

Yoon, Cheolho

Article

Factors affecting the adoption of digital marketing in non-profit organizations: An empirical study

Administrative Sciences

Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

Suggested Citation: Yoon, Cheolho (2024) : Factors affecting the adoption of digital marketing in non-profit organizations: An empirical study, *Administrative Sciences*, ISSN 2076-3387, MDPI, Basel, Vol. 14, Iss. 1, pp. 1-15, <https://doi.org/10.3390/admsci14010010>

This Version is available at:

<https://hdl.handle.net/10419/320833>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

Article

Factors Affecting the Adoption of Digital Marketing in Non-Profit Organizations: An Empirical Study

Cheolho Yoon 

Department of Business Administration, Mokpo National University, Mokpo 534-729, Republic of Korea; carlyoon@empal.com

Abstract: The study aims to enhance the sustainability of non-profit organizations by analyzing factors contributing to the adoption of digital marketing by non-profit organizations. For this purpose, this study presented a research model on digital marketing adoption reflecting the characteristics of non-profit organizations based on the technology–organization–environment (TOE) framework. The research model was analyzed using structural equation modeling on a sample of 303 staff members of non-profit organizations in South Korea. The results of the study suggest that entrepreneurship, competitive pressures, digital environment change, compatibility, and lack of human resources have an effect on the adoption of digital marketing in non-profit organizations. The findings can contribute to helping non-profit organizations better engage in digital marketing activities and, therefore, strengthen their sustainability by being more efficient in obtaining the financial resources they need.

Keywords: non-profit organizations; entrepreneurship; digital marketing; TOE framework

1. Introduction

Non-profit organizations (NPOs) aim to benefit society as a whole or to achieve an interest group's purpose instead of seeking profit for owners or shareholders. Types of non-profit organizations include charitable organizations, social advocacy groups, social welfare organizations, and foundations. NPOs carry out activities to secure financial resources not only for the purpose of the organization but also for the survival of the organization. These activities aimed to obtain financial support from different organizations or institutions, such as governments, businesses, foundations, or even ordinary citizens. In particular, as securing resources through donations from ordinary citizens symbolizes the reliability and transparency of NPOs, many NPOs make strategic efforts to collect donations from ordinary citizens (Rho 2015). To make these strategic efforts, the necessity of marketing actions to target customers has been suggested to NPOs for a long time (Kotler 1982). Although the necessity and application of marketing methods in NPOs have been discussed for a long time, NPOs' marketing efforts have traditionally been conducted based on mass media, such as TV, radio, and newspapers. However, the development of digital marketing using Internet technology and social media nowadays provides new opportunities for the marketing activities of NPOs (Krueger and Haytko 2015; Philips 2022).

Digital marketing refers to online-based marketing using digital technologies, such as the internet, mobile, social media, and search engines, to promote products or services (Denga et al. 2022). Specific digital marketing techniques include social media marketing, email and short message service (SMS) marketing, search engine optimization (SEO), content marketing, and more (Choi and Yoo 2018). This online-based digital marketing is expected to be advantageous to the marketing efforts of financially disadvantaged NPOs (Das and Lall 2016) because it is more cost-effective than traditional marketing, such as television, radio, or newspapers (Durmaz and Efendioglu 2016; Philips 2022). However, the utilization of digital marketing by NPOs is still low, and little is known academically about



Citation: Yoon, Cheolho. 2024. Factors Affecting the Adoption of Digital Marketing in Non-Profit Organizations: An Empirical Study. *Administrative Sciences* 14: 10. <https://doi.org/10.3390/admsci14010010>

Received: 2 December 2023

Revised: 22 December 2023

Accepted: 29 December 2023

Published: 31 December 2023



Copyright: © 2023 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

it. Therefore, the main purpose of this study is to provide data for NPOs to promote the adoption of digital marketing by identifying factors that influence the adoption of digital marketing by NPOs. By identifying these factors, recommendations can be made to NPOs to better engage in digital marketing activities that make them more efficient in obtaining the financial resources they need.

As academic research on the factors influencing digital marketing adoption is still scarce (Ritz et al. 2019), and research related to information technology (IT) in NPOs is also lacking (Zhang et al. 2010), this study proposes and analyzes a digital marketing adoption model for NPOs, which reflects the characteristics of NPOs based on the theoretical model of Tornatzky and Fleischner's (1990) technology–organization–environment (TOE) framework, which has been most extensively used in IT adoption research in organizations. Through the analysis of the research model, this study can contribute to strengthening the sustainability of NPOs and deriving theoretical contributions to the introduction of digital marketing and practical utilization plans.

2. Literature Review

2.1. Digital Marketing for NPOs

Digital marketing, a new approach to digitally based marketing (Järvinen et al. 2012), is defined as various promotional activities used to promote and sell a company's various services, brands, and products to customers using digital technologies and online channels (Royle and Laing 2014). In other words, it means marketing activities using all digital marketing technologies, such as digital tools, platforms, and marketing techniques, including online marketing activities using online channels. Over the past half-century, digital technologies for marketing have been continuously developed, and today, various types of digital marketing technologies and techniques, such as email marketing, affiliate marketing, display advertising, pay-per-click, mobile marketing, social media marketing, SMS marketing, SEO, search engine marketing, and digital marketing analysis, content marketing, are actively used in practice (Yasmin et al. 2015; Choi and Yoo 2018). Digital marketing using these digital technologies provides various advantages over traditional marketing (Durmaz and Efendioglu 2016). According to Das and Lall (2016), digital marketing has the following advantages over traditional marketing: greater exposure to customers, cost-effectiveness, easy measurement of marketing activities through tools such as Google Analytics, customer engagement through interactive communication, easy redefinition of strategy, better brand development, and a level playing field. In particular, the level playing field gives small businesses that do not have the resources to organize marketing campaigns with the same reach as large organizations the opportunity to implement a variety of marketing strategies through digital marketing. Therefore, most businesses today, including small businesses, actively use these digital marketing technologies to reach more customers, increase brand awareness, and generate leads and sales (Moncey and Baskaran 2020).

In general, NPOs do not pursue the interests of their owners or shareholders but rather the interests of society or achieve the goals of an interest group. As a result, digital marketing for NPOs can be used to achieve their goals or survive as an organization rather than to increase awareness or sales of their products, services, and brands to customers, as it is for businesses. This means that NPOs can have the opportunity to use digital marketing to help them achieve their goals by increasing donations, engaging existing and future volunteers, and communicating their mission and goals to new audiences (Krueger and Haytko 2015). According to Philips (2022), NPOs can greatly benefit from digital marketing because it allows them to recruit donors, increase finances, engage volunteers, and fulfill their goals. Moreover, as NPOs are generally more interested in doing more with less, digital marketing is effective in raising the awareness of organizations' causes among their audiences. Specifically, as digital marketing is based online, it can effectively influence opinion leaders, politicians, and the general public to push for great changes that benefit an NPO's cause. In conclusion, digital marketing can be utilized as a powerful tool for NPOs to raise awareness, increase financial support, and make an impact on their causes.

2.2. Characteristics of NPOs

NPOs are entities established for a specific purpose other than generating a profit for their members, owners, or stakeholders. Typically, NPOs are created to serve a social, educational, cultural, or charitable purpose (Kenton 2023). Therefore, the first characteristic of NPOs is that they have a specific social purpose. This purpose is usually reflected in the organization's mission statement, which outlines the organization's goals and objectives. Through this, members of NPOs have a common goal. The second characteristic of NPOs is their decision-making structure. NPOs are typically managed by a board of directors that sets the organization's strategy and oversees its operations (Miller-Millesen 2003). The board is usually made up of volunteers who are passionate about the organization's mission. On this board of directors, decisions are made on the main points of the organization. This represents a different characteristic from for-profit companies, in which the major decisions depend on the chief executive officer (CEO). The third characteristic of NPOs is that they have limited resources (Lettieri et al. 2004). NPOs generally have limited financial resources because they do not strive to generate large amounts of revenue. They rely heavily on donations, grants, and other funds to run their organizations. Therefore, this financial situation leads to the vulnerability of human resources, and, as a result, they often suffer from a lack of human and material resources to undertake new work.

Recently, entrepreneurship has drawn attention due to the organizational characteristics of NPOs, as described above (Weerawardena and Mort 2012). Nowadays, entrepreneurship represents an opportunity for NPOs because it allows for identifying new ways to leverage and achieve goals more effectively. Entrepreneurship encourages members of an organization to think creatively and identify new ways to solve social problems (Chen 2007). It can also help to build on this creativity to make the most of limited resources, identify new funding sources, and diversify revenue streams. Entrepreneurship also increases the likelihood of collaborating with other organizations, businesses, and government agencies to achieve organizational goals (Ketchen et al. 2007). Therefore, NPOs operating with an entrepreneurial mindset are likely to succeed in creating sustainable solutions to social and environmental problems, which are at the core of their mission. In conclusion, common goals, a lack of financial and human resources, and entrepreneurship can be considered the major factors affecting NPOs to carry out new projects.

2.3. Research on IT Adoption in NPOs

Despite the fact that IT has been used successfully in many different types of organizations over the past half-century and that NPOs play a large role in our society, research on the adoption of IT by NPOs is very sparse (Huang and Karthikeyan 2015). Existing studies on IT adoption in NPOs are divided into two categories: individual IT acceptance and organizational IT adoption. As shown in Table 1, studies on individual acceptance of IT have mainly used the technology acceptance model (TAM) (Davis 1989), the theory of planned behavior (TPB) (Ajzen 1991), the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al. 2003), and studies on organizational adoption of IT have mainly used the adoption model for small and medium-sized enterprises (SMEs) and the TOE framework (Tornatzky and Fleischner 1990) as the underlying theories. Previous studies on IT adoption in NPOs have used the adoption model for SMEs as the underlying theory for NPOs, based on the argument that NPOs have similar characteristics to SMEs (MacKay et al. 2004). However, the adoption model for SMEs used in these studies is a model consisting of perceived benefits, organizational readiness, and external pressures, which was first presented in Iacobou et al. (1995) study based on the TOE framework. In other words, previous research on IT adoption in NPOs has used the TOE framework as the primary underlying theory. Therefore, we use the TOE framework as the foundational theory of digital marketing adoption models for NPOs.

Table 1. Research on the adoption of IT in NPOs.

Researcher	Information Technology	Base Theory	Target
Napoli et al. (2000)	Internet	-	individual
MacKay et al. (2004)	E-commerce	Adoption model for SMEs	Organization
Zhang and Gutierrez (2005)	IT	TPB	individual
O'Hanlon and Chang (2007)	Internet	Adoption model for SMEs	Organization
Ndubisi (2007)	E-commerce	-	Organization
Carlos Pinho and Macedo (2008)	Internet	Adoption model for SMEs	Organization
Curtis et al. (2010)	Social marketing	UTAUT	individual
Zorn et al. (2011)	ICT	Institutional theory	Organization
Miranda et al. (2016)	ERP	DOI	Organization
Wraikat et al. (2017)	MIS	-	Organization
Wright et al. (2017)	SaaS	TOE framework	Organization
Albanna et al. (2022)	Social marketing applications	TAM/UTAUT	Organization

The TOE framework is a comprehensive theory related to the adoption of technological innovation in organizations. TOE refers to the three contexts of an organization that influence the process of adopting a technological innovation: technological (T), organizational (O), and external environmental (E). The technological context encompasses all internal and external technologies within an organization and includes not only the technologies but also the organization's processes and equipment holdings. However, much of the existing research on technology adoption has focused on the attributes of the technology being adopted as factors in the technological context. The organizational context refers to organizational characteristics and resources. Existing studies on technology adoption include not only the structural characteristics of the organization, such as the size and resources of the company, but also the specific attribute variables of the organization to be introduced, such as the innovativeness of the CEO (Thong 1999), as organizational context factors. The external environmental context refers to the external circumstances surrounding an organization, such as the size and structure of the industry, the company's competitors, and the regulatory environment. Existing studies on technology adoption also include factors such as the development of information technologies, including digital environmental changes and relationships with the government in the external environmental context (Oliveira and Martins 2011).

The TOE framework has been applied in studies on general information systems (IS) in organizations, specific IT/IS adoption, and, more recently, social media adoption in organizations, which is technically similar to digital marketing, the subject of this study (e.g., AlSharji et al. 2018; Ali Qalati et al. 2021). In addition, the TOE framework has also been actively used as a theoretical framework in recent studies of digital marketing adoption in various organizations (Sharma and Sharma 2023; Ullah et al. 2023; Patil et al. 2022). In particular, Ullah et al. (2023) argued that the TOE framework is particularly useful for examining the factors that influence an organization's adoption of new technologies in a study related to SMEs' adoption of digital marketing. Therefore, this study utilizes the TOE framework as a grounded theory.

3. Hypothesis Development

To develop hypotheses, we employ a research model that is based on the TOE framework and reflects on the characteristics of NPOs. The research model posits that variables in three areas of TOE's technological context (relative advantage, complexity, and compatibility), organizational context (common goals, entrepreneurship, financial cost, and lack of

human resources), and external environmental context (competitive pressure and digital environment change) affect NPOs' adoption of digital marketing. Figure 1 represents the research model.

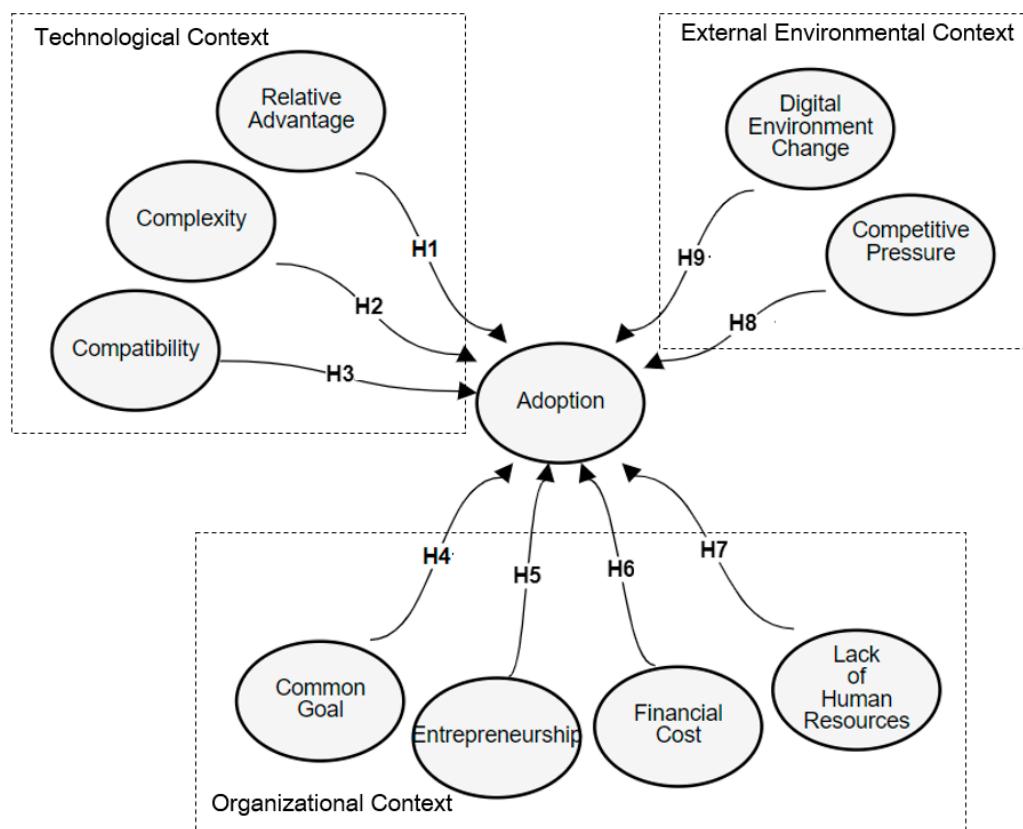


Figure 1. Research model.

Although the TOE framework defines technology context as all technologies within an organization, including processes, most studies on technology adoption have used the characteristics of the technology being adopted as variables in the technology context (Oliveira and Martins 2011). In particular, since information technologies are generally innovative, previous studies (Alshamaila et al. 2013; Maroukhani et al. 2020; Ullah et al. 2023) have used the attributes of innovation from the diffusion of innovations theory (Rogers 2003). We also propose Rogers's (2003) innovation attributes of relative advantage, complexity, and compatibility as variables of the technology context that influence digital marketing adoption in organizations.

Relative advantage is the degree to which a new technology is perceived to be superior to its predecessor (Rogers 2003). Generally, people perceive technologies with high relative advantages as useful because they provide economic benefits, such as increased productivity or cost savings. Therefore, previous studies have argued that when people perceive a high relative advantage for a particular technology, they are more likely to adopt it (Alshamaila et al. 2013; Maroukhani et al. 2020). Digital marketing can achieve similar effects at a fraction of the cost and effort of traditional marketing, and it can also allow for one-to-one marketing and customer personalization that is not possible with mass marketing, such as TV and radio. These relative advantages of digital marketing are expected to have a positive impact on the adoption of NPOs' digital marketing.

H1: *Relative advantage is positively associated with the adoption of digital marketing in NPOs.*

Complexity is the degree of difficulty in understanding and using a new technology (Rogers 2003). Rogers (2003) stated that the more people perceive the complexity of a

technology, the less they intend to use it, followed by resistance to accepting it, which ultimately acts as a barrier to its adoption. In other words, the complexity of using technology is negatively related to its adoption.

H2: *Complexity is negatively associated with the adoption of digital marketing in NPOs.*

Compatibility is the degree to which a new technology aligns with existing organizational values and practices (Rogers 2003). The IT adoption literature has shown that compatibility has a positive and strong effect on the adoption of new technologies (Kwak et al. 2023). As the need for digital marketing is generally recognized today, it is expected that NPOs will find it easier to adopt digital marketing if they perceive it as being in line with their organization's purpose, the services they provide, and their organizational structure and culture.

H3: *Compatibility is positively associated with the adoption of digital marketing in NPOs.*

In the TOE framework, organizational context represents the characteristics and resources of an organization. We propose the common goal of organizations as a key characteristic of NPOs, entrepreneurship as an organizational characteristic variable, and financial costs and lack of human resources as resource variables. Since organizational readiness is important in technology adoption, financial costs and the lack of human resources have been frequently used as organizational variables in existing TOE framework-based studies (Iacobou et al. 1995; Kwak et al. 2023).

Common goals represent the degree to which members of an organization strive to achieve its objectives. Common goals contribute to achieving the organization's goals by ensuring that all members of the organization are aligned, collaborate, motivate, and take responsibility. Thus, if members of the organization have a high common goal, they actively develop ideas that contribute to effectively achieving the organization's purpose and are willing to collaborate to achieve the goal. Generally, NPOs have a special purpose, and the need for marketing has been suggested as an activity to secure financial resources to achieve the purpose. Today, digital marketing is emerging as an effective marketing tool even for NPOs. As a result, NPOs with high common goals are likely to actively accept digital marketing, which can be a financial basis, to achieve their special purpose.

H4: *Common goals are positively associated with the adoption of digital marketing in NPOs.*

Entrepreneurship refers to an adventurous and creative spirit that seeks to create, develop, and manage new business ventures with the goal of achieving success and profitability despite some risks and uncertainties. Since entrepreneurship generally contributes to taking risks and finding innovative solutions to new opportunities and problems, people high in entrepreneurship identify opportunities in the market and use their skills, knowledge, and resources to start and grow a business (Polas and Raju 2021). Therefore, people with an entrepreneurial mindset continuously find ways to improve their businesses and actively utilize IS and the latest information technologies for this purpose. For a long time, information technologies have been recognized by entrepreneurs as the tools they need to manage their businesses effectively, improve decision-making processes, and stay ahead of their competitors (Harb and Shang 2021). Therefore, people with high entrepreneurship will perceive digital marketing as a tool that will maintain their organization's competitiveness and bring new opportunities in today's business environment, and they will actively utilize it.

H5: *Entrepreneurship is positively associated with the adoption of digital marketing in NPOs.*

Financial costs are the extent to which an organization feels burdened by the costs incurred to introduce and operate a new technology (Kwak et al. 2023). In past studies,

financial costs have been suggested as an important determinant of SME adoption of new technologies (Kuan and Chau 2001). Although digital marketing requires fewer operating costs than traditional marketing, the initial investment or operating costs may be a barrier for NPOs with weaker finances than SMEs. Therefore, financial costs are expected to have a negative impact on the adoption of digital marketing by NPOs:

H6: *Financial costs are negatively associated with the adoption of digital marketing in NPOs.*

Lack of human resources is the extent to which an organization lacks appropriate personnel to introduce and operate a new technology (Kwak et al. 2023). In previous studies on technology adoption by SMEs with a weak workforce structure, the vulnerability of human resources was found to have a negative impact on technology adoption (Yoon et al. 2020). Most NPOs today are financially weak compared to for-profit organizations, and NPOs can experience problems in securing a specialized workforce to perform digital marketing activities. Therefore, the shortage of manpower in NPOs is expected to have a negative impact on the adoption of digital marketing.

H7: *Lack of human resources is negatively associated with the adoption of digital marketing in NPOs.*

In the TOE framework, the external environment context refers to environmental characteristics that can affect an organization's business. External environmental variables that have been mainly used in previous TOE framework-based studies are competitive government support, pressure, and digital environment change (Kwak et al. 2023). Although government support has been used as a major factor in research on technology adoption by organizations in the past, it is excluded in our model because the Korean government does not provide support to adopt the digital marketing of NPOs.

Competitive pressure is the degree of pressure from competitors in the industry regarding competitive advantages such as price, quality, and service (Lee and Yoon 2022). Previous research suggests that a fiercely competitive environment is an important factor in determining organizations' adoption of new IT (Jeon et al. 2006). Today, NPOs are also fiercely competing to raise donations. In particular, the COVID-19 outbreak has intensified this competing situation. Therefore, competitive pressure is expected to have a significant impact on introducing digital marketing by NPOs as a way to raise more donations.

H8: *Competitive pressure is positively associated with the adoption of digital marketing in NPOs.*

The digital environment change is the degree to which companies recognize the need to use new information technologies in their industrial environment (Lee and Yoon 2022). As today's digital-based industry has a great impact on all organizations regardless of their type or size, changes in the digital environment are emerging as a significant external environmental factor when all organizations make their major decisions, such as the introduction of IT. It has become an inevitable reality for NPOs to use online-based technologies as well. Therefore, changes in the digital environment are expected to have an important impact on NPOs' introduction of digital marketing.

H9: *Digital environment change is positively associated with the adoption of digital marketing in NPOs.*

4. Research Methodology

4.1. Data Collection

To collect NGO-related data to analyze this research model, we visited the Jeonnam Social Welfare Association, a representative association of Korean non-profit organizations, and the Jeonnam Social Workers Association, an association of leaders, to explain this study

and seek cooperation in data collection. Data were collected online from members of these associations and their colleagues using a mobile questionnaire. A total of 303 questionnaires were collected. Among the respondents, 128 were male and 175 were female, with 77.6% of those in their 40s or older. Among the NPOs that participated in the survey, social welfare facilities accounted for the majority (83.3%), and about 77% of NPOs had less than 50 regular staff. Descriptive statistics for respondents and NPOs are provided in Table 2.

Table 2. Descriptive statistics of respondents and NPOs.

Measure	Value	Frequency	Percentage
Gender	Male	128	42.2
	Female	175	57.8
	-	303	100
Age	20–29	27	8.0
	30–39	47	15.5
	40–49	133	43.9
	Older than 50	96	31.7
Religion	-	303	100
	Atheist	100	33.0
	Christian	148	48.8
	Catholic	37	12.2
	Buddhist	18	5.9
Type of organization	-	303	100
	Social welfare facility	253	83.5
	Civil society organizations	14	4.6
	Culture and art organization	1	0.3
	Charity	3	1.0
	Other	32	10.6
Number of staffs	-	303	100
	10 or less	53	17.5
	11–30	109	36.0
	31–50	71	23.4
	51–80	42	13.9
	81–100	9	3.0
More than 100	More than 100	19	6.3
	-	303	100

4.2. Measurement Development

The measurements for the relative advantage, complexity, and compatibility were developed by adapting from the study conducted by [Lee and Yoon \(2022\)](#). The measurements for common goals and entrepreneurship in the organizational context were newly developed for this research. The measurements for financial costs and lack of human resources were developed by adapting from [Kwak et al. \(2023\)](#). The measurements for competitive pressure and digital environment change were adapted from [Oliveira et al. \(2014\)](#) and [Yoon et al. \(2020\)](#), respectively. All the measurements are shown in Appendix A.

5. Results

We employed the partial least squares structural equation modeling (PLS-SEM) technique to analyze the research model. For analysis using the PLS-SEM, the *plspm* package ([Sanchez et al. 2013](#)) of open-source software R 3.4 was used in this study.

5.1. Measurement Model

The reliability and validity of the measurement items for the constructs were verified based on the measurement model calculated through a confirmatory factor analysis (CFA). As shown in Table 3, the reliability results showed that Cronbach's alpha values and the composite reliability (CR) values representing the internal consistency of the constructs

were all much higher than the recommended value of 0.70 (Bagozzi and Yi 1988). Therefore, it indicates that there is reliability for all measurement items for the constructs.

Table 3. Reliability.

Construct	Item No.	C. Alpha	CR	AVE
Relative advantage	3	0.931	0.956	0.879
Complexity	3	0.861	0.915	0.782
Compatibility	3	0.879	0.926	0.807
Common goal	2	0.936	0.969	0.940
Entrepreneurship	3	0.894	0.934	0.825
Lack of human resources	2	0.877	0.942	0.889
Financial costs	2	0.900	0.952	0.901
Competitive pressure	2	0.876	0.941	0.889
Digital environment change	3	0.819	0.893	0.734
Adoption	2	0.960	0.980	0.962

In the measurement model, when the average variance extracted (AVE) of the construct is higher than 0.50, the convergent validity of a construct is verified (Gefen and Straub 2005). As shown in Table 3, the AVE values for all constructs far exceeded the recommended value of 0.5. The discriminant validity of constructs is confirmed when the correlation value between constructs is less than the square root of the construct's AVE (Gefen and Straub 2005). Table 4 shows that all correlation values between constructs are much smaller than all square roots of AVE.

Table 4. Square root of the AVE and correlations.

Construct	RA	CM	CMP	CMO	ES	CST	HR	CP	DEC	AI
RA	(0.94)									
CM	0.19	(0.88)								
CMP	0.71	0.24	(0.90)							
CMO	0.42	0.07	0.49	(0.97)						
ES	0.54	0.24	0.59	0.68	(0.91)					
CST	0.21	0.44	0.26	0.34	0.29	(0.94)				
HR	0.09	0.24	0.10	0.18	0.15	0.37	(0.95)			
CP	0.19	0.15	0.29	0.32	0.20	0.23	0.31	(0.94)		
DEC	0.68	0.21	0.70	0.45	0.44	0.25	0.25	0.44	(0.86)	
AI	0.62	0.20	0.74	0.46	0.55	0.17	0.08	0.41	0.69	(0.98)
Mean	5.63	5.00	5.26	5.39	4.94	4.78	5.22	5.47	5.68	5.24
SD	1.37	1.33	1.30	1.23	1.36	1.49	1.47	1.23	1.17	1.43

(): Square root of AVE. RA: relative advantage, CM: complexity, CMP: compatibility, CMO: common goal, ES: entrepreneurship, CST: financial costs, HR: lack of human resources, CP: competitive pressure, DEC: digital environment change, AI: adoption, SD: standard deviation.

5.2. Structural Model

Hypothesis testing was conducted using a structural model that shows the causal relationship between the constructs of the research model. Figure 2 shows the structural model for the research model, and Table 5 details the path coefficients, *t*-values, and *p*-values for the structural model.

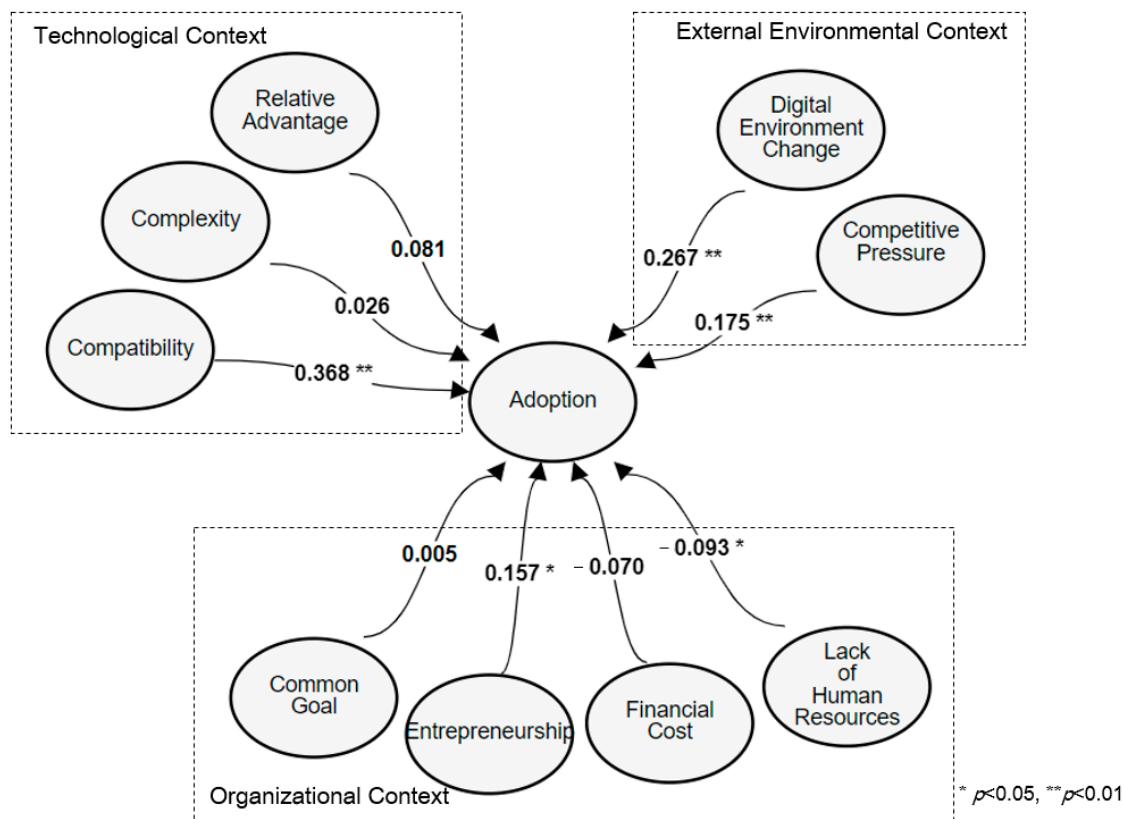


Figure 2. Structural model.

Table 5. Hypothesis testing results.

Hypothesis	Sign	Path Coefficient	t-Value	p-Value	Testing
H1. Relative Advantage → Adoption	(+)	0.081	1.163	0.123	Rejected
H2. Complexity → Adoption	(+)	0.026	0.465	0.321	Rejected
H3. Compatibility → Adoption	(+)	0.368	4.984	0.000	Accepted
H4. Common Goals → Adoption	(+)	0.005	0.073	0.471	Rejected
H5. Entrepreneurship → Adoption	(+)	0.157	2.180	0.015	Accepted
H6. Financial costs → Adoption	(-)	-0.070	-1.249	0.106	Rejected
H7. Lack of Human Resources → Adoption	(-)	-0.093	-2.180	0.015	Accepted
H8. Competitive Pressure → Adoption	(+)	0.175	3.398	0.000	Accepted
H9. Digital Environment Change → Adoption	(+)	0.267	3.817	0.000	Accepted

Adoption R²: 0.652.

As indicated in Table 5, compatibility significantly affects the adoption with $\alpha = 0.000$; however, the relative advantage and complexity have no significant effect on the adoption. Therefore, H3 is supported, while H1 and H2 are rejected. Entrepreneurship significantly affects the adoption with $\alpha = 0.015$, and common goals have no significant effect on the adoption. Also, the financial cost had no significant effect on the adoption, while the lack of human resources significantly affected the adoption with $\alpha = 0.015$. Thus, H4 and H6 were rejected, and H5 and H7 were supported. Lastly, competitive pressure and digital environment change significantly affect the adoption at $\alpha = 0.000$. Thus, H8 and H9 were all supported.

6. Discussion and Conclusions

Discussion points regarding our findings are as follows: First, we found that compatibility with the technological context seems to be the most important analyzed factor. This is consistent with previous studies on technology adoption in organizations (Wang et al.

2010; Alshamaila et al. 2013; Kwak et al. 2023). Moreover, this result expands previous findings to NPOs as a type of organization with different characteristics from conventional for-profit organizations in terms of organizational structure, operations, and culture. For NPO compatibility, this is the degree of fit with organizational characteristics, which seems to represent a very important factor in the adoption of digital marketing. Unexpectedly, the relative advantage (Alshamaila et al. 2013; Ullah et al. 2023) and complexity (Maroufkhani et al. 2020) of the technological context, which have been analyzed as key factors in previous organizational IT adoption studies, did not appear to affect NPOs' digital marketing adoption. According to Yoon et al. (2020), who studied the adoption of smart farms, a low level of understanding of the introduction of technology underestimates the efficiency of the technology and is likely not to affect technology adoption. This could also be the case for NPOs.

Second, as expected, entrepreneurship, as an organizational characteristic of NPOs, has a significant effect on the adoption of NPOs' digital marketing. This finding is likely due to the fact that NPOs face increasing competition for donations, and digital marketing is an important tool for overcoming it. Highly entrepreneurial individuals are more likely to actively use digital marketing as a fundraising tool for their organization's continued survival because they are sensitive to changes in the external environment. They always look for opportunities and think and act innovatively to seize those opportunities (Chen 2007). The fact that common goals as an organizational characteristic of NPOs have no effect on digital marketing adoption may be due to the fact that it is not viewed as a direct means to achieve organizational goals, even if digital marketing can activate donations and make financial contributions.

Third, consistent with the findings of Kwak et al. (2023), the lack of human resources has a negative effect on NPOs' adoption of digital marketing. This result may reflect the realistic situation of NPOs, which generally have a weaker organizational structure and workforce than for-profit companies. This could make it extremely difficult to secure specialized staff for digital marketing adoption and operations. The insignificant impact of financial costs contrasts with the findings of Yoon et al. (2020) and Kuan and Chau (2001). A potential reason is that online-based digital marketing is relatively cheaper than general IT/IS within an organization, so it does not seem to have a significant impact on NPOs' willingness to adopt digital marketing. Finally, consistent with the findings of Lee and Yoon (2022) and Kwak et al. (2023), competitive pressure and digital environmental change in the external environmental context strongly affected NPOs' adoption of digital marketing. As the scale of donations from the general public has been reduced due to the COVID-19 pandemic, competition for donations between NPOs has become more intense. In this context, adopting digital marketing may be considered a solution for NPOs to overcome competitive pressure. In addition, online-based digital marketing, which has been actively embraced by for-profit organizations, has been recognized by NPOs as an inevitable change in the business environment.

6.1. Implications for Researchers and Practitioners

This study provides the following theoretical contributions: First, most previous studies on the adoption of innovative technologies, such as IT and IS, have been conducted on for-profit organizations, and little is known about the introduction of advanced information technologies, such as digital marketing, in the field of NPOs. One main theoretical contribution of this study is to expand and empirically test the factors influencing digital marketing adoption in other types of organizations that usually receive less attention in the academic literature. Therefore, the results of this study can be used as a basis for developing new research models to analyze the factors contributing to the adoption of new IT in NPOs. Second, given that the importance of entrepreneurship is emphasized not only in commercial organizations but also in NPOs today, this study hypothesizes and empirically verifies that entrepreneurship is an important factor in the introduction of technology in the organizational domain. Identifying entrepreneurship as an important

factor contributing to NPOs' digital marketing adoption can serve as a basis for future studies on technology introduction in various types of organizations.

Based on the results of this study, the practical implications for the adoption of digital marketing by NPOs are as follows: First, the most important factor influencing digital marketing adoption in NPOs is compatibility. This suggests that digital marketing techniques and content are more likely to be used if they fit the culture or structure of an NPO. Therefore, when introducing digital marketing, NPOs need to actively utilize digital marketing technology suitable for their organizational structure and to develop and utilize content suitable for the organization. Second, digital environment change and competitive pressure were found to be the main factors influencing NPOs' adoption of digital marketing. This implies that online-based digital marketing is perceived as both a threat and an opportunity, even in NPOs. Organizational leaders in NPOs should provide training to their staff on digital marketing tools to leverage the benefits of digital marketing to their organizations. Finally, the lack of human resources was found to have a negative effect on NPOs' adoption of digital marketing. NPOs are more financially vulnerable than for-profit organizations and lack specialized professional staff knowledgeable about digital marketing tools. Governments and related support organizations should establish policies to enhance training and secure digital marketing staff for NPOs so that NPOs can achieve their important social, cultural, and environmental activities.

6.2. Limitations and Further Research

Although our findings suggest significant implications for practitioners of NPOs and NPO-related researchers, this study includes limitations. First, despite the existence of various NPOs, such as charitable organizations, social advocacy groups, social welfare organizations, and foundations, the data for the analysis of this study were mainly collected from social welfare facilities, and the sample size was rather small. Future studies should collect more data from different types of NPOs to expand these results to other types of NPOs. Furthermore, since results may differ from this study depending on the type of non-profit organization, more in-depth research needs to be conducted. Second, this study derived the results through a cross-sectional survey of digital marketing adoption intentions. Actual adoption may differ because it is more complex and dynamic than the intention of adoption. To provide more realistic implications in the future, longitudinal studies, including studies on all stages of adoption, are needed. Third, this study adopted quantitative analysis using survey methods; in the future, combining interview-based qualitative analysis with quantitative analysis may yield a richer approach to this stream of research. Finally, this study was conducted among NPOs in one country, South Korea. As national culture can shape organizational characteristics, future studies may use a cross-cultural approach comparing samples from different countries to validate and generalize the findings of this study.

Funding: This research was supported by Research Funds from Mokpo National University in 2022.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Relative Advantage

- a1. Digital marketing will streamline my fundraising efforts.
- a2. Digital marketing is effective in managing donation campaigns.
- a3. Digital marketing will improve fundraising.

Complexity

- a4. It would be very difficult to carry out digital marketing.
- a5. It will take a lot of effort to do digital marketing.
- a6. The knowledge and skills required to perform digital marketing would be complex.

Compatibility

- a7. Digital marketing fits well with the activities of my organization.
- a8. Digital marketing fits well with my organization's work style.
- a9. Overall, digital marketing is a good fit for modern fundraising.

Common Goals

- a10. People in my organization are passionate about pursuing the organization's common goals.
- a11. People in my organization believe that our shared goals provide valuable benefits to each other.

Entrepreneurship

- a12. Members of my organization choose creative rather than conventional methods to solve business-related problems.
- a13. Members of my organization strive to improve performance by adopting innovative operational techniques.
- a14. People in my organization always try to create new value in their current work.

Financial Cost

- a15. The cost of operating digital marketing is a burden to our organization.
- a16. Financial difficulties are expected when our organization operates digital marketing.

Lack of Human Resource

- a17. My organization lacks the human resources to implement digital marketing.
- a18. My organization has fewer people who can utilize computer technologies for performing digital marketing.

Competitive Pressure

- a19. Fundraising competition among non-profit organizations is becoming more intense.
- a20. Competitive pressure on non-profit organizations (institutions) is increasing.

Digital Environment Change

- a21. Internet-based digital marketing is the wave of the future.
- a22. Internet-based digital marketing is being actively used by non-profit organizations.
- a23. Digital marketing is an essential fundraising method for non-profit organizations today.

Adoption

- a24. Our organization will adopt digital marketing.
- a25. Our organization will actively use digital marketing.

References

Ajzen, Icek. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179–211. [\[CrossRef\]](#)

Albanna, Hanaa, Ali Abdallah Alalwan, and Mostafa Al-Emran. 2022. An integrated model for using social media applications in non-profit organizations. *International Journal of Information Management* 63: 102452. [\[CrossRef\]](#)

Ali Qalati, Sikandar, Wenyuan Li, Naveed Ahmed, Manzoor Ali Mirani, and Asadullah Khan. 2021. Examining the factors affecting SME performance: The mediating role of social media adoption. *Sustainability* 13: 75. [\[CrossRef\]](#)

Alshamaila, Yazn, Savvas Papagiannidis, and Feng Li. 2013. Cloud computing adoption by SMEs in the north east of England: A multi-perspective framework. *Journal of Enterprise Information Management* 26: 250–75. [\[CrossRef\]](#)

AlSharji, Adel, Syed Zamberi Ahmad, and Abdul Rahim Abu Bakar. 2018. Understanding social media adoption in SMEs: Empirical evidence from the United Arab Emirates. *Journal of Entrepreneurship in Emerging Economies* 10: 302–28. [\[CrossRef\]](#)

Bagozzi, Richard P., and Youjae Yi. 1988. On the evaluation of structural equation models. *Journal of the Academy of Marketing Science* 16: 74–94. [\[CrossRef\]](#)

Carlos Pinho, José, and Isabel Maria Macedo. 2008. The driving forces of internet adoption: An empirical examination from the Portuguese non-profit sector. *EuroMed Journal of Business* 3: 305–19. [\[CrossRef\]](#)

Chen, Ming-Huei. 2007. Entrepreneurial leadership and new ventures: Creativity in entrepreneurial teams. *Creativity and Innovation Management* 16: 239–49. [\[CrossRef\]](#)

Choi, Kwang-Don, and Soon-Duc. Yoo. 2018. *Optimal ICDL Digital Marketing*. Seoul: Sungandang.

Curtis, Lindley, Carrie Edwards, Kristen L. Fraser, Sheryl Gudelsky, Jenny Holmquist, Kristin Thornton, and Kaye D. Sweetser. 2010. Adoption of social media for public relations by non-profit organizations. *Public Relations Review* 36: 90–92. [\[CrossRef\]](#)

Das, Santanu Kumar, and G. Lall. 2016. Traditional marketing VS digital marketing: An analysis. *International Journal of Commerce and Management Research* 2: 5–11.

Davis, Fred D. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 13: 319–40. [\[CrossRef\]](#)

Denga, Edna Mngusughun, Narasimha Rao Vajjhala, and Sandip Rakshit. 2022. The Role of Digital Marketing in Achieving Sustainable Competitive Advantage. In *Digital Transformation and Internationalization Strategies in Organizations*. Hershey: IGI Global, pp. 44–60.

Durmaz, Yakup, and Ibrahim Halil Efendioglu. 2016. Travel from traditional marketing to digital marketing. *Global Journal of Management and Business Research* 16: 34–40. [\[CrossRef\]](#)

Gefen, David, and Detmar Straub. 2005. A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information Systems* 16: 5. [\[CrossRef\]](#)

Harb, Yousra, and Yanyan Shang. 2021. Linking information technology and entrepreneurship: A literature review. Paper presented at 54th Hawaii International Conference on System Sciences, Kauai, HI, USA, January 4–8.

Huang, Haiyan, and Umapathy Karthikeyan. 2015. A Preliminary Study of Information Technologies Usage in Non-Profit Organizations. Paper presented at AMCIS 2015 Proceedings, 10, Fajardo, Puerto Rico, August 13–15; Available online: <https://aisel.aisnet.org/amcis2015/General/GeneralPresentations/10> (accessed on 1 August 2023).

Iacovou, Charalambos L., Izak Benbasat, and Albert S. Dexter. 1995. Electronic data interchange and small organizations: Adoption and impact of technology. *MIS Quarterly* 19: 465–85. [\[CrossRef\]](#)

Järvinen, Joel, Aarne Tollinen, Heikki Karjaluo, and Chanaka Jayawardhena. 2012. Digital and social media marketing usage in B2B industrial section. *Marketing Management Journal* 22: 102–17.

Jeon, Bang Nam, Kyeong Seok Han, and Myung Jin Lee. 2006. Determining factors for the adoption of e-business: The case of SMEs in Korea. *Applied Economics* 38: 1905–16. [\[CrossRef\]](#)

Kenton, Will. 2023. Non-profit Organization (NPO): Definition and Example. Available online: <https://www.investopedia.com/terms/n/non-profitorganization.asp> (accessed on 1 August 2023).

Ketchen, David J., Jr., R. Duane Ireland, and Charles C. Snow. 2007. Strategic entrepreneurship, collaborative innovation, and wealth creation. *Strategic Entrepreneurship Journal* 1: 371–85. [\[CrossRef\]](#)

Kotler, Philip. 1982. *Marketing for Non-profit Organizations*. Hoboken: Prentice-Hall.

Krueger, Julia C., and Diana L. Haytko. 2015. Non-profit adaptation to Web 2.0 and digital marketing strategies. *Journal of Technology Research* 6: 1–17.

Kuan, Kevin K. Y., and Patrick Y. K. Chau. 2001. A perception-based model for EDI adoption in small businesses using a technology–organization–environment framework. *Information & Management* 38: 507–21.

Kwak, Changweon, Cheolho Yoon, and José Martí-Parreño. 2023. Factors affecting SME executives' intentions to adopt smart factories: The case of Korea. *Information Development*. [\[CrossRef\]](#)

Lee, Sangho, and Cheolho Yoon. 2022. Factors of the Adoption of O2O Service Platforms: Evidence from Small Businesses in Korea. *Sustainability* 14: 15813. [\[CrossRef\]](#)

Lettieri, Emanuele, Francesca Borga, and Alberto Savoldelli. 2004. Knowledge management in non-profit organizations. *Journal of Knowledge Management* 8: 16–30. [\[CrossRef\]](#)

MacKay, Nancy, Michael Parent, and Andrew Gemino. 2004. A model of electronic commerce adoption by small voluntary organizations. *European Journal of Information Systems* 13: 147–59. [\[CrossRef\]](#)

Maroufkhani, Parisa, Ming-Lang Tseng, Mohammad Iranmanesh, Wan Khairuzzaman Wan Ismail, and Haliyana Khalid. 2020. Big data analytics adoption: Determinants and performances among small to medium-sized enterprises. *International Journal of Information Management* 54: 102190. [\[CrossRef\]](#)

Miller-Millesen, Judith L. 2003. Understanding the behavior of non-profit boards of directors: A theory-based approach. *Non-profit and Voluntary Sector Quarterly* 32: 521–47. [\[CrossRef\]](#)

Miranda, Marília Queiroz, Josivania Silva Farias, Carolina de Araújo Schwartz, and Juliana Pascualote Lemos de Almeida. 2016. Technology adoption in diffusion of innovations perspective: Introduction of an ERP system in a non-profit organization. *RAI Revista de Administração e Inovação* 13: 48–57. [\[CrossRef\]](#)

Moncay, Anushka Achamma, and Kamaladevi Baskaran. 2020. Digital marketing analytics: Building brand awareness and loyalty in UAE. Paper presented at 2020 IEEE International Conference on Technology Management, Operations and Decisions (ICTMOD), Marrakech, Morocco, November 24–27; pp. 1–8.

Napoli, Julie, Michael T. Ewing, and Leyland F. Pitt. 2000. Factors affecting the adoption of the internet in the public sector. *Journal of Non-profit & Public Sector Marketing* 7: 77–88.

Ndubisi, Nelson Oly. 2007. E-commerce adoption by non-profit organisations: Key dimensions of facilitators. *International Journal of Services Technology and Management* 8: 2–20. [[CrossRef](#)]

O'Hanlon, Rory, and Vanessa Chang. 2007. Towards a Model of Internet Technology Adoption for Not-for-Profit Organisations. Paper presented at ACIS 2007 Proceedings, 6, Melbourne, Australia, July 1–13; Available online: <http://aisel.aisnet.org/acis2007/6> (accessed on 1 August 2023).

Oliveira, Tiago, and Maria Fraga Martins. 2011. Literature review of information technology adoption models at firm level. *Electronic Journal of Information Systems Evaluation* 14: 110–21.

Oliveira, Tiago, Manoj Thomas, and Mariana Espadanal. 2014. Assessing the determinants of cloud computing adoption: An analysis of the manufacturing and services sectors. *Information & Management* 51: 497–510.

Patil, Aishwarya S., Nagaraj R. Navalgund, and Shashidhar Mahantshetti. 2022. Digital marketing adoption by start-ups and SMEs. *SDMIMD Journal of Management* 13: 47–61. [[CrossRef](#)]

Philips, Victoria. 2022. Digital Marketing in Non-profits Organization: Essential Techniques for the New Era. School of Leadership and Education Sciences: Faculty Scholarship. 35. Available online: <https://digital.sandiego.edu/soles-faculty/35> (accessed on 1 August 2023).

Polas, Mohammad Rashed Hasan, and Valliappan Raju. 2021. Technology and entrepreneurial marketing decisions during COVID-19. *Global Journal of Flexible Systems Management* 22: 95–112. [[CrossRef](#)]

Rho, Yeonhee. 2015. What brings either success or failure in fundraising campaigns of non-profit organizations?: A multiple case study. *Korean Journal of Social Welfare Studies* 46: 65–99.

Ritz, Wendy, Marco Wolf, and Shaun McQuitty. 2019. Digital marketing adoption and success for small businesses: The application of the do-it-yourself and technology acceptance models. *Journal of Research in interactive Marketing* 13: 179–203. [[CrossRef](#)]

Rogers, Everett M. 2003. *Diffusion of Innovations*, 5th ed. New York: Free Press.

Royle, Jo, and Audrey Laing. 2014. The digital marketing skills gap: Developing a Digital Marketer Model for the communication industries. *International Journal of Information Management* 34: 65–73. [[CrossRef](#)]

Sanchez, Gaston, Laura Trinchera, Maintainer Gaston Sanchez, and Suggests FactoMineR. 2013. Package 'Plspm'. State College: Citeseer.

Sharma, Ankita, and Swati Sharma. 2023. Digital marketing adoption by small travel agencies: A comprehensive PLS-SEM model using reflective and higher-order formative constructs. *European Journal of Innovation Management*. ahead of print. [[CrossRef](#)]

Thong, James Y. L. 1999. An integrated model of information systems adoption in small businesses. *Journal of Management Information Systems* 15: 187–214. [[CrossRef](#)]

Tornatzky, Louis, and Mitchell Fleischer. 1990. *The Process of Technology Innovation*. Lexington: Lexington Books.

Ullah, Ihsan, Muhammad Khan, Dilshodjon Alidjonovich Rakhmonov, Kalonov Mukhiddin Bakhritdinovich, Julija Jacquemod, and Junghan Bae. 2023. Factors affecting digital marketing adoption in Pakistani small and medium enterprises. *Logistics* 7: 41. [[CrossRef](#)]

Venkatesh, Viswanath, Michael G. Morris, Gordon B. Davis, and Fred D. Davis. 2003. User acceptance of information technology: Toward a unified view. *MIS Quarterly* 27: 425–78. [[CrossRef](#)]

Wang, Yu-Min, Yi-Shun Wang, and Yong-Fu Yang. 2010. Understanding the determinants of RFID adoption in the manufacturing industry. *Technological Forecasting and Social Change* 77: 803–15. [[CrossRef](#)]

Weerawardena, Jay, and Gillian Sullivan Mort. 2012. Competitive strategy in socially entrepreneurial non-profit organizations: Innovation and differentiation. *Journal of Public Policy & Marketing* 31: 91–101.

Wraikat, Haneen, Al Bellamy, and He Tang. 2017. Exploring organizational readiness factors for new technology implementation within non-profit organizations. *Open Journal of Social Sciences* 5: 1–13. [[CrossRef](#)]

Wright, Ryan T., Nicholas Roberts, and David Wilson. 2017. The role of context in IT assimilation: A multi-method study of a SaaS platform in the US non-profit sector. *European Journal of Information Systems* 26: 509–39. [[CrossRef](#)]

Yasmin, Afrina, Sadia Tasneem, and Kaniz Fatema. 2015. Effectiveness of digital marketing in the challenging age: An empirical study. *International Journal of Management Science and Business Administration* 1: 69–80. [[CrossRef](#)]

Yoon, Cheolho, Dongsup Lim, and Changhee Park. 2020. Factors affecting adoption of smart farms: The case of Korea. *Computers in Human Behavior* 108: 106309. [[CrossRef](#)]

Zhang, Wei, and Oscar Gutierrez. 2005. Understanding Information Technology Acceptance in the Social Sector. Paper presented at AMCIS, Omaha, NE, USA, August 11–14.

Zhang, Wei, Oscar Gutierrez, and Kieran Mathieson. 2010. Information systems research in the non-profit context: Challenges and opportunities. *Communications of the Association for Information Systems* 27: 1. [[CrossRef](#)]

Zorn, Theodore E., Andrew J. Flanagan, and Mirit Devorah Shoham. 2011. Institutional and noninstitutional influences on information and communication technology adoption and use among non-profit organizations. *Human Communication Research* 37: 1–33. [[CrossRef](#)]