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FACTORS INFLUENCING TECHNICAL COMPETENCIES IN DIGITAL MARKETING OF MSMEs IN WHOLESALE AND RETAIL SECTORS: THE MEDIATING ROLE OF CORE COMPETENCIES

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Abstract. While technology is essential for the survival of micro, small, and medium-sized businesses (MSMEs), their ability to use digital marketing effectively, especially in the wholesale and retail sectors, remains unclear. The study aims to investigate the current state of digital marketing capabilities and the influence of behavioral competencies on technical competencies through the core competencies in digital marketing. The research approach included surveying a sample size of 400 MSMEs in the wholesale and retail sectors. The collected data was analysed using a combination of descriptive statistics and structural equation modelling approaches. This study highlights the crucial role of core competencies in digital marketing. It suggests that strong behavioral skills positively influence technical skills by first impacting core competencies. The findings of this research show that improving behavioral and core competencies has a substantial and positive impact on the technical competencies in digital marketing. Including, the primary goal of developing digital marketing abilities should be to hone behavioral and core competencies since they will contribute to a demonstrable enhancement in the technical competencies of digital marketing.

1. Introduction

The way to transform marketing is to create new organizational structures to succeed in the digital domain. This requires firms to rethink their marketing strategies and hire new professional profiles (Di Gregorio et al., 2019). Micro and small and medium enterprises (MSMEs) have a significant opportunity to grow through digital marketing in the age of the fourth industrial revolution (Sudarmiatin & Hidayati, 2023). Digital marketing encompasses a variety of methods that include the use of digital communication channels like as websites, search engine marketing, digital advertising, social media, e-mails, and mobile to acquire, retain, and establish connections with consumers (Setkute & Dibb, 2022). Digital marketing is a comprehensive method that combines the management of digital customer data with digital channels such as websites, email, and wireless media. It also combines the internet with tra-

ditional media to efficiently supply and acquire services for clients. (Sudarmiatin & Hidayati, 2023).

The widespread use of the internet and the rapid growth of technology have fundamentally altered how businesses operate in the contemporary digital era. MSMEs in a variety of sectors are quickly understanding the advantages of digital marketing approaches in increasing their competitiveness and expanding their customer base (Redjeki & Affandi, 2021). The MSME sector is critical to the economy because it allows entrepreneurs to start and build new businesses that generate income and jobs. The internet has the ability to alter SME marketing in a variety of ways, including customization, customer relationship management, access to new markets, business-to-business cooperation, product co-creation with customers, and increased internal operational efficiency (Olazo, 2022). Almost every firm now uses digital marketing. Every year, thousands of new enterprises with innovative ideas try to

break into the corporate sector. A lack of a comprehensive digital marketing strategy is one of the major causes of business failure (Patil et al., 2022).

The advent of social media is undoubtedly a very positive opportunity for SMEs, particularly because it does not require large resources to leverage social media and the numerous benefits that can be gained if you use it effectively. The adoption of new technologies is easier to accomplish, to increase the success of the MSMEs sector since it does not have a cumbersome and convoluted framework (Redjeki & Affandi, 2021). MSMEs are acknowledged as a key sector for economic growth in Thailand (Ruangchoengchum, 2017). Thailand's GDP (Gross Domestic Product) was 16,178,719 million baht in 2021. Micro and small and medium enterprises GDP was 5,603,443-million-baht, accounting for 34.6% of overall GDP. The number of MSMEs classified by business sectors revealed that the wholesale and retail trade sector is the largest, accounting for 40.97 percent of all SMEs in the country, followed by the service sector, and the manufacturing sector (The Office of SMEs Promotion, 2021). MSMEs mostly encounter challenges in adopting digital marketing strategies, including limited resources, lack of expertise, and resistance to change. An empirical study is necessary to explore these obstacles and identify strategies to overcome them (Egala et al., 2024). It examines these problems to offer significant insights into the impediments encountered by SMEs in adopting digital technology. This research seeks to elucidate the challenges encountered by wholesale and retail entrepreneurs in incorporating digital marketing into their business models and provides tips to aid this transition.

The Thai government encourages individuals to learn and sell online as internet trade becomes more popular globally and locally. This includes established training programs for entrepreneurs, such as the Business Transformation to Digital Economy Project and the MSMEs GO Online Project, aimed at developing people's online and ICT capabilities. Furthermore, the training helps MSMEs build the business skills they need to succeed in today's world (Wongkhamdi et al., 2020). Focusing on digital marketing strategies is necessary for Thai MSMEs. To reflect the interconnectedness of digital media and consumer, the new marketing paradigm must be modified as a result (Boonmalert et al., 2021). However, Thai MSMEs frequently confront several challenges. The key issues include a lack of entrepreneurship and business experience, high competitiveness, ineffectiveness, and low efficiency in innovation, poor management, and a shortage of trained labor (Amornpinyo, 2018). Entrepreneurs, particularly low-tech ones, have suffered the most from significant revenue losses and movement restrictions, and they also have the least access to government assistance (Sastararuji et al., 2022).

Wholesale and retail trade sector, which involves direct interaction with end consumers, can benefit greatly from online marketplaces and e-commerce. The advent of online marketplaces, social media platforms, and e-commerce websites has presented both opportunities and challenges.

Retail MSMEs may gain traction influencing client demand and integrate e-commerce into their business models by implementing a market-driving strategy, all of which are made feasible by the market-driving approach (Aziz, 2022). Thus, understanding how wholesale and retail entrepreneurs perceive their need for digital marketing can shed light on their willingness to invest in digital strategies, their perceived benefits, and the barriers they encounter. One fundamental aspect of understanding digital marketing in MSMEs is measuring the level of capacities and identifying the specific aspects that influence their digital marketing competencies.

A systematic framework for establishing and assessing digital marketing capabilities in MSMEs is lacking. In the absence of such frameworks, evaluating and cultivating the requisite talents becomes difficult. This research aims to define and standardize the behavioral and technical abilities in digital marketing that impact MSMEs' success, thereby providing a systematic framework for competence development. The marketing competency development of MSMEs should be thoroughly standardized so that it may be utilized as a tool to develop personnel more efficiently. Consequently, the purpose of this paper include:

- To investigate the level of digital marketing capabilities of MSMEs in Wholesale and retail sector and
- To investigate the behavioral competencies in digital marketing that influence technical competencies in digital marketing through core competencies in digital marketing.

The scope of the study encompasses the wholesale and retail sectors in Pathum Thani province, which comprised 21,931 entrepreneurs in 2020 and 22,270 entrepreneurs in 2021 (The Office of SMEs Promotion, 2021). It is clear that the number of business operators in the wholesale and retail is steadily increasing. Even during the COVID-19 crisis, it is regarded as a key business sector for the global and current economies. There are numerous opportunities to improve competitiveness and efficiency in this business sector. Research findings will assist entrepreneurs in identifying competency gaps that require improvement in developing successful digital marketing strategies. Furthermore, it can assist the Thai government in distributing policies for various training programs designed for wholesale and retail entrepreneurs.

2. Literature review

2.1. Micro-entrepreneurs, Small and Medium-sized Enterprises (MSMEs)

Thai ministerial guidelines have defined the word "micro, small, and medium-sized enterprises (MSMEs)". They divided the market into three sectors: manufacturing, service, and wholesale and retail. The features of small and medium-sized firms were determined by the number of employees and income. The firms were classified into three sizes: micro, small (medium), and medium (medium) (The Office of SMEs Promotion, 2021).

Wholesale and retail enterprises provide trade-related services. Wholesalers offer new and used items to shops, industrial users, commercial work, organizations, institutions, and even other wholesalers. Retail trade is the selling of new and used commodities to the public for consumption or personal use in the home, without transformation. Being a broker or sales agent for gas stations and consumer cooperatives is a common trade in this area. The business size is calculated as follows (The Office of SMEs Promotion, 2021):

1. A medium-sized company has less than 100 workers and generates less than 300 million baht in revenue.
2. Small size is defined as having less than 30 employees and earning less than 50 million baht.
3. A micro business is defined as having less than 5 workers and earning less than 1.8 million baht.

2.2. Digital marketing

Digital marketing refers to advertising a brand or product using digital media or the internet. The purpose of digital marketing is to reach current and potential customers quickly. The widespread use of technology and the Internet has made digital marketing a top choice for firms (Aziz, 2022). Companies utilize a lot of digital marketing, which demonstrates that it has numerous advantages and benefits. Some of the benefits of digital marketing over traditional forms of marketing include speed of spread, ease of evaluation, wider reach, being cheap and effective, and building a brand name (Aziz, 2022). The proposed digital marketing framework consists of five main dimensions, which can be considered essential competencies includes :marketing strategy, content marketing, search engine optimization (SEO), social media, and email marketing, as recognized by entrepreneurs and industry professionals (Papageorgiou & Marneros, 2023).

There are several sorts of digital marketing, such as web sites, search engine marketing, social media marketing, online advertising, email marketing, and video marketing. A website serves an important function in demonstrating the company's professionalism, assisting customers in learning about your business, effective advertising, and simple business media. While search engine marketing attempts to improve search engine visibility for corporate websites, Search engine marketing is separated into two categories: 1) search engine optimization (SEO) and 2) search engine marketing (SEM). SEO takes longer and is less expensive than SEM, which is paid but faster. Social media marketing circulates platforms on social media, such as Facebook and Twitter, because they are low-cost and even free. Online advertising is distributing online promotion and ads via the internet for a price. This method provides faster and more satisfactory results but comes at a higher cost compared to the previous one. Email marketing provides up-to-date information about promotions, goods, and services. Including video marketing allows businesses to quickly share information about their company, products, and client testimonials. All of these digital marketing techniques, of course, can improve the company's brand (Redjeki & Affandi, 2021).

2.3. Digital marketing competencies in MSMEs

Digital marketing, particularly e-marketing, is transforming company management for micro, small, and medium-sized businesses (MSMEs). Digital talents are defined as qualities that are applied in operating new information and communication technology. E-marketing is a new approach that replaces traditional marketing with electronic methods. Digital transformation has impacted the marketing career path by examining the most in-demand marketing skills and identifying prospects for future marketing professionals (Di Gregorio et al., 2019).

Numerous studies have been conducted on digital marketing competencies of MSMEs. Research by Segarwati et al. (2020) revealed that the digital marketing competency of MSMEs in Indonesia demonstrates that their knowledge, abilities, and understanding are still limited. Strengthening digital marketing skills among MSMEs in Indonesia can lead to increased knowledge, attention to new technologies and media, innovation, and creativity in business operations. MSMEs lack the necessary digital marketing competence to improve business performance. They primarily utilize social media platforms such as Facebook, WhatsApp, and Instagram. Their awareness of digital marketing technologies, such as having a website or collaborating with marketplaces like Go-Food and Grab Food, remains limited. MSMEs express interest, desire, and willingness to adapt to technological changes, particularly in digital marketing. However, there are still challenges to overcome, such as access to information, mindset, and government attention. Di Gregorio et al. (2019) presents a framework for identifying the competencies required of marketing professionals to start and advance their careers based on a content analysis of job advertising and a cross-country poll of marketing professionals.

Behavioral competencies such as digital creativity, critical thinking, communication skills, and digital problem-solving serve as a bridging element that narrows the gap between digital marketing capabilities and the performance of small and medium-sized enterprises (SMEs). The engagement in digital marketing significantly impacts SME business performance, with digital competencies also contributing substantially to enhancing SMEs' outcomes (Umboh & Aryanto, 2023).

Core marketing competencies primarily pertain to orchestrating marketing activities rather than specific marketing knowledge, which is often assumed. These abilities encompass imaginative thinking for crafting content suitable for various customer touchpoints, adept planning and time allocation, as well as precision and meticulousness. Notably, within this skill set, there's a notable emphasis on soft skills over theoretical knowledge in marketing management (Di Gregorio et al., 2019)

Royle and Laing (2014) described the "Digital Marketer Model," which advocates for a comprehensive strategic approach. This strategy emphasizes the need of having both strategic business acumen in digital marketing and specific technical abilities. These technical skills include knowledge of technology (such as SEO, mobile applications, 3D animation, and video editing), measurement, monitoring, and evaluation abilities. Kovács (2021) also suggested the importance of certain digital and technical skills in the field of digital marketing, with a focus on social media and mobile, SEO and SEM, knowledge of e-commerce, and the Internet and software.

Erro-Garcés and Hernández Palaceto (2021) discuss how technical competencies, which refer to specific skills and knowledge related to technology and digital tools, need to be complemented with core competencies. Core competencies include interpersonal skills, which involve effective communication and collaboration with others, and functional skills, which are specific skills related to a particular job or task. Although digital skills are useful for succeeding in the virtual world, they are insufficient. Technical competencies should be supplemented by core competences such as interpersonal and functional skills. Core competencies, when combined with technical skills, contribute to overall success in the virtual world and in the context of digital transformation. Therefore, the details of digital marketing competencies in each area is summarized as shown in Table 1.

Overall, the literature review demonstrated that MSMEs must address gaps in their behavioral and core competencies to fully unlock their potential in technical skills. Therefore, we developed a conceptual framework to connect the three types of competencies by investigating how behavioral competencies affect the growth of core competencies, which in turn gives MSMEs the power to use technical skills. The focus on the requirement of MSMEs for development in these competencies emphasizes the need of an integrated approach in which technical implementation and strategy creation benefit from soft skills. This all-encompassing perspective fits the goal of the research, which is to examine, as shown in Figure 1, the interplay of
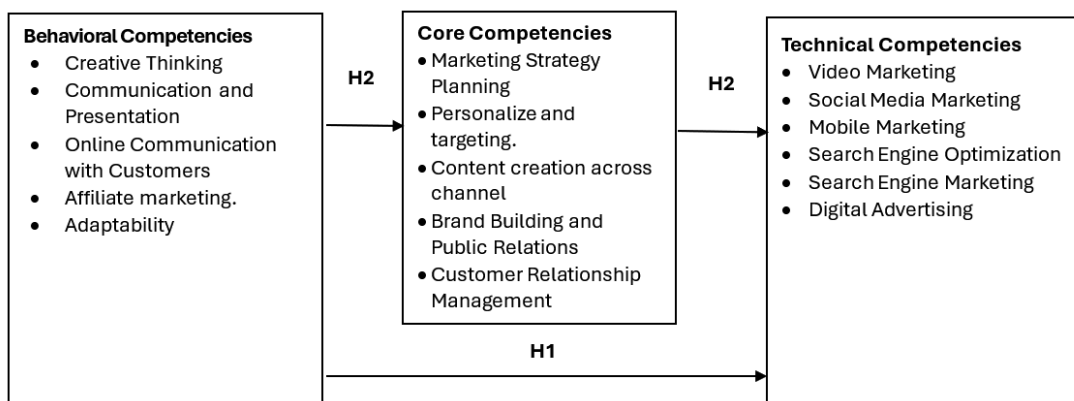
Table 1. Summarize the details of digital marketing competencies in each area

Digital Marketing Competencies	Digital Marketing Areas	Researcher
Creative Thinking	Behavioral Competencies	Royle and Laing (2014), Umboh and Aryanto (2023)
Communication and Presentation		
Online Communication with Customers		
Affiliate marketing		
Adaptability		
Marketing Strategy Planning	Core Competencies	Di Gregorio et al. (2019); Kovács (2021)
Personalize and targeting		
Content creation across channel		
Brand Building and Public Relations		
Customer Relationship Management		
Video Marketing	Technical Competencies	Di Gregorio et al. (2019); Kovács (2021); Redjeki and Affandi (2021); Royle and Laing (2014)
Social Media Marketing		
Mobile Marketing		
Search Engine Optimization		
Search Engine Marketing		
Digital Advertising		

behavioral, core, and technological competencies in digital marketing for MSMEs.

3. Methodology

This study used the quantitative method of research. This method was utilized to investigate the digital marketing capabilities, especially in terms of behavioral competencies, core competencies, and technical competencies in digital marketing. Moreover, we studied how behavioral competencies in digital marketing influence technical competencies in digital marketing through core competencies in digital marketing. The conceptual framework for the research is set as Figure 1.

Behavioral Competencies
- Creative Thinking
- Communication and Presentation
- Online Communication with Customers
- Affiliate marketing.
- Adaptability

H2

Core Competencies
- Marketing Strategy Planning
- Personalize and targeting.
- Content creation across channel
- Brand Building and Public Relations
- Customer Relationship Management

H2

Technical Competencies
- Video Marketing
- Social Media Marketing
- Mobile Marketing
- Search Engine Optimization
- Search Engine Marketing
- Digital Advertising

H1

Figure 1. Conceptual framework

4. Relationship between behavioral and technical competencies in digital marketing

Olazo (2023) investigated the relationship between marketing capabilities and marketing innovation toward the sustainable competitive advantage of small and medium enterprises in the Philippines. The result shows that unique marketing techniques increase revenue and decrease outlays. Marketing competency influences sustainable competitive advantage. Micro, small, and medium-sized enterprises (MSMEs) possess sufficient personnel capable of executing marketing innovation initiatives and adopting new technologies, such as information technology. Additionally, it was discovered that marketing innovation strongly correlates with the achievement of sustainable competitive advantage. MSMEs demonstrate this innovation through various means, such as product development, pricing strategies, distribution channels, and promotional activities, which can establish a unique market position leading to sustained competitive advantage. Apasrawirote et al. (2022) promoted digital marketing skills as a vital measure of firm performance. The suggested sections of the digital marketing capabilities framework aim to provide new research opportunities for both the marketing and IT strands. Statistics reveal that digital marketing capabilities have a substantial influence on SMEs' business success; hence, the author called for the employment of a resource-based approach to bridge the gap between digital marketing capacity and SMEs' business performance.

In the context of digital marketing, behavioral competencies play a crucial role in influencing both technical competencies related to digital tools and platforms, as well as core competencies essential for success in the field. Here's how behavioral competencies can impact technical and core competencies in digital marketing. Behavioral competencies shape the development and application of technical competencies in digital marketing tools and platforms, while also influencing core competencies essential for success in the field, such as communication, adaptability, leadership, and innovation. By cultivating a diverse set of behavioral competencies, digital marketers can enhance their effectiveness in navigating the complexities of the digital landscape and achieving their professional goals. Therefore, hypotheses were set as follows:

H1: Behavioral competencies in digital marketing influences technical competencies in digital marketing.

H2: Behavioral competencies in digital marketing influences technical competencies in digital marketing through core competencies in digital marketing.

The sample group that responds to the questionnaire consist of employees in digital marketing, managers in their junior or middle level, or owners of MSMEs in wholesale and retail sectors in Phum Thani City, Thailand. Given that the precise population size is unknown, the Cochran method was used to estimate the sample size to be 400 individuals. With an error value of ±5%, the calculating

algorithm makes use of 95% confidence intervals (Cronbach & Furby, 1970).

Based on research of literature, the questionnaire consists of two major sections: the first portion collects demographic data on the respondents and the second part gathers data on the digital marketing capabilities. The second section rates their degree of digital marketing skills on a five-point Likert scale. Digital marketing capacity was assessed using a five-point Likert scale as, as advised by Joshi et al. (2015), it strikes a mix between responder ease and granularity. This scale allows for a nuanced understanding of respondents' attitudes while avoiding respondent fatigue associated with more granular scales. Moreover, this format is widely used in similar studies on marketing and digital competencies, ensuring comparability with prior research (Sharabati et al., 2024).

Convenience Sampling method was used to collect data from the sample group. Both online and in-person techniques were used to obtain the data for the questionnaire. To address potential biases inherent in the convenience sampling method, efforts were made to mitigate sample bias by ensuring diversity in the sources. Participants from a wide range of wholesale and retail stores all across Pathum Thani province helped accomplish this. Many organizational environments were collected to respond to increase the generalizability of the results, even if convenience sampling has certain limits. Using several sources in convenience sampling can help to lower bias and increase the validity of findings, as advised by Bornstein et al. (2013).

The following statistical processing of the data is necessary for quantitative data analysis in order to obtain the desired results of the questionnaire: (1) Frequency distribution, which will be employed to characterize MSMEs' attributes. Furthermore, frequency distributions are descriptive statistics that offer summarized and instructive data sets. (2) Mean rating and standard deviation; the average answers to the different options provided in the survey questionnaire will be determined by using the mean rating. Conversely, the standard deviation quantifies the dataset's dispersion in relation to its mean value. The difference between the estimated mean and the actual mean is measured using the standard deviation. A low standard deviation suggests that values are grouped around the mean, while a large standard deviation shows that values are regularly far from the mean, claims (Bhandari et al., 2019). Structural equation modeling helps one to ascertain both direct and indirect impacts of the variable.

Structural Equation Modeling (SEM) was used in data analysis to investigate both direct and indirect correlations among variables. SEM is widely recognized for its ability to simultaneously estimate structural models and measurements, thereby facilitating the assessment of intricate interactions (Hair, 2009). The selection of this method stemmed from its ability to scrutinize multiple interactions within a theoretical framework and its robustness in handling hidden variables. Methodical techniques helped to solve certain biases in SEM analysis, including

typical procedure bias and measurement error. To lower response bias, for example, procedural remedies such as maintaining anonymity, lowering uncertainty in questionnaire questions, and randomizing question order were followed (Podsakoff et al., 2003).

5. Results

A panel of three specialists in marketing research and digital marketing reviewed the questionnaire's substance and face validity. These experts examined the survey questions to ensure they were relevant, clear, and in line with the study's aims. The procedure is consistent with Polit and Beck (2006) guidelines, which highlight that expert evaluation is an important stage in proving validity for newly created instruments. Based on their suggestions, revisions were made to enhance the items' clarity and appropriateness. For example, specific items were awarded to ensure that they were readily understood by MSME participants, demonstrating optimal survey creation standards.

A Cronbach alpha coefficient value above 0.90 is indicative of a highly reliable measure, as supported by Nunnally and Bernstein (1994). Table 2 below shows the result of the Cronbach Alpha Coefficient.

Table 2. Shows the result of Cronbach Alpha coefficient

Digital Marketing Capabilities	Alpha Coefficient	Alpha Coefficient of Items
Behavioral Competencies	0.95	
Core Competencies	0.91	0.97
Technical Competencies	0.96	

Descriptive results shown in Table 3 show the characterization of MSMEs in wholesale and retail (n = 400).

Table 3 shows the characteristics of MSMEs in the wholesale and retail sectors in Thailand. The majority of MSMEs (38.8%) have less than 25 employees. Almost 30% of MSMEs have an income between 1 million and 5 million baht, while another 30% have an income between 5 million and 10 million baht. Over 40% of MSMEs have been operating for 1 to 5 years, while 20% have been operating for less than a year. Most MSMEs (71.3%) are at the operational level, meaning they are actively engaged in business activities. Overall, the data suggests that MSMEs in the wholesale and retail sectors in Thailand are typically small businesses with a relatively short operational life.

Table 4 summarizes the level of digital marketing capabilities of MSMEs in the wholesale and retail sectors. It categorizes these capabilities into three groups: behavioral competencies (BC), core competencies (CC), and technical competencies (TC). Overall, the digital marketing capabilities of SMEs in these sectors are moderate, with an average score of 3.39.

The details of each competency group in digital marketing revealed that behavioral competencies (BC) in digital marketing, have an average score of 3.36, which is also considered moderate. While the core competencies (CC)

Table 3. MSMEs characteristics in wholesale and retail sectors

MSMEs Characteristics	Frequency	Percentage
Number of Employment (person)		
less than 25 people	155	38.8
25–50 people	84	21
51–100 people	96	24
>100 but not more than 200 people	65	16.3
Income (baht)		
<=1,000,000 baht	80	20
1,000,000–5,000,000 baht	119	29.8
5,000,001–10,000,000 baht	119	29.8
> 10,000,000 and <= 500 million	82	20.5
Business Operation period (year)		
less than 1 year	38	9.5
1–5 years	161	40.3
6–10 years	121	30.3
>10 years	80	20
Operational level		
Marketing staff	285	71.3
Junior management	75	18.8
Middle management/Owner	40	10

in digital marketing have an average score of 3.42, which is considered high. The technical competencies (TC) have an average score of 3.33, which is considered moderate. In addition, the highest score of digital marketing competencies in all areas is the online communication with customers competency, which has the highest score at 3.55, followed by the ability of affiliate marketing, which has a high score at 3.50, and the ability to identify customer targets and personalize, and mobile marketing competency has the same high score at 3.47, respectively.

The detail of the level of behavior competencies revealed that the online communication competency has the highest score (3.55). The affiliate marketing competency, with a score of 3.50, is another high score, follow by the communication and presentation competency also has a high score (3.46) for the behavioral competencies in digital marketing of MSMEs in the wholesale and retail sectors. While the creative thinking competency has the lowest score (3.36) within the BC group.

The personalizing and targeting competency have the highest score (3.47) within the core competencies group. The brand building and public relations competency also has a high score (3.46). With a score of 3.42, the Customer Relationship Management competency is another high-scoring area for MSMEs. While the Marketing Strategy Planning competency has the lowest score (2.95) within the CC group.

The Mobile marketing competency has the highest score (3.47) within the TC group. Social Media Marketing and Video Marketing, these competencies both have a moderate score (3.39 and 3.36, respectively). While the search Engine Optimization has a moderate score (3.30) which is lowest in the TC group.

Table 4. The level of digital marketing capabilities of MSMEs in wholesale and retail sectors

Digital Marketing Capabilities	Mean	S.D.	Results	Rank (in each side)	Rank (all)
Behavioral Competencies (BC)					
Creative Thinking (BC_CT)	3.36	1.078	Moderate	5	9
Communication and Presentation (BC_CP)	3.46	1.100	High	3	4
Online Communication with Customers (BC_OC)	3.55	.997	High	1	1
Affiliate marketing (BC_AM)	3.50	1.067	High	2	2
Adaptability (BC_AD)	3.45	1.114	High	4	5
Average	*3.46*		*High*		
Core Competencies (CC)					
Marketing Strategy Planning (CC_MSP)	2.95	1.249	Moderate	5	11
Personalize and targeting (CC_PT)	3.47	1.013	High	1	3
Content creation across channel (CC_CC)	3.36	.982	Moderate	4	8
Brand Building and Public Relations (CC_BBPR)	3.46	.985	High	2	4
Customer Relationship Management (CC_CRM)	3.42	.897	High	3	6
Average	*3.33*		*Moderate*		
Technical Competencies (TC)					
Video Marketing (TC_VM)	3.36	1.081	Moderate	3	9
Social Media Marketing (TC_ SMM)	3.39	.959	Moderate	2	7
Mobile Marketing (TC_MM)	3.47	.993	High	1	3
Search Engine Optimization (TC_SEO)	3.30	1.095	Moderate	5	10
Search Engine Marketing (TC_SEM)	3.33	1.125	Moderate	4	10
Digital Advertising (TC_DA)	3.33	1.095	Moderate	4	10
Average	*3.36*		*Moderate*		
Overall	***3.39***		***Moderate***		

6. Confirmatory factor analysis

According to Fornell and Larcker (1981), composite reliability (CR) > 0.7 and average variance extracted (AVE) > 0.5 were deemed appropriate for conducting confirmatory factor analysis (CFA). The factor loading of the measurement items in digital marketing skills was all above 0.5, as Table 5 illustrates.

All the variables' AVE and CR values were above 0.5 and 0.7, respectively, demonstrating strong composite reliability and convergent validity. The CMIN/DF for the CFA model fit test was found to be 2.466 by looking at the fit indices for the variables. GFI = 0.950, AGFI = 0.900, RMSEA = 0.061, NFI = 0.980, RFI = 0.965, and CFI = 0.988 are some of the other indices. These indices were all complaints. Consequently, one may draw the conclusion that this model is suitable for explaining the connections between technical abilities, core competencies, and independent variable behavioral competencies.

7. Hypothesis testing

To test all assumptions, the researcher used the computer applications SPSS for Windows and AMOS (Analysis of Moment Structures). This investigation assessed the factors' direct, indirect, and total effect on technical abilities in digital marketing. The path analysis yielded the results of the direct impacts of behavioral competencies (BC) and

Table 5. Summary of CFA of digital marketing capabilities

Observed Variable	Item	Factor Loading	AVE	CR
Behavioral Competencies	BC_CT	0.899	0.79	0.95
	BC_CP	0.905		
	BC_OC	0.806		
	BC_AM	0.919		
	BC_AD	0.898		
Core Competencies	CC_MSP	0.800	0.69	0.92
	CC_PT	0.849		
	CC_CC	0.860		
	CC_BBPR	0.888		
	CC_CRM	0.741		
Technical Competencies	TC_VM	0.891	0.79	0.96
	TC_SMM	0.914		
	TC_MM	0.901		
	TC_SEO	0.891		
	TC_SEM	0.844		
	TC_DA	0.884		

technical competencies, as well as the indirect effects of BC through core competencies (CC) as a mediating variable on TC. The statistical value shown in Table 6 is used to estimate the outcomes of the model variables or various coefficient estimates, as well as to show the connection between the variables. Standardized regression weight, standard error,

critical ratio, also known as t-value, and p-value are all included in this. Table 6 displays these findings.

Table 6. The results of the estimated correlation coefficients between variables

Path Relationship			Esti-mate	S.E.	C.R.(t-value)	P-value
CC	<---	BC	.778	.045	17.215	***
TC	<---	BC	.572	.058	9.777	***
TC	<---	CC	.435	.067	6.480	***
BC_AM	<---	BC	.947	.031	30.832	***
BC_OC	<---	BC	.797	.031	25.657	***
BC_CP	<---	BC	.977	.032	30.972	***
BC_CT	<---	BC	.950	.031	30.411	***
TC_SEM	<---	TC	1.061	.033	32.087	***
TC_SEO	<---	TC	1.022	.028	36.559	***
TC_MM	<---	TC	.878	.033	26.719	***
TC_SMM	<---	TC	.807	.028	28.579	***
TC_VM	<---	TC	.949	.036	26.569	***
CC_PT	<---	CC	1.023	.059	17.356	***
CC_CC	<---	CC	.971	.057	17.077	***
CC_BBPR	<---	CC	.986	.058	17.084	***
CC_CRM	<---	CC	.813	.052	15.739	***

The measurement model's results showed that the data was actual and consistent, had a good general model fitness, and could be used for route analysis. The path analysis results of a PCLOSE of 0.007 are CMIN/df = 2.775, RMSEA = 0.067, GFI = 0.949, AGFI = 0.901, NFI = 0.977, CFI =.985, and TLI = 0.9, thereby suggesting that the general model is well-fit.

The structural equation analysis and a detailed assessment of the causal route coefficients revealed that no path coefficient could be deemed negligible. This demonstrates that the association between the variables employed in the research was satisfactory to some extent. However, first evaluations of the model's fit indicate that it needs improvement to reach completeness and dependability, as indicated by the model modification results in Figure 2. The data analysis showed statistically significant

connections between all pairs of variables (p < 0.05).

To study intermediate effects using the AMOS tool, two stages were conducted. Step 1 entailed determining the direct relationship between behavioral and technical capabilities in digital marketing factors. Step 2 entailed inserting the mediator (core competencies in digital marketing) into the model and verifying the relevance of the indirect influence via Bootstrapping.

The values of the Beta coefficient (β) in path analysis are revealed by Table 6, which represents a positive effect between behavioral competencies in digital marketing and technical competencies in digital marketing (β = .57) at the 0.001 level of significance. As a result, the behavioral competencies in digital marketing had a positive influence on the technical competencies in digital marketing; therefore, the H1 hypothesis was supported.

For testing, core competencies in digital marketing mediates the relationship between behavioral competencies in digital marketing and technical competencies in digital marketing (H2). The H2 hypothesis represents a positive effect between behavioral competencies in digital marketing and core competencies in digital marketing (β = .78), including core competencies in digital marketing, which had a positive effect on technical competencies in digital marketing (β = .44). The results show that behavioral competencies in digital marketing had a positive influence on technical competencies in digital marketing through core competencies in digital marketing (β = .34). Therefore, the H2 hypothesis was supported, as shown in Table 7.

Table 7. Hypotheses relationship

Hypo-thesis	Model Relationship	β	P	Results
	Main Effect			
H1	Behavioral Competencies (BC) -> Technical competencies (TC)	.57	.000**	Support
	Mediating Effect			
H2	Behavioral Competencies (BC) -> Core Competencies (CC) -> Technical competencies (TC)	.34	.000**	Support

Note: Significance: *p < 0.05, **p < 0.001.
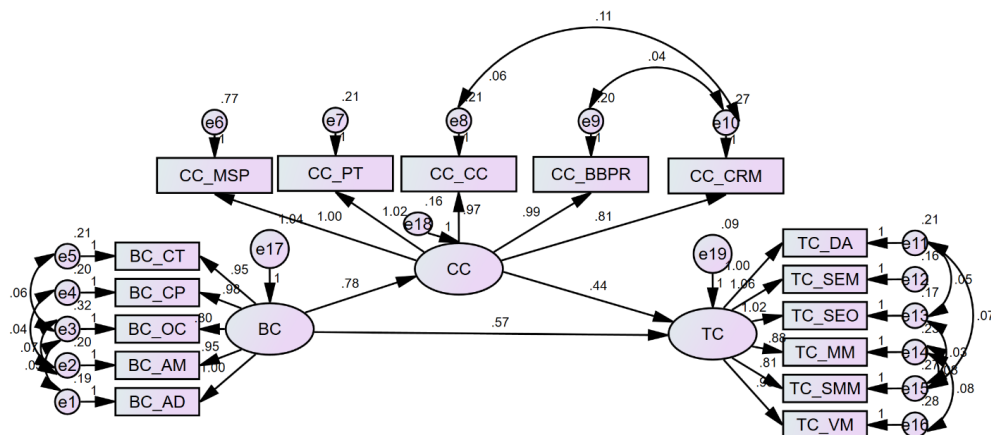
Figure 2. Final model

8. Discussion and contribution

A data analysis of the general characteristics of MSMEs for the wholesale and retail business sectors in Pathum Thani Province, Thailand, revealed that businesses in the wholesale and retail sectors are small business groups with incomes of less than 5,000,000 baht and business operations lasting no more than 5 years. This result is consistent with the results of a survey of data from Office of Small and Medium Enterprise Promotion (2020), which found that the group of small businesses (small) in wholesale and retail businesses in Pathum Thani Province increased from 2021, which had 6,064 businesses rising to 6,331 businesses in 2022. The majority of the enterprises run grocery shops, demonstrating the growth of small wholesale and retail businesses in Pathum Thani area, Thailand, which have expanded in tandem with economic conditions and a growing number of people moving to the area. The survey results highlight the typical features of MSMEs in the wholesale and retail sectors: in general, these enterprises are tiny, employ a limited number of people, and have a low income. Furthermore, there is a distinct tendency for small wholesale and retail enterprises expanding as the local population grows. This surge in small firms can enhance the region's economic efficiency in the future.

This research is being conducted as exploratory research, with the purpose of determining the influence of digital marketing abilities in each of the behavioral, core, and technical competencies. This highlighted the significance of improving the digital marketing capabilities of Thailand's MSMEs, particularly in the wholesale and retail sectors. The overall analysis results revealed that the top three digital marketing skills possessed by entrepreneurs and marketing employees working in wholesale and retail businesses are: 1) online customer communication; 2) affiliate marketing; and 3) mobile marketing and personalization and targeting. The study's findings align with those of Herhausen et al. (2020), Kovács (2021), Papageorgiou and Marneros (2023) who discovered that listening skills and customer service are the most crucial abilities. These are regarded as crucial soft skills that marketers need to possess and use frequently in order to develop their own abilities. Overall, it was discovered that digital marketing personnel and relevant individuals had a good level based on the survey's three digital marketing competencies, which are behavioral, core, and technical.

The findings of this study are in line with those of Erro-Garcés and Hernández Palaceto (2021), which discovered that behavioral competencies in digital marketing positively impacted technical competencies in the field. Specifically, behavioral competencies in digital marketing positively impacted technical competencies in the field through core competencies in the field. As a result, the results of the MSMEs in Wholesale and Retail Digital Marketing Competency Survey provide insight into the state of digital marketing competencies today. The findings may be utilized as a benchmark to push and motivate MSMEs in Thailand to pursue their digital marketing potential in order to forge robust and long-lasting operations through the acquisition of digital marketing capabilities. Government organizations that are pertinent will understand the significance of digital marketing competencies. The importance of specific digital and technical skills in the field of digital marketing, with an emphasis on social media and mobile, SEO and SEM, knowledge of e-commerce, the Internet, and software, which improves their sales performance, has led many MSMEs to concentrate on honing their technical competencies in digital marketing these days (Kovács, 2021; Royle & Laing, 2014). However, the government and private organizations should be aware of the importance of digital marketing competencies, which can support MSMEs in gaining confidence to expand their businesses into other digital marketing areas. This is because the focus should not only be on technical competencies; it should also include MSMEs in the wholesale and retail sectors.

In the field of digital marketing, core competencies are crucial since they deal with planning marketing campaigns rather than specialized expertise, which is sometimes presumed. These skills include creative thinking to create content that is appropriate for different consumer touchpoints, skillful time management and planning, and accuracy and attention to detail (Di Gregorio et al., 2019). Interestingly, soft skills are prioritized over theoretical knowledge in marketing management within this skill set. Therefore, notably, within this skill set, there is a greater focus on soft skills than theoretical knowledge in marketing management. Behavioral competencies such as digital creativity, critical thinking, communication skills, and digital problem-solving help to bridge the gap between digital marketing capabilities and the success of small and medium-sized businesses (SMEs). As a result, the key focus in creating digital marketing skills should be on honing these two competences, as this will contribute to quantifiable advances in technical knowledge in the industry.

The study underlines in theoretical terms the importance of behavioral talents such as creativity, critical thinking, and communication in bridging the gap between technical and fundamental marketing skills. Future theoretical research could explore how the inclusion of artificial intelligence and automation in marketing alters these abilities. Effective communication is crucial for conveying marketing plans and interacting with customers, particularly when using AI tools (Elhajjar, 2024). This study shows the interdependence of behavioral, core, and technical competencies in reaching marketing success, therefore strengthening and extending already existent frameworks.

The research findings show that enhancing MSMEs' core, behavioral, and technical competencies may greatly contribute to their company performance. Governments and private firms can collaborate to deliver skill-building seminars, webinars, and e-learning modules aimed primarily at the wholesale and retail sector (Sharabati et al., 2024). One practical application is to create focused training programs for small business owners and digital marketing employees to develop behavioral (e.g., communication,

creativity), core (e.g., strategic planning, customer personalization), and technical competencies (e.g., social media marketing, SEO, SEM). The government's policies should prioritize digital transformation for MSMEs. This involves offering incentives for the use of digital technology, funding training courses, and building resource centers to raise knowledge of digital marketing strategies.

9. Conclusions

The details of the level of behavioral competencies revealed that the online communication competency has the highest score (3.55) within the behavioral competencies, suggesting that MSMEs are comfortable communicating with customers online. The communication and presentation competency also has a high score (3.46), indicating that SMEs are relatively skilled in this area, and the affiliate marketing competency, with a score of 3.50, is another high score. Also, the adaptability competency has a high score (3.45) for the behavioral competencies in digital marketing of MSMEs in the wholesale and retail sectors.

The personalizing and targeting competency received the highest scores (3.47), and brand building and public relations proficiency received a commendable score (3.46). These scores demonstrated the proficiency of SMEs in identifying the suitable audience and adapting their marketing strategies accordingly. Another high-scoring ability of MSMEs is customer relationship management, with a score of 3.42 indicating their exceptional performance in managing client contacts. Policymakers may maximize these benefits by supporting contemporary CRM tool and analytics system access. These kinds of approaches can help MSMEs boost consumer loyalty and expand their attempts at customizing (Herhausen et al., 2020).

The mobile marketing competency had the highest score (3.47) in the technical competencies category, showing that MSMEs are relatively adept in mobile marketing. Social media marketing and video marketing both receive a modest grade (3.39 and 3.36, respectively). The search engine optimization receives a modest (3.30) score, which is the lowest in the technical competencies category. This result shows that although MSMEs have great general technical capacity, their performance will need improvement by means of better digital marketing competencies. To help MSMEs boost their technological capabilities, they might have access to technical upskilling programs like online courses and boot camps. Government could stress tax advantages or subsidies for MSMEs using digital technologies such social media management systems, SEO software, and video editing tools.

While the marketing strategy planning competency receives the lowest score of 2.95 in the behavioral skills category, suggesting that SMEs could benefit from further development in this area. With a low competency score of 2.95 in marketing strategy planning, training courses focusing on strategic planning in digital marketing are in demand. Structured methods to the development of marketing strategy should be encouraged for MSMEs.

Policymakers should collaborate with private enterprises and educational institutions to offer seminars that teach MSMEs how to do market research, allocate resources, and evaluate campaigns (Papageorgiou & Marneros, 2023).

For testing the effect of behavioral competencies on technical competencies, it was found that there is a significant positive, with a beta coefficient of.57, p <.001, indicating strong support for this relationship. To test the mediating effect, there is a significant positive relationship between behavioral competencies and technical competencies when mediated by core competencies, with a beta coefficient of .34, p <.001, suggesting strong support for this mediated relationship. Therefore, this result shows that behavioral competences are essential in the framework of digital marketing as they affect fundamental abilities necessary for success in the sector as well as technical competencies relevant to digital tools and platforms. Policymakers who can fund mentorship programs meant to foster leadership and creative problem-solving capacity can run public awareness campaigns highlighting the necessity of soft skills in the digital transition.

10. Limitation and future research

Although the government and related organizations will use the findings to develop policies for upskilling and reskilling digital marketing professionals, CEOs, and entrepreneurs in MSMEs, the study did not address how MSMEs compete in international markets. As a result, a future consideration should be to widen the examination of MSMEs' competitive capabilities in foreign marketplaces if they increase their digital marketing capacities and suggest the aspects that impact their competitive capabilities.

This entails considering how well diverse digital tools and platforms interact with global clients. For example, Sharabati et al. (2024) discovered that digital marketing has a significant impact on the performance of SMEs, implying the need for similar strategies for global market penetration and attempting to provide comprehensive frameworks defining the digital marketing capabilities required for MSMEs seeking to enter international markets. This encompasses technical proficiency, strategic planning, and cross-cultural communication. Sutrisno and Susanti (2024) research underlines the need of creative digital business development methods for increasing global competitiveness, noting that MSMEs must adapt to changing market dynamics. Future research should try to provide comprehensive frameworks describing the digital marketing abilities required for MSMEs seeking to reach international markets. This includes technical skills, strategic planning, and cross-cultural communication abilities.

Furthermore, future research should identify the factors that influence MSMEs' competitive capabilities in relation to their digital marketing ability, as well as broaden the scope of the study to analyze their opportunities in foreign markets as their digital marketing capacity improves. This offers the groundwork for understanding how digital

marketing influences SMEs' success and may involve global competencies.

Author contributions

Conceptualization, NB, SW, and NC; methodology, SW, and NB; validation, SI and RS; formal analysis, NC; writing – original draft preparation, SW, NC, and NB; writing – review and editing, SW, and NB; visualization, NC and SI. All authors have read and agreed to the published version of the manuscript.

Disclosure statement

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