), digital marketing provides many advantages to micro, small, and medium-sized enterprises (MSMEs), such as reduced costs, increased consumer reach, and better brand visibility. Despite these benefits, digital marketing is still not widely used by MSMEs in Andhra Pradesh. If these businesses want to improve their digital presence, they need to know what drives digital marketing adoption and what obstacles they encounter (Das & Mishra, 2020). Digital marketing has flourished in Andhra Pradesh thanks

to the state's increasingly smartphone and internet-connected population (Reddy & Rao, 2021). Micro, small, and medium-sized enterprises (MSMEs) can take advantage of the expanding digital audience as more people use the internet for research, shopping, and entertainment (Gopalakrishnan, 2019). Small and medium-sized enterprises (SMEs) can increase revenue, strengthen customer relationships, and raise brand awareness with digital marketing (Kumar & Anjum, 2020). There are a number of elements that affect the rate of digital marketing adoption among MSMEs in Andhra Pradesh. Both internal and external variables have a role in these considerations. Factors within the company's control include its size, resources, level of digital literacy, and the mindset of upper management towards IT. According to Singh and Srivastava (2020), digital marketing is more commonly used by larger, more financially stable MSMEs than by smaller, less well-off ones. Despite the many advantages, digital marketing presents several obstacles for micro, small, and medium-sized enterprises (MSMEs) in Andhra Pradesh. A lack of familiarity with and ability to use digital tools is a major obstacle. It is challenging for many owners and employees of MSME to execute successful digital marketing strategies due to a lack of familiarity with digital marketing tools and methodologies (Gupta & Jain, 2017). The constant need to learn and adapt to new technologies is another challenge for small enterprises that are already strapped for cash (Singh & Srivastava, 2020). The shortage of funds is another major obstacle. Digital marketing may be more economical than more conventional forms of advertising, but it nevertheless necessitates an outlay of resources (Bala & Verma, 2018). Allocating funds for digital marketing campaigns can be difficult for MSMEs, especially those with limited budgets (Kumar & Anjum, 2020). In addition, digital marketing may face challenges in rural areas due to inadequate infrastructure, which includes unreliable internet and a shortage of digital devices (Reddy & Rao, 2021). Lastly, it could be difficult for MSMEs to gauge the success of their digital marketing campaigns. It may be difficult for MSMEs to monitor and assess the efficacy of their digital marketing campaigns, in contrast to larger companies that possess sophisticated analytics software and in-house experts (Tiago & Veríssimo, 2014). Problems with optimising marketing strategies and getting desired outcomes may result from this (Chaffey & Ellis-Chadwick, 2019).

Small and medium-sized enterprises (SMEs) in Andhra Pradesh have a great deal to gain from embracing digital

marketing if they want to boost their competitiveness and fuel their growth. But in order to reap all these rewards, we must overcome the obstacles these businesses encounter and deal with the reasons that are affecting the adoption of digital marketing. Governments, trade groups, and universities can all play a key role in encouraging micro, small, and medium-sized enterprises (MSMEs) to embrace digital marketing by offering tailored assistance and resources (Das & Mishra, 2020). The purpose of this research is to help policymakers and practitioners in Andhra Pradesh create successful digital transformation plans by shedding light on the variables impacting the adoption of digital marketing and the difficulties encountered by micro, small, and medium-sized enterprises (MSMEs).

REVIEW OF LITERATURE

Across industries and nations, a number of studies have looked at how MSMEs fared when they started using digital marketing. Digital marketing adoption and business success are impacted by a myriad of technical, organisational, and environmental factors, as shown in these studies. Researchers Aditya Andika et al. (2021) looked at small and medium-sized enterprises (SMEs) in Indonesia to see how they use digital marketing and what elements make it worthwhile. This literature review study discovered that small and medium-sized enterprises (SMEs) perform better when they employ digital marketing. This is because SMEs are able to reach more customers, communicate more effectively with those customers, and use more cost-effective marketing tactics. To further encourage MSMEs to embrace digital marketing, the study emphasised the value of training and mentoring programs offered by universities and research institutes. The motivations behind the use of digital products in marketing by MSME tape producers were studied by Zul Mazwan et al. (2022). The research included descriptive statistics and Partial Least Squares (PLS) analysis, and it relied on a survey approach with 45 participants. Factors such as technology advancement, skills, environmental conditions, competitiveness, and capital constraints hampered the actual adoption of digital marketing tools by MSME manufacturers, even though they were interested in adopting them.

Using a quantitative research technique using PLS-SEM analysis, Hela Diouani et al. (2023) investigated the factors impacting the adoption of digital marketing among SMEs in Algeria. The research lent credence to the Technology Acceptance Model (TAM) and revealed that subjective norms impact the perception of ease of use, while accessibility, cost savings, and time savings impact the perceived usefulness, which in turn influences the adoption of digital marketing.

Using a quantitative survey of 500 MSMEs in Indonesia, Anuradha Sharma and Swati Sharma (2023) used PLS-SEM to study focused on small travel firms in India. The study discovered various essential factors affecting digital marketing adoption and concluded that it greatly increases organisational effectiveness. The use of confirmatory

composite analysis in PLS-SEM was another methodological contribution of the study.

The use of factor analysis and a logistic regression model with a sample of 900 MSMEs in Karnataka was investigated by Sameena Banu and B. Suresh (2023) in their study on digital practice adoption. According to the research, digital practices have a positive impact on many aspects of company operations, including administration, customer relations, inventory management, communication, and marketing.

According to Ahmad Ahsin Kusuma Mawardi et al. (2024), who used a mixed-method approach and PLS-SEM analysis to study MSME performance, social media adoption has an effect. Results showed that digital marketing adoption and performance increase were both supported by competent human resources, and that technology greatly improved MSME performance. The impact of MSMEs' adoption of e-commerce in the age of Industry 4.0 was investigated by Bagus Hari Sugiharto (2024). Market expansion, operational efficiency, and direct engagement with customers are three ways in which e-commerce adoption increases competitiveness, according to the report. Research also showed that government assistance for MSMEs and training in digital skills were important.

One study that looked at the relationship between digital marketing tactics and the competitiveness of MSME was the one by Dian Sudiantini et al. (2024). Using digital marketing, the study found that MSMEs were able to increase revenues, broaden their customer base, and boost their brand's reputation. One of the biggest problems with digital marketing is that people still don't know enough about it or have the necessary abilities. Utilising the Decomposed Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM), Hasbullah Ashaari et al. (2024) investigated the elements impacting the adoption of digital marketing by small business owners in Malaysia. Research shows that behavioural and technical aspects play a large role in digital marketing adoption decisions, with most independent variables having a considerable impact.

Technological factors, organisational readiness, financial resources, digital skills, government backing, and environmental factors, including competition and customer behaviour, are the main determinants of digital marketing adoption among MSMEs, according to the research. Digital marketing has a beneficial effect on MSME performance, competitiveness, and market expansion, according to most research. However, many small and medium-sized enterprises (SMEs), particularly in developing nations, still face obstacles to adoption, such as a lack of digital literacy, limited financial resources, and technical hurdles. In order to encourage digital marketing adoption among MSMEs, our results stress the importance of training programs, infrastructure development, and policy assistance.

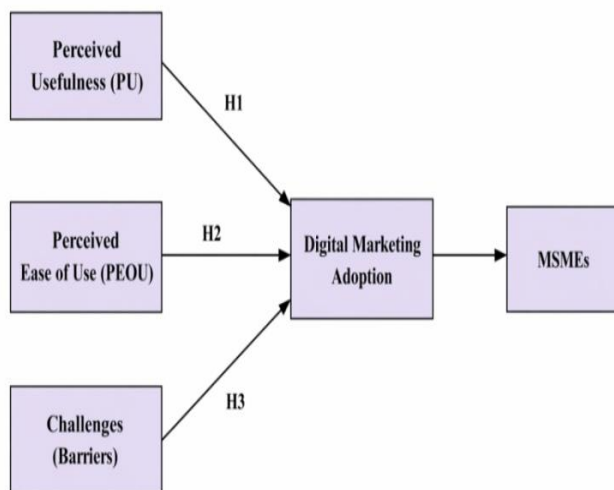
RESEARCH GAP

There is limited research specifically focused on digital marketing adoption among MSMEs in Andhra Pradesh.

Most studies discuss general trends and challenges, ignoring regional differences such as infrastructure, digital literacy, and economic conditions. Additionally, there is a lack of empirical evidence on the role of government policies and local market dynamics. Therefore, a focused study is needed to identify region-specific factors and provide practical insights to improve MSMEs' digital competitiveness.

CONCEPTUAL MODEL

Digital marketing adoption among MSMEs is positively impacted by perceived usefulness (PU) and perceived ease of use (PEOU). These concepts are taken from the TAM, which describes how people embrace and make use of new technology. However, digital marketing adoption is hindered by challenges, such as insufficient technological understanding, financial limitations, and regulatory difficulties. Additionally, MSMEs' performance and competitiveness are improved by the adoption of digital marketing.



Note: H1, H2, and H3 represent the hypothesized relationships.

OBJECTIVE OF THE STUDY

1. To investigate the role of perceived usefulness and ease of use in shaping MSMEs' adoption of digital marketing.
2. To identify the key obstacles MSMEs face in implementing digital marketing strategies.

HYPOTHESIS OF THE STUDY

Based on the research objectives, which was framed to fill the research gap the following research hypothesis has been framed.

- H1:** Perceived usefulness significantly influences digital marketing adoption among MSMEs.
H2: Perceived ease of use significantly influences digital marketing adoption among MSMEs.
H3: Challenges significantly influence digital marketing adoption among MSMEs.

SCOPE OF THE STUDY:

This research looked at the impact of perceived utility and usability on the uptake of digital marketing by micro, small, and medium-sized enterprises (MSMEs) in Andhra Pradesh. This study set out to grasp the intricate dynamics of digital marketing adoption by analysing how these businesses' growth was affected by digital marketing strategies. The study aimed to offer practical insights that micro, small, and medium-sized enterprises (MSMEs) can use to their advantage in digital marketing to achieve long-term growth and development.

RESEARCH METHODOLOGY

Using primary data and a quantitative research strategy, this study looks at how MSMEs in Andhra Pradesh are using digital marketing. Entrepreneurs from micro, small, and medium enterprises (MSME) with a minimum of one year of digital marketing experience who are registered under the Udyam Registration program make up the research population. An 85.7% response rate was achieved with 120 valid responses out of 140 questionnaires sent. In order to minimise sample bias and guarantee representativeness, respondents were chosen using a random selection technique.

The research objectives informed the questionnaire's structure, which included closed-ended questions. Perceived utility, perceived usability, and difficulties in implementing digital marketing were evaluated using a five-point Likert scale. Statistical methods such as exploratory factor analysis (EFA), discriminant analysis, and descriptive statistics were used to examine the data. Classifying and differentiating adopters and non-adopters was done using discriminant analysis, and identifying underlying factors impacting digital marketing adoption was done using EFA.

DATA ANALYSIS

Objective-1: To investigate the role of perceived usefulness and ease of use in shaping MSMEs' adoption of digital marketing.

The objective aims to understand the MSMEs perceive the benefits and simplicity of digital marketing tools, utilising discriminant analysis to differentiate between adopters and non-adopters. By assessing these factors, the study seeks to identify key determinants that encourage or hinder the adoption of digital marketing practices among MSMEs.

Table -1: Perceived Usefulness Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	11.000 ^a	100.0	100.0	.957

Source: Primary data

The table shows the outcomes of a discriminant analysis that looked at how MSMEs' perceptions of digital marketing's utility affected their decision to employ it. Its significant

explanatory power in differentiating between MSMEs that use digital marketing and those that do not is highlighted by the fact that the first canonical discriminant function explains 100% of the variance in perceived usefulness, as indicated by the eigenvalue of 11.000. The strong association between perceived usefulness elements and adoption behaviours is further supported by the high canonical correlation coefficient of 0.957. This highlights the substantial impact that these factors play in defining organisational strategies and practices regarding digital marketing initiatives.

Table -2: Model fitness of Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.083	28.576	3	.000

Source: Primary data

Perceived utility characteristics and the adoption of digital marketing among MSMEs are significantly related, according to the Wilks' Lambda test results ($p < .001$). Perceived usefulness characteristics distinguish MSMEs that employ digital marketing from those that do not, according to the Wilks' Lambda (.083). The results highlight how perceived benefits play a significant role in MSMEs' decision-making process when it comes to digital marketing adoption.

Table -3: Perceived Usefulness Factors Structure Matrix

	Function 1
Provided Valuable insights into customer behaviour and preferences	-.866
Increased Sales and revenue	.561
Enhanced business's visibility and recognition	-.234
Reached Expansion towards broader audience	.099

Source: Primary data

The structure matrix reveals the relative importance of different functions of digital marketing in influencing adoption among MSMEs in Andhra Pradesh. A high negative coefficient (-0.866) for "Provided valuable insights into customer behaviour and preferences" indicates that MSMEs that prioritise understanding customer behaviour through digital marketing are less likely to adopt these practices. Conversely, a positive coefficient (0.561) for "Increased sales and revenue" suggests that the potential for financial gains strongly motivates adoption. The negative coefficient (-0.234) for "Enhanced business's visibility and recognition" suggests that while visibility is important, it is not a primary driver of adoption. The small positive coefficient (0.099) for "Reached expansion towards broader audience" indicates a minor positive impact on adoption, implying that while expanding audience reach is valued, it does not significantly drive initial adoption decisions among MSMEs in the region.

Table 4: Perceived Ease of Use Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.684 ^a	100.0	100.0	.637

a. First 1 canonical discriminant functions were used in the analysis.

Source: Primary data

The table shows the outcomes of a discriminant analysis that looked at how characteristics related to MSMEs' perceptions of digital marketing's ease of use affected their adoption rates. With a canonical correlation coefficient of 0.637 and an eigenvalue of 0.684, the first canonical discriminant function completely explains the variance in perceived ease of use. The criteria measuring ease of use have a significant effect on the adoption of digital marketing strategies by MSMEs, according to the data. With higher eigenvalues, the variables are more discriminatory, suggesting that aspects pertaining to usability have a substantial impact on the decision-making process of MSMEs when it comes to implementing digital marketing tactics.

Table -5: Model Fitness of Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.594	10.418	4	.034

Source: Primary data

With a chi-square value of 10.418 and 4 degrees of freedom (df), the Wilks' Lambda test result is .594, suggesting a statistically significant association between perceived ease of use factors and the adoption of digital marketing among MSMEs. The chance of MSMEs adopting digital marketing tactics is highly impacted by perceived ease of use ($p = .034$). Conclusions drawn from the study point to the importance of MSMEs' perceptions of the usability of digital marketing tools in their adoption decisions. Wilks' Lambda values closer to 0 show that characteristics related to ease of use have a larger impact on adoption, whilst values closer to 1 imply a smaller influence. Consequently, micro, small, and medium-sized enterprises (MSMEs) may be more likely to embrace digital marketing if they were helped to perceive its ease of use through specific interventions and support systems.

Table 6: Perceived ease of Use - Structure Matrix

	Function 1
Quick to adapt changes in digital marketing platforms	.953
Learning to use digital marketing channels is easy	-.534
Creating and managing campaigns is simple	-.480
Easy-to-understand digital marketing tools	-.297

Source: Primary data

The structure matrix presented for perceived ease of use factors influencing the adoption of digital marketing among MSMEs reveals several key insights. The high positive

loading (0.953) for "Quick to adapt changes in digital marketing platforms" indicates that MSMEs perceive the ability to adapt swiftly to evolving digital platforms as a significant facilitator of ease of use. Conversely, negative loadings for factors such as "Learning to use digital marketing channels is easy" (-0.534) and "Creating and managing campaigns is simple" (-0.480) suggest challenges in these areas, indicating that MSMEs may find initial learning and operational aspects of digital marketing more complex than anticipated. The moderately negative loading (-0.297) for "Easy-to-understand digital marketing tools" further underscores a perceived need for more intuitive and user-friendly tools to enhance adoption rates among MSMEs. The study results highlight specific areas where interventions in training, tool development, and platform usability could potentially increase the adoption of digital marketing practices among MSMEs.

Objective-2: To identify the key obstacles MSMEs face in implementing digital marketing strategies.

The objective focuses on exploring the various obstacles that MSMEs encounter when attempting to implement digital marketing strategies, employing Exploratory Factor Analysis (EFA) to uncover underlying issues. The findings will provide insights into the specific barriers, such as resource limitations, digital literacy, and infrastructural challenges, that impede the widespread acceptance of digital marketing among MSMEs.

Table 7 Sample Adequacy through KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	497.914
	Df	45
	Sig.	.000

Source: Primary data

The KMO value of 0.801 surpasses the recommended threshold of 0.6, signifying that the dataset is sufficiently adequate for exploring underlying factors affecting MSMEs' acceptance of digital marketing. Additionally, Bartlett's Test of Sphericity yields a significant chi-square value of 497.914 (df=45, $p < 0.001$), indicating that correlations between variables are sufficiently strong for meaningful factor analysis. These indicate a solid foundation for identifying and understanding the specific challenges hindering MSMEs from embracing digital marketing practices, thereby informing targeted strategies to address these barriers effectively.

Table -8 Key Challenges through Component Matrix

Key Factors	Component	
	1	2
Outdated systems undermine digital marketing efficiency.	.690	

Compatibility issues prevent innovative strategy implementation.	.694	
compelling, consistent content strains available resources.	.777	
Balancing content quality and quantity impacts its effectiveness.	.795	
Limited budgets constrain investments in digital advertising.	.505	
Skill shortages impede execution of sophisticated digital strategies.		.458
Navigating privacy regulations requires constant vigilance.		.762
Aligning practices with evolving laws necessitates ongoing monitoring.		.767
Ineffective communication leads to disjointed digital marketing efforts.		.705
Conflicting priorities hinder the development of a unified digital strategy.		.599

Source: Primary data

The component matrix derived from the analysis of challenges faced by MSMEs in adopting digital marketing highlights critical factors.

Component 1, characterized by high loadings for "Outdated systems undermine digital marketing efficiency" (0.690), "Compatibility issues prevent innovative strategy implementation" (0.694), and "Navigating privacy regulations requires constant vigilance" (0.762), underscores technological and regulatory barriers. The study indicates that outdated infrastructure, compatibility issues with digital tools, and the complexity of navigating privacy laws are significant challenges inhibiting MSMEs' adoption of digital marketing practices.

Component 2, with high loadings for "Compelling, consistent content strains available resources" (0.777), "Balancing content quality and quantity impact its effectiveness" (0.795), and "Ineffective communication leads to disjointed digital marketing efforts" (0.705), highlights operational and strategic hurdles. These include resource constraints in content creation, challenges in optimizing content effectiveness, and difficulties in maintaining cohesive communication strategies. Overall, the study results highlight the multifaceted nature of barriers MSMEs encounter, ranging from technological limitations and regulatory compliance to operational complexities, necessitating targeted interventions to enhance digital marketing adoption and effectiveness among MSMEs.

FINDINGS OF THE STUDY

1. The study found that MSMEs that prioritized understanding customer behavior through digital marketing were less likely to adopt these practices, as indicated by the high negative coefficient (-0.866) for providing valuable insights into customer behavior and preferences.

2. The study identified that the potential for financial gains strongly motivated digital marketing adoption among MSMEs, as evidenced by the positive coefficient (0.561) for increased sales and revenue.
3. The study revealed that although business visibility and recognition were considered important, they were not primary drivers of digital marketing adoption, as shown by the negative coefficient (-0.234).
4. The study indicated that MSMEs perceived the ability to adapt quickly to evolving digital marketing platforms as a major facilitator of perceived ease of use, supported by the high positive loading (0.953).
5. The study examined the challenges associated with learning and managing digital marketing tools and found that MSMEs experienced difficulties in learning digital marketing channels and managing campaigns, as reflected by the negative loadings (-0.534) and (-0.480), respectively.
6. The study found that MSMEs required more intuitive and user-friendly digital marketing tools to improve adoption rates, as indicated by the moderately negative loading (-0.297).
7. The study identified several technological challenges that hindered digital marketing adoption, including outdated systems and compatibility issues with digital tools, as evidenced by loadings of 0.690 and 0.694, respectively.
8. The study observed that privacy regulations and legal compliance requirements were significant barriers to digital marketing adoption among MSMEs, as indicated by the high loading (0.762).
9. The study found that operational and strategic challenges related to content creation, content consistency, and communication strategies also hindered digital marketing adoption, as evidenced by high loadings of 0.777 and 0.795.

CONCLUSION

The study comprehensively evaluated the factors influencing the adoption of digital marketing among MSMEs in Andhra Pradesh, highlighting both the perceived usefulness and ease of use aspects, as well as the challenges faced. Key findings indicate that financial incentives, such as increased sales and revenue, are strong motivators for MSMEs to adopt digital marketing practices. However, the study also found that complexities in understanding customer behavior, navigating privacy regulations, and managing content creation pose significant barriers. The ability to swiftly adapt to evolving digital platforms emerged as a crucial factor for ease of use, suggesting a need for more intuitive and user-friendly tools. To enhance digital marketing adoption, targeted training programs, updated infrastructure, and simplified tools are essential. Additionally, fostering long-term brand-building strategies and providing comprehensive support can help MSMEs

overcome operational and strategic hurdles. Addressing these multifaceted challenges through focused interventions will enable MSMEs in Andhra Pradesh to leverage digital marketing more effectively, ultimately contributing to their growth and competitiveness in the digital economy.

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