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Current Issues in Tourism

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/rcit20

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To cite this article: Yabibal A. Abate, Dandison C. Ukpabi & Heikki Karjaluoto (29 May 2024): Investigating digital marketing readiness among tourism firms: an emerging economy perspective, Current Issues in Tourism, DOI: 10.1080/13683500.2024.2358047

To link to this article: https://doi.org/10.1080/13683500.2024.2358047

Published online: 29 May 2024.

CURRENT ISSUES IN TOURISM
https://doi.org/10.1080/13683500.2024.2358047

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RESEARCH ARTICLE

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Investigating digital marketing readiness among tourism firms: an emerging economy perspective

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ABSTRACT

The study aimed at investigating the readiness of firms in the tourism industry to adopt digital marketing as a marketing strategy – from an emerging economy perspective. The technology–organisation–environment framework and technology acceptance model were used to identify potential determinants of firms' intention to adopt digital marketing. Data was collected from a sample of 191 tour and travel agencies using standardised questionnaire. Of the technological, organisational, and environmental factors, convenience, managerial commitment, government regulation, and customer pressure were found to be significant determinants of perceived usefulness and perceived ease of use of digital marketing. Both the mediating variables (perceived usefulness and perceived ease of use) were found significant in affecting firms' intention to adopt digital marketing as a marketing strategy. Leader digital skill was not found to be a significant moderator on the effect of perceived usefulness and perceived ease of use on intention to adopt digital marketing. Devising conducive policies and regulations, strategic consideration of customer feedback, and creating awareness about the technology are essential for tourism firms and key stakeholders of the sector to capitalise on the advantages of digital marketing.

ARTICLE HISTORY
Received 22 December 2022
Accepted 15 May 2024

KEYWORDS
Digital marketing; perceived usefulness; perceived ease of use; intention to adopt; tourism industry; emerging economies

1. Introduction

Digital marketing is one crucial part of marketing that relies on the internet and digital devices including computers, mobile phones, and platforms, for the promotion of goods/services (Ritz et al., 2019; Smith, 2012). It has brought a paradigm shift in the marketing strategies and activities of all types of firms, in every industry (Ali & Xia, 2022; Hofacker et al., 2020). Similarly, it has transformed the marketing activities of the tourism industry worldwide (Alves et al., 2020; Gupta, 2019; Mathew & Soliman, 2021). It not only enhances the marketing and financial performance of firms in the tourism industry but also brings increased engagement, customised services, and wellbeing protection in crisis times (like the COVID – 19 era) for travelers (Akhtar et al., 2021; Ketter & Avraham, 2021; Taiminen & Karjaluoto, 2015).

Since the tourism sector is information intensive, the performance of any firm engaged in the industry heavily depends on its ability to gather and communicate this information with its stakeholders effectively and efficiently and hence the sector is said to be highly receptive of the benefits of digital technologies (Sharma et al., 2020). On the other hand, tourism firms that lag in

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digitalising their marketing activities harm their reach and visibility, targeting and personalisation, customer engagement, ability to leverage on data-driven insights, and the opportunities of cost-minimized marketing activities (Gupta, 2019; Ritz et al., 2019; Sharma et al., 2020), which intern has a detrimental impact on overall competitiveness.

Digital marketing capabilities are still underutilised, especially in emerging economies (Ali & Xia, 2022; Ansong & Boateng, 2019; Mkwizu, 2019; Sharma et al., 2020). Emerging economies like Ethiopia fall short of taking advantage of digital marketing to the tourism industry partly because of inadequate skilled workforce, regulatory pitfalls, and lack of necessary physical resources (Deb et al., 2022; Pandey et al., 2020; Sharma et al., 2020). Ethiopia's tourism industry possesses a strong potential for development. For instance, the country is endowed with nine UNESCO registered world heritages (more than any other African country and one of the leading in the world). However, the country has not yet fully utilised the potential of the industry, primarily because of inadequate marketing of its destination brands (Asmare, 2016; Asmelash & Kumar, 2019).

While some researchers (e.g. Busca & Bertrandias, 2020; Herhausen et al., 2020) have offered evidence on the adoption and use of digital, social media, and mobile marketing at firm level, extant literature is merely focused on individual-level investigations (Sharma et al., 2020), with a limited firm level examination of the adoption and use of digital marketing technologies. In addition, although digital marketing has been a common research agenda in advanced economies, research dealing with developing economies is scarce (Pham, 2021). Moreover, extant research concentrated on employing a singular theoretical framework to examine the adoption and use of digital technologies at the firm level, thereby falling short in establishing a comprehensive understanding of the underlying factors involved. Following the suggestions of Chatterjee et al. (2021), Chatterjee et al. (2020), Cho et al. (2022), Katebi et al. (2022), the study combined the technology–organisational–environmental (TOE) framework and technology acceptance model (TAM), for a comprehensive understanding of determinants of firms' intention to adopt digital marketing. While TOE framework enables to uncover antecedents related to attributes of the technology, organisational capabilities, and environmental pressure (Abed, 2020; Chatterjee et al., 2021), the variables of TAM, perceived usefulness (PU) and perceived ease of use (PEOU) explains individual perceptions and attitudes towards a particular technology (Chatterjee et al., 2020; Chatterjee et al., 2021; Gangwar et al., 2015). Merging these two theories allows to examine both macro-level (organisational) and micro-level (individual) factors that shape the adoption of digital marketing at firm level.

The purpose of this study is, therefore, to identify determinants of intention to adopt digital marketing by firms in the tourism industry from an emerging economy perspective, with a special reference to Ethiopia, by combining the TOE framework and TAM. The study shows the complimentary role of TOE framework (organisational level theory) and TAM (individual level model) for a comprehensive investigation of the antecedents of technology adoption among firms in the tourism industry and beyond. Moreover, the study also brings the perspective of emerging economies while much of extant literature is concentrated on the case of advanced economies.

2. Literature review

2.1. Digital marketing

Digital marketing is the use of digital technologies to create, integrate, target, and communicate with actual and potential customers in the process of acquiring and retaining them (Sharma et al., 2020; Taiminen & Karjaluoto, 2015). Similarly, Ritz et al. (2019) described digital marketing as a branch of marketing that relies on modern/digital channels for product placement and branding activities. Digital marketing as a marketing strategy has revolutionised the way firms promote their products and communicate with their customers (Hofacker et al., 2020; Sharma et al., 2020).

Although digital marketing positively impacts the performance of firms in every industry, its potential to transform the tourism industry is far important from both marketers and consumers

perspective (Alves et al., 2020; Appel et al., 2020; Gupta, 2019; Mathew & Soliman, 2021). Digital marketing helps marketers in the tourism industry to increase their visibility and reach, improve customer engagement, enable targeted advertisements, enhance customer experience (through real – time communication and simplified booking and reservations), and easily measure results, among other benefits (Alves et al., 2020; Mathew & Soliman, 2021; Sharma et al., 2020). Digital marketing is relatively more important to the tourism industry of emerging economies such as Ethiopia, where resources are scarce, as it is more efficient compared with traditional marketing (Ketter & Avraham, 2021).

2.2. TOE framework

TOE is an organisational level theory elucidating the three (technological, organisational, and environmental) contextual factors influencing firms' decision to adopt a given technology (Cho et al., 2022; Tornatzky & Fleischer, 1990). Technological context explains the characteristics of the technology itself, such as complexity, security, relative advantage, convenience, trialability and observability, among others (Hooks et al., 2022). Organisational context defines factors affecting firms' intention to/ actually adopt/use a particular technology and are related to factors such as resource availability, top management support, employees' knowledge, among others (Pan et al., 2022; Venkatesh, 2022). Finally, the environmental context is related to the surrounding arena in which the business operation takes place incorporating determinant factors such as industry structure and competition, legal and regulatory frameworks, and customer pressure (Cho et al., 2022).

Prior studies used TOE framework to investigate the adoption of different technologies such as cloud computing adoption (e.g. Gangwar et al., 2015), AI (Cho et al., 2022), and enterprise resource planning (Awa et al., 2016) among others. Researchers in the field of technology adoption use various combinations of these factors that suits the context of the case technology and country.

2.3. TAM

TAM postulates that PU and PEOU strongly predict the intention to adopt a given technological innovation (Davis, 1995). PU examines how much an individual perceives that a system contributes to improving individual and overall company performance by reducing the complexity of specific tasks (Daragmeh et al., 2021). Whereas PEOU refers to the extent to which an individual believes that using digital technology will be easy/effortless (Cho et al., 2022).

Variables of TAM (both in the original or its later visions), mainly PU and PEOU, serve as mediators for the adoption/use of digital technologies (Cho et al., 2022). The findings of Hansen et al. (2018), Gangwar et al. (2015), and Katebi et al. (2022), show that the two prominent TAM variables mediate the effect of external variables (antecedents) on intention to adopt a given technology.

2.4. Hypothesis development

2.4.1. Technological factors

Convenience can be defined as any feature of the technology influencing the amount of time and effort a user spends in availing a service (Kasilingam & Krishna, 2022). It is when a technological innovation becomes relatively simple to operate and creates comfort for its users (Jiang et al., 2013). From a digital marketing perspective, convenience can be described as characteristic of the technology that makes it require relatively less cost, effort, and time to its marketers and other users. Infancy of digital marketing adoption in the tourism industry of emerging economies makes convenience relatively an important factor because the more consumers are used to a technology the more they feel convenient, which enhances the adoption rate further and vice versa (Boden et al., 2020).

Shankar and Rishi (2020) discovered that subdimensions of convenience (access, transaction, and possession convenience) determine intention to adopt mobile banking. Chekembayeva et al. (2023)

have found that time convenience influences behavioural intention to adopt AR mobile retailing applications through the mediation of attitude. Handarkho and Harjoseputro (2020) found that perceived convenience has a positive direct effect on intention to adopt a technology. Digital marketing capabilities bring convenience to tourism firms in various ways such as, facilitated online booking, targeted advertising, personalised recommendations, real-time updates on travel alerts, facilitated feedback and review, and virtual travel experience (Alves et al., 2020; Hu & Olivieri, 2021; Mathew & Soliman, 2021). Moreover, Chen and Tsai (2019), Al-Adwan (2020), and Sakshi et al. (2020) also discovered that convenience affects adoption intention through the mediation of PU and PUOE. Therefore, the following hypotheses are drawn.

H1a: Convenience has a positive significant effect on PU.

H1b: Convenience has a positive significant effect on PEOU.

Security concern refers to the cyber safety of data and information in digital marketing platforms regarding authentication, confidentiality, non-refusal, and data integrity during transactions made in the system (Türker et al., 2022). Digital marketing capabilities include online reservation and payment systems posing significant cyber risk. Moreover, when it comes to the security issues of a technology, advanced economies like EU countries possess stricter regulations for data protection and privacy including the European Union General Data Protection Regulation (GDPR) (Dwivedi et al., 2021). In developing economies, however, there is a huge regulatory loophole to insure the protection and safety of users' data (Mishra et al., 2022).

Utilising the TOE framework, Abed (2020) found that security concern negativity affects behavioural intention to adopt social commerce. Similarly, Chau et al. (2020) also unveiled the significant role of security concern on intention to adopt mobile commerce. Mangiò et al. (2020) further considered security concern as a facilitating condition in their investigation of the adoption of privacy-enhancing technologies, using UTAUT2. Studies including Park and Jones-Jang (2022), Türker et al. (2022), Chatterjee et al. (2020), and Chawla and Joshi (2019) have found strong negative effect of security concern on PU, and PEOU intention to adopt a technology.

H2a: Security concern has a negative effect on PU.

H2b: Security concern has a negative effect on PEOU.

2.4.2. Organisational factors on PU and PEOU

In the context of our study, managerial commitment (top management support) is defined as the degree to which high level management of tourism firms is involved, serves as a change agent, and determined to the adoption and full implementation of digital marketing (Lorente-Martínez et al., 2020; Wang et al., 2010). Support and commitment of people at the top of the organisational chain of command is vital for a realisation of any technological change. Top management plays an invaluable role in backing employees, assisting them, proactively solving associated problems, creating a collaborative environment during the implementation process, and establishing a clear line of coordination to effectively implement and sustain the technology (Hsu et al., 2018; Wang et al., 2019).

Studies that are based on the TOE framework, such as, Deng et al. (2020), Khayer et al. (2020), Lu et al. (2021), and Pizam et al. (2022), have found that top management commitment has a positive significant effect on the adoption of a technology. Hancerliogullari Koksalmis and Damar (2022), Kamble et al. (2021), and Tasnim et al. (2023), have also discovered that managerial commitment significantly affects PU and PEOU. Based on this notion, we hypothesise as follows:

H3a: Managerial commitment has a positive effect on PU.

H3b: Managerial commitment has a positive effect on PEOU.

Resource availability, also known as organisational readiness or infrastructure availability, is operationalised as the availability of adequate resources for the firm to adopt and implement a technology (Clohessy & Acton, 2019; Wang et al., 2010). These resources are sub categorised as human resource (which indicates the availability of equipped staff with the necessary skills and ability to understand and work with digital marketing tools) (Wang et al., 2010), financial resources which indicates the accessibility of sufficient financial capital to be allotted for the acquisition of digital marketing devices and tools (Clohessy & Acton, 2019), and finally the availability of physical infrastructure which measures whether the existing infrastructure is suitable to adopt and implement digital marketing (Wang et al., 2019). When an organisation possesses those resources the likelihood of adopting a new technology is presumably high. Although resource scarcity is a universal phenomenon, it is more acute when it comes to firms from emerging economies. Prior studies including Dubey and Sahu (2022), Hsu et al. (2018), and Wang et al. (2010) have found a strong positive relationship between resource availability and intention to adopt a technological innovation. Wang et al. (2022) found that resource availability influences adoption intention through behavioural control variables.

H4a: Resource availability has a positive effect on PU.

H4b: Resource availability has a positive effect on PEOU.

2.4.3. Environmental factors on PU and PEOU

Government regulations include policies, rules, and standards that facilitate or hinder the adoption of a given technology (Alfaro-Serrano et al., 2021). The role of the policies and regulations that local governments make in terms of adopting a new technology is crucial (Lian et al., 2014). Regulatory frameworks have the power to encourage or discourage organisations to adopt a new technological innovation (Ali & Osmanaj, 2020). In the context of digital marketing, the more regulated digital and social media platforms, the more adopters will feel safe and will be ready to adopt the technology. The absence of favourable regulatory framework for technological innovations has been identified as a key determinant of the widespread adoption of these technologies in emerging economies (Erol et al., 2022). Recent studies have confirmed the positive significant impact of government regulations on adoption of a technology include Bag et al. (2022), Maroufkhani et al. (2020), and Mujahed et al. (2022).

H5a: Government regulation has a positive effect on PU.

H5b: Government regulation has a positive effect on PEOU.

Customers', and competitors' pressure, collectively known as stakeholder pressure, refers to the degree to which a company feels pressurised by its competitors in the industry and customers to use a particular technology (Alam et al., 2022). Alternatively, it can also be defined as the external influence to adopt a given technological innovation for the sake of gaining competitive advantage over competitors (Katebi et al., 2022). Pressure from customers and competitors is expected to be strong in affecting firms' decision to adopt digital marketing since the sub-tools of digital marketing such as e-payment system and web analytics are only operational when such stakeholders are integrated with (Ponzoa & Erdmann, 2021). Rodríguez-Espíndola et al. (2022) argue that firms observe and imitate the benchmarked competitors and partners to take advantage of the potential benefits of a new technological innovation. Another reason is that companies tend to accept a new technology because they believe that their competitors and clients expect them to do so (Abed, 2020). Prior studies (Abed, 2020; Katebi et al., 2022; Rodríguez-Espíndola et al., 2022) found a positive relationship between competitive pressure and PU and PEOU.

H6a: Customer pressure has a positive effect on PU.

H6b: Customer pressure has a positive effect on PEOU.

H7a: Competitors' pressure has a positive effect on PU.

H7b: Competitors' pressure has a positive effect on PEOU.

2.4.4. PU and PEOU as mediators

The mediating role of PU and PEOU on the relationship between external variables and technology adoption is long established in the original TAM and its later versions (e.g. TMA2 and TAM3) (Venkatesh & Bala, 2008). Lai (2016) also proposed the Stimulus Theoretical Framework where PU and PEOU serve as mediators on the relationship between design and security stimulus (technology characteristics) and intention to adopt the technology. Recent studies that discovered the significant positive mediating role of PU and PEOU on the relationship between extraneous variables and adoption of a technology include Huarng et al. (2022), Park and Jones-Jang (2022), and Rafdinal and Senalasari (2021).

In addition, PEOU also incorporates concepts such as perception on external control, self-efficacy, enjoyment, anxiety, and playfulness (Chatterjee et al., 2021). Therefore, besides the synergistic effect of both variables on firms' decision to adopt a technological innovation, PEOU also affects PU (Chatterjee et al., 2021; Daragmeh et al., 2021), hence, we hypothesise as follows.

H8: PEOU has a positive effect on PU.

H9: PU has a positive effect on intention to adopt digital marketing.

H10: PEOU has a positive effect on intention to adopt digital marketing.

2.4.5. Leader digital skill as a moderator

Lack of adequate digital skill hinders the ability to adopt and harness the benefits of digital technologies (Yu et al., 2017; Van Laar et al., 2017). We conceptualise digital skill as set of abilities on how to use digital marketing tools and systems in daily business activities. Digital skill, especially possessed by those assuming higher organisational positions (Brock & Von Wangenheim, 2019; Royle & Laing, 2014), has been found a significant determinant of decision to use/adopt a given innovation.

Consideration of LDS becomes more relevant to our context as the divide between developed and emerging economies in terms of digital skill is wider than the divide in physical access to technology (Yu et al., 2017). With a significant digital skill gap, it is always difficult to be a digital leader and build a firm that is digitally enabled as Magesa and Jonathan (2022) stated. In our context, following the findings of Van Laar et al. (2017), LDS is hypothesised to moderate the effect of PU and PEOU on intention to adopt digital marketing. Following similar approach, Borah et al. (2022) have discovered that LDS (digital leadership) significantly moderates the effect of social media usage on innovation capability and sustainable performance.

H11a: LDS positively moderates the relationship between PU and intention to adopt digital marketing.

H11b: LDS positively moderates the relationship between PEOU and intention to adopt digital marketing.

As depicted in Figure 1, we controlled the model for gender, age, and positional role of the respondents.

3. Methodology

3.1. Measurement

A questionnaire-based survey was used to collect the data. All the items were adopted from prior studies (Table 2) and validated by digital marketing experts. Of the technological factors, convenience was measured using three items adopted from Shankar and Rishi (2020) and Jiang et al. (2013), whereas security concern was measured using five items derived from Molla and Licker

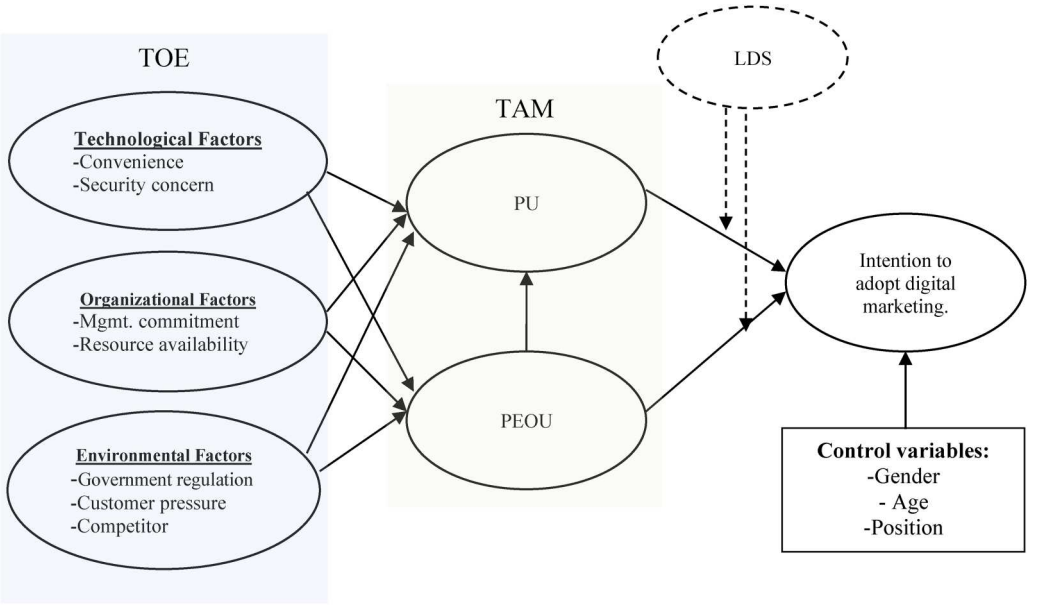

Figure 1. Proposed conceptual framework.

(2005) and Abed (2020). Likewise, organisational factors i.e. managerial commitment and resource availability were measured using four and five items, respectively, taken from Khayer et al. (2020), Wang et al. (2019). The remaining three environmental variables i.e. government regulation, customer pressure and competitive pressure were measured using three, four and three items respectively (Ali & Xia, 2022; Lin & Lin, 2008).

PU and PEOU were measured using three and four items respectively and all adopted from Daragmeh et al. (2021). Finally, intention to adopt digital marketing was measured using three items obtained from Mathew and Soliman (2021). Items were developed using a five-point Likert scale, 1 representing strongly disagree and 5 representing strongly agree. LDS was measured by requesting tour and travel managers and marketing officers to evaluate their skills in terms of their abilities to fully understand, operate, and teach to their staff members about the digital marketing activities and solutions (Royle & Laing, 2014).

3.2. Data collection strategy

Data was collected from 191 tour and travel agencies licensed by ministry of tourism of Ethiopia and are members of the Ethiopian Tour Operators Associations (ETOA) cross sectionally. Either top and middle level managers or alternatively marketing officers were purposefully targeted in our survey. This was done to assure that the respondents have a better understanding on the concept of digital marketing and are aware of the firm's existing and future marketing strategies. Data was collected using both online and paper and pencil approaches. Email address was obtained from the ETOA for the 378 tour and travel member agencies to which the questionnaire was later distributed electronically. For the remaining 168 agencies, the questionnaire was handed later collected face to face. From the 464 Tour and Travel operators targeted, 191 usable questionnaires were returned yielding a 41% response rate. Respondents were asked to return the questionnaire within twenty days.

Since the study depended on data obtained from respondents using a structured questionnaire, we suspect of chances of biased responses. To avoid common method bias, respondents were

provided with an assurance that confidentiality of responses will be strictly followed. Common method bias can also be statistically assured using variance inflation factor (VIF) values. Kock (2015) suggested that the occurrence of VIF greater than 3.3 is indication of multicollinearity and common method bias problems in the model. Since the VIF values of our latent variables are below the 3.3 threshold, inexistence of both common method bias and multicollinearity issues were confirmed.

4. Analysis results and interpretations

4.1. Demographic information

More than 68% of the respondents had either a bachelor's or master's degree which assures that the participants are educated enough to understand digital marketing and other concepts of the study.

Most of the participants (83%) have also worked within the industry for more than a year which makes them relevant to the study as they are likely to have a better understanding about the industry. Majority (76%) of the respondents were less than 40 years old. As stated earlier, we included only managers and marketing officers of tour and travel agencies in Ethiopia. Table 1 presents a summary of demographic characteristics of our respondents.

4.2. Measurement model

Partial least square structural equation modelling (PLS-SEM) was applied for testing the hypotheses using smartPLS-3. In assessing the reliability of the constructs, Cronbach's alpha composite reliability (Hair et al., 2017) were used and all the values were well above the 0.70 threshold with values ranging from 0.8271 to 0.9714 (Table 2).

Validity can be maintained through several techniques. In our case, all the items were adopted from prior research. Once modified to fit with the concept of digital marketing in the tourism sector, developed questionnaire was submitted for marketing experts (working in the tourism sector) to check our questionnaire for face validity. Moreover, statistical techniques were also used to assure convergence and discriminant validities. Items under a given latent variable must truly converge (come together) to explain the variable that they represent. This can be assured using two test statistics i.e. using factor loading or the Average Variance Extracted (AVE). Minimum criteria for both statistical approaches (>0.7 and >0.6 respectively) was met (Hair et al., 2017) as shown in Tables 2 and 3, respectively.

Discriminant validity was checked using Fornell & Larcker's criterion which states that the square root of the AVE value of each latent variable must be above the correlation coefficient of the variable

Table 1. Description of demographic data ($n = 191$).

Variable	Category	N	%
Gender	Male	137	72%
	Female	54	28%
Level of education	Diploma holder	61	32%
	Bachelor's degree holder	105	55%
	> Bachelor's holder	25	13%
Age	< 21 years old	21	11%
	21–30 years old	47	25%
	31–40 years old	76	40%
	> 40 years old	47	25%
Year of experience in the tourism industry	< a year	7	17%
	Between 1 and 3 years	34	46%
	> 3 years	150	37%
Position	Manager	102	53%
	Marketing officer	89	47%

Table 2. Summary of items, descriptive statistics, and reliability test results ($n = 191$).

Factor (Item Source)	Item code	Item	Mean	S.d	Loading	CR	Rho-A	Cronbach's Alpha
Convenience (Jiang et al., 2013; Shankar & Rishi, 2020)	CON1	Digital marketing helps us to provide our travel and tourism services at any time.	4.031	0.870	0.886	0.940	0.905	0.904
	CON2	I can offer travel and tourism services at any place via digital marketing.	4.136	0.913	0.943			
	CON3	Using digital marketing will improve the convenience of our tour and travel services.	4.037	0.861	0.919			
Security concern (Abed, 2020; Molla & Licker, 2005)	SEC1	Use of digital marketing is trustworthy.	3.304	1.219	0.94	0.970	0.978	0.963
	SEC2	Use of digital marketing provides enough security during information exchange.	3.330	1.170	0.965			
	SEC3	Digital marketing maintains the privacy of the organisation.	3.440	1.267	0.927			
	SEC4	Digital marketing provides enough data confidentiality.	3.419	1.211	0.946			
	SEC5	Security concerns are not issues in using digital marketing.	3.314	1.221	0.85			
Managerial commitment (Khayer et al., 2020)	MGC1	Management is willing to take the risks associated with adopting digital marketing.	3.921	0.814	0.874	0.930	0.899	0.899
	MGC2	Management is seriously considering the adoption of digital marketing.	4.079	0.911	0.902			
	MGC3	The management understands the benefits of using digital marketing.	3.984	0.837	0.875			
	MGC4	Management is willing to provide the necessary resources in using digital marketing.	4.079	0.787	0.854			
Resource availability (Wang et al., 2019)	RES1	Our organisation has the financial resources to adopt digital marketing.	3.775	0.898	0.822	0.924	0.901	0.898
	RES2	Our organisation has the technical readiness to adopt digital marketing.	4.047	0.823	0.814			
	RES3	We have high connectivity to the internet.	3.937	1.009	0.822			
	RES4	Most of our employees have unrestricted access to computer.	4.068	0.929	0.869			
	RES5	Most of our employees are computer literate.	4.005	0.954	0.884			
Government regulations (Ali & Xia, 2022)	GOV1	Government effectively promotes the use of digital marketing.	3.864	0.803	0.89	0.930	0.888	0.887
	GOV2	Data protection is well regulated by the government.	3.942	0.872	0.904			
	GOV3	Government regulations create a conducive environment to adopt digital marketing.	3.885	0.922	0.916			
Customer pressure (Lin & Lin, 2008)	CUS1	Most of our customers and clients use digital marketing platforms.	3.880	0.877	0.87	0.929	0.886	0.885
	CUS2	Most of our trading partners recommended us to use digital marketing.	3.906	0.859	0.917			
	CUS3		3.895	0.820	0.918			

(*Continued*)

Table 2. Continued.

Factor (Item Source)	Item code	Item	Mean	S.d	Loading	CR	Rho-A	Cronbach's Alpha
		Our customers are generally knowledgeable about digital marketing.						
Competitors pressure (Lin & Lin, 2008)	COM1	Most of our competitors have already adopted or at least seriously considering adopting digital marketing.	3.990	0.775	0.9	0.910	0.856	0.852
	COM2	Most of our competitors use digital marketing as a competitive dimension.	3.958	0.813	0.882			
	COM3	I fear that unless we adopt digital marketing, our sales and market share will decrease.	3.958	0.839	0.853			
PU (Daragmeh et al., 2021)	PU1	I believe using digital marketing increases the performance of our organisation.	4.000	0.754	0.937	0.965	0.952	0.951
	PU2	I can achieve things in a quicker way using digital marketing practices.	4.058	0.789	0.918			
	PU3	Digital marketing helps achieve our tasks in a cheaper way.	4.031	0.787	0.889			
PEOU (Daragmeh et al., 2021)	PEOU1	The process of using digital marketing is easy to understand.	4.031	0.787	0.912	0.939	0.905	0.903
	PEOU2	It is easy for an organisation to adopt and use digital marketing practices.	4.031	0.794	0.926			
	PEOU3	I will be able to understand and perform digital marketing activities easily.	4.031	0.774	0.959			
	PEOU4	I am sure that all the responsible employees can easily understand and perform digital marketing activities.	4.037	0.757	0.949			
Intention to adopt digital marketing (Mathew & Soliman, 2021)	DMA1	We intend to use digital marketing in the future.	4.026	0.721	0.925	0.944	0.914	0.911
	DMA2	We predict that our business will adopt digital marketing in the future.	4.094	0.762	0.937			
	DMA3	Our organisation is ready to adopt digital marketing in the near future.	4.010	0.775	0.901			

Table 3. Discriminant validity using AVE^2 Versus Correlation (F&L criterion) ($n = 191$).

Factor	AVE	1	2	3	4	5	6	7	8	9	10
(1) CON	0.839	**0.916**									
(2) SEC	0.865	0.026	**0.93**								
(3) MGC	0.768	0.684	−0.03	**0.876**							
(4) RES	0.710	0.497	−0.098	0.57	**0.843**						
(5) GOV	0.816	0.548	−0.075	0.639	0.756	**0.903**					
(6) CUS	0.814	0.539	0.002	0.595	0.696	0.558	**0.902**				
(7) COM	0.771	0.496	−0.024	0.617	0.505	0.59	0.584	**0.878**			
(8) PU	0.873	0.69	−0.031	0.771	0.594	0.585	0.638	0.696	**0.915**		
(9) PEOU	0.837	0.625	−0.084	0.7	0.545	0.71	0.671	0.586	0.762	**0.934**	
(10) DMA	0.849	0.514	−0.1	0.637	0.52	0.679	0.574	0.45	0.719	0.777	0.921

with other variables in the model (Table 3). The other statistical method of insuring discriminant validity is the use of hetrotrait-monotrait (HTMT) ratio. Discriminant validity was established as the correlational values fall below the 0.85 maximum threshold.

4.3. Model goodness of fit tests

The coefficient of determination (R^2) values specifies the amount of variation of a dependent variable predicted by its antecedents in the model (Hair et al., 2017). Following Chin's (1998) recommendation, we regard the values of 0.670, 0.333 and 0.190 as substantial, moderate and week powers of explanations. In this study, all the R^2 values were between moderate and substantial (Table 4).

Another measure of the quality for the structural model is the Q^2 which is calculated by using the blindfold option (Chin, 1998). As shown in Table 6, all Q^2 values were well above 0.35 which shows that the ability of the model in predicting the endogenous variables was overwhelmingly strong. The thresholds are 0.02 = weak; 0.15 = moderate, and 0.35 = strong (Henseler et al., 2009).

4.4. Structural model

Following the recommendations of Henseler et al. (2009), bootstrapping method with 5000 resampling was used with 191 cases. Among the technological variables, convenience was found to be a significant determinant of PU ($p < 0.05$) and PEOU ($p < 0.1$) with coefficients of 0.143 and 0.119, and p – values of 0.013 and 0.083 respectively. Hypotheses H_{2a} and H_{2b}, developed in relation to the effect of security concern on PU and PEOU respectively were not supported. The effect of managerial commitment on PU and PEOU of digital marketing was also found to be significant with coefficients with β = 0.223 and 0.179, and p – values of 0.008 and 0.019 respectively, supporting H_{3a} and H_{3b}. Hover, the hypotheses with respect to resource availability (H_{4a} and H_{4b}) are not supported. Among, the environmental factors, government regulation and customer pressure showed strong effect on PU and PEOU of digital marketing supporting our hypotheses. While the effect of competitors pressure on PEOU (H_{7b}) is significant, its effect on PU (H_{7a}) was not supported with β = 0.064 ($p = 0.291$).

To investigate the mediation effect of PU PEOU in the relationships between the constructs considered in the TOE framework and intention to adopt digital marketing, the direct and direct effects were compared. Hair et al. (2017) stated that it can be concluded that from PLS-SEM results, if the direct and indirect (through mediator) relationships of the exogeneous and endogenous variables are significant, there is partial mediation. Full mediation occurs when the direct effect becomes insignificant when the mediator is included in the model, whereas mediation effect is rejected if the indirect effect is negligible (Table 5).

There is a partial mediation on convenience, managerial commitment, government regulation, competitor pressure and PEOU as both the direct and indirect effects of these constructs on intention to adopt digital marketing are significant. There was no mediation on security concern and resource availability since there is neither direct nor indirect significant relationship was observed (Hair et al., 2017). A summary of the indirect effects is presented in Table 6.

Results showed that LDS does not significantly alter the relationship between PU and intention to adopt digital marketing. More unexpectedly, LDS had a negative significant moderation effect on the relationship between PEOU and intention to adopt digital marketing (β = −0.246, p-value = 0.008). This finding is further depicted in Figure 2(a and b).

Table 4. R^2 and Q^2 indices ($n = 191$).

Endogenous variable	R^2	R^2 Adjusted	Q^2
PU	0.791	0.782	0.598
PEOU	0.674	0.661	0.496
DMA	0.721	0.713	0.566

Table 5. Hypothesis testing ($n = 191$).

Relationship	Coefficient	p – values	Decision
$H_{1a:}$ CON → PU	0.143	0.031	Supported
$H_{1b:}$ CON → PEOU	0.119	0.083	Supported
$H_{2a:}$ SEC → PU	0.02	0.598	Not Supported
$H_{2b:}$ SEC → PEOU	−0.042	0.313	Not Supported
$H_{3a:}$ MGC → PU	0.223	0.008	Supported
$H_{3b:}$ MGC → PEOU	0.179	0.019	Supported
$H_{4a:}$ RES → PU	0.048	0.359	Not Supported
$H_{4b:}$ RES → PEOU	−0.009	0.877	Not Supported
$H_{5a:}$ GOV → PU	0.21	0.003	Supported
$H_{5b:}$ GOV → PEOU	0.319	0.000	Supported
$H_{6a:}$ CUS → PU	0.113	0.074	Supported
$H_{6b:}$ CUS → PEOU	0.237	0.002	Supported
$H_{7a:}$ COM → PU	0.064	0.291	Not Supported
$H_{7b:}$ COM → PEOU	0.141	0.026	Supported
$H_{8:}$ PEOU →PU	0.269	0.001	Supported
$H_{9:}$ PU → DMA	0.264	0.004	Supported
$H_{10:}$ PEOU → DMA	0.342	0.000	Supported
$H_{11a:}$ Moderation on PU→DMA	0.070	0.431	Not Supported
$H_{11b:}$ Moderation on PEOU → DMA	−0.246	0.008	Not supported *

Gender, age, and positional role of respondents were treated as control variables in our model. All the three demographic variables were found to be insignificant influencers of intention to adopt digital marketing.

4.5. Importance – performance map analysis (IPMA)

While PLS – SEM results provide information on the relative importance of constructs in the structural model, importance performance map analysis (IPMA) by offering information about the performance of each construct in predicting a target variable (intention to adopt digital marketing in our case) (Hair et al., 2023). Figure 3 shows the result of IPMA for the path model including both indirect (TOE variables) and indirect (TAM variables). The performance of PEU was superior among all the predictors of intention to adopt digital marketing, followed by PU. On the other hand, security concern was found to be the least critical variable. In aggregate terms, while the performance of TAM variables dominates TOE variables considered in this model, managerial commitment and government regulation were the most performing constructs among TOE variables. Technological variables including convenience and security concern were found to be least critical.

5. Discussion of results

The aim of this study was to investigate factors that influence tourism firms' intention to adopt digital marketing from the perspective of an emerging economy. We deployed TOE framework

Table 6. Direct and indirect /mediation effects ($n = 191$).

	Direct effect		Indirect effects	
Linkage	Coefficient	p – value	Coefficient	p – value
CON → DMA	0.027	0.736	0.087	0.006
SEC → DMA	−0.059	0.273	−0.012	0.522
MGC → DMA	0.260	0.000	0.133	0.003
RES → DMA	0.070	0.434	0.009	0.774
GOV → DMA	0.392	0.000	0.187	0.001
CUS → DMA	0.173	0.048	0.128	0.002
COM → DMA	−0.072	0.325	0.075	0.027
PEOU →DMA	0.470	0.000	0.071	0.000

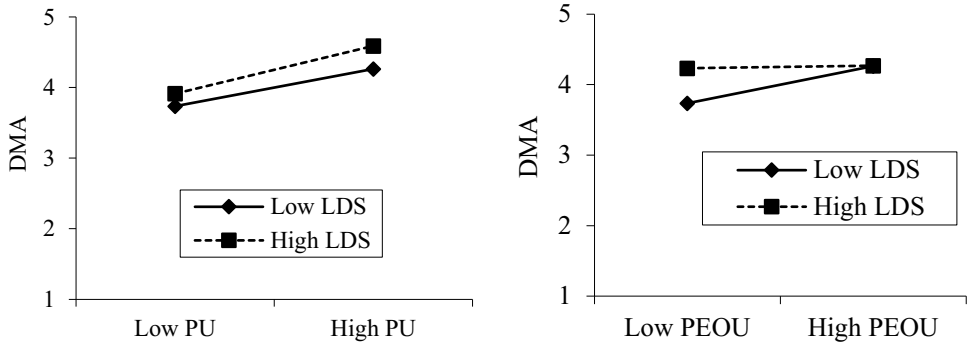

Figure 2. (a) Moderation effect of LDS on the relationship between PU and intention to adopt digital marketing. (b) Moderation effect of LDS on the relationship between PEOU and intention to adopt digital marketing.

and TAM model to explain the most important determinants of intention to adopt digital marketing with special reference to Ethiopian tourism industry. TOE framework variables were used as antecedents whereas TAM variables (PU and PEOU) were employed as mediators.

Among the technological factors, we have found a significant relationship between convenience and PU, consistent with the findings of prior studies (e.g. Jiang et al., 2013; Kasilingam & Krishna, 2022). Similarly, convenience was also found to be a significant influencer of PEOU of digital marketing, confirming the findings of Kasilingam and Krishna (2022). Tourism firms in emerging economies need digital marketing tools to improve their communication and engagement with travellers and lower their transaction costs. On the other hand, there was no significant relationship between security concern and both PU and PEOU. Although this contradicts with prior findings of firm level investigations (e.g. Abed, 2020; Lee, 2019), the plausible explanation is due to two reasons; (1) although data security and privacy are the primary risks of digital marketing usage, finding mitigation mechanism is always better than not adopting it because the technology is the future of marketing and advantages outweigh such security issues and other drawbacks of digital marketing; (2) unlike pre-adoption factors such as convenience and top management support, security concern is more of a post-adoption issue. Therefore, with the existing low adoption rate of digital marketing in Ethiopian context, it may be difficult for firms to foresee such post-adoption concerns.

Among the organisational factors proposed by the TOE framework, managerial commitment and resource availability were identified as potential determinants of firms' decision to adopt digital

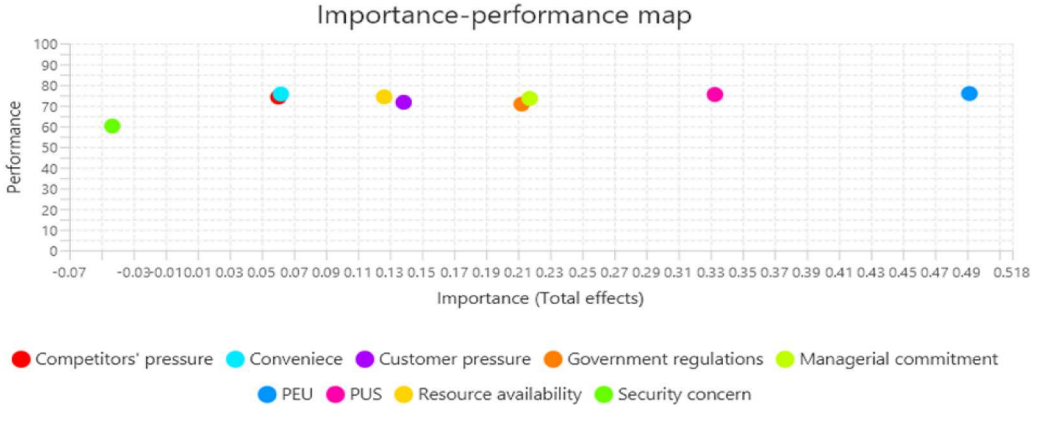

Figure 3. Importance – performance map analysis result.

marketing. Managerial commitment significantly affects both PU and PEOU consistent with prior findings (e.g. Khayer et al., 2020; Wang et al., 2019). In contrast, there was no significant relationship between resource availability and both PU and PEOU. This contradicts with (e.g. Hsu et al., 2018; Jiao et al., 2020; Wang et al., 2010). Such finding is highly attributed to the fact that the adoption of digital marketing does not require sophisticated resources (Melović et al., 2020). Basic devices and internet connection are sufficient infrastructures to use digital marketing. These resources are readily available at most tourism firms in developing economies. The third group of influencers of technology adoption according to TOE framework, is external factors.

As hypothesised, government regulation significantly affects both PU and PEOU of digital marketing. Regulations in developing economies have been consistently found as key determinants of technology adoption (Bhimani et al., 2022). Similarly, pressure from customers was found as important predictor of PU and PEOU of digital marketing. This is largely because international tourists, often from more advanced economies, heavily rely on digital tools for booking their travels. Tour operators in emerging markets are in a constant pressure to utilise these tools to satisfy the needs of their customers.

In addition, there is strong empirical evidence on the link between PEOU and PU. Consistent with the findings of Mouakket and Aboelmaged (2021), Wali et al. (2016) and in support of our hypothesis, PEOU has also a significant positive influence on PU. Finally, PU and PEOU are also significant influencers of intention to adopt digital marketing, supporting prior empirical evidence (e.g. Chatterjee et al., 2021; Daragmeh et al., 2021; Lai, 2016).

LDS was not found to be a significant moderator on the relationships of both PU and PEOU on intention to adopt digital marketing. Although these results contradict with prior findings (e.g. Borah et al., 2022; Liu et al., 2018; Royle & Laing, 2014), this may be due to two reasons. First, leaders with a clear understanding of the technology itself are more likely to have knowledge about the internal and external challenges being faced by the industry as well as the existing practicability to adopt digital marketing. Second, in a different model, we treated LDS as an independent variable and discovered a significant relationship with intention to adopt digital marketing. Therefore, although it is not one of the constructs proposed by either TOE framework or TAM (one of the reasons to treat the variable as a moderator in this study), it may be important in the future to deeply investigate other theories and frameworks in which digital skill can be seen as one of the constructs affecting technology adoption decisions rather than a moderating variable. Yu et al. (2017) have also found similar results in their quest for the determinants of ICT adoption behaviour.

6. Implications

6.1. Theoretical implications

The study has examined what determines tourism firms' intention to adopt digital marketing as a marketing strategy from an emerging economy perspective. The researchers have combined the TOE framework and TAM for a comprehensive investigation of potential determinants. The TOE framework helps to enlist both the internal and external influencing factors whereas the TAM explains the mediating behavioural factors (PU and PEOU) which determine the intention to adopt digital marketing. Although TOE framework and TAM are used for firm-level and individual investigations of technology adoption respectively, we have shown the complementary role of variables of these prominent theories for a broader understanding of potential determinants of digital marketing adoption in the tourism sector (Chatterjee et al., 2020; Chatterjee et al., 2021; Katebi et al., 2022).

Our findings also revealed that firms' intention to adopt digital marketing in the tourism industry of emerging economies is attributed to external factors such as national regulatory framework,

industry pressure, and customer influence rather than organisational and technological related variables such as resource availability and security concern.

TOE and TAM based research have heavily relied on the use of gender, age, firm size, and other demographic variables as moderators and there is ample empirical evidence on the moderating role of those variables (Chawla & Joshi, 2018). In this study, we have introduced LDS as a moderating variable on the effect of PU and PEOU on intention to adopt digital marketing responding to the calls of Yu et al. (2017) and Van Laar et al. (2017).

6.2. Managerial implications

Based on the findings of this study, the following practical implications can be forewarned to enhance future adoption of digital marketing among firms in the tourism industry of emerging economies. Managerial commitment is a vital organisational factor influencing PU and PEOU of digital marketing. Since adopting digital marketing is a change implementation process for organisations, strong initiation and lasting commitment from top management (change agents) is necessary for firms to adopt digital marketing tools. On the other hand, resource availability has little contribution indicating that it does not require expensive resources and sophisticated digital infrastructure to adopt digital marketing (Melović et al., 2020). Therefore, firms can consider the implementation of digital marketing with minimum investment in infrastructure and digital resources. Devising conducive cyber regulation is also worth considering for policy makers. Currently, it is legally banned to make international transactions in Ethiopia and banks do not issue credit cards and hard currency accounts. Such regulatory pitfalls create additional constraints to tourism firms from adopting and using digital marketing tools. This necessitates short and long-term policy and regulatory interventions. Moreover, managers need to prioritise customer feedback and build strategic collaboration with other players of the industry in order to fully capitalise on the advantages of digital marketing technology. Finally, both PU and PEOU play a vital role in affecting firms' intention to adopt digital marketing hence managers of tourism firms need to be sincere in clarifying the utilities of the technology to their employees and the rest of stakeholders.

7. Limitations and future research

The following limitations are to be noted and can be addressed in future studies. In testing our hypotheses, we relied on a cross-sectional survey data obtained from 191 respondents. For a better understanding of the determinants of firms' intention to adopt digital marketing, survey data can be complemented with interview data or experimental designs and with a larger sample size. In addition, this study examined the tourism industry's readiness for digital marketing in developing economies, with a specific focus on the Ethiopian tourism sector. To enhance the generalizability of the findings and mitigate potential biases, we suggest future research to explore this topic in a multi-country context. Moreover, although digital marketing is considered as one of the technological innovations (Dwivedi et al., 2020; Ritz et al., 2019), the study of its adoption may be broad in scope as it encompasses a range of other subdomains such as social media marketing, influencer marketing, email marketing, etc. Therefore, investigating the adoption of a specific subcomponents of digital marking in the tourism industry at a time will be insightful. Finally, a comparative study between developed and emerging markets could help see the underlining differences in digital marketing readiness of the tourism industry among different economies.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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