

## Digital Marketing Adoption among MSMEs in Assam

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### Abstract

The study investigates digital marketing usage in micro, small and medium-sized enterprises (MSMEs) of Assam along with the extent of digital marketing adoption and also explores the challenges of Digital Marketing Adoption. Digital marketing adoption is measured for a sample of 301 MSMEs located in two districts of Assam; India using a composite score arrived at by considering five parameters related to digital marketing adoption. MSMEs in Assam have not widely embraced digital marketing particularly the micro enterprises located in rural region, with their usage primarily restricted to email marketing and social media marketing and websites. Usage of social media platforms is popular amongst both urban MSMEs and rural MSMEs. However, the usage of mobile marketing, e-mail marketing and affiliate marketing has not taken off. Adoption behavior is similar for Small businesses belonging to Tourism sector in both districts. Level of adoption is more for service businesses compared to manufacturing units. Highest level of digital marketing adoption is seen amongst Medium enterprise of urban Kamrup. Lack of proper training and knowledge, security concerns, and unfamiliarity with legal practices are major hurdles identified.

**Keywords:** Adoption Behavior, Assam, Challenges, Digital Marketing, MSMEs.

### Introduction

A rising trend that is drawing interest from many companies, particularly MSMEs, is digital marketing. Digital marketing is growing because businesses are focusing more on using the electronic or digital media to help their marketing. Subsequently, digital marketing is altering the ways in which businesses and customers interact, exchange information, make purchases, and make sales. The growing number of people using the internet, the accessibility of electronics like smartphones, and the utilization of social media platform have made a worthwhile consequence on consumer behaviour and experiences. This phenomenon has revealed how important it is for organizations to have an online presence in the modern world in order to realize the need for digital transformation and even to survive in this digital age. The introduction of digital marketing (DM) has completely transformed how companies interact with their clientele, especially micro, small and medium-sized firms (MSMEs). The growing ubiquity of electronic media, the internet, and social media platforms has made digital marketing an indispensable instrument for information exchange, communication, and business (1). Small

and medium-sized businesses (SMEs) are essential for nation's overall economic development (2). Digital and social media marketing offer small and medium-sized businesses (SMEs) significant chances to enlarge & improve their market share. These strategies help draw in new clients, keep hold of current ones more successfully, improve the quality of services they provide, lower costs, forge stronger bonds with clients, and, in the end, improve and develop both internal and external communication (3). MSMEs are vital for the country's economic growth as these industries contribute to the country's manufacturing output, boost foreign exchange profits, create jobs, export goods, and encourage balanced economic development (4). Therefore, there is room to investigate and study digital marketing adoption behaviour of MSMEs in Assam, the gateway to North-eastern part of India and its connectivity to Southeast Asia, makes its capital city Guwahati a major commercial hub. Our study pertains to the two major districts of Assam viz., Kamrup Rural and Kamrup Metro (Guwahati falls under Kamrup Metro). The Internet has created a wealth of options for businesses to use contemporary

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digital marketing tools that enable them to advertise their goods through a variety of marketing channels. These options include a wide range of products, services, and prices (5). Digital marketing can be defined as an application built on digital technologies that create digital channels for marketing and achieving organizational objectives by exceeding competitors' offerings in meeting customer needs (6). Additionally, digital marketing is the application of promoting goods, services, knowledge, concepts through digital media (7). The launching of products or services into the international market, the recognition and comprehension of international standards, the use of e-commerce platforms for goods and services, the ability to target potential customers with pricing and product customization, and the acquisition of core competencies and skills necessary for global market positioning are just a few benefits that MSMEs can enjoy from having a fruitful marketing mix that incorporates internet marketing and e-commerce (8). Digital marketing encompasses various tools that are vital means of communication for businesses and customers (9). Businesses typically use the tools that are available to them based on what best suits their objectives and business model. When it comes to SMEs, email marketing is one of the most useful means available in digital marketing. CT aids in the effective execution of a organized and targeted promotion that can support business development and aid in customer retention for potential future benefits (10). Digital marketing is an appealing choice for small and medium-sized businesses (SMEs) with tight marketing budgets as it is more affordable, accessible, and offers cost efficiency when compared to traditional marketing channels like print, radio, and TV. It also allows SMEs to target the right customers. SMEs are still trailing behind in implementing these technologies, despite the opportunities that digital marketing and technology offer. Some are still in the early stages of adoption and haven't moved past email and basic informational websites yet (11). Digital marketing includes many means which are crucial communication procedures from both customers and companies' perspectives (12). Business practices differ in embracing those means, depending on how it suits their purpose and their business model. E-mail marketing is one of the most commonly used tools amongst the tools that

digital marketing offers. Social media is another tool that allows the creation and exchange of user-generated content (13). Businesses now have more opportunities to use cutting-edge digital marketing tools to advertise their goods across a variety of marketing channels (14). Digital marketing includes different tools that are essential communication methods for both customers as well as for businesses. Companies tend to adopt those available tools depending upon what is best fit for their business model and their purpose (15). In India, there are limited studies that investigated digital marketing adoption (15). Digital marketing is still not a well-established concept in India, and there are only a few researches that tried to investigate digital marketing practices and digital marketing tools (16). The study on digital marketing adoption among Jordanian SMEs, found that digital marketing tools are not widely accepted and it is limited to email and social media (17). Studies on digital marketing in SMEs in the future can be expanded to study specific SME sectors, digital marketing tools outside SMM and website, as well as research locations that have rarely been previously researched (18). Micro businesses were more positive towards digital marketing adaptation than small businesses. This was found in the research which was conducted to understand the perspectives of small business towards digital marketing and to determine the strength of the relationship between the factors that affect their digital marketing adoption and digital marketing adaptation (19). This study addresses all these issues by considering (i) both manufacturing and services sector (ii) rural and urban location (iii) digital marketing tools other than website and SMM. According to Director, CRISIL "Despite their limitations, micro enterprises are not very far from small enterprises in digital adoption" (20). Given the scarce coverage of this segment, it would be very relevant to investigate the extent to which this is true for Assam. Further the economies of Kamrup rural and Kamrup Metro districts of Assam depend heavily on MSMEs. They make a substantial contribution to the state's GDP, entrepreneurship, and employment. Examining the use of digital marketing in these areas can shed light on the opportunities and difficulties these units encounter in the digital economy. Thus, our first objective is 'to assess the digital marketing

adoption behaviour of MSMEs in two districts of Assam viz., Kamrup Metro and rural Kamrup with regard to their online presence and the level/extent of adoption'. Digital marketing adoption can improve the performance of MSMEs (21). But SMEs are lagging behind digital marketing adoption and are ineffective in developing and implementing online marketing strategies (22). The ability of SMEs to turn the positive effects of digital marketing into a strong digital marketing plan or structure is hindered by lack of technical capability (22). Utilization of social media such as Instagram and Facebook will finally be an alternative to micro enterprises in the post-pandemic times (23). Our study uses both a quantitative and qualitative approach which has not been found in this particular geographic context and has been addressed in our study. So the second objective is 'to explore the challenges faced by MSMEs in digital marketing adoption'.

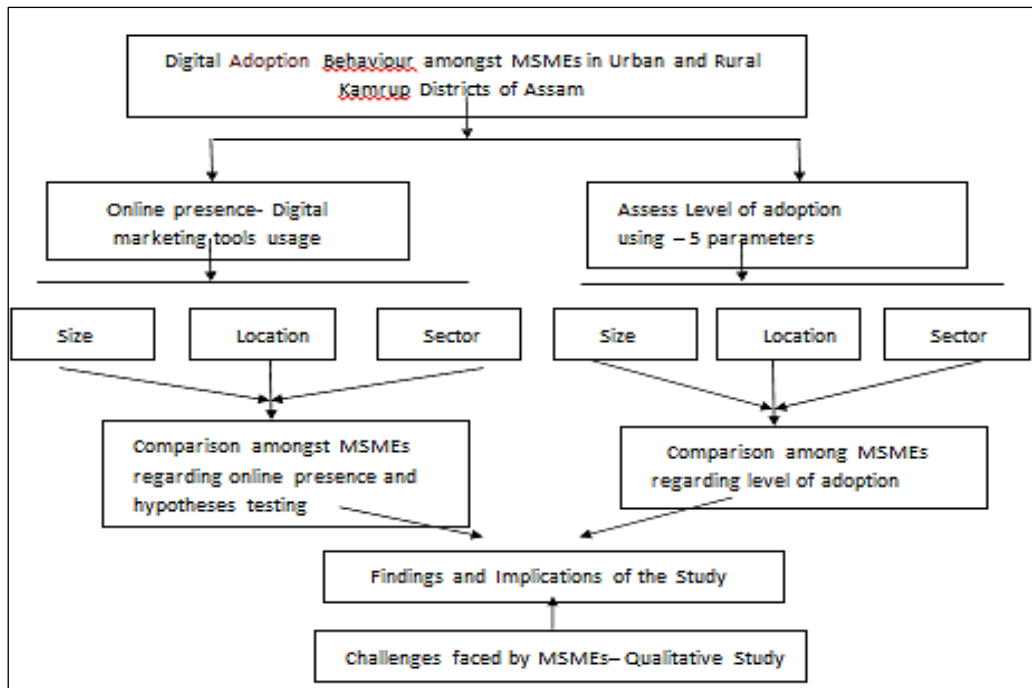
## Methodology

The first phase of the research explored the level of digital marketing adoption among MSMEs and the tools adopted for digital marketing through an empirical study of 301 MSMEs located in rural and urban Assam. This study considers the MSMEs located in one of the major districts of Assam, viz.,

Kamrup Metro district and Kamrup Rural district. The qualitative approach used in the second phase sought to unearth the challenges faced by MSMEs in adopting digital marketing. Qualitative data has been gathered through semi-structured interviews with MSME owners/ promoters while quantitative data was generated through survey of the MSMEs. The study design is presented in Figure 1. For the first phase of data collection, ten experts' viz., academicians and professionals with expertise in the fields of digital marketing and e-business examined the survey questions before they were administered to ensure there was no room for misinterpretation and that the questions appropriately addressed the study objectives. Thus, some adjustments were made in response to their recommendations. 30 MSMEs in Assam were chosen at random to participate in a pilot survey. The pilot study's results indicated that the questions were deemed reliable for use in the large-scale survey. 301 businesses that are listed as MSMEs with the Ministry of Industry, Trade, and Supply, Assam received the questionnaire. The size of the sample is deemed sufficient for the analysis and is in line with the response rates as recommended (24). A profile of the sample is given in Table 1.

**Table 1:** Sample Profile

Business Enterprise	Description	Frequency	Percentage
Geographic Area	Rural	125	42%
	Urban	176	58%
Type	Manufacturing	154	51%
	Services	147	49%
Years of Existence	1 to 5	54	18%
	5 to 10	139	46%
	10 to 15	71	24%
	15 to 20	25	8%
	More than 20	12	4%
Type of Ownership	Proprietorship	174	58%
	Partnership	39	13%
	Company	88	29%



**Figure 1:** Conceptual Framework

Amongst the sampled MSMEs, the digital marketing adoption practice was looked into from two points - the different DM tools adopted and the extent of adoption. The extent of adoption has been analysed based on five parameters viz., types of platforms, purpose for which these tools are used or their marketing strategy, number of DM tools adopted, frequency of use and, duration of use of DM tools. Three categories viz., (i) uses own platform i.e., having one's own website, and (ii) other platform, which refers to using digital platform of others, such as another person's website, App, or other channel and (iii) both own and others' platform were used for the first parameter 'Type of platform used'. The second parameter 'Marketing Strategy/ Purpose of use'

has been categorized as (i) boost brand awareness or product promotion,(ii) to receive orders, (iii) accept payments online, (iv)purchase and sell goods online (v) receive feedback online (with a score of one assigned to each item).The third parameter 'Number of DM tools used' includes DM tools - Email, blogs, SMM, mobile marketing, websites, affiliate marketing, and a score of one is assigned to every tool. While the parameter 'Frequency of use' involves 3 categories (Never, Seldom, and Most frequently) and the parameter 'Duration of use' involved 4 categories (0 to 1 year, 2 to 5 years, 6 to 10 years, and more than 10 years). Table 2 presents the scores assigned to the response categories of the different parameters.

**Table 2:** Parameters used to Assess Level / Extent of Digital Marketing Adoption

No.	Parameter	Categories	Score
1	Type of Platform Used	None	0
		Others' Platform	1
		Own Platform	2
		Both own and others	3
2	Purpose of Use/ Marketing strategy	Product promotion / boost brand awareness	1
		Receiving orders	1
		Accepting payment	1
		Purchase and sell goods online	1
		Receiving feedback	1
3	Number of Tools Used	E Mail	1
		Blog	1

		Mobile Marketing	1
		SMM	1
		Website	1
		Affiliate marketing	1
4	Frequency of Use	Never	0
		Seldom	1
		Frequently	2
5	Duration of Use	0-1 yr	1
		2-5 yrs	2
		6-10 yrs	3
		More than 10 yrs	4

The total score for extent/ level of adoption has been arrived at by adding up the scores received for each parameter considered (Please refer Table 2). The scores so arrived at, for each sampled unit, have been then categorized as 'Very Low' (Scores 1-4), Low (5-10), Moderate (11 - 16) and High (17-20).

## Results

The results related to the two objectives are discussed below.

**Table 3:** Usage of Digital Marketing Tools

Digital Marketing Tools	Response	Rural		Urban		Overall	
		No. (i)	% (ii)	No. (iii)	% (iv)	No. (v)	% (vi)
Website	Yes	65	31%	97	55%	162	54%
	No	60	69%	79	45%	139	46%
E-mail Marketing	Yes	58	46%	75	43%	133	44%
	No	67	54%	101	57%	168	56%
Social Media Marketing	Yes	109	85%	165	94%	274	91%
	No	16	15%	11	6%	70	9%
Mobile Marketing	Yes	52	42%	68	39%	120	40%
	No	73	58%	108	61%	181	60%
Affiliate Marketing	Yes	44	35%	54	31%	98	33%
	No	81	65%	122	69%	203	67%

Table 3 depicts the online presence of the sampled enterprises. It reveals that most (54%) of the MSMEs have their own website while a clear majority (77%) of businesses use social media platforms such as Facebook, Instagram, YouTube, etc. However, the usage of mobile marketing, e-mail marketing and affiliate marketing are less popular (<50%) tools amongst the MSMEs in Assam as is evident from the column (vi) of Table 3. A comparison was made between MSMEs located in urban and rural areas in Kamrup district of Assam with respect to the usage of DM tools. As is evident from Table 3, more MSMEs (55%) located in the Kamrup (Metro) have websites compared to MSMEs in rural Kamrup (31%). Usage of social

## Adoption of Digital Marketing by MSMEs

### Online Presence

With the aim to capture the present adoption of digital marketing tools amongst MSMEs in Assam, the respondents were asked to exhibit their use of the most prevalent digital marketing tools. The results viz., number of units and the percentages of units using each of the DM tools, are exhibited in Table 3.

media platforms such as Facebook, Instagram, Youtube, etc. is popular amongst both urban MSMEs (94%) as well as rural MSMEs (85%). However, the usage of mobile marketing, e-mail marketing and affiliate marketing amongst MSMEs is yet to gain momentum in both rural and urban areas as evident from Table 3. Surprisingly, the percentage of MSMEs using these three tools is slightly higher than MSMEs in urban areas. Five hypotheses have been tested to assess whether there is any significant difference in the usage of DM tool amongst MSMEs in urban Kamrup district and MSMEs in rural Kamrup district. Accordingly, z-test for proportions was done, the result of which is seen in Table 4.

**Table 4:** Hypotheses Test Results

Hypothesis	p-Value	Conclusion
Ownership of Website is more amongst urban MSMEs than rural MSMEs	0.29	Rejected
E-mail marketing use is more amongst urban MSMEs than rural MSMEs	0.74	Rejected
Social media marketing use is more amongst urban MSMEs than rural MSMEs	0.025	Accepted
Mobile marketing use is more amongst urban MSMEs than rural MSMEs	0.51	Rejected
Affiliate Marketing use is more amongst urban MSMEs than rural MSMEs	0.795	Rejected

As can be observed from Table 4, there is no significant difference in the adoption of the DM tools considered in our study amongst the two types of MSMEs based on their geographical location. However, the difference is significant in case of social media marketing adoption and more numbers of MSMEs in urban Kamrup (94%) has adopted this tool compared to the number of MSMEs in rural Kamrup (85%).

#### Level / Extent of Digital Marketing Adoption

As mentioned earlier in the Methodology section, five parameters viz., platform usage, strategy, number of digital marketing tools used, frequency of use and the number of years of use are used to

gauge the extent of digital marketing adoption. The summated score for extent of adoption has been calculated based on the five parameters. These scores have then been categorized into 4 groups viz., very low level of adoption, low level of adoption, moderate level of adoption and high level of adoption. Tables 5 to 7 show the distribution of these scores of the 301 MSMEs considered in this study according to MSME type, nature of industry (manufacturing/service) and industry sector. The extent of adoption is also seen separately for MSMEs located in rural and urban areas.

**Table 5:** Level of Digital Marketing Adoption amongst MSME Type

	1-4	%	5-10	%	11-15	%	16-20	%
Micro [134]	8	6%	65	49%	49	36%	12	9%
Small [114]	0	0%	51	45%	51	45%	12	10%
Medium [53]	0	0%	15	28%	17	32%	21	40%
Total [301]	8	3%	131	44%	117	38%	45	15%

Table 5 indicates that of the 301 units, 44% of them fall in the low adoption group as indicated by the scores 5-10, while 38% shows moderate adoption and 15% fall in the high adoption group. Thus, the extent of DM adoption is found to be low to moderate amongst all the MSMEs considered in this study. Further, an analysis of the MSMEs category-wise reveals that majority (55%) of the Micro enterprises fall in the very low to low adoption category (1-10 score); 90% of the small

enterprises fall in the low (45%) to moderate (45%) category while 40% of the Medium enterprises fall in the high adoption category. This indicates that digital marketing adoption is more profound amongst Medium enterprises. Table 6 reveals that the extent of DM adoption is more amongst service based MSMEs (59% - moderate to high) compared to their counterparts in manufacturing (49% - moderate to high).

**Table 6:** Level of Digital Marketing Adoption in MSMEs Based on Nature of Industry

Nature of Industry	1-4	%	5-10	%	11-15	%	16-20	%
Manufacturing [154]	5	3%	69	48%	64	38%	16	11%
Service [147]	3	1%	58	38%	66	45%	20	14%

**Table 7:** Level of Digital Marketing Adoption amongst MSME Based on Industry Sector

Scores Nature of Industry	1-4	%	5-10	%	11-15	%	16-20	%
Handloom & Textiles [79]	5	6%	35	44%	32	41%	7	9%
Food Processing [61]	1	2%	28	46%	25	41%	7	11%
Education [27]	1	4%	8	30%	16	59%	2	7%
Printing [16]	0	0%	7	44%	7	44%	2	12%

Tourism [54]	0	0%	14	26%	24	44%	16	30%
Healthcare [26]	0	0%	8	31%	11	42%	7	27%
Others [38]	1	3%	24	63%	8	21%	5	13%
Total=301	8	3%	124	41%	123	41%	46	15%

A sector-wise analysis (Table 7) indicates that MSMEs in Tourism sector (30%) and healthcare (27%) sector have a higher level of adoption (Scores 16 to 20) compared to Handloom & Textiles (9%), Food Processing (11%), education (7%) and printing (12%). Moderate level of adoption (Scores - 11to15) is seen for MSMEs (59%) in the education sector. Whereas handloom & textiles (44%), food processing (46%) and

printing (44%) businesses show a low level of adoption (Scores- 5to10). The extent of adoption is also seen separately for MSMEs located in rural and urban areas. Tables 8 to 10 shows the distribution of the scores [Very low (below 5), Low (5-10), Moderate (11 - 16) and High (17-20)] amongst urban MSMEs across types, industry and sectors of the extent of adoption.

**Table 8:** Enterprise-wise Digital Marketing Adoption Level in Kamrup (Metro) District

Type of Enterprise	V. Low (1-4)	%	Low (5-10)	%	Moderate (11-15)	%	High (16-20)	%
Micro [77]	3	7%	23	30%	39	52%	12	14%
Small [63]	0	0%	28	44%	27	43%	8	13%
Medium [36]	0	0%	11	31%	8	22%	17	47%
Total =176	3	2%	62	35%	74	43%	37	20%

Table 8 indicates that of the 176 units located in Kamrup Metro, 62% of them fall in the low adoption group as indicated by the scores 5-10, while 43% shows moderate adoption and 20% fall in the high adoption group. Further, an analysis of the MSMEs category-wise reveals that majority (52%) of the Micro enterprises fall in the moderate adoption category (11-15 score); 87% of the small enterprises fall in the low (44%) to moderate (43%) category while 47% of the Medium

enterprises fall in the high adoption category. This indicates that extent of digital marketing adoption is very high amongst Medium enterprises. Table 9 reveals that there is High (Scores - 16 to 20) adoption amongst service based MSMEs (27%) compared to their counterparts in manufacturing (16%). 48% of the manufacturing units have adopted DM moderately while 36% service units fall in the moderate adoption category.

**Table 9:** Level of Digital Marketing Adoption Based on Nature of Industry amongst MSME in Kamrup Metro

Nature of Industry	V. Low (1-4)	%	Low (5-10)	%	Moderate (11-15)	%	High (16-20)	%
Manufacturing [90]	2	2%	31	34%	43	48%	14	16%
Service [86]	1	1%	31	36%	31	36%	23	27%
Total =176	3	2%	62	35%	74	43%	37	20%

**Table 10:** Level of Digital Marketing Adoption amongst MSME in Kamrup Metro Based on Industry Sector

Sector	V. Low (1-4)	%	Low (5-10)	%	Moderate (11-15)	%	High (16-20)	%
Handloom &Textiles [42]	2	5%	16	38%	19	45%	5	12%
Food Processing [37]	1	0%	13	36%	18	53%	5	11%
Education [15]	0	0%	3	20%	11	73%	1	7%
Printing [10]	0	0%	3	30%	5	50%	2	20%
Tourism [30]	0	3%	8	26%	10	32%	12	39%
Healthcare [15]	0	0%	3	37%	5	50%	7	13%
Others [27]	0	0%	16	41%	6	44%	5	15%
Total=176	3	2%	62	35%	74	42%	37	21%

A sector-wise analysis (Table 10) indicates that MSMEs in Tourism sector (39%) have a higher level of adoption (Scores 16 to 20) compared to Handloom & Textiles (12%), Food Processing (11%), education (7%), printing (20%), healthcare (13%) and Others (15%). Moderate level of

adoption (Scores – 11 to15) is seen for MSMEs in Handloom & Textiles (45%), education (73%), Food processing (53%), healthcare (50%) sectors. A table 11 to 13 shows the extent of adoption amongst rural MSMEs across types, industry and sectors.

**Table 11:** Enterprise-wise Digital Marketing Adoption Level in Kamrup Rural District

	<b>V. Low (1-4)</b>	<b>%</b>	<b>Low (5-10)</b>	<b>%</b>	<b>Moderate (11-15)</b>	<b>%</b>	<b>High (16-20)</b>	<b>%</b>
Micro [57]	5	9%	42	61%	10	28%	1	2%
Small [51]	0	0%	23	45%	24	43%	5	10%
Medium [17]	0	0%	4	24%	7	41%	5	35%
Total= 125	5	4%	62	50%	49	39%	9	7%

Table 11 indicates that of the 125 units located in rural Kamrup, 50% of them fall in the low adoption group as indicated by the scores 5-10, while 39% shows moderate adoption and 7% fall in the high adoption group. Further, an analysis of the MSMEs category-wise reveals that majority (61%) of the Micro enterprises fall in the low adoption category (5-10 score); 88% of the small enterprises fall in

the low (45%) to moderate (43%) category while 41% of the Medium enterprises fall in the moderate adoption category. However a high adoption (scores from 16 to) is seen amongst medium enterprises (35%) compared to a micro (2%) and small (10%) enterprises. This indicates that extent of digital marketing adoption is yet to pick up amongst micro and small enterprises.

**Table 12:** Level of Digital Marketing Adoption Based on Nature of Industry amongst MSME in Kamrup Rural District

<b>Industry</b>	<b>V. Low (1-4)</b>	<b>%</b>	<b>Low (5-10)</b>	<b>%</b>	<b>Moderate (11-15)</b>	<b>%</b>	<b>High (16-20)</b>	<b>%</b>
Manufacturing [64]	3	5%	37	58%	20	31%	4	6%
Service [61]	2	3%	25	41%	29	48%	5	8%

**Table 13:** Level of Digital Marketing Adoption Based on Industry Sector amongst MSMEs in Kamrup Rural District

<b>Sector</b>	<b>V. Low (1-4)</b>	<b>%</b>	<b>Low (5-10)</b>	<b>%</b>	<b>Moderate (11-15)</b>	<b>%</b>	<b>High (16-20)</b>	<b>%</b>
Handloom & Textiles [37]	3	8%	19	51%	13	35%	2	6%
Food Processing [24]	0	0%	15	63%	7	29%	2	8%
Education [12]	1	8%	5	42%	5	42%	1	8%
Printing [6]	0	0%	4	67%	2	33%	0	0%
Tourism [24]	0	0%	6	25%	14	58%	4	17%
Healthcare [11]	0	0%	5	45%	6	55%	0	0%
Others [11]	1	9%	8	73%	2	18%	0	0%
Total = 125	5	4%	62	50%	49	39%	9	7%

Table 12 reveals that adoption amongst service based MSMEs (56% has scores ranging from moderate to high) is higher than their counterparts in manufacturing (37% has scores ranging from moderate to high). This implies that manufacturing units have been slow in the adoption of digital marketing tools. A sector-wise analysis (Table 13) indicates that MSMEs in Tourism sector (17%) sector have a high level of adoption (Scores 16 to 20) compared to Handloom & Textiles (6%), Food

Processing (8%), education (8%). Moderate to high level of adoption Scores (11 and above) reveal that the Tourism sector leads (75% of enterprises) followed by healthcare (55% of enterprises), Education (50%), Handloom & Textiles (41%), Food Processing (37%), Printing (33%) and other sectors (18%). Overall, only 46% of the rural MSMEs have shown moderate to high level of adoption. A summary of the findings is given in Table 14.



**Table 14:** Summary of Level of Digital Marketing Adoption in Kamrup Metro and Kamrup Rural

District	Category	Sub-Category	Extent of Digital Marketing Adoption
Kamrup Metro	MSME Type	Micro	Moderate
		Small	Low to Moderate
		Medium	High
	Industry-wise	Manufacturing	Moderate to High
		Service	Moderate to High
	Sector-wise	Handloom & Textiles	Moderate
		Food Processing	Moderate
		Education	Moderate
		Printing	Low to Moderate
		Tourism	Moderate to High
Kamrup Rural	MSME Type	Micro	Low
		Small	Low to moderate
		Medium	Moderate to High
	Industry-wise	Manufacturing	Low
		Service	Moderate
	Sector-wise	Handloom & Textiles	Low to Moderate
		Food Processing	Low
		Education	Low to Moderate
		Printing	Low
		Tourism	Moderate to High
		Healthcare	Low to Moderate
		Others	Low

As evident from Table 14, Digital Marketing adoption in urban Kamrup and rural Kamrup district is similar for small businesses belonging to Tourism sector. Level of adoption is more for service businesses in Rural Kamrup as compared to service businesses in urban Kamrup. If we compare based on the type of enterprise, the highest level of digital marketing adoption is seen amongst Medium enterprise of urban Kamrup.

#### **Challenges Faced in Adoption of Digital Marketing by MSMEs**

An attempt has been made to understand the challenges faced by MSMEs in adopting digital marketing. It is understood that innovation diffusion takes time. This is true in the case of digital marketing too. And especially so when it comes to small businesses, where resources are scarce. Thirty MSME managers/ owners were interviewed to find out about the challenges faced. The analysis of the interviews revealed that digital marketing has not taken off due to a number of

challenges. Lack of management support was noted to be a challenge for some SMEs. Despite the digital marketing advantages, marketing and IT managers mostly claimed that the top management does not usually give priority to digital marketing. A few responses are indicated below.

“One of the important things that stop us from utilizing digital marketing is the lack of proper knowledge as well as the understanding of the associated digital marketing channels”.

“We have consulted with the top management regarding the digital marketing as our competitors are taking advantage of it, but our management is reluctant to shift from traditional marketing to Digital marketing” (manager of textile unit)

“A few years back, we spent a huge amount of money in order to achieve higher customer reach; however, these are false earnings” (owner of food processing unit).

“We are aware about the benefits of digital marketing, but the financial and budget constraints are hindering us from adopting digital marketing”. Based on the responses from the interviews, the challenges faced by the MSME managers/owners are listed below.

- Lack of support from top management
- Lack of Skilled Workforce
- Lack of sufficient awareness
- Lack of Financial resources
- Lack of adequate technical resources
- Lack of Trust/ Security concerns
- Incompatible with the business model

## Discussion

Our study assessed the digital marketing adoption level among MSMEs in the Kamrup district of Assam. While a larger number of respondents own informative websites, they hardly utilize digital marketing in their business activities (Table 3). Majority of the MSMEs (44%) are in the low adoption group, while 38% shows moderate adoption and a small number of units fall in the high adoption group (Table 5). Thus, the extent of DM adoption is found to be low to moderate amongst all the MSMEs considered (Table 14). The study also indicates that MSMEs in Assam have not widely embraced digital marketing particularly the micro enterprises located in rural region, with their usage primarily restricted to email marketing and social media marketing and websites (Tables 3 and 14). Challenges such as a lack of proper training and knowledge, concerns about security, and unfamiliarity with legal practices were identified as significant hurdles to digital marketing adoption among MSMEs in Assam. However, the respondents admitted the potential advantages of adopting digital marketing in their organizations. They felt that digital marketing could help minimize costs, save time, expand their market and market share, and facilitate the quick launch of new products. A few of the study's findings are consistent with related research conducted in other markets. For example, difficulties like financial limitations are common in nations like the UK, Malaysia, Italy, and the United States (25-28). Furthermore, there are factors unique to a given region (29, 30). Growing economies are more likely to experience problems like security and dependability issues (31, 32). The study findings can throw light on the status of adoption amongst the MSME units and the popular

tools of digital marketing. This information can aid units to assess their status and find the gap between them and other units in their business sector as far as adoption of digital marketing tools is concerned. The Government of India has created platforms for MSMEs to come on board. Various schemes and measures have been undertaken to support MSMEs to take advantage of technology in this digital age. Our study findings can give insight to the challenges faced by MSMEs to adopt digital marketing tools. Based on the findings of this research the government agencies and concerned departments can plan future interventions to enable these units to understand and implement their digital marketing strategies.

## Conclusion

While this research provides insights into the digital marketing adoption level among MSMEs in two major districts of Assam, however the sample size was restricted to 301 MSMEs only. This may limit the generalizability of the findings to a broader population. Future research can be carried out to aim for a larger and more diverse sample covering other states of the Northeast region of India. Moreover, the study utilized a cross-sectional design, capturing data at a single point in time. This design limits the ability to establish causal relationships or observe changes in digital marketing adoption over time. Future research could employ longitudinal designs to assess the dynamics of digital marketing adoption and its impact on MSMEs performance. This research study focused primarily on email marketing and social media marketing as indicators of digital marketing adoption. However, there are other advanced tools such as search engine optimization, content marketing, and mobile advertising that were not extensively explored. Including a broader range of digital marketing tools would provide a more comprehensive understanding of MSMEs' digital marketing practices. To ensure successful adoption of digital marketing, MSMEs need to proactively include digital marketing in their business plans by allocating adequate budgets and investing in technologies that make it possible for its implementation. Addressing challenges related to training, security, and legal compliance is pivotal for MSMEs to overcome barriers and embrace digital marketing applications effectively and efficiently. The enterprises felt that digital marketing could help minimize costs, save time,

expand their market and market share, and facilitate the quick launch of new products. Although the government has come out with various schemes for upgrading the MSME sector, yet intervention from the government is still felt necessary for creating awareness and skill upgradation for technology use especially amongst the micro and small enterprises.

### Abbreviations

DM: Digital marketing, MSME: Micro, small and medium enterprises, SME: Small and medium-sized enterprises.

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### Author Contributions

Ms. A Barman and Dr. M Mahanta contributed equally to the conceptualization, methodology, data analysis and writing of the article.

### Conflict of Interest

The author declares no potential conflicts of interest with respect to authorship and/or publication of this article.

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### References

1. Yaseen H, Alhusban M, Alhosban A, Dingley K. Making sense of e-commerce customers awareness in a developing country context: A framework for evaluation. *The Electronic Journal of Information Systems Evaluation*. 2017; 20(2): 102–115.
2. Mohan M, Ali S. Challenges faced by Indian MSMEs in adoption of internet marketing and e-commerce. *Academy of Marketing Studies Journal*. 2019; 23(1): 1–9.
3. Taiminen HM, Karjaluo H. The usage of digital marketing channels in SMEs. *Journal of Small Business and Enterprise Development*. 2015; 22(4): 633–651.
4. Mohan V, Ali S. Assessment of the implications of GST (Goods and Services Tax) rollout on Indian MSMEs. *Theoretical Economics Letters*. 2018; 8(15): 3567–3580.
5. Ritz W, Wolf M, Mcquitty S. Digital marketing adoption and success for small businesses The application of the do-it-yourself and technology acceptance models. *Journal of Research in Interactive Marketing*. 2019; 13(2): 179–203.
6. Taiminen HM, Karjaluo H. The usage of digital marketing channels in SMEs. *Journal of Small Business and Enterprise Development*. 2015; 22(4): 633–651.
7. Dehkordi GJ, Rezvani S, Rahman MS, Fouladivanda F, Nahid N, Jouya SF. A conceptual study on e-marketing and its operation on firm's promotion and understanding customer's response. *International Journal of Business and Management*. 2012; 7(9): 114–124.
8. Low GS. Correlates of integrated marketing communications. *Journal of Advertising Research*. 2000; 40(3): 27–39.
9. Kaushik R. Digital marketing in Indian context. *International Journal of Computational Engineering and Management*. 2016; 19(2): 12–17.
10. Sunday CE, Vera CE. Examining information and communication technology (ICT) adoption in SMEs. *Journal of Enterprise Information Management*. 2018; 31(2): 338–356.
11. Omar A, Ramayah T, Lin LB, Mohamad O, Marimuthu M. Determining factors of the usage of web-based marketing applications by Small and Medium Enterprises (SMEs) in Malaysia. *Journal of Marketing Development and Competitiveness*. 2011; 5(2): 70–86.
12. Kaur P, Pathak A. E-marketing-a global perspective. *International Journal of Engineering Research and Applications*. 2015; 5(2): 116–24.
13. Kaplan AM, Haenlein M. Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*. 2010; 53(1): 59–68.
14. Ya-Ping H. E-marketing development in virtual market-space: A strategic perspective. *Asian Journal of Business Management*. 2012; 4(4): 359–66.
15. Kaushik R. Digital Marketing in Indian Context. *International journal of computational engineering and management*. 2016; 19: 2230–7893.
16. Chauhan S, Gupta P, Jaiswal M. Factors inhibiting the internet adoption by base of the pyramid in India. *Digital Policy, Regulation and Governance*. 2018. <https://doi.org/10.1108/DPRG-01-2018-0001>
17. Al-Adwan AS, Yaseen H. Digital Marketing Adoption among SMEs in Jordan: A Mixed-Method Approach. *Journal of Theoretical and Applied Information Technology*. 2019; 97: 1401–1412.
18. Thaha AR, Maulina E, Muftiadi A, Alexendri MB. Digital Marketing and SMEs: A Systematic Mapping Study. *Library Philosophy and Practice (e-journal)*. 2021; 5113.1–19.
19. Aydın MS, Şenkayas H. Investigation of Factors Affecting Digital Marketing Adaptation of Small Enterprises: An Application in Aydın Province. 2021. *Research and Reviews in Social, Human and Administrative Sciences*. Volume 1. Gece Publishing
20. Parekh B. <https://www.indiaglobalbusiness.com/industry/advertising/msmes-adopting-digital-marketing-are-helping-india-recover-faster>
21. Andika A, Jennifer J, Huang JC, Sebastian JC. Analysis of Digital Marketing Adoption in Indonesian Micro, Small, and Medium Enterprises. *Jurnal Manajemen Bisnis*. 2021; 18: 308–328.
22. Olazo D. Measuring the level of Digital Marketing Capabilities, Digital Marketing Strategies and Challenges and Issues of SMEs in adopting Digital Marketing. *Journal of Marketing Advances and Practice*. 2022; 4(1): 79–96.

23. Zuhri IA, Sinulingga S, Iskandarini. International Journal of Research and Review. 2021; 8(9): 488-496.
24. Kline RB. Principles and practice of structural equation modeling. 2015. 4th ed. Guilford Press.
25. Harindranath G, Dyerson RB. ICT adoption and use in UK SMEs: A failure of initiatives? Electronic Journal of Information Systems Evaluation. 2008; 11(2): 91-6.
26. Tan KS, Chong SC, Lin B, Eze UC. Internet-based ICT adoption: Evidence from Malaysian SMEs. Industrial Management & Data Systems. 2009; 109(2):224-244.
27. Lucchetti R, Sterlacchini A. The adoption of ICT among SMEs: Evidence from an Italian survey. Small Business Economics. 2004; 23(2): 151-168.
28. Beatty RC, Shim J, Jones MC. Factors influencing corporate website adoption: A time-based assessment. Information and Management. 2001; 38(6): 337-354.
29. Arendt L. Barriers to ICT adoption in SMEs: how to bridge the digital divide? Journal of Systems and Information Technology. 2008; 10(2): 93-108.
30. Rouibah K, Khalil OEM, Hassanien AE. Emerging markets and e-Commerce in developing economies. 2009. DOI: 10.4018/978-1-60566-100-1
31. Aljifri HA, Pons A, Collins D. Global e-commerce: A framework for understanding and overcoming the trust barrier. Information Management and Computer Security. 2003; 11(3): 130-138.
32. Osorio-Gallego CA, Londoño-Metaute JH, López-Zapata E. Analysis of factors that influence the ICT adoption by SMEs in Colombia. Intangible Capital. 2016; 12(2): 666-698.