Factors influencing the intention to continue using social media in 2–3-star hotels in Hanoi: An application of the Technology-Organization-Environment (TOE) Framework

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Abstract
Based on an overview of previous studies on factors influencing behavioral intentions, this study proposes a research model consisting of eight factors classified into three groups: technological, organizational, and environmental contexts, to examine their impact on the intention to continue using social media communication among 2 to 3-star hotels in Hanoi, Vietnam. The research employed a mixed-method approach, including a qualitative phase for model refinement and a quantitative phase for model validation. Data was collected through a survey of 160 respondents from 2 to 3-star hotel businesses in Hanoi, ensuring statistical validity. The findings reveal that all eight proposed factors have a significant impact on the intention to continue using social media. These factors collectively explain 63.3% of the variance in the intention to continue using social media communication, while the remaining 36.7% is attributed to external factors and random errors. The ranking of the factors' influence from highest to lowest is as follows: compatibility, technological readiness, top management support, legal environment, customer pressure, relative advantage, ease of use, and competitive pressure. This study contributes to the existing literature by addressing a research gap in exploring the continued use of social media in small and medium-sized hotels, an area that has received limited attention. Theoretically, the study expands the application of the Technology-Organization-Environment (TOE) framework in the hospitality sector. Practically, the findings provide valuable implications for hotel managers to formulate appropriate strategies for enhancing social media effectiveness, strengthening customer engagement, and improving long-term business performance.

Keywords: 2 to 3-star hotels, social media application, TOE framework.

1. Introduction
In the era of the Fourth Industrial Revolution, digital transformation has emerged as a critical strategic priority for businesses across a wide range of industries, including the hospitality sector. Among the various digital tools adopted, social media has rapidly gained prominence as a dynamic platform that enables businesses not only to promote products and services but also to foster customer engagement, strengthen relationships, and enhance brand visibility in an increasingly competitive marketplace (Kaplan & Haenlein, 2010; Mangold & Faulds, 2009). Unlike traditional marketing channels, social media facilitates two-way communication, allowing businesses to interact directly with customers, respond to feedback in real-time, and deliver more personalized marketing experiences (Xiang & Gretzel, 2010; Hudson & Thal, 2013). In Vietnam, the potential impact of social media on business operations is particularly significant. With 78.1% of the population actively using social media and average daily usage reaching 2 hours and 38 minutes, digital platforms have

become an essential touchpoint for customer engagement across industries (Statista, 2023). This trend is especially evident within the hospitality industry, where small and medium-sized hotel businesses are increasingly incorporating social media into their marketing, customer relationship management, and service delivery strategies. Existing research has demonstrated that social media provides hotels with valuable opportunities to promote services, engage with guests, manage online reputations, and encourage customer-generated content, such as reviews and recommendations (Leung et al., 2013; Chan & Guillet, 2011). In Hanoi, recent surveys indicate that 100% of 2- to 3-star hotels have adopted social media platforms in some capacity within their business operations. However, despite the widespread use of social media, many hotels face ongoing challenges in maintaining its effective use over time. These challenges include limited financial and human resources, a lack of specialized expertise in social media management, rapidly evolving technological trends, and increasing difficulties in sustaining consistent customer engagement (Abed, 2020; Odoom et al., 2017).

These operational challenges are unfolding against the backdrop of Vietnam's rapidly expanding hospitality industry. Fueled by robust growth in tourism and rising demand from both domestic and international travelers, Vietnam has emerged as one of Southeast Asia's most vibrant hospitality markets. According to the Vietnam National Administration of Tourism (VNAT, 2023), the country currently boasts over 35,000 accommodation establishments, providing approximately 700,000 rooms nationwide. Hotels in Vietnam are classified under a 1- to 5-star rating system based on national standards, with 2- to 3-star hotels accounting for more than 65% of the total classified supply. This segment, dominated by small and medium-sized enterprises (SMEs), plays a pivotal role in delivering affordable accommodation, particularly to domestic tourists and budget-conscious international travelers. Despite their market dominance in terms of quantity, 2- to 3-star hotels in Vietnam operate in an increasingly competitive landscape. The rapid growth of online travel agencies (OTAs) such as Booking.com, Agoda, and Airbnb, coupled with the constant emergence of new market entrants, has intensified competition within this segment. As a result, many small and medium-sized hotels are under growing pressure to differentiate themselves and build customer loyalty through digital marketing strategies — with social media emerging as a central tool in this effort.

Yet, leveraging social media effectively and sustainably is far from straightforward for these businesses. Challenges such as constrained marketing budgets, the absence of dedicated social media teams, the fast-changing nature of online platforms, and rising customer expectations continue to limit the ability of many SMEs to fully capitalize on social media's potential. In this context, gaining a deeper understanding of the factors that influence hotels' continued use of social media becomes increasingly important — not only for academic inquiry but also for practical business strategy. To address this gap, the present study adopts the Technology-Organization-Environment (TOE) framework (Tornatzky & Fleischer, 1990) as a theoretical lens to investigate the key factors shaping the continuance intention to use social media among 2- to 3-star hotels in Hanoi. By applying the TOE framework to the specific context of social media continuance in the hospitality industry, this study seeks to contribute to the existing literature by moving beyond initial technology adoption to explore factors that support sustained usage over time. Moreover, the research offers valuable practical insights for hotel managers, providing strategic guidance for overcoming operational barriers, enhancing customer engagement, and maintaining competitiveness in an increasingly digitalized and dynamic business environment.

2. Literature Review

Accommodation service bussiness

Hotel is one type of accommodation service bussiness. The concept of the accommodation service business can be understood in both broad and narrow senses. Broadly, it refers to the field of business activities in the tourism industry that provide accommodation, meals, and additional services to satisfy customers' temporary needs at tourist destinations. Narrowly, it specifically refers to businesses that offer bedroom rental services and additional services to tourists during their temporary stay at an accommodation establishment with the intention of making a profit. In this research, the definition of accommodation service business should be understood in a narrow sense. In 1962, the World Tourism Organization (WTO) began building a globally recognized hotel ranking system. By 1995, there were more than 100 classification systems in use around the world, mostly based on the WTO model but customized to suit the conditions of each country and locality. A variety of hotel rating schemes are used by different organizations around the world with different classification methods such as numbers, letters, stars, crowns, etc. In 2004, Switzerland announced the draft Hotelstars Union and was approved by HOTREC as a common standard for hotel star ratings in Europe. Accordingly, hotels are classified in 5 types which are indicated by from 1 to 5 stars. Today, this star hotel rating method is applied by many countries to rank hotels, including Vietnam. In Vietnam, according to the provisions of Article 50, Law on Tourism 2017, hotels, tourist villas, tourist apartments, and tourist accommodation ships are ranked according to national standards for ranking accommodation establishments. tourism. Classes of tourist accommodation establishments include 01 star, 02 stars, 03 stars, 04 stars and 05 stars. Criteria to consider a hotel's star rating include: architectural location; equipment and amenities; service and service level; managers and service staff based on Vietnamese Standard TCVN 4391:2015: Hotels – Rating. Most of the 2-3 star-hotels in Hanoi are small and midium enterprises.

Social media

The concept of social media has been mentioned in various studies. Despite different approaches, most scholars and researchers agree that social media comprises Internet applications built on Web 2.0 technologies and ideas, facilitating user-generated content and information exchange (Kaplan & Haenlein, 2010). Expanding on the concept, Carr and Hayes (2015) assert that social media are online platforms that allow users to selectively interact and express themselves in real-time or asynchronously with diverse audiences who derive value from the user-generated content. Similarly, McCay-Peet and Quan-Haase (2017) agree that social media are web-based services enabling individuals, communities, and organizations to collaborate, connect, interact, and build communities by creating, co-creating, modifying, sharing, and engaging with user-generated content, accessible easily. Due to its interactive nature, social media facilitates information sharing and collaborative activities involving a much larger community than traditional media such as radio, television, and print. Hence, social media is now considered the most important channel for disseminating information about businesses, products, and services. Social media includes blogs, forums, user review sites, and social networking sites (Arrigo, 2018).

Social media utilizes applications containing user-generated content based on personal experiences and perceptions (Blackshaw, 2006). In the hospitality business, besides the product messages proactively conveyed by businesses to customers, customers also create and share content through social media based on their actual experiences with the services (Xiang & Gretzel, 2019). This can be seen as an extended form of word-of-mouth marketing, an effective method for influencing customer purchase decisions. In the technological boom of the 21st century, consumer behavior is witnessing changes from need recognition to post-

purchase stages (Mangold, 2009). Due to its convenience and cost-effectiveness, customer engagement and support are primarily executed by businesses through social media. Some social networking sites utilized by hospitality businesses, especially small and medium-sized enterprises, include Zalo, Facebook, YouTube, and Twitter. Websites providing forums for user reviews of hospitality products like Trip Advisor, Lonely Planet, and Agoda have attracted a large number of users to create and share information (Ramsey, 2016).

This study adopts Kaplan and Haenlein's (2010) definition of social media to clarify relevant scientific issues. According to this definition, social media are Internet applications built on Web 2.0 technologies and ideas, facilitating user-generated content and information exchange. Users can post text, images, videos, and links, and interact with others through comments, likes, shares, and other interactive features. The main purpose of social media is to connect people, allowing them to communicate, collaborate, and build communities regardless of geographical boundaries. It has transformed the way individuals, businesses, organizations, and even governments communicate and interact with their "audience." Different social media platforms vary in features, target audiences, and the type of content they support. In the context of this study, social media refers to specific platforms that are widely used by 2–3-star hotels in Hanoi, including Facebook, Zalo, Instagram, TikTok, and YouTube. These platforms provide various interactive tools that enable businesses to connect directly with customers at low cost and with wide reach. In particular, hotels utilize social media for multiple purposes, such as promoting products and services, updating information about room availability, sharing promotions, and displaying customer reviews. Moreover, social media is an effective channel for creating and disseminating marketing content like images, short videos, or travel experiences that attract potential customers. Another essential purpose is to maintain customer relationships through online communication, responding to inquiries, providing after-sales service, and encouraging customer feedback. The two-way interaction capabilities of social media allow hotel businesses to enhance customer engagement, build brand loyalty, and foster a stronger online presence in a competitive market.

In today's digital age, social media has fundamentally reshaped how businesses in the hospitality industry engage with customers and promote their services. Platforms such as Facebook, Instagram, TikTok, TripAdvisor, and Booking.com have evolved beyond simple marketing tools to become integral components of hotel operations — influencing everything from brand visibility to customer relationships and purchasing decisions (Leung et al., 2013; Xiang & Gretzel, 2010). For small and medium-sized hotels in particular, social media offers distinct advantages, providing cost-effective ways to reach broad audiences without the need for substantial marketing budgets (Chan & Guillet, 2011). Beyond traditional advertising, social media allows hotels to deliver real-time updates, respond to customer inquiries quickly, and create personalized content that resonates with target audiences. This dynamic interaction fosters stronger connections with customers and helps build lasting loyalty (Hudson & Thal, 2013). Importantly, the role of customers themselves has expanded within this digital environment. User-generated content (UGC) including reviews, ratings, photos, and personal experiences shared on social media platforms - now plays a powerful role in shaping a hotel's online reputation and influencing potential guests' booking decisions (Hays et al., 2013).

In highly competitive markets, such as Hanoi's growing 2- to 3-star hotel segment, maintaining an active and engaging presence on social media has become more critical than ever. As the number of hospitality providers increases and customer expectations continue to rise, social media serves not only as a marketing channel but also as a strategic tool for differentiation and customer engagement. However, sustaining effective use of social media over time remains a considerable challenge for many small and medium-sized hotels. Factors

such as limited financial and human resources, lack of professional expertise in social media management, and the constant pressure to meet evolving customer expectations often constrain these businesses' ability to fully leverage social media's potential (Abed, 2020). Given this context, understanding how social media functions within the hospitality industry, and more importantly, identifying the key factors that influence the continuance of its use, is becoming increasingly vital — both from an academic research perspective and for practical application within hotel management. Gaining such insights can help businesses develop more effective social media strategies, allocate resources more efficiently, and ultimately enhance their competitive position in an ever-evolving digital marketplace.

Behavioural Intention

The intention to continue using social media is identified as behavioral intention. In the business field, the concept of behavioral intention plays a crucial role as a psychological construct that elucidates individuals' deliberate tendencies to perform specific actions. Originating from a cognitive process influenced by a combination of factors including attitudes, beliefs, social norms, and personal experiences, behavioral intention acts as a vital intermediary between internal will and observable behavior. Prominent scholars have significantly contributed to a deep understanding of behavioral intention in a business environment. Ajzen and Fishbein's Theory of Planned Behavior (TPB) explains behavioral intention as an indication of an individual's readiness to perform a given behavior, which is considered a direct antecedent to action. Behavioral intention results from three fundamental components: (i) Attitude towards the behavior: This pertains to an individual's evaluative viewpoint of the positive or negative consequences of the anticipated action. Favorable attitudes tend to promote favorable behavioral intentions; (ii) Subjective norms: These include an individual's perception of prevailing social pressures and the likelihood of societal approval or disapproval from significant others.

The role of social norms in shaping behavioral intention is crucial; (iii) Perceived behavioral control: This encompasses an individual's perceived ability to perform the intended behavior. Enhanced perceived control increases the tendency of behavioral intention. Bagozzi, in the Theory of Reasoned Action (TRA), highlighted emotional factors, personal identity, and past behavior as determinants of behavioral intention. In a business context, this underscores the importance of emotional appeal, alignment with consumer identity, and previous brand interactions in forming behavioral intentions. Meanwhile, Venkatesh and Davis proposed the Technology Acceptance Model (TAM), a key model in explaining the intention to adopt technology. Based on the perceived usefulness and ease of use of technology, TAM emphasizes their critical role in shaping the tendency to use technology. In business, this model stresses that adopting new technologies is reinforced by individuals' assessment of the practical benefits and ease of integrating these technologies into their existing processes. The Technology-Organization-Environment (TOE) Framework (Tornatzky and Fleischer, 1990) serves as a comprehensive lens for analyzing the complex interactions of factors shaping behavioral intention in a business context. This framework acknowledges the intertwined influences of technological attributes, organizational dynamics, and broader environmental forces. By examining how technological factors such as tools and capabilities, organizational factors including culture and support systems, and environmental variables encompassing social norms and contextual signals converge, the TOE framework offers a nuanced understanding of the multifaceted drivers behind behavioral intention. This holistic perspective equips businesses with the necessary insights to strategically predict, influence, and facilitate desired behavioral outcomes, promoting informed decision-making and effective interventions.

Thus, the concept of behavioral intention in the business field encompasses the complex interaction of multiple factors governing an individual's conscious decisions. The intellectual contributions of scholars like Ajzen and Fishbein, Bagozzi, Venkatesh and Davis, Tornatzky and Fleischer collectively provide an overarching framework to understand, predict, and influence consumer behavior through strategic interventions. Consequently, the concept of the intention to continue using social media is understood as the interaction of multiple factors influencing the intention to continue applying social media in businesses.

Hypothesis development

This study adopts the Technology-Organization-Environment (TOE) framework (Tornatzky & Fleischer, 1990) as the primary theoretical foundation to examine the factors influencing the continuance intention to use social media among 2–3-star hotels in Hanoi, Vietnam. The TOE framework is particularly suitable for this research context because it provides a comprehensive and multi-dimensional perspective on organizational technology usage by considering not only technological factors but also organizational resources and environmental pressures that collectively shape technology-related decisions. While previous studies on technology adoption and usage behavior have frequently applied models such as the Technology Acceptance Model (TAM) (Davis, 1989), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), or the Theory of Planned Behavior (TPB) (Ajzen, 1991), these models primarily focus on individual-level perceptions, such as perceived usefulness, ease of use, or behavioral attitudes. However, in the context of small and medium-sized enterprises (SMEs) like 2–3-star hotels in Hanoi, technology adoption and continuance intention are influenced not only by individual perceptions but also by organizational characteristics (e.g., resources, management support) and external environmental factors (e.g., market competition, customer expectations, and regulatory conditions) (Oliveira et al., 2014; Abed, 2020).

Therefore, the TOE framework is considered the most appropriate theoretical lens for this study because it allows for a holistic analysis of multiple contextual factors affecting social media continuance intention at the organizational level, which better reflects the complex decision-making environment of SMEs in the hospitality industry. This framework is particularly relevant for the Vietnamese hospitality industry, where 2–3-star hotels represent the majority of accommodation providers and often operate with limited resources while facing increasing competition and changing customer behaviors. By employing the TOE framework, this study aims to provide a comprehensive understanding of the determinants of continued social media use that goes beyond individual user perspectives and addresses the organizational and environmental complexities specific to small and medium-sized hotels in Hanoi.

- **Technological Context:**

The technological context pertains to internal and external technologies applicable to businesses, including available technologies within the enterprise or in the market (Lin and Chen, 2012; Gupta et al., 2013; Oliveira et al., 2014). In this study, technology is understood as social media applications. The behavioral intention to use technology has been demonstrated in the TAM, TAM2, TAM3, UTAUT, and UTAUT2 models to be influenced by perceived usefulness and perceived ease of use. Similarly, many scholars argue that technology adoption is influenced by perceived usefulness and perceived ease of use, where perceived usefulness is reflected through the relative advantages that technology brings to the business, and perceived ease of use is reflected through the ease with which users can use the technology.

Relative Advantage: Relative advantage is a core indicator for the adoption of new technologies, and Rogers (2003) defines it as the degree to which a technological factor is perceived to provide greater benefits to organizations. Previous studies on the impact of relative advantage on technology adoption intention in organizations (Thong, 1999; Lee, 2004) have shown that when businesses perceive the relative advantage of a technology, the likelihood of adoption increases (Alshamaila et al., 2013). Social media provides numerous advantages for adopters, including flexibility, scalability, on-demand access, and low upfront costs (Dwivedi et al., 2021). Organizations have almost instant access to on-demand platforms accessible via the internet with minimal upfront investment. Therefore, the first hypothesis is proposed as follows:

H1. Relative advantage affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Ease of use: Rogers (2003) pointed out that adopting new technologies is less likely to occur if they are perceived as difficult to use. The adoption intention of social media can pose problems for organizations if it is seen as more challenging to use than existing systems or if integrating it with current processes is highly complex. Berman et al. (2012) argue that new technologies need to be easy to use and manage to increase acceptance rates. Ease of use is a significant factor in the intention to continue using technology. Therefore, the second hypothesis is proposed as follows:

H2. Ease of use affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Compatibility: Besides relative advantage and ease of use, compatibility is also considered a factor influencing intention of continue using social media in hotel businesses. This refers to the degree to which the technology aligns with the organization's values and needs (Rogers, 2003). Businesses are more likely to adopt social media if it is recognized as compatible with existing working systems and aligns with the organization's values and strategies (Gutierrez and Boukrami, 2015). Thus, the third hypothesis is proposed:

H3. Compatibility affects the intention to continue using social media in 2 to 3-star hospitality businesses in Hanoi.

- **Organizational Context:**

The organizational context includes various factors related to the organization itself: size, scope, organizational structure, quality of human resources, readiness in terms of technology and personnel, creativity, and the level of support from top management (Oliveira et al., 2014; Brender and Markov, 2013; Chang et al., 2013).
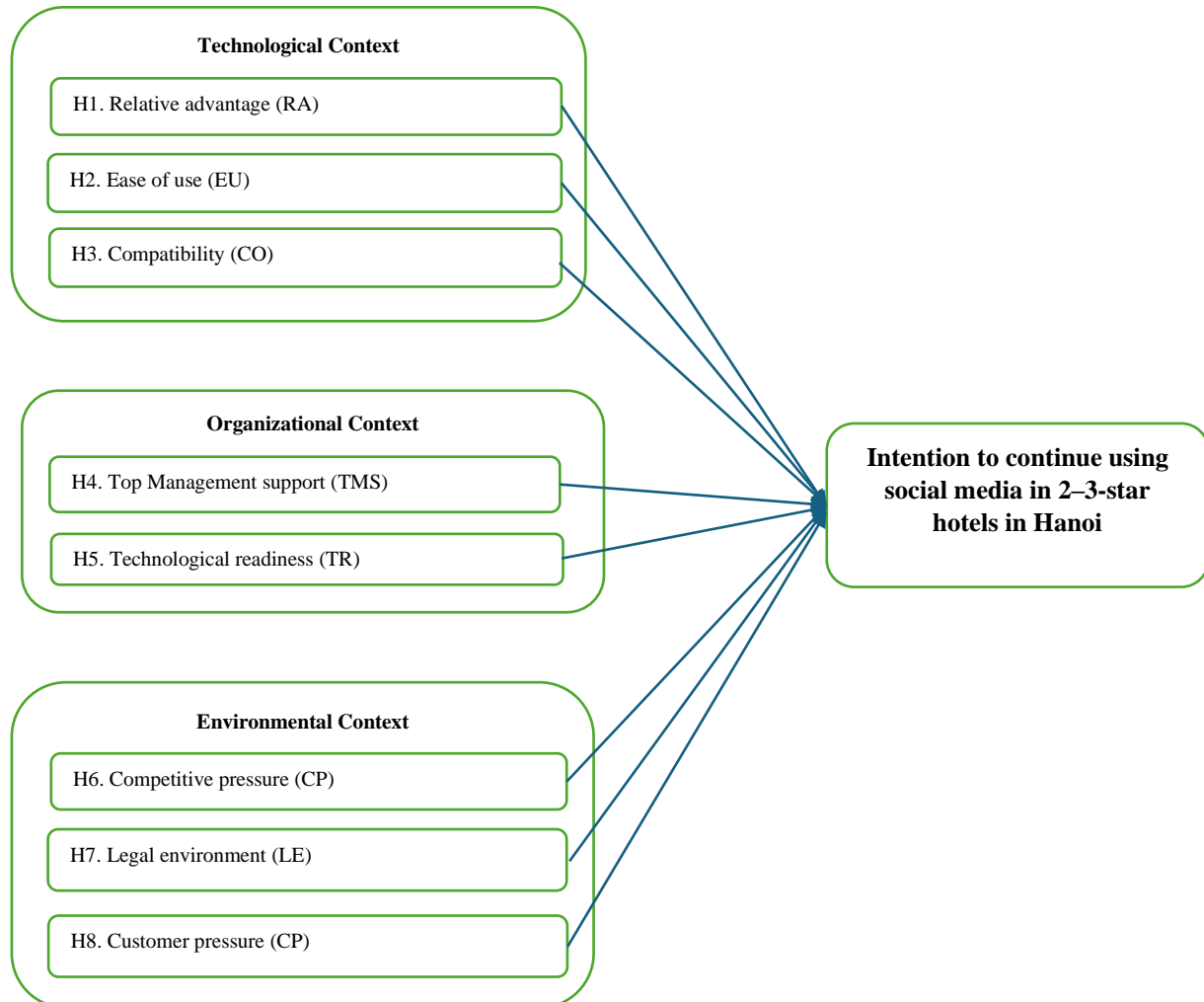
Top Management support: Top management support is considered the first factor significantly affecting the intention to continue using technology within an enterprise (Gutierrez and Boukrami, 2015). This support ensures that the organization leverages appropriate resources to adopt technology, creating a competitive advantage and helping overcome internal barriers to easily adopt new technologies. The perception of top management regarding the potential of social media adoption will help spread trust in its effectiveness to all employees within the organization (Low et al., 2011). Therefore, the fourth hypothesis is proposed as follows:

H4. Top management support affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Technological readiness: Technological readiness is viewed as the necessary infrastructure system enabling the organization to grasp new technology to achieve set goals (Parasuraman, 2000). Businesses with a high level of technological readiness are typically

those that fully recognize the potential and limitations of current IT infrastructure to allow for social media adoption. Thus, technological readiness is set forth in the fifth hypothesis:

H5. Technological readiness affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Technological Context
H1. Relative advantage (RA)
H2. Ease of use (EU)
H3. Compatibility (CO)

Organizational Context
H4. Top Management support (TMS)
H5. Technological readiness (TR)

Environmental Context
H6. Competitive pressure (CP)
H7. Legal environment (LE)
H8. Customer pressure (CP)

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Figure 1: Proposed research model
Source: Research results

- **Environmental Context:**

The environmental context includes factors related to the business environment of the enterprise. Among them, competitive pressure and legal environment are considered to have a significant impact on the implementation of business strategies, including social media adoption.

Competitive pressure: Competitive pressure relates to the intensity and level of competition among "same industry" competitors (Laforet, 2011). In general business and specifically in the hotel business, competitive pressure is seen as a driving force for enterprises to seek and adopt new technologies to enhance market competitiveness (Gutierrez and Boukrami, 2015). Therefore, the sixth hypothesis is proposed as follows:

H6. Competitive pressure affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Legal environment: The legal environment has a significant influence on the execution of business strategies (Tornatzky and Fleischer, 1990; Kotler and Armstrong, 2014; Hoang Van Thanh, 2014), as all business activities must comply with government regulations. Legal regulations bring opportunities or challenges for businesses in their operations and must be considered before deciding to adopt any technology. Thus, the seventh hypothesis is proposed as follows:

H7. Legal environment affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

Customer pressure: Customer pressure refers to the demands exerted by customers, such as the need to see, capture information, and interact with brands on social media applications. One of the reasons businesses, particularly small and medium-sized enterprises, adopt new technologies is the recognition that it helps them better meet customer needs. Abed (2020) also argues that meeting customer needs and expectations drives the adoption of innovations or new technologies in SMEs. Maduku et al. (2016), Rahayu and Day (2015) have also reported the significant impact of customer pressure on technology adoption in SMEs. Thus, the eighth hypothesis is proposed as follows:

H8. Customer pressure affects the intention to continue using social media in 2 to 3-star hotels in Hanoi.

From these hypotheses, the proposed research model for factors affecting the intention to continue using social media in 2 to 3-star hotels in Hanoi as seen in figure 1.

3. Research Methodology

This study employs a combination of qualitative and quantitative research methods. In the qualitative phase, in-depth interviews were conducted with 10 hotel managers and marketing staff working at 2–3-star hotels in Hanoi. These interviewees were selected based on their experience in managing or operating social media platforms for their hotels. The purpose of the qualitative research was to explore, review, and adjust the measurement items in the theoretical model to ensure their appropriateness and relevance to the context of small and medium-sized hotel businesses in Hanoi. Based on the findings from the qualitative phase, the official research model and measurement scales were finalized. In the subsequent quantitative phase, a structured questionnaire was developed, and a survey was conducted to collect data from 2–3-star hotel businesses in Hanoi. The survey was conducted from May 2023 to July 2023. The respondents of the survey included representatives from different levels within the hotels, such as staff, managers, and members of the board of directors, who have direct experience and involvement in using social media in business operations.

The convenience sampling method was conducted with a sample size that meets the requirements for the number of samples needed to analyze the exploratory factor analysis (EFA) proposed by Hair et al. (2014) as $N > 5m$ (m is the number of observed variables). Therefore, $n > 527 = 135$. The sample size must also meet the requirements for the sample size conditions for regression analysis proposed by Green (1991) as $N > 50 + 8m$ (m is the number of independent variables) $= 50 + (8 \times 8) = 114$. Thus, the study distributed 180 questionnaires. Among them, 20 questionnaires were not statistically valuable (including questionnaires with missing response information, repeated questionnaires with the same answer for all questions...). The remaining questionnaires with statistical value were encoded and processed using SPSS for Windows version 20.0 through these following steps: Testing the reliability of the scale; conducting exploratory factor analysis (EFA), Pearson correlation analysis, and multiple regression analysis.

This assesses the fit of the research model by determining the adjusted R-squared coefficient, which indicates the variation of the dependent variable explained by the independent variables, testing for multicollinearity, and finally proposing the multiple linear regression equation. Based on the Beta coefficient (ß) of the regression equation, the impact degree of each factor on the application of social media communication in 2 to 3-star accommodation businesses in Hanoi was identified.

4. Results of Research
Respondents' characteristics

Table 1: Respondents' characteristics

	Numbers	Percentage
Hotel star-ranking		
2-star hotels	85	48.0%
3-star hotels	28	82.4%
Genders		
Male	91	56.9%
Female	69	43.1%
Job positions		
Directors/ Vice Directors	32	20.0%
Head of Departments	37	23.1%
Staffs	91	56.9%
Work experiences		
Under 3 years	25	15.6%
From 3 – under 5 years	97	60.6%
From 5 – under 10 years	31	19.4%
Above 10 years	7	4.4%

Source: Research results

Hypotheses testing
Scale reliability testing
The reliability of the scale was tested by Cronbach's Alpha coefficient. The results showed that all Cronbach's Alpha coefficient was greater than 0.6. No variables were excluded. Therefore, the scale was accepted.

Table 2: Measurement Scales and Reliability Results

No	Nhân tố	Cronbach's Alpha
1	Relative Advantage (RA)	0,926
2	Ease of Use (EU)	0,792
3	Compatibility (CO)	0,844
4	Top Management Support (TMS)	0,756
5	Technological Readiness (TR)	0,793
6	Competitive Pressure (CP)	0,798
7	Legal Environment (LE)	0,697
8	Customer Pressure (CP)	0,604
9	Continuance Intention (INT)	0,765

Source: Research results

EFA analysis

The study kept going to figure out what factors may be at play by using the Principal Components method along with Varimax rotation to see if the variables were all pointing in the same direction or not. They made sure each factor had a decent impact with a factor loading coefficient of 0.5.

- For the independent variables:
  - The KMO analysis suggested that the data, with a Kaiser-Meyer-Olkin measure of 0.704, was good for analysis as it showed the variables were connected in some way (Garson, 2003).
  - Bartlett's test came back with a result of 1531.261, and a significance level of 0.000, indicating that the variables were indeed correlated and fit for factor analysis.

By using the Principal Components method along with Varimax rotation, it was found that the 22 observed variables could be grouped into 8 clusters, explaining about 76.560% of the total variance. All 8 factors were important, with factor 8 at the lowest but still above the threshold. The tests showed clear values, showing the practical significance of the variables, useful for real-world application. No variables were left out.

The findings from the study indicated that the values of convergence and discrimination of the variables were clearly demonstrated. The factor loading coefficients of the observed variables were all above the threshold of 0.5, ensuring practical significance in the Exploratory Factor Analysis (EFA) and indicating that they could be applied in practice. As a result, no variables were excluded.

Table 3: Results of Exploratory Factor Analysis (EFA)

	Component							
	1	2	3	4	5	6	7	8
RA3	.910							
RA1	.906							
RA2	.903							
CO1		.870						
CO2		.847						
CO3		.819						
TMS3			.822					
TMS2			.815					
TMS4			.651					
TMS1			.590					
CP3				.861				
CP2				.857				
CP1				.768				
TR2					.849			
TR3					.839			
TR1					.653			
EU1						.881		
EU2						.876		
LE2							.862	
LE1							.821	
CP1								.807
CP2								.806

Source: Research results

Pearson correlation analysis
- For the dependent variables:

The result of the Kaiser-Meyer-Olkin (KMO) analysis showed that:

    o   KMO coefficient = 0.701 > 0.5. This indicates that the data used for analysis are suitable, and there is correlation among the variables (Garson, 2003).

    o   The result of Bartlett's test = 1632.275 with a significant level Sig = 0.000 < 0.05. This means that the null hypothesis H0 (the observed variables have no correlation with each other in the population) is rejected. The variables are correlated with each other and satisfy the conditions for factor analysis.

Conducting Principal Components Analysis with Varimax rotation: The result indicates that "Only 1 unique factor is extracted. The results are not self-rotating". This means that only 1 unique factor is extracted in the EFA analysis for dependent variables. The study conducted Pearson correlation analysis to examine the linear correlation between the dependent variable and the independent variables. The results showed that the Sig values of the t-test in Pearson correlation analysis were all less than 0.05. Therefore, it can be affirmed that there is a linear relationship between the dependent variable (INT) and the independent variables (RA, EU, CO, TMS, TR, CP, LE, CP). The results of the Pearson correlation analysis testing the linear correlation between independent variables with each other showed that the Sig values of the t-test of some variables were less than 0.05, but the absolute value of the correlation coefficient was less than 0.7, making it unlikely to have multicollinearity (Dormann et al., 2013).

Linear regression analysis
The study continued to perform multiple linear regression analysis to examine the linear relationship between the dependent variable and the independent variables.

Table 4: Results of Linear regression analysis

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Multicollinearity analysis	
		B	Std. Error	Beta			Tolerance	VIF
1	Constant	-.460	.239		-1.927	.056		
	RA	.071	.022	.179	3.257	.001	.763	1.310
	EU	.106	.021	.257	4.978	.000	.866	1.155
	CO	.161	.025	.348	6.312	.000	.759	1.317
	TMS	.173	.033	.294	5.283	.000	.745	1.343
	TR	.203	.035	.333	5.790	.000	.699	1.432
	CP	.079	.029	.144	2.757	.007	.845	1.183
	LE	.214	.038	.293	5.696	.000	.874	1.144
	CP	.145	.028	.263	5.134	.000	.879	1.137

Source: Research results

• The Sig value of the F test

First, the study evaluates the adequacy of the model through hypothesis testing with the hypothesis H0: R2=0. The result of the F test is used to assess the adequacy of the model. From the ANOVA variance analysis results, the Sig value = 0.000 < 0.05, so the null hypothesis H0 is rejected, meaning R2 ≠ 0 significantly, the regression model is appropriate.

The F test result = 35.335 > 2 (compared to the F distribution table) shows that the regression model is statistically significant, the independent variables significantly explain the dependent variable in the model.

• Adjusted R2 coefficient

The adjusted R2 value = 0.633. This indicates that the independent variables included in the regression analysis influence 63.3% of the variance of the dependent variable, while

the remaining 36.7% is due to the impact of external variables in the model and random errors.

• The Sig value of the T test

The analysis results show that all independent variables have Sig values (of t-tests) less than 0.05. Therefore, all independent variables are statistically significant and have an impact on the dependent variable.

• Variance Inflation Factor (VIF)

The analysis results show that the VIF for all independent variables is < 2, indicating no violation of the multicollinearity assumption. This leads to conclusions regarding the hypotheses posed: Relative Advantage, Ease of Use, Compatibility, Top Management Support, Technological Readiness, Competitive Pressure, Legal Environment, and Customer Pressure influence on the intention to continue using social media communication among 2 to 3-star accommodation businesses in Hanoi.

Based on the magnitude of the standardized regression coefficient Beta, the order of the impact levels from strongest to weakest of the factors influencing the intention to continue the application of social media communication of 2 to 3-star hotel businesses in Hanoi are as follows: Compatibility ($\beta = 0.348$); Technological readiness ($\beta = 0.333$); Support from top management ($\beta = 0.294$); Legal environment ($\beta = 0.293$); Pressure from customers ($\beta = 0.263$); Ease of use ($\beta = 0.257$); Relative advantage ($\beta = 0.179$); Competitive pressure ($\beta = 0.144$). Therefore, all factors of relative advantage, ease of use, compatibility, support from top management, technological readiness, competitive pressure, legal environment, and customer pressure positively impact the intention to continue the application of social media communication by 2 to 3-star hotel businesses in Hanoi. Among the influencing factors, compatibility has the strongest impact.

5. Discussion

This study employed the Technology-Organization-Environment (TOE) framework to investigate the key factors influencing the continuance intention of social media use among 2- to 3-star hotels in Hanoi. The findings offer valuable insights into how technological, organizational, and environmental elements collectively shape the sustained use of social media within small and medium-sized hotel enterprises — a segment often characterized by limited resources and intense market competition. Within the technological context, *compatibility* emerged as the most influential factor driving continuance intention. This result reinforces prior research that highlights the critical role of technology's alignment with an organization's existing needs, processes, and capabilities (Abed, 2020; Alraja et al., 2022). Additionally, *relative advantage* and *ease of use* were also found to have positive effects, consistent with previous studies emphasizing that perceived benefits and user-friendliness are central to sustaining technology use, particularly in SMEs (Maroufkhani et al., 2020).

In terms of organizational factors, both *top management support* and *technological readiness* demonstrated significant impacts on the continuance of social media use. This finding echoes recent literature suggesting that leadership commitment and the availability of technological infrastructure are crucial enablers of long-term technology engagement, especially within resource-constrained environments like small and medium-sized hotels (Abed & Aubert, 2023). Turning to environmental factors, the results indicate that *customer pressure* and *competitive pressure* significantly shape hotels' decisions to maintain their social media presence. This aligns with the reality of the hospitality industry, where customer expectations and market competition are key external drivers influencing business strategies (Nguyen et al., 2021). Interestingly, the *legal environment* was also found to positively affect continuance intention — suggesting that clear regulations, supportive policies, or government

guidance can foster greater confidence and encourage hotels to sustain their social media activities (Pham et al., 2023). Taken together, the findings of this study contribute to the existing body of knowledge by extending the application of the TOE framework to the context of social media continuance — an area that remains relatively underexplored, particularly within the hospitality sector in developing countries like Vietnam. Beyond theoretical contributions, the results offer practical implications for hotel managers and policymakers, highlighting the need to foster technological alignment, strengthen internal capabilities, and create a supportive external environment to facilitate the sustainable use of social media in small and medium-sized hotel enterprises.

6. Conclusion

Although the research has shown the influencing factors and the level of impact of each factor on the intention to continue applying social media at 2- to 3-star hotel businesses in Hanoi, Resources still have certain limitations. Specifically: The research sample was selected using the convenience sampling method, so it was not possible to ensure a balance in the proportion of 2–3-star hotel businesses in Hanoi included in the study; The scope of the research is only focused on Hanoi City, so the level of contribution to practice is still limited and not generalizable. These are also limitations for future research to overcome and clarify.

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