



The Influence of Platform Service Factors on Online Purchase Intention among College Students

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Abstract- The purposes of this quantitative research were to 1) examine the influence of platform service factors—Access Convenience, Perceived Website Quality, Perceived Price, Perceived Usefulness, and Trust—on Online Purchase Intention among students at Guangxi Quality Engineering Vocational and Technical College, and 2) analyze the relative importance of each factor. Data were collected from 400 students via stratified random sampling and analyzed using descriptive statistics, Pearson correlation, and multiple regression. The results revealed that all five factors had significant positive relationships with Online Purchase Intention. Perceived Price emerged as the strongest predictor, followed by Perceived Website Quality, Trust, Access Convenience, and Perceived Usefulness. The regression model explained 36.0% of the variance ($R^2 = 0.360$, Adjusted $R^2 = 0.352$). These findings provide actionable insights for e-commerce platforms targeting price-sensitive student segments and validate an integrated theoretical framework combining the Technology Acceptance Model (TAM), Trust Theory, the Information Systems Success Model, and Perceived Value Theory.

Keywords: Online Purchase Intention, Platform Service Quality, Price Perception, Trust, E-commerce, Vocational College Students.

I. Introduction

The digital economy has fundamentally reshaped global retail, with e-commerce sales surpassing \$5.9 trillion in 2024. China, as a global leader, generated approximately \$2.1 trillion in online transactions (Statista, 2024; eMarketer, 2025). Despite this growth, there is limited research on the online purchasing behavior of vocational college students—a demographic representing about 7.8 million individuals in China. These students are digital natives with distinct consumption patterns, yet they are often overlooked in existing studies. Guangxi Province, one of China's fastest-growing e-commerce markets, offers a valuable context: college students account for nearly 15% of online retail transactions but exhibit an 18% higher platform-switching rate than the national average. This suggests that current platform offerings may not fully meet their expectations.

Prior research has predominantly applied single-theory models (e.g., TAM) in developed markets, neglecting the joint effects of multiple platform service dimensions in emerging markets. This study addresses these gaps by examining how five key factors—Access Convenience, Perceived Website Quality, Perceived Price, Perceived Usefulness, and Trust—collectively influence online purchase intention among vocational college students in Guangxi. The study integrates perspectives from TAM, Trust Theory, and Service Quality Theory to develop a holistic understanding of digital-native consumer decision-making.

1.1 Research Objective

1. To explore the key platform service factors that constitute the core service experience of e-commerce platforms.
2. To empirically analyze the direct impact of these factors on the online purchase intention of college students at Guangxi Quality Engineering Vocational and Technical College.

Research Hypotheses

- H1: Access Convenience has a significant positive impact on college students' online purchase intention.
- H2: Perceived Website Quality has a significant positive impact on college students' online purchase intention.
- H3: Perceived Price has a significant positive impact on college students' online purchase intention.
- H4: Perceived Usefulness has a significant positive impact on college students' online purchase intention.
- H5: Trust has a significant positive impact on college students' online purchase intention.

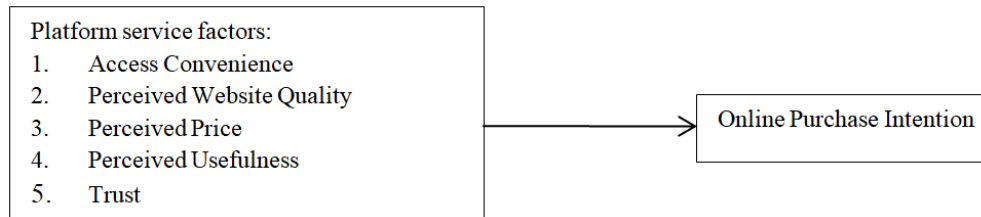


Figure 1. Research Framework

II. Literature review

This study is grounded in four core theoretical perspectives to provide a comprehensive understanding of online purchase intention.

2.1 Technology Acceptance Model (TAM)

Developed by Davis (1989), TAM is a foundational framework for explaining user adoption of information technology. It posits that two primary beliefs determine behavioral intention: Perceived Usefulness, the degree to which a person believes that using a system enhances performance; and Perceived Ease of Use, the degree to which using the system is free of effort. In the e-commerce context of this study, TAM provides the theoretical basis for the Access Convenience (operationalizing ease of use) and Perceived Usefulness constructs. When students find a platform easy to navigate and useful for achieving shopping goals, their intention to purchase increases (Aziz & Wahid, 2018; Davis, 1989).

2.2 Trust Theory

Trust is a critical mechanism for mitigating the inherent risks and uncertainty in online transactions where face-to-face interaction is absent. (Mayer et al., 1995) conceptualized trust as the willingness to be vulnerable based on positive expectations of another party's behavior. In e-commerce, this translates to confidence in the platform's reliability, integrity, and security regarding personal information, payments, and order fulfillment. Trust reduces perceived risk and is a fundamental prerequisite for transaction completion. This theory directly underpins the Trust variable in this study, confirming its vital role in fostering purchase intention (Gefen et al., 2003; Tataningtyas & Tjahjaningsih, 2022).

2.3 Information Systems Success Model (IS Success Model)

The updated IS Success Model (DeLone & McLean, 2003) identifies system quality, information quality, and service quality as key determinants of user satisfaction and intention to use a system. System quality refers to a platform's usability, reliability, and responsiveness; information quality concerns the accuracy and relevance of content. In online shopping, these dimensions directly shape the user's experience and evaluation. This model provides the theoretical foundation for Perceived Website Quality, explaining how a stable, well-designed, and informative platform enhances students' willingness to purchase (Baharuddin & Wahab, 2025; DeLone & McLean, 2003).

2.4 Perceived Value Theory

Grounded in behavioral economics and consumer psychology, Perceived Value Theory posits that consumers' purchase decisions are driven by their overall assessment of the utility of a product or service based on perceptions of what is received (benefits) and what is given up (sacrifices), with price being a primary sacrifice (Zeithaml, 1988). This theory is central to understanding the Perceived Price variable. It suggests that purchase intention is not merely a function of objective price, but of the subjective judgment of price fairness, value for money, and attractiveness relative to benefits (Monroe, 1990; Xia et al., 2004). For economically sensitive students, this value trade-off is paramount.

2.5 Variable Definitions

Access Convenience: The perceived time and effort required to initiate and complete a shopping task on the platform (adapted from Berry et al., 2002; derived from TAM).

Perceived Website Quality: The user's holistic evaluation of the platform's technical performance, information design, and usability (adapted from DeLone & McLean, 2003; derived from IS Success Model).

Perceived Price: The subjective judgment of price fairness, attractiveness, and value for money (Zeithaml, 1988; derived from Perceived Value Theory).

Perceived Usefulness: The degree to which using the platform enhances shopping effectiveness and efficiency (Davis, 1989; derived from TAM).



Trust: The belief that the platform is reliable, secure, and honest in its transactions (Mayer et al., 1995; derived from Trust Theory).

Online Purchase Intention: The likelihood that a consumer will plan and execute a purchase via the platform in the near future (Ajzen, 1991).

Numerous studies have confirmed the positive relationships between these factors and online purchase intention. For instance, Saha et al. (2022) found that service convenience directly influences future purchase intentions. Setiawan and Achyar (2021) demonstrated that perceived price and trust significantly affect purchase intention in Indonesian online stores. Aziz and Wahid (2018) identified perceived usefulness as a key driver among university students. Recent meta-analyses (Adanan et al., 2025; Tataningtyas & Tjahjaningsih, 2022) further validate the integrated role of these variables. However, most studies examine these factors in isolation or in developed markets, leaving a gap in understanding their joint effects in vocational student populations in emerging regions.

III. Materials and Methods

This section details the methodologies used in the study to examine the influence of platform service factors on online purchase intention among college students.

3.1 The Population / Sample Group

The target population comprised 5,140 full-time undergraduate students at Guangxi Quality Engineering Vocational and Technical College. Using stratified random sampling by school and academic year, 400 students were selected (Yamane's formula, 95% confidence level, 5% margin of error). The proportional allocation ensured representation across all six schools and three academic years.

3.2 Research Instrument

A structured questionnaire was developed based on validated scales from prior literature. It consisted of three parts: demographic information (7 items), platform service factors (30 items covering the five constructs), and online purchase intention (5 items). All items were measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The original questionnaire was administered in Chinese, as the target respondents were Chinese college students. To ensure conceptual equivalence, the items were translated from English sources using a back-translation procedure.

The measurement items were adapted from prior validated studies on technology acceptance, trust, service quality, and consumer behavior (e.g., Davis, 1989; DeLone & McLean, 2003; Zeithaml, 1988; Mayer et al., 1995; Ajzen, 1991).

Content validity was assessed by three experts; all items achieved an Item-Objective Congruence (IOC) index greater than 0.6. Reliability was established through a pilot test with 30 respondents; Cronbach's alpha for all constructs exceeded 0.88, and the overall reliability was 0.940, indicating excellent internal consistency.

3.3 Data Collection

Data were collected from January to February 2026 via an online questionnaire distributed through Wenjuanxing, a professional survey platform in China. Personalized invitations were sent to the 400 sampled students via official university email addresses, with a follow-up reminder after one week.

3.4 Reliability and Validity

All constructs demonstrated excellent reliability, with Cronbach's alpha coefficients as follows: Access Convenience ($\alpha = 0.884$), Perceived Website Quality ($\alpha = 0.886$), Perceived Price ($\alpha = 0.893$), Perceived Usefulness ($\alpha = 0.880$), Trust ($\alpha = 0.892$), and Online Purchase Intention ($\alpha = 0.900$). Content validity was confirmed through expert review with IOC scores exceeding 0.6 for all items.

3.5 Data Analysis

Descriptive statistics (frequency, percentage, mean, standard deviation) were used to summarize respondent characteristics and variable levels. Pearson correlation and multiple linear regression analysis were employed to test the hypotheses. Statistical significance was set at $p < 0.05$. All analyses were conducted using IBM SPSS Statistics version 26.

IV. Results

Table 1. Basic Information of Respondents

(n=400)

Question	Item	Frequency	Percentage(%)
Q1 - Gender	Male	178	44.50
	Female	222	55.50
	Total	400	100.00
Q2 - Age	18 and under	35	8.80
	19years old	94	23.50
	20 years old	110	27.50
	21 years old	90	22.50
	22 years old	56	14.00
	23 years and above	15	3.75
Total	400	100.00	
Q3 - Your School/Faculty	School of Business	60	15.00
	School of Artificial Intelligence and Big Data	80	20.00
	School of Quality Management	102	25.50
	School of Food, Drug, and Health Management	73	18.25
	School of Special Equipment	43	10.75
Total	400	100.00	
Q4 - Monthly Disposable Income (RMB)	1,500 or less	106	26.50
	1,501 - 2,500	253	63.30
	2,501 - 3,500	31	7.80
	3,501 or more	10	2.50
Total	400	100.00	
Q5 - How many years of online shopping experience do you have?	Less than 1 year	26	6.50
	1-3 years	59	14.75
	4-6 years	149	37.25
	7 years or more	166	41.50
Total	400	100.00	
Q6 - On average, how often do you shop online?	I never shop online	29	7.25
	Less than once per month	73	18.25
	1 to 3 times per month	70	17.50
	1 to 2 times per week	206	51.50
Total	400	100.00	

Table 1 presents the demographic profile of the 400 respondents. The sample consisted of slightly more females (55.5%) than males (44.5%), with the majority aged between 19 and 21 years (82.25%). Most students had a monthly disposable income of 1,501-2,500 RMB (63.25%), possessed four or more years of online shopping experience (78.75%), and shopped online at least once per week (57%).

Table 2. The Online Shopping Platform(s) You Use Most Frequently

(n=400)

Question	Item	Frequency	Percentage(%)
Q7 - The online shopping platform(s) you use most frequently	Taobao	163	40.75
	JD	231	57.75
	Pinduoduo	231	57.75
	Douyin	194	48.50
	Xiaohongshu	119	29.75
	Other	51	12.75
Total	989	100.00	

Table 2 shows the online shopping platforms most frequently used by respondents. JD and Pinduoduo had the highest penetration rates, both at 57.75%, followed by Douyin at 48.50% and Taobao at 40.75%. Xiaohongshu accounted for 29.75%, and 12.75% of respondents chose other platforms. Overall, college students showed high usage rates of both mainstream comprehensive e-commerce platforms and content-based e-commerce platforms.



Table 3. Descriptive Statistics of Platform Service Factors and Online Purchase Intention (n=400)

Dimension	Mean	S.D.	Interpretation	Order
Access Convenience (AC)	3.316	0.958	Moderate	4
Perceived Website Quality (PWQ)	3.319	0.967	Moderate	3
Perceived Price (PP)	3.377	0.983	Moderate	1
Perceived Usefulness (PU)	3.322	0.947	Moderate	2
Trust (TR)	3.304	1.012	Moderate	5
Online Purchase Intention (OPI)	3.297	1.012	Moderate	6

Table 3 outlines the mean scores and standard deviations for all variables. All constructs were perceived at a moderate level, with Perceived Price scoring the highest (M = 3.38) and Trust and Online Purchase Intention scoring the lowest (M = 3.30). Standard deviations ranged from 0.95 to 1.01, indicating consistent response patterns.

Table 4. Pearson Correlation Analysis Results

		Access Convenience	Perceived Website Quality	Perceived Price	Perceived Usefulness	Trust	Online Purchase Intention
Access Convenience	Pearson correlation	1					
	SIG.(two-tailed)						
Perceived Website Quality	Pearson correlation	0.419	1				
	SIG. (two-tailed)	0.000					
Perceived Price	Pearson correlation	0.404	0.432	1			
	SIG. (two-tailed)	0.000	0.000				
Perceived Usefulness	Pearson correlation	0.360	0.439	0.442	1		
	SIG. (two-tailed)	0.000	0.000	0.000			
Trust	Pearson correlation	0.454	0.406	0.461	0.453	1	
	SIG. (two-tailed)	0.000	0.000	0.000	0.000		
Online Purchase Intention	Pearson correlation	0.419	0.447	0.462	0.429	0.448	1
	SIG. (two-tailed)	0.000	0.000	0.000	0.000	0.000	

*Note: ** Correlation is significant at the 0.01 level (2-tailed).*

Table 4 displays the Pearson correlation coefficients among all variables. All independent variables showed significant positive correlations with Online Purchase Intention ($p < 0.01$), with coefficients ranging from 0.419 to 0.462. The highest correlation was observed between Perceived Price and Trust ($r = 0.461$). All correlations among independent variables were below 0.50, confirming the absence of multicollinearity.

Table 5. Multiple Regression Analysis Results

Variable	B	SE	β	t	p	VIF
(Constant)	0.442	0.197		2.241	0.026	
Access Convenience	0.154	0.052	0.144	2.996	0.003	1.426
Perceived Website Quality	0.188	0.052	0.177	3.624	<0.001	1.465



Variable	B	SE	β	t	p	VIF
Perceived Price	0.200	0.052	0.191	3.866	<0.001	1.505
Perceived Usefulness	0.155	0.053	0.143	2.927	0.004	1.476
Trust	0.160	0.051	0.158	3.152	0.002	1.551

Note: Dependent Variable: Online Purchase Intention. $R^2 = 0.360$, Adjusted $R^2 = 0.352$, $F(5, 394) = 44.341$, $p < 0.001$, Durbin-Watson = 2.049.

Table 5 presents the multiple regression analysis results. All five hypotheses were supported, with each independent variable significantly predicting Online Purchase Intention. Perceived Price was the strongest predictor ($\beta = 0.191$, $p < 0.001$), followed by Perceived Website Quality ($\beta = 0.177$, $p < 0.001$), Trust ($\beta = 0.158$, $p = 0.002$), Access Convenience ($\beta = 0.144$, $p = 0.003$), and Perceived Usefulness ($\beta = 0.143$, $p = 0.004$). The model explained 35.2% of the variance in Online Purchase Intention. All VIF values were below 5, indicating no multicollinearity issues.

V. Discussion

The findings confirm that all five platform service factors significantly influence online purchase intention among vocational college students, supporting the integrated theoretical framework. Perceived Price emerged as the most important predictor, reflecting the economic constraints and price sensitivity of this demographic. This finding strongly aligns with Perceived Value Theory (Zeithaml, 1988), which posits that consumers' purchase decisions are driven by a value trade-off between perceived benefits and sacrifices. For economically dependent students, price is a primary sacrifice, making its fairness and attractiveness paramount (Setiawan & Achyar, 2021).

Perceived Website Quality was the second strongest predictor, underscoring the critical role of system stability, navigational ease, and information design in shaping user confidence and purchase decisions. This supports the core tenets of the IS Success Model (DeLone & McLean, 2003), confirming that high system and information quality are fundamental drivers of user intention. Trust also played a significant role, validating Trust Theory (Gefen et al., 2003; Mayer et al., 1995; An, 2024) by demonstrating that in the absence of physical interaction, students rely on platform reliability and security to mitigate perceived risk and facilitate transactions. Access Convenience and Perceived Usefulness, both derived from TAM, were significant but had slightly lower coefficients. This suggests that for digital natives, basic ease of use and usefulness are expected baseline features, whereas price, quality, and trust become key differentiators in a mature e-commerce market. The moderate perception levels across all variables indicate that students evaluate platforms pragmatically, balancing multiple attributes—a rational behavior consistent with the competitive landscape of China's e-commerce industry.

This study advances the literature by successfully integrating TAM, Trust Theory, the IS Success Model, and Perceived Value Theory into a unified framework, demonstrating their joint explanatory power. It validates that cognitive (usefulness, convenience), affective (trust), functional (website quality), and economic (price) dimensions collectively shape online purchase intention. It also provides crucial empirical evidence from an underresearched segment—vocational college students in Southwest China—highlighting the primacy of price in this specific context.

E-commerce platforms should prioritize price competitiveness (e.g., student discounts, transparent pricing, value bundles) while maintaining high website quality and robust trust mechanisms (security badges, clear return policies). Resource allocation should follow the identified hierarchy: price > website quality > trust > convenience > usefulness. Marketing campaigns should emphasize value for money alongside security and ease of use.

VI. Conclusion

This study examined how five platform service factors, grounded in four major theoretical perspectives, influence online purchase intention among vocational college students in Guangxi, China. The results confirmed



that all factors are significant predictors, with perceived price being the most influential. The integrated model explained 35.2% of the variance, validating the multidimensional and theoretically grounded nature of consumer decision-making.

The study also assessed the relative importance of each factor, providing a clear, data-driven prioritization for platform managers. These findings contribute to both academic knowledge and practical business strategy in the rapidly growing field of e-commerce.

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