

# Determinants of Online Shopping Intention Among Students: A Proposed Integration of TPB and TAM

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## ABSTRACT

The rapid growth of e-commerce in Malaysia, driven by affordable internet access and mobile commerce, has significantly reshaped consumer behavior, especially among university students. Platforms such as Shopee, Lazada, and TikTok Shop have become integral to student lifestyles, offering convenience and affordability. As digital natives, students increasingly rely on online shopping for goods and services, yet concerns regarding trust, product authenticity, and transaction security continue to influence their purchasing decisions. This study aims to examine the determinants of online shopping intention among Universiti Teknologi MARA (UiTM) students by integrating the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM). A quantitative, cross-sectional survey will be conducted among undergraduate students selected through stratified random sampling to ensure representation across faculties, academic years, and gender. Constructs such as perceived usefulness, perceived ease of use, attitude, subjective norms, and perceived behavioral control will be measured using validated five-point likert scales. Data will be analysed using SmartPLS to assess reliability, validity, and structural relationships through Structural Equation Modeling (SEM). By integrating behavioral and technological perspectives, this study seeks to advance understanding of the factors shaping students' online shopping intention. Findings are expected to guide online retailers in designing student-oriented strategies, support consumer protection agencies in enhancing digital security measures, and assist universities in promoting responsible online consumption.

**Keywords:** Online shopping intention, E-commerce, Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), students

## INTRODUCTION

The rapid advancement of digital technologies and the increasing accessibility of the internet have revolutionized the retail industry worldwide. In Malaysia, the growth of e-commerce has been particularly significant, with platforms such as Shopee, Lazada, Zalora, and TikTok Shop becoming household names. According to recent industry reports, Malaysia's e-commerce market has grown steadily due to the rise of mobile commerce, affordable data plans, and the convenience associated with online shopping. This trend is particularly visible among younger consumers, including university students, who represent one of the most active and influential online shopping demographics.

University students are digital natives who are highly engaged with social media platforms, mobile applications, and online marketplaces. They often rely on e-commerce not only for purchasing goods such as clothing, gadgets, and personal care items but also for accessing essential services such as food delivery and educational resources. The student lifestyle, characterized by limited financial resources, busy academic schedules, and a strong reliance on technology, makes online shopping an appealing alternative to traditional retail shopping. UiTM, being one of the largest universities in Malaysia with over 30 campuses nationwide, offers a diverse and representative sample of Malaysian students, making it an ideal context to explore online shopping behavior and intention.

Despite the popularity of online shopping, several concerns and challenges remain. Issues such as trust, security of online transactions, authenticity of products, misleading advertisements, and delivery delays continue to affect students' perceptions and willingness to shop online. Moreover, the influence of social media marketing, peer recommendations, and price promotions further complicates online shopping decisions. This raises important questions on the factors that contribute to the intention to still shop online among students.

From a theoretical perspective, behavioral models such as the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM) provide useful frameworks to examine online shopping intention. TPB emphasizes attitudes, subjective norms, and perceived behavioral control as predictors of intention, while TAM highlights perceived usefulness and ease of use. Both models have been widely applied in consumer behavior studies but require contextual validation within the Malaysian higher education environment.

Given that online shopping is now embedded in the daily routines of students, it is essential to investigate the underlying motivations and barriers faced by this group. The insights from this study are not only academically valuable but also practically relevant. For instance, understanding students' online shopping intention may help e-commerce platforms design more student-friendly marketing strategies, guide policymakers in formulating consumer protection policies, and support universities in promoting digital literacy and financial responsibility among students.

Therefore, this study aims to analyze the factors influencing online shopping intention among UiTM students across various campuses in Malaysia. By integrating behavioral theories and contextual realities, this study seeks to contribute to a deeper understanding of the determinants shaping students' adoption of e-commerce platforms.

## **CONTRIBUTION OF THE STUDY**

This study contributes to academic literature and practical applications in several ways. From a theoretical perspective, it extends consumer behavior research by applying the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM) to the context of Malaysian university students. It provides empirical evidence on how factors such as trust, perceived usefulness, ease of use, social influence, and price sensitivity influence online shopping intention. By focusing on UiTM students, who represent diverse socio-economic and cultural backgrounds across multiple campuses, the study offers a more nuanced understanding of online shopping intention among young consumers in Malaysia.

In terms of practical contribution, the findings are expected to benefit e-commerce businesses and online retailers by providing insights into the preferences, motivations, and barriers that shape students' online shopping behavior. These insights can assist businesses in designing student-friendly marketing strategies, such as offering discounts, improving platform usability, and strengthening trust through secure payment systems. Moreover, the study highlights potential risks associated with online shopping, such as overspending and compulsive buying, which could inform the development of consumer education programs targeting students.

On the policy front, the study provides valuable input for consumer protection agencies and policymakers in their efforts to promote safe, transparent, and trustworthy online shopping practices. The results may guide the development of initiatives to enhance digital literacy, financial management skills, and online security awareness among students. At the institutional level, universities including UiTM can also draw upon the findings to design student support services, workshops, and awareness programs that encourage responsible digital consumption.

In summary, this study bridges the gap between theoretical understanding and practical application by offering a framework that can guide businesses, policymakers, and higher education institutions in fostering a safer and more effective online shopping environment for Malaysian university students.

## LITERATURE REVIEW

### Online Shopping Behavior

Online shopping, often referred to as e-shopping, is defined as the purchase of products or services through digital platforms. Consumer shopping behavior in this domain is highly dynamic, as purchasing decisions may shift depending on the information available online. At present, customers commonly use e-commerce platforms to gather information, compare product features and prices with alternatives, and subsequently select the best available option (Wu et al., 2013). Previous studies have shown that younger consumers, particularly students, are more inclined to shop online due to factors such as convenience, product variety, and affordability. Nonetheless, issues related to trust, perceived risk, and security continue to play a significant role in shaping purchasing decisions (Yuliharsi, Islam, & Daud, 2011).

### Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB)

Technology Acceptance Model (TAM), proposed by Davis (1989), emphasizes two primary determinants of technology adoption: perceived usefulness (users believe using technology will enhance or improve their job or life performance) and perceived ease of use (users believe the technology will facilitate their effort and free from hassle). The theory suggests that the latter will have a direct effect on perceived usefulness. TAM also provides a foundation for examining how external factors influence beliefs, attitudes, and intentions related to technology adoption (Davis, Bagozzi, & Warshaw, 1989). Although originally developed to explain technology adoption in workplace settings, TAM has also been widely applied in studies of e-commerce adoption (Chen et al., 2002).

In contrast, the Theory of Planned Behavior (TPB), developed by Ajzen as an extension of the Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980), posits that attitudes are strongly associated with human behavior. Ajzen (1991) explains that behavioral intention reflects the motivational aspect of behavior and indicates the extent to which an individual is prepared to engage in a specific action, provided that it is within their control. TPB suggests that attitudes, subjective norms, and perceived behavioral control shape consumer intentions toward online shopping. In this context, attitude refers to consumers' overall positive or negative evaluation of online shopping, while subjective norms relate to their perception of social pressure or approval from important referent groups, such as friends or colleagues. Perceived behavioral control reflects consumers' beliefs about the availability of knowledge, resources, and opportunities required to engage in online shopping (Lin, 2007).

Bangun & Handra (2021) further argue that attitudes are formed when consumers perceive e-commerce as either unnecessary, which results in low intention to adopt it, or essential, which fosters a positive attitude. Subjective norms arise from beliefs about whether significant others, such as family, spouses, relatives, or colleagues support or oppose the behavior, thereby influencing consumer decisions. In terms of perceived behavioral control, when consumers face difficulties in navigating online shopping platforms, their sense of control diminishes, leading to a reduced likelihood of such intention.

### Perceived usefulness

Perceived usefulness can be measured by the convenience offered by online shopping platforms. Convenience has also been widely recognized as a major determinant of online shopping behavior. Chiang and Dholakia (2003) and Chiang (2001) argue that consumers who perceive offline shopping as time-consuming or inconvenient are more likely to turn to online platforms. This is particularly relevant for students with busy academic schedules, who value the efficiency of online shopping. If online shopping simplifies the purchasing process, consumers are more likely to develop the intention to shop online.

### Ease of use

Similar to perceived usefulness, ease of use will shape user intention to purchase online too. Although earlier studies primarily emphasized the time dimension of convenience (e.g., travel time to physical stores), other

aspects such as long checkout queues and crowded environments also discourage offline shopping (Chiang, 2001). Online shopping addresses these limitations by offering 24/7 access, home delivery, and the ability to browse products without physical constraints. Khan and Rizvi (2012) further noted that the ability to save time and effort contributes to a convenient shopping experience, making online platforms especially attractive to students and other time-conscious consumers.

The constructs of usefulness and ease of use are expected to shape users' attitudes and, in turn, their intention to adopt a system. Within the online shopping context, if students perceive e-commerce platforms as useful and user-friendly, their intention to shop online is likely to increase (Yuliharsi, Islam, & Daud, 2011). Various extensions of TAM have been developed to incorporate additional external variables. For example, Perea y Monsuwé, Dellaert, and De Ruyter (2004) proposed an integrated framework that includes consumer traits, situational factors, product characteristics, previous online shopping experience, and trust in online shopping as factors influencing purchase intentions.

### **Attitude**

The attitude element in TPB can be tested using trust components in online shopping. Trust can be defined as the willingness of an individual to be vulnerable to the actions of another, based on the expectation that the other party will act in a manner that yields positive outcomes (Tang et al., 2021). In the context of online shopping, trust is a critical determinant of purchase decisions. For instance, Han, Li, and Tan (2025) found that trust mediates the relationship between consumer perceptions (such as information quality, service quality, haptic imagery, and visual-audio cues) and purchase intentions. Similarly, Hanaysha, Ramadan, and Alhyasat (2025) and Lin (2007) demonstrated that trust in online platforms is positively influenced by factors such as service quality, customer reviews, product variety, and website design.

Perceived risk, privacy concerns, and security issues are equally important in influencing online shopping intentions. Khan and Rizvi (2012) noted that these factors can diminish consumers' willingness to purchase online. A study in the UAE found that consumers purchasing air tickets, books, and digital products were less concerned with risks due to their prior online shopping experience, which normalized such transactions. Conversely, Ha et al. (2021) argued that risk perception has the strongest negative effect on online purchasing, suggesting that payment methods such as cash-on-delivery can enhance online shopping intentions.

In the Malaysian context, Yuliharsi, Islam, and Daud (2011) observed that payment security concerns significantly influence students' online shopping intentions. Many students expressed reluctance to share sensitive financial details, such as credit card information, due to fear of fraud. Zendehdel, Paim, and Osman (2015) further emphasized that when perceived risk is high, consumers are less likely to participate in future online purchases. Thus, concerns related to security breaches and potential financial losses continue to shape consumer trust and decision-making in online shopping.

### **Subjective norms**

In exploring subjective norms, social influence can explain how it shapes online purchase intention. Lim et al. (2017) highlighted that the alignment between social media influencers and promoted products significantly affects purchase intention and consumer attitudes. Popular platforms such as Shopee, Lazada, Instagram, and TikTok are central to these dynamics. Ismael et al. (2025) reported that social media content has a positive and significant impact on purchase intention, while Dang et al. (2025) underscored the role of virtual influencer (VI) quality and social presence in influencing Gen Z consumers' purchasing decisions. Virtual influencers resonate strongly with Gen Z due to their unique features, including customization, flexibility, and authenticity (Penttinen, 2023).

Peer pressure also contributes to consumer choices, particularly among students. Niu (2013) noted that adolescent decision-making is often reinforced by peer influence, while Pepe (2025) observed that students may prioritize products that help them fit in socially, even if those purchases conflict with personal preferences or financial limitations.

## Perceived behavioural control

Perceived behavioral control refers to an individual's belief regarding the ease or difficulty of performing a particular action (Azjen, 1991). It can also be understood as the perception of how manageable or challenging an action is, shaped by prior experiences and the potential obstacles that may be overcome in the process (Handra & Sutisna, 2021). For instance, in traditional shopping, consumers often move from one store to another to compare prices and product availability. However, on online platforms, price comparison becomes much easier. Pricing sensitivity also can influence online purchase decisions. Price sensitivity remains one of the most influential factors driving online shopping behavior (Ghani et al., 2001). Prior research suggests that lower prices and promotions are strong motivators for online purchases (Delafrooz, Paim, & Khatibi, 2010; Jadhav & Khanna, 2016). Price competition is particularly intense in the e-commerce environment, as online retailers often employ price-based strategies to attract customers (Haque et al., 2006). The presence of intelligent search engines and price comparison tools further amplifies this competition, enabling consumers to easily evaluate alternatives.

For students, who typically operate with limited financial resources, price sensitivity is especially significant. Harahap and Amanah (2018) found that discounted prices and online promotions strongly influence students' shopping intentions. Conversely, higher prices discourage online purchases, indicating that affordability is central to students' decision-making processes.

## CONCEPTUAL FRAMEWORK

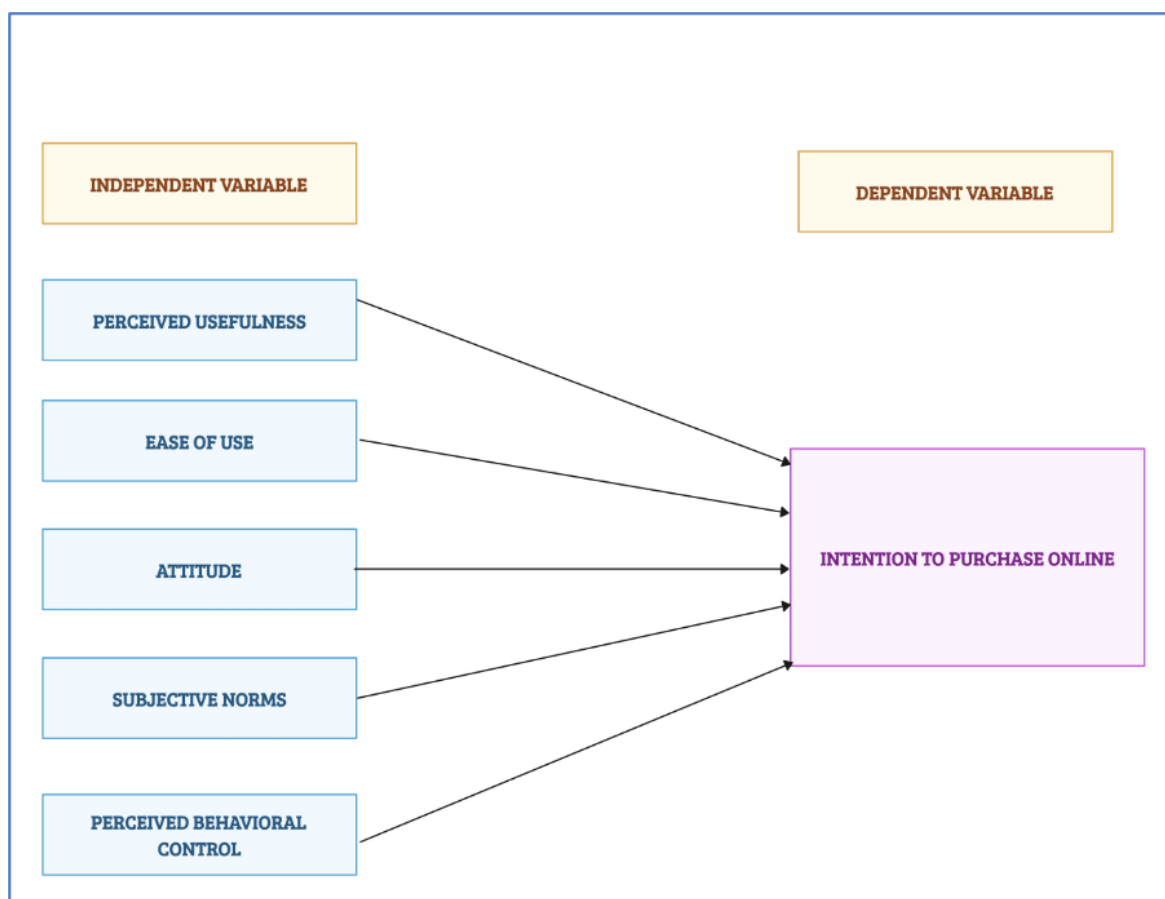


Figure 1: Proposed Research Framework: Integration of TAM and TPB

This framework illustrates the integration of the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) in explaining online shopping intentions among students. For TAM, perceived usefulness and perceived ease of use are proposed to have influence on purchase intention. While, in TPB, attitude, subjective norms, and perceived behavioral control are hypothesized to influence online shopping intention. Thus, this study will test the following hypotheses:



H1: Perceived usefulness will influence online purchase intention

H2: Ease of use will influence online purchase intention

H3: Attitude will influence affect online purchase intention

H4: Subjective norms will influence online purchase intention

H5: Perceive behavioural control will influence online purchase intention

## METHODOLOGY

This study employs a quantitative, cross-sectional survey design to examine the determinants of online shopping intention among students. The research is grounded in the integration of the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM), which together provide a robust framework for explaining technology adoption and behavioral intention. A structured questionnaire will be utilized as the main instrument to gather empirical data, as this approach is suitable for testing relationships between constructs within a single time frame.

The target population of the study comprises undergraduate students at Universiti Teknologi MARA (UiTM). This group is considered appropriate given their digital literacy, frequent engagement with online shopping, and relevance to consumer behavior studies. A stratified random sampling technique will be applied to ensure adequate representation across faculties, academic years, and gender. In accordance with Krejcie and Morgan's (1970) sample size determination table, a minimum of 384 respondents is required for large populations. To safeguard against non-responses or incomplete submissions, the study aims to collect responses from 400 to 450 participants.

All constructs included in the proposed framework, which are perceived usefulness, perceived ease of use, attitude, subjective norms, and perceived behavioural control, will be measured using items adapted from validated scales in prior literature. Each item will be assessed on a five-point Likert scale, ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree." The use of established scales enhances content validity and facilitates comparability with prior studies. A pilot study with a small group of students will be conducted to ensure the clarity, reliability, and internal consistency of the instrument before full deployment.

The data will be further analysed using SmartPLS. The analysis will begin with data screening and descriptive statistics to summarise the demographic profiles of respondents and detect any missing values. Reliability and validity of the measurement model will also be examined. Factor analysis will be conducted to further confirm the measurement properties of the constructs. Structural Equation Modeling (SEM) via SmartPLS will then be employed to test the hypothesised relationships within the integrated TPB–TAM model. This methodological approach provides a rigorous basis for testing the research framework, ensuring that the findings are both reliable and valid in explaining the determinants of online shopping intention among UiTM students.

## CONCLUSION

This concept paper highlights the growing importance of understanding online shopping intentions among university students, particularly within the Malaysian higher education context. The rapid expansion of e-commerce has positioned students as a critical consumer group whose purchasing behavior is shaped by a blend of technological, behavioral, and contextual factors. By drawing upon the Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM), this study underscores the significance of perceived usefulness, ease of use, attitudes, subjective norms, and perceived behavioral control in influencing students' online shopping decisions. These factors are essential determinants that either encourage or inhibit online purchase intentions.

The contribution of this study lies in integrating established theoretical frameworks with contemporary issues in e-commerce, thereby providing a holistic understanding of students' consumer behavior. The findings are

expected to offer meaningful insights for e-commerce platforms, policymakers, and universities in designing effective strategies to promote safe, trustworthy, and student-centered online shopping practices. Ultimately, by examining online shopping behavior among UiTM students across different campuses, this research not only enriches the literature on consumer intention in Malaysia but also informs the development of sustainable digital commerce ecosystems that meet the evolving needs of young consumers.

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