



ORIGINAL ARTICLE

Investigating the Relationship between Environmental Factors of Virtual Pages for Selling Sports Products and Customers' Online Purchase Intention

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KEY WORDS

Environmental factors;
Online sales;
Purchase intention;
Sports products

ABSTRACT

The aim of this research was to investigate the relationship between environmental factors of virtual pages for selling sports products and customers' online purchase intention. This research was an applied study in terms of purpose, and descriptive-correlational in terms of nature, conducted as a field study. The statistical population of this research included customers of websites, pages, or virtual channels selling sports products who had made at least one purchase from online sports product stores. The data collection tools in this study included the standard questionnaire for environmental factors of online stores by Liu et al. (2008) and Soufapan's (2013) repurchase intention questionnaire, which were used after validating their reliability. Descriptive and inferential statistics, along with SPSS26 software, were used for data analysis. The research results showed a positive and significant relationship between the environmental factors of virtual pages selling sports products and the intention to purchase sports products ($r = 0.75$). It was also found that there is a relationship between the constituent components of environmental factors of virtual pages and customers' purchase intention, with the strongest relationships related to website design, website security, and payment method components.

Introduction

In the current era, global changes due to the emergence of the internet, information technology, and consequently, the creation of e-commerce, have brought about profound transformations in business processes. In this regard, many companies have established online stores using the internet platform, allowing customers and buyers to order and receive their desired items without a physical visit. These online stores and companies have developed in line with the advancement of information technology in recent years (Vazifeh-Dust & Omidzadeh, 2013). These developments have also had significant impacts

on the sports product sales industry, such that, according to global statistics, the volume of transactions in this sector reached 5.7 trillion dollars in 2022 (Statista, 2023).

As mentioned, over the past decade, the sports industry has also grown steadily, with billions of dollars spent annually on sporting events and related equipment and apparel (Lee, 2012). Today, traditional marketing approaches can no longer meet the needs of the electronic age, especially in the field of sports (Zakerian et al., 2017). Understanding how online buyers and virtual networks purchase sports products

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can enable e-commerce companies to better comprehend consumer needs and assist retailers in adjusting and localizing their marketing strategies (Dehdashti & Mobarhan, 2012).

Despite this significant growth, many online sports product stores face a fundamental challenge in converting visitors into loyal customers and encouraging them to make repeat purchases (Salehinia et al., 2023). This issue highlights the increasing importance of effective customer relationship management and creating distinctive shopping experiences. As Aghazadeh et al., (2013) pointed out; sustainable success depends on repeat customer purchases and fostering their loyalty. In this regard, many marketing experts believe that providing online customer services is not a prerequisite for companies' success; rather, these services can have the necessary impact if they lead to retaining existing customers. In fact, online retailers today have come to believe that they can only achieve long-term profits through repeat customer purchases (Aghazadeh et al., 2013); therefore, the most important task for companies selling products online is to manage customers after a purchase to encourage them to buy again from the website. Thus, these companies are trying to identify ways to improve and increase customers' repurchase intention (Amini & Akbari, 2014). Given these points, sports service providers and online stores offering sports products also cannot succeed significantly in selling and offering their products unless they understand customers' purchasing styles and interests (Bensardi & Nazari, 2018).

Accordingly, managers of online sports product sales companies must seek solutions and factors to attract customers to the company and its services, and to increase repeat purchases and customer retention. This is important because many people visit various e-commerce websites today, but the number of actual buyers is not high compared to the large volume of visitors, and many buyers show no desire to make repeat purchases or return to the online store's website after a purchase. Therefore, the most important thing

companies need to consider is identifying barriers and problems related to customer repurchases and trying to convert visitors into actual customers (Hasangholipour et al., 2013). Among these, several factors influence customers' decisions for repeat purchases. These factors include the design and atmosphere of the e-commerce website, which affect consumers' emotional states through environmental cues. Environmental cues can be described as stimuli in the retail environment that, by changing them, can create the desired emotional state (Ballantyne, Jack & Parsons, 2010); in most cases, the only interface between the customer and the seller in e-commerce is the website. These websites, as a relatively new medium, have changed traditional shopping methods, and their use offers many advantages compared to traditional methods, including a wide array of product choices, access to extensive information about them, and the absence of time and place limitations. Therefore, an online store not only needs a good site but also needs to be designed and offer services in a way that attracts customers (Akhavanfar & Roqaei, 2016).

Given the increasing importance of e-commerce and the development of online sports product stores in the form of websites, Telegram channels, Instagram pages, sales applications, etc., this has become more evident than ever before. Furthermore, sports product sellers who market their products this way cannot achieve much success without understanding their customers' purchasing styles and interests, because customers who prefer purchasing from virtual spaces and electronic devices have different tendencies than traditional shoppers. Considering the importance of the topic, this research investigates the impact of environmental characteristics of online sports product stores on customers' repurchase intention; the findings of this research can significantly help sports product sellers in designing more effective strategies for attracting and retaining customers.

Materials and Methods

The present study, considering its main objective, is categorized as applied research. In terms of design, it is a non-experimental type, and more specifically, a descriptive-correlational design. This research will be conducted in a field setting using a questionnaire. The statistical population of this research includes all individuals who made at least one purchase from online sports product stores during the year 2025 (Persian calendar year, corresponding to 2025-2026). The sample size, using Cochran's formula for unknown populations, will be 264 individuals, who will be selected using a random sampling method. The statistical population of this research included customers of a website, page, or virtual channel selling sports products who had made at least one purchase from online sports product stores. In this

research, data collection was carried out using library studies, internet research, and databases. For data gathering, demographic characteristic questionnaires, the standard online store environmental characteristics questionnaire by Liu et al., (2008), and Sophapan's (2013) customer repurchase intention questionnaire were used, after their validity was confirmed. For data analysis, descriptive statistics (frequency, mean, percentages, standard deviations, and table creation) and inferential statistics (Kolmogorov-Smirnov test for normality, Pearson or Spearman test for examining variable relationships) were employed, using SPSS26 software.

Results

Results from the description of demographic characteristics were reported in Table 1.

Table 1. Demographic Characteristics.

Variable	Groups	Frequency	Percentage
Gender	Male	110	43.3%
	Female	144	57.7%
Age	Under 20 years	26	10.2%
	21-30 years	80	31.5%
	31-40 years	85	33.5%
	Over 40 years	63	24.8%
Education	High school or below	71	27.9%
	Associate degree	21	8.3%
	Bachelor's degree	89	35.1%
	Master's or higher	73	28.7%
Occupation	Employee	26	10.2%
	Self-employed	62	23.6%
	Student	99	39.0%
	Homemaker	61	24.4%
	Other	6	2.4%
Online Purchase History	Yes	113	42.4%
	No	141	57.6%

The results of Table 1 indicate that 43% of the subjects were male and 58% were female. Based on age, most subjects (33% frequency) were in the 31 to 40 age range, and the fewest (10% frequency) were over 40 years old. In terms of education level, most

subjects (about 35%) held a Bachelor's degree, and the fewest (8% frequency) held an Associate's degree. Based on employment status, most subjects were students (39% frequency), and the fewest (about 12%) were employees. Based on online purchase history

from sports stores, 43% had a purchase history, while products and had only visited the websites. 57% did not have an online purchase history of sports

Table 2. Descriptive Statistics of Variables

Variable		Mean	Standard Deviation
Components of Environmental Factors	Environmental Factors of Virtual Platforms	3.70	0.74
	Website Design	3.89	0.94
	Security	3.64	0.91
	Information Quality	3.54	0.86
	Payment Methods	3.64	0.89
	Product Variety	3.80	0.75
	Purchase Intention	3.68	0.76

As the results of Table 2 show, the variable "Environmental Factors of Virtual Pages" had a mean and standard deviation of 3.70 ± 0.74 , and the variable "Online Sports Product Purchase Intention" had a mean and standard deviation of 3.8 ± 0.75 . Given that the mean of all variables was higher than 3, they all had appropriate means.

To investigate the relationship between environmental

factors of virtual pages for selling sports products and the inclination to purchase sports products, the Pearson correlation coefficient test was used. Findings in Table 3 showed that there is a relationship between environmental factors of virtual pages for selling sports products and the inclination to purchase sports products ($r = 0.758$), given the observed significance level.

Table 3. Pearson Correlation Coefficient Results.

Variable		Correlation (r)	Significance (p)
Component Factors	Environmental Factors	0.758**	0.001
	Website Design	0.684**	0.001
	Security	0.659**	0.001
	Information Quality	0.638**	0.001
	Payment Methods	0.657**	0.001
	Product Variety	0.631**	0.001

Furthermore, linear regression was used to explain and predict the criterion variable. Table 4 presents the results of multiple regression for predicting the intention to purchase sports products online, considering the variable of environmental factors of virtual pages and its dimensions. One important aspect to consider in regression is multicollinearity

between independent variables, which is calculated in the table below using the Durbin-Watson statistic. If this statistic is between 1.5 and 2.5, it indicates the absence of multicollinearity between variables, and given the Durbin-Watson statistic, regression analysis is feasible.

Table 4. Multiple Regression Analysis Results.

Source	Sum of Squares	df	Mean Square	F-ratio	R	R ²	Adjusted R ²	Std. Error	DurbinWatson	Sig.
Regression	36.33	5	12.108	73.221*	0.772	0.596	0.588	0.492	2.09	0.001
Residual	73.31	248	0.402							
Total	109.65	253								

The analysis reveals that the adjusted multiple coefficient of determination (R^2) for the linear combination of environmental factors in virtual platforms with online purchase intention is 0.58. This indicates that approximately 58% of the variance in customers' online purchase intention for sports products can be explained by these environmental components. Table 5 shows the results of regression analysis using the simultaneous method, if all 5

components of the environmental factors of virtual pages are entered into the model, the results obtained show that all components of the environmental factors of virtual pages are predictors of customer online purchase intention, and in the meantime, according to the regression coefficient, the website design component has the highest and information quality the lowest regression effect on the online purchase intention variable.

Table 5. Results of Multiple Regression Analysis of Environmental Factors Components of Virtual Sports Product Sales Pages and Purchase Intention

Predictor	Unstandardized Coefficients	Standard Error	Standardized Coefficients (β)	t-value	Sig.
Constant	0.73	0.167	-	4.39	0.001
Website Design	0.26	0.050	0.329	5.38	0.001
Security	0.085	0.066	0.202	2.29	0.038
Info. Quality	0.052	0.067	0.158	1.77	0.044
Payment Methods	0.210	0.054	0.246	3.89	0.001
Product Variety	0.170	0.060	0.168	2.82	0.005

Discussion and Conclusion

The aim of this research was to investigate the relationship between the environmental factors of virtual pages for selling sports products and customers' online purchase intention. The research findings showed a positive and significant correlation ($r = 0.75$) between the environmental factors of virtual pages for selling sports products and the tendency to purchase sports products. It was also determined that there is a relationship between the constituent components of environmental factors of virtual pages and customer purchase intention, with the strongest relationships observed for website design, website security, and payment method. Studies indicate that the quality of the digital environment of online stores directly impacts consumer behavior. Neglecting key elements such as user-friendly design, transaction security, site performance speed, and accuracy of product content not only leads to a decrease in purchase rates but can also result in a wave of negative feedback on social networks. Conversely,

implementing professional standards in website design and management, while increasing customer satisfaction, transforms them into brand ambassadors who naturally recommend products to others. Nowadays, new digital marketing approaches emphasize the importance of creating sensory and emotional experiences in the virtual space, such that by utilizing intelligent design elements and consumer psychology, the tendency for repeated purchases can be strengthened. This strategy not only leads to competitive differentiation but also brings sustainable profitability to online businesses by reducing new customer acquisition costs. In essence, the digital environment acts as a dynamic platform that, by stimulating cognitive and emotional factors, both enhances the perceived value of the product and strengthens the tendency for future purchases.

The results of this section of the research were consistent and aligned with the findings of Amini and Akbari (2014), Azizi and Negahdari (2012),

Mostafasari et al., (2021), Al-Barraq (2021), Cha and Lee (2021), Jad Hao and Khana (2016), Shin et al., (2013), and G-Jee et al. (2012), but were inconsistent with Taghizadeh's research. Amini and Akbari (2014) conducted a study titled "Investigating the Effect of Site Quality on Online Repurchase Intention Through Customer Satisfaction," the results of which showed that website quality is an effective factor on customer repurchase intention. Al-Barraq (2021), Jad Hao and Khana (2016), Shin et al. (2013), and G-Jee et al. (2012) also found that empirically, website design positively affects overall customer satisfaction and perceived service quality. Taghizadeh (2010) found that website design has no significant effect on individuals' attitudes toward online shopping; in other words, for individuals with a negative attitude toward online shopping, site design cannot influence them, but it does affect customer satisfaction.

In today's digital age, creating and maintaining purchase intention in customers has become one of the fundamental challenges for businesses. Unlike physical environments, the e-loyalty of sports product customers has specific complexities that require a different and strategic approach. Research shows that factors influencing satisfaction and repeat purchases in the online space are inherently different from traditional environments, and understanding these differences can play a decisive role in the success of online stores. One of the key factors in this regard is the intelligent and user-centric design of online sales platforms. Specifically, websites and sports product sales pages must be designed not only to meet customers' information needs but also to provide an engaging and unique experience. This includes elements such as a simple user interface, rich multimedia content, smart recommendation systems, and a fast and secure purchasing process. It is important to note that in the digital space, every element of website design can become a factor for attracting or repelling customers. Therefore, online business managers must constantly update their strategies by utilizing the latest research findings in

digital consumer behavior. This approach not only leads to an increase in conversion rates and customer loyalty but also creates a sustainable competitive advantage for the business.

Conflict of interests

The authors declare that they have no conflicts of interest.

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