

Research on Determinants of Online Purchasing Behavior of Sportswear Based on TPB Theory

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Abstract: The promotion of national health preservation has led to a heightened awareness among the public regarding the significance of physical activity, thereby stimulating demand for sportswear. The present study, grounded in the TPB (Theory of Planned Behavior), undertakes an analytical examination of consumers' propensity to purchase sportswear on online platforms, their behavioral patterns, and the factors that influence these behaviors. A comprehensive analysis of 545 questionnaire survey responses revealed that consumers exhibit a high degree of confidence in online platforms and frequently utilize them for the acquisition of sportswear. Furthermore, consumers' purchase intention is significantly and positively influenced by their credibility in online platforms, attitude, subjective norms, and perceived behavioral control, which in turn significantly and positively affects their purchase behavior.

Keywords: TPB Theory; Sportswear; Purchase Intention; Online Platforms Credibility

1. Introduction

As people become more health-conscious, more consumers are pursuing a healthy lifestyle. As a crucial part of national health preservation, fitness has attracted increasing participation. From 2008 to 2018, the global fitness industry's total revenue grew from \$96.7 billion to \$124.7 billion. It is expected to reach \$302 billion by 2034 (Hill, 2025) [7]. During sports activities, people have stricter requirements for clothing that must balance comfort and flexibility. Currently, sportswear sales mainly include online and offline models. Online sales rely on platforms such as Taobao, TikTok, and Rednote. As digital technology develops, more consumers prefer to buy sports products online [2]. In the global market, 37% of consumers prefer to purchase sports equipment online, while 26%

buy in equal proportions online and in-store (Kineree Shah, 2024) [18]. Various factors influence consumers' online purchase of sportswear. Therefore, this paper thoroughly analyzes these factors based on TPB.

2. Literature Review

2.1 Theory of Planned Behavior (TPB)

Icek Ajzen (1985) proposed the Theory of Planned Behavior (TPB), which is an expansion of the Theory of Reasoned Action (Fishbein M. and Ajzen I., 1975) [6]. According to the theory, an individual's behavioral intention, which is affected by pure volitional factors (such as attitude toward the behavior and subjective norms) and non-volitional control factors (such as perceived behavioral control), determines their behavior. The theory has been extensively validated in numerous studies across various fields, and many domestic and foreign scholars have employed it to explain consumer purchase behavior [9].

2.2 Research on Purchase Intention of Sportswear

By reviewing relevant literature, numerous scholars both domestically and internationally have analyzed the factors influencing consumers' purchasing decisions regarding clothing. Nishant Kumar and Divya Mohan (2021) argue that the purchasing intent of educated Indian millennials towards eco-friendly clothing is significantly influenced by attitude, perceived behavioral control, environmental concern, and price sensitivity [8]. The findings of Hadi Moradi and Azim Zarei (2011) indicate that brand loyalty, perceived quality, brand associations, and brand awareness within brand equity all have a positive impact on consumers' purchasing intentions [11]. Yeayoung Noh and Na Young Ahn (2024) surveyed 348 millennials and found that perceived price, quality, and emotional value positively influence their willingness to purchase activewear, while the desire for conspicuous

consumption mediates the relationship between perceived emotional and social value and purchasing intent. Some scholars have also examined the influence of celebrities or key figures on consumer purchase intentions [13]. Dewi Wuisan et al. (2021) used Adidas as an example and found that celebrity endorsements have a positive and significant impact on the purchase intentions of potential Adidas consumers [22]. Ren Benhui et al. (2025) argued that the traits of fitness influencers influence women's willingness to purchase sports apparel through customer fit [17]. Wang Hongfeng, Tian Bingqiang, and Qu Hongjian (2024) found that the functional, promotional, image, experiential strategies, and social recognition of domestic sportswear positively influence consumer purchasing intentions. Some scholars analyze the impact of online information characteristics on consumer purchasing behavior [20]. David et al. (2020) noted that the attractiveness, credibility, and professionalism of information sources on social media significantly enhance consumer purchasing intentions. Zhu Xiaoyu et al. (2025) argue that consumers' perception of the credibility of fashion social media positively influences young consumers' willingness to purchase clothing [24].

2.3 Research on Sportswear Purchase Behavior

Ziynet Öndoğan et al. (2016) argue that the fit, comfort, color, design, and style of sportswear significantly influence purchasing behavior [15]. Ashok Abhan et al. (2019) found that product quality (including fit and durability), special features, store location, and brand personality (such as brand identity and brand image) are key factors influencing consumers' purchases of sportswear. Sun Wenshu (2020) found that the brand image of sportswear significantly positively influences purchasing behavior [19]. Additionally, scholars have also found that clothing purchasing behavior varies significantly between different genders (Cao Bei and Dong Jingqiu, 2020) and generations (Monika Rahulan, 2014) [3,16]. Funde Yogesh and Mehta Yesha (2014) discovered via their study that remarks on social media, particularly those from friends, significantly influence consumers' purchasing behavior on social media [23]. Saeid Dehyadegari et al. (2025) discovered that the effect of social media influencers indirectly affects the consumption intentions of online

clothing consumers, thereby influencing their purchasing behavior. Additionally, many scholars have used the TPB theory to study different sportswear purchasing behaviors [4]. Leonnard et al. (2019) argue that both perceived behavioral control and subjective norms act as motivators for purchase intention, thereby promoting the purchase of moderate athletic wear. Watts and Chi (2019) found that the purchase intention of casual athletic wear is significantly affected by attitudes and perceived behavioral control [21]. In addition, past purchase behavior and a health-oriented lifestyle also indirectly affect consumers' purchase decisions. Hong-bo Yan and You-fang Chen (2023) also found that subjective norms and perceived behavioral control have a significant impact on the inclination to purchase athletic wear. Meanwhile, perceived ease of use and perceived usefulness jointly shape purchasing behavior [14].

Given the analysis above, this research puts forward the following hypotheses:

H1: online platforms' credibility will positively influence consumers' attitude toward purchasing sportswear online.

H2: online platforms' credibility will positively influence consumers' perceived behavioral control when purchasing sportswear online.

H3: Sportswear consumers' attitudes toward purchasing sportswear online positively influence their consumer purchase intentions.

H4: Sportswear consumers' subjective norms regarding online purchases of sportswear positively influence their consumer purchase intentions.

H5: Perceived behavioral control toward purchasing sportswear online positively influences consumers' purchase intention.

H6: Sportswear consumers' purchasing intent for sportswear online positively influences their consumer purchasing behavior

Combining the hypotheses, a model diagram is drawn, as shown in Figure 1.

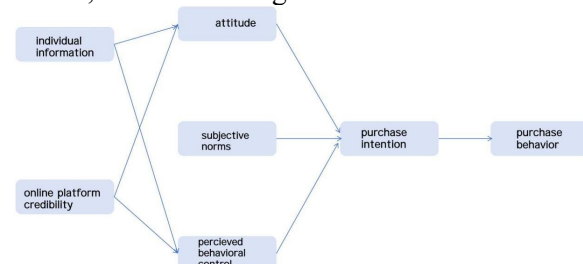


Figure 1. Sports Clothing Purchase Behavior Model Diagram

3. Argumentation and Analysis

3.1 Research Methods

The present study utilizes a questionnaire survey method. The content of the questionnaire mainly consists of the respondents' basic information, their trust in online platforms, their attitudes towards buying sportswear online, subjective norms, perceived behavioral control, purchase intention, and purchase behavior. With the exception of basic information and purchase behavior, the remaining items are adapted from established scales [10]. These adaptations are based on the characteristics of sports apparel consumers' online purchasing behavior. The measurement of each variable is executed through the utilization of a five-point Likert scale. The scale items for trust in online platforms were adapted from Li Zhe et al. (2018), attitudes from Ajzen I. (1991) [1], subjective norms from Fitzmaurice (2005) [5], perceived behavioral control from Li Wenchao et al. (2023), and purchase intention from Kim et al. (2013) [11]. The distribution of the questionnaire was facilitated by the Questionnaire Star platform and was randomly sampled, resulting in a total of 545 valid responses. In order to control the potential sampling deviation, the questionnaire identifies and eliminates invalid questionnaires by setting logical check questions to ensure the authenticity of the answers of the remaining samples. Table 1 presents the demographic details of the survey respondents.

Table 1. Frequency Distribution of Basic Information

variable	option	frequency	percentage (%)
age group	18 and under	27	5
	19~24	153	28.1
	25~34	186	34.1
	35~44	98	18
	45 and above	81	14.9
Gender	man	289	53
	woman	256	47
Education	High school and below	52	9.5
	college degree	230	42.2
	Bachelor's degree	195	35.8
	Master's degree or above	68	12.5
occupation	student	178	32.7
	office worker	170	31.2
	Freelancer	112	20.6

Average monthly income	Business owner/anager	81	14.9
	other	4	0.7
	Under 3000	178	32.7
	3001–5000	28	5.1
	5001–10,000	131	24
	10,001–20,000	152	27.9
	More than 20,000	56	10.3

3.2 Empirical Analysis

Reliability analysis was used to assess the reliability and stability of the scale. During this research, the statistical software SPSS 27.0 was utilized for data analysis. The reliability analysis was conducted using the Cronbach's Alpha method, which is a widely-recognized technique in psychometric analysis. Table 2 presents the results of the reliability analysis. The overall Cronbach's Alpha coefficient was determined to be 0.927, the online platform credibility was found to be 0.904, the attitude was determined to be 0.852, the subjective norm was determined to be 0.829, the perceived behavioral control was determined to be 0.817, and the purchase intention was determined to be 0.841. A thorough examination reveals that the Cronbach's Alpha coefficients of all dimensions exceed 0.7, indicating substantial reliability. According to the prevailing standard, the reliability of the scale is usually deemed sufficient when the coefficient is over 0.7. The reliability value of the scale is satisfactory, indicating that the measurement results of the scale as a whole and each dimension have high reliability and stability.

Table 2. Reliability Test

	number of items	Clonebach Alpha	Clonebach Alpha
Online platform credibility	8	0.904	0.927
Attitude	4	0.852	
Subjective norms	4	0.829	
Perceived behavioral control	4	0.817	
Purchase intention	4	0.841	

Validity analysis aims to investigate whether the scale can accurately measure the concept or variable it is intended to measure. This paper adopts KMO (Kaiser-Meyer-Olkin) inspection and Bartlett spherical degree validity analysis, the results as shown in table 3. KMO aptness sampling measure is 0.94, which is greater than 0.7 (generally considered KMO value is greater

than 0.7 for factor analysis, points out that the variables have shared influencing factors); The approximate chi-square value of Bartlett's sphericity test was 6512.503, the degree of freedom was 276, and the significance was 0.000 (the significance level was less than 0.05, indicating that there was a significant correlation between the variables). It can be concluded that the scale has high validity and can effectively measure the target variable. **Table 3. KMO and Bartlett's Test**

Number of KMO sampling appropriateness	0.94
Bartlett's test of sphericity	Approximate chi-square 6512.503

Degrees of freedom	276
Salience	0.000

As demonstrated in Table 4, the correlation analysis indicates that all variables exhibit a positive correlation, and this correlation is confirmed to have statistical significance at the 99% confidence level. The existence of a substantial positive correlation among all the variables is evident. The credibility of online platforms, the attitudes of consumers, subjective norms, and perceived behavioral control have been shown to exert a positive influence on purchase intention and purchase behavior. Furthermore, it is evident that these variables are interconnected and mutually impactful.

Table 4. Correlation Analysis Among Variables

	Online platform credibility	Attitude	Subjective norms	Perceived Behavioral control	Purchase intention	purchase behavior
Online platform credibility	1					
Attitude	.489**	1				
Subjective norms	.431**	.513**	1			
Perceived Behavioral control	.371**	.462**	.515**	1		
Purchase intention	.437**	.509**	.535**	.504**	1	
purchase behavior	.331**	.350**	.404**	.406**	.723**	1

** At the 0.01 level (double tail), the correlation is significant.

Table 5 shows that in this regression analysis, the unstandardized coefficient B of the constant is 0.665, the standard error is 0.202, the t value is 3.288, and the significance is 0.001, indicating that there is a basic value that significantly affects the purchase intention when other independent variables are not considered. The independent variables, encompassing sportswear consumers' credibility in online platforms, subjective norm, perceived behavioral control, and attitude, demonstrate a statistically meaningful and positive influence on purchase intention. This conclusion is substantiated through the analysis of unstandardized

coefficients, standardized coefficients, t-values, and corresponding significance levels. The standardized coefficients of attitude (0.205) and subjective norm (0.251) are relatively high, indicating a large impact. The R square was 0.416, showing that 41.6% of the variation in purchase intention was explainable by the independent variables, and the degree of model fit was acceptable. The F value was 96.043 and the significance was 0.000, indicating that the whole regression model was significant, that is, all the independent variables had a significant impact on the purchase intention as a whole.

Table 5. Multiple Linear Regression of Each Independent Variable on the Dependent Variable Purchase Intention

	Unstandardized coefficients		Standardization coefficient	t	Salience
	B	standard error	Beta		
(constant)	0.665	0.202		3.288	0.001
Online platform credibility	0.174	0.047	0.145	3.700	0.000
attitude	0.198	0.041	0.205	4.889	0.000
Subjective norms	0.250	0.042	0.251	5.994	0.000
Perceived behavioral control	0.231	0.041	0.226	5.645	0.000
R square	0.416				
F	96.043***				

Table 6 demonstrates that consumers' trust in online platforms, subjective norms, and

perceived behavioral control exhibit p-values below the 0.05 significance threshold, with all

three coefficients being positive. This implies that these factors are positively correlated with purchasing behavior in a statistically significant manner. Conversely, the p-value for attitude exceeds 0.05, showing that attitude and purchasing behavior do not have a significant linear association. With an R^2 value of 0.239, it

means that the predictor variables account for 23.9% of the variability in the outcome variable., surpassing the 10% benchmark and indicating substantial explanatory power. Furthermore, the F-value significance level of less than 0.001 confirms the overall validity of the regression model.

Table 6. Multiple Linear Regression with Each Independent Variable Regressed Against the Dependent Variable of Purchase Behavior

	Unstandardized coefficients		Standardization factor	t	conspicuousness
	B	standard error	Beta		
(constant)	1.559	0.174		8.969	0.000
Online platform credibility	0.110	0.040	0.122	2.737	0.006
attitude	0.066	0.035	0.091	1.895	0.059
Subjective norms	0.144	0.036	0.192	4.013	0.000
Perceived behavioral control	0.169	0.035	0.220	4.806	0.000
R square	0.239				
F	42.376***				

Table 7 shows the lower and upper confidence intervals obtained based on Bootstrap sampling. If the confidence interval does not contain 0, the mediating effect is significant. The three mediating paths shown in the table (subjective norm → purchase intention → purchase behavior, online platform credibility → perceived

behavioral control → purchase intention → purchase behavior, online platform credibility → attitude → purchase intention → purchase behavior) do not contain 0 in BootLLCI and BootULCI intervals, indicating that their mediating effects are significant.

Table 7. Test of Mediating Effect

path	Effect	BootS E	BootLL CI	BootULCI
Subjective norm → purchase intention → purchase behavior	0.10	0.02	0.06	0.15
Online platform credibility → perceived behavioral control → purchase intention → purchase behavior	0.13	0.03	0.08	0.20
Online platform credibility → attitude → purchase intention → purchase behavior	0.14	0.03	0.08	0.20

From the analysis mentioned above, it can be concluded that Hypothesis 1, Hypothesis 2, Hypothesis 3, Hypothesis 4, Hypothesis 5, and Hypothesis 6 all hold true.

4. Conclusion

Based on TPB theory and consumers' trust in online platforms, this paper obtains 545 questionnaire survey data through the method of questionnaire survey, and investigates the factors that impact consumers' behavior when buying sportswear online. The results show that 83% of consumers purchased sports apparel online more than 5 times in the past year, and most of them chose online platforms such as TikTok, Rednote, Pinduoduo and Taobao. 93% of consumers have a good impression of the reputation of online platforms. 90% of consumers are satisfied with the logistics and distribution, website security and privacy protection of online platforms, and

89% of consumers are satisfied with the communication and interaction of online customer service. The analysis demonstrates that consumer trust in online platforms significantly enhances perceived behavioral control and attitude. Their attitude, perceived behavioral control, and subjective norms positively influence consumers' purchase intention. Moreover, the positive impact of purchase intention on the buying actions of consumers is quite prominent. In view of this, sportswear brands can create a "scenario-based content + instant purchase" chain on these platforms. Such content can accelerate the delivery of product value, thereby improving consumers' attitudes toward and willingness to purchase their brand products.

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