The Impact of Digital Marketing Public Relations Factors on Online Shopping Behavior

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Abstract

Purpose: With technological advancements, brands have increasingly carried out their marketing activities in digital environments, leading to the rise of digital marketing. Digital marketing refers to the promotion of products and services through digital platforms and tools. It has required brands to make more effort to influence consumer behavior and differentiate themselves from competitors. In this context, brands operating in the marketing field have started to seek support from various areas, one of which is public relations. In marketing, public relations aims to influence consumers by establishing communication and interaction with them, ensuring brand awareness, and increasing sales. The purpose of this research is to examine the impact of public relations factors in digital marketing on online shopping behavior.

Design/methodology/approach: In the study, scales for "public relations in digital marketing" and "online shopping behavior" were initially developed. In this context, three components of the public relations scale in digital marketing and four components of the online shopping scale emerged. The developed scales were applied to 1,085 consumers in Istanbul using purposive and simple random sampling methods through Google Forms in April and May 2023. The data obtained were analyzed using the SPSS program.

Results: The study concluded that public relations factors in digital marketing influence online shopping behavior.

Discussion: The findings of this research highlight the significant role of public relations factors in digital marketing. Future studies could provide more comprehensive insights by examining the impact of public relations activities on online shopping behavior in greater depth and through comparisons with brands from different industries.

Keywords: *Digital Marketing; Public Relations; Online Shopping*

Introduction

Marketing is a dynamic business activity that can constantly change. One of these changes is the use of the internet in marketing. Internet marketing involves using the Internet to market and sell goods or services. This form of marketing uses the power of electronic commerce to sell and market products (Bala and Verma, 2018). With the spread of the Internet, online shopping has gained momentum. Consumers use digital communication channels to search for product information and services. It has become a part of people's daily life (Stephen, 2016; Alghizzawi, 2019). Digital marketing is a service that uses digital channels to reach consumers. It aims to promote brands through various forms of digital media. For example, by using social media as a marketing tool, it helps the brand obtain feedback from the consumer by determining which media platform is best for the consumer (Ghazie and Dolah, 2018).

Consumers turn to online shopping due to advantages such as saving time, product variety, affordable prices, interaction, and user-friendly interfaces. This situation in consumer behavior has been seen as an opportunity for brands, and brands have moved their marketing activities to digital platforms. Marketing activities carried out by brands using digital technologies are called digital marketing. Today, the impact and importance of digital marketing activities on consumer behavior, especially online consumer behavior, is confirmed.

In the literature, the effect of digital marketing on consumer behavior (Makrydakis, 2021; Kusumawati, 2019; Yamin, 2017) and the effect of digital marketing on consumers' purchasing behavior (Sivasankaran, 2013; KR, 2020; Mahalaxmi and Ranjith, 2016; Kaushik and Prativindhya, 2019; Omar and Atteya, 2020; Dastane, 2020) researches are included. Tong and Chan (2022), how public relations and marketing practitioners perceive and apply public relations in the digital age; Nuseir, Aljumah, and El-Refae (2022), the role of digital marketing in the development of public relations. Pranata, Valevi, Habibullah, Sari and Nofirda (2023).) examined social media as a tool for improving public relations in the age of digital marketing. Kamaruddin and Yanis (2022) examined the effect of digital marketing public relations regarding Menantea products on the purchasing interest of YouTube users. Studies on the effect of marketing public relations on brand awareness (Amadea and Hernawati, 2023; Veronica and Utami, 2021; Wahid and Puspita, 2017), their role in creating brand image (Khopipah and Turistiati, 2019) and the level of affecting brand value (Erciş, 2013) is included in the literature. There are also studies examining marketing public relations from different perspectives (Topan and Widiasanty, 2022; Wiwitan and Yulianita, 2017; İldem and Özgen, 2016; Hidayat, 2015; Plessis, Angelopulo and Plessis, 2016; Papasolomou, Thrassou, Vrontis and Sabova, 2014 and Papasolomou and Melanthiou, 2012).

As a result of the literature review, it is seen that the previous studies were examined within the framework of digital marketing and public relations in marketing. In light of this information, studies on the impact of digital marketing public relations factors on consumers' online shopping behavior need to be further researched and discussed. Because brands owe their existence to consumers, it is necessary to understand the consumer, research the consumer's wishes, needs, and expectations, and determine the most appropriate channels to reach the consumer in order to meet these expectations. Because brands are now faced with online consumers. Measuring numerical data on consumers' online shopping behavior is easier than determining the factors that drive consumers to online shopping behavior because there are different factors that direct consumers to shop online and affect online shopping behavior. For this reason, it is aimed to determine the effect of digital marketing public relations factors on online shopping behavior.

Digital Marketing Public Relations

Digital marketing is the promotion and sale of products or services through digital technologies, primarily via the Internet, mobile phones, display advertising, and other digital media platforms (Desai, 2019: 196). Digital marketing is an interactive environment that allows for the creation of demand using

the power of the Internet, and as the Internet grows, the overlap between public relations and marketing also increases (Stokes, 2013). Public relations work is characterized by an approach to corporate communication that engages all stakeholders. For many organizations, consumers are the most important public. However, in consumer-oriented communications, it has often been difficult to know exactly where marketing ends and public relations begins. Marketing public relations has gained importance due to the increase in different products and services competing in the markets and the difficulties this creates in reaching consumers (Ejime, 2022: 175). Brands need to create a positive image before consumers, employees, and business partners. For this reason, brands are becoming increasingly active in marketing and public relations activities (Zdonek, 2022: 366).

Marketing public relations is the use of public relations strategies and techniques to achieve marketing goals (Harris and Whalen, 2009: 29). Public relations in marketing involves activities like increasing awareness, informing and educating the target audience, fostering understanding, building trust, providing consumers with reasons to purchase, and motivating them to take action (Papasolomou and Melanthiou, 2012: 323). Digital marketing public relations has enabled brands to communicate directly and interactively with their consumers. The goal of marketing public relations is to create long-term trust by forming a genuine, sincere, and emotional connection between the consumer and the brand (Apa and Balta Peltekoğlu, 2020: 453).

Online Shopping

The impact of technology on marketing activities has provided convenience to consumers in many ways. Online shopping is one of them (Moon, Talha, and Salehin, 2021). Online shopping is a rapidly growing area today. The increasing number of online shopping has started a new era in the lives of consumers (Adibfar, Gulhare, Srinivasan and Costin, 2022: 162).

Consumers prefer online shopping to save time, find the products that best suit their needs (Punj, 2011: 134), ease of accessing detailed information about the product and variety of product options (Ward and Lee, 2000: 6), the comparison between shopping in a physical store and online shopping. (Khan and Rizvi, 2012) Prefer online shopping due to reasons such as the ease of navigating the site or shopping online (Flavian, Guinalíu and Gurrea, 2006: 2).

Methodology

The objective of this research is to explore the influence of digital marketing public relations factors on online shopping behavior. It is hypothesized that digital marketing public relations play a significant role in shaping consumers' online shopping habits. The data collection method of the study, which utilizes the quantitative research method, is the online survey technique. Ethics Committee permission was obtained for the survey study with the decision of Fırat University Rectorate Social and Human Sciences Research Ethics Committee dated 20.11.2020 and numbered 425242. The data obtained as a result of the questionnaire study were analysed using SPSS software.

Research Model and Hypotheses

The following conceptual model was developed based on the literature review. The aim of the conceptual model is to examine the impact of public relations activities in digital marketing on consumers' online shopping behaviour.
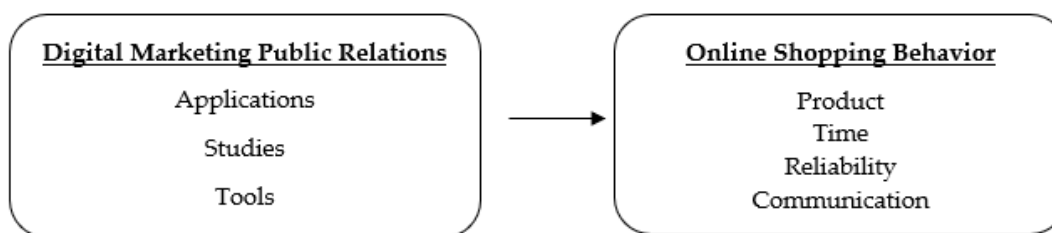
Figure 1. Research model

Based on the research model, the following hypotheses are proposed.

H1: At least one of the digital marketing public relations factors has a significant effect on consumers' online shopping behavior.

H2: There is a significant relationship between at least one of the digital marketing public relations factors and consumers' online shopping behavior.

Population and Sample of the Research

The data for the study was collected from two separate samples. Purposeful and simple random sampling methods were used in the study. The sample of the study consists of consumers aged 18 and above who live in Istanbul and shop online. The research data was collected using an online survey technique. During the scale development process, data was collected from 150 consumers. In the implementation phase of the developed scales, 1164 consumers participated in the study. The data of consumers who did not shop online (58) and under the age of 18 (21) were excluded. The total number of consumers participating in the research is 1085.

Data Collection

This study employed a quantitative research method to investigate the relationship between variables. The data collection tool used is a survey, which consists of two sections. The first section includes information about the participants' gender, age, education level, income, and occupation. In the second part, a digital marketing public relations and online shopping behavior scale was developed, and its validity and reliability were tested. In order to test the validity and reliability of the scales, a pilot survey was conducted between 01.03.2023-15.03.2023. We focus on Cronbach's alpha values in the reliability analysis of the scales. Reliability analyses of digital marketing public relations factors and online shopping behavior scale were conducted. Among the digital marketing public relations factors, the Cronbach alpha of the applications sub-dimension is 0.77, the Cronbach alpha of the studies sub-dimension is 0.93, and the Cronbach alpha of the tools sub-dimension is 0.94. The Cronbach alpha value of the product sub-dimension of the online shopping behavior scale is 0.97, the Cronbach alpha value of the time sub-dimension is 0.90, the Cronbach alpha value of the reliability sub-dimension is 0.92, and the Cronbach alpha value of the communication sub-dimension is 0.70. Cronbach's alpha values indicate the reliability of the data and their suitability for analysis. The KMO test for the digital marketing public relations scale is 0.934. Bartlett's test indicates a chi-square distribution of 13740.619 with 91 degrees of freedom (p-value <0.000). The KMO test for the online shopping behavior scale is 0.973. Bartlett's test indicates a chi-square distribution of 24570.494 with 190 degrees of freedom (p-value<0.000). As a result of these analyses applied to the scales, it was understood that they were suitable for factor analysis.

Table 1. Factor analysis of the digital marketing public relations scale

	Construct	Item	Factor loadings	Explained Variance (%)
Digital marketing public relations scale	Applications	M21	,672	60,026
		M24	,773	
		M25	,798	
	Studies	M22	,776	9,155
		M23	,815	
		M26	,750	
		M28	,833	
		M29	,768	
	Tools	M34	,785	8,049
		M35	,802	
		M36	,814	
		M37	,803	
		M38	,781	
		M39	,768	

The digital marketing public relations scale consists of three sub-dimensions (applications, studies, and tools). The public relations scale in digital marketing consists of a total of 13 items. Table 2, which includes the items related to the scale, is shown below.

Tablo 2. Digital marketing public relations scale

	Items
Applications	I prefer brands that use a certain amount of my shopping for public benefit.
	In my online shopping, I prefer products from brands that sponsor an event or organization.
	I prefer brands/products recommended by social media influencers.
Studies	When shopping online, brands with a positive corporate image are my primary choice.
	I prefer to buy from brands that take into account suggestions, recommendations, and criticisms from consumers.
	When shopping online, I benefit from personalized campaigns.
	I prefer to shop from websites with good digital service quality.
	Digital public relations studies make it easier for me to choose a product/brand.
Tools	The social media accounts of the brands I shop for are active.
	The social media posts of the brands I shop for are up-to-date.
	Communicating with consumers through social media affects my online shopping behavior.
	I am fascinated by the way I interact with the online communities I am a member of.
	When shopping online, I benefit from content related to events, promotions, products and services on corporate blogs.
	The presence of brand-related newsletters in digital environments affects my product/brand preference.

The data related to the online shopping behavior scale developed by the researchers are presented below.

Table 3. Factor analysis of the online shopping scale

Construct		Item	Factor loadings	Explained Variance (%)
Online shopping behavior scale	Product	M1	,719	
		M2	,822	
		M3	,815	
		M4	,798	66,285
		M5	,810	
		M6	,842	
		M7	,771	
		M8	,779	
	Time	M9	,674	
		M10	,708	7,472
		M11	,620	
		M12	,625	
	Reliability	M13	712	
		M14	,780	4,195
		M15	,806	
		M16	,706	
	Communication	M17	,697	
		M18	,786	3,414
		M19	,743	
		M20	,745	

The online shopping behavior scale consists of four sub-dimensions (product, time, trust, and communication). It contains eight items in the product sub-dimension.

Table 4. Online shopping behavior scale

	Items
Product	There is an opportunity to access more information about products in online shopping.
	Product variety is more in online environments.
	I can reach more than one brand at the same time in online environments.
	I benefit from user reviews.
	I can find the product at an affordable price online.
	I can compare the prices of products more easily on the internet.
	Online shopping has more discount coupons, deals and campaign advantages.
	Free shipping opportunity is effective in my online shopping.
Time	I prefer online shopping as traditional shopping (going to the store or market) takes more time.
	I can shop online at any time of the day.
	I can see the delivery day or time of my orders in online shopping.
	I can do my online shopping over time.
Reliability	The website where I shop is reliable.
	I trust the policies and procedures implemented by the website for information security.
	My personal and financial information is secure on the website.
	The website I shop on delivers my orders on the specified date.
Communication	The brand I prefer in online shopping uses new technologies effectively to reach consumers.
	The brand I shop online asks consumers for feedback on the product.
	The brand I shop with responds to the problems communicated in a short time.
	The brand I shop with provides a live support line service.

Factor analysis was conducted on the scales. The results of the factor analysis revealed that the digital marketing public relations scale comprises three sub-dimensions, while online shopping behavior consists of four sub-dimensions. After performing exploratory factor analysis, confirmatory factor analysis was also used to assess the validity of the identified structures.

The GFI fit index value of the digital marketing public relations scale is 0.949, the AGFI fit index value is 0.919, the CFI fit index value is 0.974, the RMSEA fit index value is 0.070, and the RMR fit index value is 0.050. The GFI fit index value of the online shopping behavior scale is 0.950, the AGFI fit index value is 0.934, the CFI fit index value is 0.983, the RMSEA fit index value is 0.048, and the RMR fit index value is 0.038. An RMSEA value of less than 0.05 is considered a perfect fit, and a value of 0.08 or less is considered acceptable (Hu and Bentler, 1999). RMR takes values between 0.00 and 1.00, and RMR values close to zero show a good fit (Schermelleh-Engel, Moosbrugger ve Müller, 2003:38). As a result of the confirmatory factor analysis, model fit indices for the items of both scales were calculated, and it was determined that these indices were at an acceptable level in terms of model-data fit.

The developed scales were applied to 1085 consumers between 26.04.2023-13.05.2023 via a link created through Google forms.

Findings

In this section of the study, demographic characteristics, averages of the scales, correlation, and regression analysis results are included.

Table 5. Demographic Characteristics of Consumers

		Frequency	Percentage (%)
Gender	Female	786	72,4%
	Male	299	27,6%
Age	18-24	321	29,6%
	25-34	389	35,9%
	35-44	270	24,9%
	45+	105	9,7%
Education	Primary school	31	2,9%
	Secondary school	63	5,8%
	High school	278	25,6%
	Associate degree	212	19,5%
	Bachelors degree	444	40,9%
	Postgraduate	57	5,3%
Occupation	Public Employee	140	12,9%
	Private Sector Employee	251	23,1%
	Retired	44	4,1%
	Student	236	21,8%
	Unemployed	323	29,8%
	Other	91	8,4%

27.6% of the survey participants are male, and 72.4% are female. Most consumers fall within the age range of 18 to 44. 40.9% of consumers have a bachelor's degree. 40.9% of the consumers have a bachelor's degree, 25.7% have a high school education, and 19.4% have an associate's degree. 29.8% of consumers reported that they were unemployed. Additionally, 21% are students, 23.1% are private sector employees, 12.9% are public employees, and the remaining percentage belongs to other categories. 51.5% of consumers' average monthly income is between 0-8506. This rate is followed by those with a monthly average income of 8507-12000 TL at 20.6%, 12001-16000 at 15.4%, and 12.5% of consumers have an average monthly income of 16,001 TL or more.

Table 6. Descriptive Statistics of the Scales

	$\bar{x}$	$\sigma(s)$	Median	Minimum	Maximum
Online shopping behavior scale					
Product	4,13	1,11	4,50	1,00	5,00
Time	3,94	1,11	4,00	1,00	5,00
Reliability	3,84	1,03	4,00	1,00	5,00
Communication	3,81	,85	4,00	1,00	5,00
Digital marketing public relations scale					
Applications	3,15	1,00	3,33	1,00	5,00
Studies	4,04	,99	4,20	1,00	5,00
Tools	3,80	1,01	4,00	1,00	5,00

The average of the product sub-dimension of the online shopping behavior scale is 4.13. The standard deviation of the product sub-dimension is 1.11, and the median value is 4.5. The average of the time sub-dimension is 3.94. The standard deviation value is 1.11, and the median value is 4. The trust sub-dimension is 3.84. The standard deviation value of the trust sub-dimension is 1.03, and the median value is 4. The average of the communication sub-dimension is 3.81. The standard deviation value is 0.8,5, and the median value is 4. In the online shopping behavior scale, the product sub-dimension exhibits the highest average, while the communication sub-dimension shows the lowest average. The product sub-dimension is more effective than the time, trust, and communication sub-dimension in consumers' online shopping behavior.

The average of the applications sub-dimension of the digital marketing public relations scale is 3.15. The standard deviation value of consumer responses is 1.0,0, and the median value is 3.33. The average of the studies sub-dimension of the digital marketing public relations scale studies is 4.04. The standard deviation value of consumer responses for the study sub-dimension is 0.99, and the median value is 4.2. The average of the tools sub-dimension of digital marketing public relations is 3.80. The standard deviation value of the study sub-dimension is 1.01, and the median value is 4. In digital marketing public relations, the studies sub-dimension has the highest average, and the applications sub-dimension has the lowest average. In digital marketing public relations, the studies sub-dimension is more effective in consumers' online shopping behavior than the tools and applications sub-dimension.

Table 7. Correlation Analysis

		Product	Time	Reliability	Communication
Applications	r	,012	,011	,017	,436**
	p	,687	,724	,566	**<,001**
Studies	r	,026	,004	,020	,663**
	p	,399	,884	,513	**<,001**
Tools	r	,053	,068*	,061*	,617**
	p	,079	**,025**	**,044**	**<,001**

Correlation analysis reveals a moderately significant relationship between the applications sub-dimension and the communication sub-dimension (r = 0.436; p < 0.001). As the score obtained from public relations practices in digital marketing increases, the score received from communication also increases. Practices and communication dimensions are positively related to each other.

A moderately significant relationship was found between the study's sub-dimension in digital marketing public relations and the communication sub-dimension (r = 0.663; p < 0.001). As the score received from digital marketing public relations studies increases, the score received from communication also increases.

A moderately significant relationship was found between the tools sub-dimension in digital marketing public relations and the communication sub-dimension (r = 0.617; p = 0.001). As the score from the tools increases, the score from time also increases.

A low significant relationship was found between the public relations tools sub-dimension in digital marketing and the time (r=0.068; p=0.025) and reliability (r=0.061; p=0.044) sub-dimensions. As the score from the tools increases, the score from time and reliability also increases. The hypothesis positing a significant relationship between at least one of the digital marketing public relations factors and consumers' online shopping behavior has been accepted.

Table 8. The Effect of the Sub-Dimensions of Digital Marketing Public Relations Factors on The Product Sub-Dimension of Online Shopping Behavior

Online shopping behavior -Product	$\hat{\beta}$	SE $(\hat{\beta})$	Beta	t	p value	Adjusted R^2
Fixed	3,955	,149		26,586	<,001	
Applications	-,028	,044	-,025	-,641	,522	,001
Tools	,087	,049	,080	1,762	,078	
Studies	-,018	,051	-,016	-,349	,727	
F=1,27; p=0,281						

The effect of the sub-dimensions of the digital marketing public relations factors on the product sub-dimension of the online shopping behavior scale is not significant (F = 1.27; p = 0.281). The sub-dimensions of the digital marketing public relations factors explain the online shopping behavior product sub-dimension at a rate of 0.001.

Table 9. The Effect of the Sub-Dimensions of Digital Marketing Public Relations Factors on the Time Sub-Dimension of Online Shopping Behavior

Online shopping behavior - Time	$\hat{\beta}$	SE $(\hat{\beta})$	Beta	t	p value	Adjusted R^2
Fixed	3,806	,148		25,794	<,001	
Applications	-,026	,043	-,024	-,604	,546	0,006
Tools	,151	,049	,139	3,080	,002	
Studies	-,089	,050	-,080	-1,768	,077	
F=3,206; p=0,023						

The effect of the sub-dimensions of the digital marketing public relations factors on the time sub-dimension of online shopping behavior is significant (F = 3.206; p = 0.023). The sub-dimension of digital marketing public relations tools has a significant effect on the time factor affecting online shopping behavior (β=0.151; t=3.080; p=0.002). The sub-dimensions of the digital marketing public relations factors explain the factors/time sub-dimension affecting online shopping behavior at a rate of 0.006.

Table 10. The Effect of the Sub-Dimensions of the Digital Marketing Public Relations Factors on the Reliability Sub-Dimension of Online Shopping Behavior

Online shopping behavior - Reliability	$\hat{\beta}$	SE $(\hat{\beta})$	Beta	t	p value	Adjusted R^2
Fixed	3,684	,137		26,806	<,001	
Applications	-,018	,040	-,018	-,444	,657	0,002
Tools	,102	,046	,100	2,226	,026	
Studies	-,042	,047	-,041	-,905	,366	
F=1,81; p=0,143						

The effect of the sub-dimensions of the digital marketing public relations factors on the reliability sub-dimension of online shopping behavior is not significant (F = 1.81; p = 0.143). The sub-dimensions of the digital marketing public relations factors explain the reliability sub-dimension of the online shopping behavior by 0.002.

Table 11. The Effect of the Sub-Dimensions of Digital Marketing Public Relations Factors on the Communication Sub-Dimension of Online Shopping Behavior

Online shopping behavior - Communication	$\hat{\beta}$	SE $(\hat{\beta})$	Beta	t	p value	Adjusted R^2
Fixed	1,305	,082		15,949	<,001	
Applications	-,011	,024	-,013	-,442	,659	0,482
Tools	,250	,027	,299	9,201	<,001	
Studies	,393	,028	,459	14,081	<,001	
F=336,73; p<0,001						

The effect of the sub-dimensions of the digital marketing public relations scale on the communication factor sub-dimension of online shopping behavior is significant (F=336.73; p<0.001). The sub-dimension of digital marketing public relations tools has a significant effect on the factors/communication affecting online shopping behavior (β=0.250; t=9.201; p<0.001). The sub-dimension of digital marketing public relations studies has a significant effect on the communication sub-dimension of online shopping behavior (β=0.393; t=14.081; p<0.001). The sub-dimensions of the digital marketing public relations factors explain the online shopping behavior scale/communication sub-dimension by 0.48.

Table 12. The Impact of Digital Marketing Public Relations Factors on Online Shopping Behavior

	$\hat{\beta}$	SE $(\hat{\beta})$	Beta	t	p value	R^2
Fixed (Online shopping behavior)	12,889	,428		30,150	<,001	0,041
Digital marketing public relations	,257	,038	,202	6,805	<,001	

The effect of digital marketing public relations factors on online shopping behavior is significant (β=0.257; t=6.805; p<0.001). Digital marketing public relations explains consumers' online shopping behavior at a rate of 0.041. Therefore, the hypothesis that at least one of the digital marketing public relations factors has a significant effect on consumers' online shopping behavior is accepted.

Conclusions

The findings of this study highlight the critical role of public relations factors in digital marketing in shaping online shopping behavior. The results indicate that public relations strategies, particularly those emphasizing communication and trust-building, can influence consumer purchasing decisions. These insights have several implications for both marketing professionals and academic researchers. From a managerial perspective, brands seeking to enhance their online sales should integrate well-structured public relations strategies into their digital marketing efforts. The significant relationship found between the communication sub-dimension of public relations and online shopping behavior suggests that brands should prioritize clear, consistent, and engaging messaging in their digital campaigns. Furthermore, the low but significant relationship between trust and online shopping behavior underscores the necessity for brands to strengthen consumer trust through transparency, credibility, and customer engagement.

From an academic standpoint, future research should explore additional moderating or mediating variables that may influence the relationship between PR factors and consumer behavior. Expanding the sample size and conducting cross-sectoral comparisons would allow for a more nuanced understanding of sector-specific public relations strategies. Additionally, longitudinal studies could provide deeper insights into how public relations factors impact consumer behavior over time.

In summary, this study reinforces the necessity of strategically utilizing public relations tools in digital marketing to enhance consumer engagement and drive online sales. The implications for brands are clear: investing in effective public relations strategies can lead to better consumer relationships, increased trust, and ultimately, stronger online shopping behaviors.

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