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Determinants of Impulse Buying Behavior: Evidence from Thailand's Retail Sector

Yann Li[a], Wann Yin[b]

Abstract

This study examines the key determinants of impulse buying behavior within the retail sector of Thailand by integrating both individual-level and in-store environmental factors into a unified analytical framework. Specifically, the research investigates how personal conditions, including financial availability, time availability, and family influence, shape consumers' spontaneous purchasing tendencies. In parallel, it evaluates the role of retail-specific stimuli such as store environment, promotional strategies, and product-related attributes in triggering unplanned purchases. By combining these dimensions, the study offers a comprehensive perspective on the behavioral mechanisms underlying impulse buying in an emerging retail market. A quantitative research design was adopted, and primary data were collected through a structured online questionnaire administered to consumers in Bangkok. The final sample consisted of 305 valid responses, ensuring sufficient representation for statistical analysis. To rigorously test the proposed relationships, the study employed both the Statistical Package for the Social Sciences and partial least squares structural equation modeling techniques. These methods enabled the examination of both direct effects and the overall explanatory strength of the conceptual model. The empirical findings reveal that all selected personal and in-store factors exert a statistically significant influence on impulse buying behavior. Financial readiness and available time increase the likelihood of spontaneous purchases, while family influence also plays a notable role in shaping consumer decisions. Simultaneously, an appealing store atmosphere, effective promotional activities, and attractive product characteristics significantly enhance impulsive purchasing tendencies. The results indicate that these factors operate in a complementary manner, collectively strengthening consumers' inclination toward unplanned buying. This study contributes to the broader literature by providing empirical evidence from the Thailand retail context, highlighting the multidimensional nature of impulse buying behavior. The findings offer practical implications for retail managers and marketers, emphasizing the importance of aligning in-store strategies with consumer-specific characteristics to stimulate impulse purchases and improve overall market performance.

Keywords: *Impulse Buying, Consumer Behaviour, Retail Environment, Promotional Strategies*

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1. INTRODUCTION

Consumer purchasing behaviour has become more complex as retail markets have developed in several ways, such as the diversity of product offerings, more competition, more sophisticated promotions, and rapidly changing consumer lifestyles. Shopping is not always a well-thought-out process of need assessment, alternative selection, and cost evaluation (Vasa et al., 2026). Consumers might be exposed to products, promotions, displays, or situational cues that elicit immediate buying reactions. For this reason, these spontaneous choices are an important aspect of consumer behaviour that can impact the number of transactions, basket size, engagement, and retailers' revenue performance. The

[a] Department of Agricultural and Resource Economics, Kasetsart University, Bangkok, Thailand, lii.yannku@ac.th
[b] Department of Agricultural and Resource Economics, Kasetsart University, Bangkok, Thailand

increasing importance of spontaneous purchase has then led researchers to focus on impulse buying not only as a purchasing response, but as a multi-dimensional phenomenon of behaviour. Meta-analysis reveals that impulse buying behavior is impacted by consumer characteristics, situational factors, and marketing stimuli, suggesting a need for an integrated explanation of the behavior (Iyer et al., 2019; Khalid et al., 2025; Shafqat et al., 2026; Tandon et al., 2026).

In today's retail environments, impulse buying really begins to show itself as a problem, as the constant stimuli in the environment and the promotions set up to speed up consumers' purchasing habits do just that. Product characteristics, product visibility, marketing information, the ambience of the shopping environment, and the product presentation can change consumers' perceptions and stimulate spontaneous buying. The retail context is thus a medium of two-fold nature, not only a physical environment, but also a behavioral stimulus which can affect consumers' immediate responses. Evidence suggests that store attributes can have a strong influence on consumers' tendency to make impulsive purchases, especially when products can be easily found in the store, and the decision to purchase is not far from the first exposure to the product (Nishanov & Ahunjonov, 2016; Saim et al., 2025; Humayun et al., 2026; Wijaya et al., 2026). Also, studies of retail checkout behavior show that some situational factors can elicit impulse buying at the very end of the purchase process (Pallikkara et al., 2021; Longston et al., 2025; Muzaffar et al., 2026; Amon, 2026). In addition to environmental stimuli, impulse buying is also influenced by the consumer's current psychological and situational condition. If consumers have more financial flexibility, they feel less constrained when presented with an attractive product – and if they have less, then their spontaneous purchasing will be limited. Shopping behavior could also be affected by time availability; if people have more time to shop, they may look, compare, and touch the products more thoroughly, exposing themselves to more stimuli that can motivate them to buy. Personal factors are also important because consumers are different in their sensitivity to situational cues and in their tendency to respond impulsively (Rana et al., 2025; Zamir et al., 2026; Son, 2026). Studies that combine consumer attributes and situational factors have also validated that factors such as environmental factors cannot be used to explain impulse buying, as consumer attributes are related to immediate shopping conditions (Atulkar & Kesari, 2018; Hashmi et al., 2025; Kachalia et al., 2026; Al Maalouf et al., 2026). The interaction model enables the integration of financial and time availability with other personal determinants in a common behavioral perspective.

Family influences can have an impact on planned and spontaneous purchasing responses, influencing perceived desirability and acceptability of specific products. According to the evidence on family buying behavior, purchasing behavior may not only be an individual preference, but also be based on interpersonal processes, as children can influence the purchasing behavior of their family members (Ali & Kerpčarová, 2019; Kumar et al., 2025; Farooq et al., 2026; Keni et al., 2026). Therefore, the social factors need to be taken into account in addition to the personal financial and temporal situation of consumers to understand impulse buying (Khan et al., 2025; Naseer et al., 2026; Akin & Akin, 2026). Retailers have been seen to have an impact on the buying behavior of their customers through the use of promotional tools, which helps in stimulating the purchase response in a competitive retail market (Baig & Imtiaz, 2020; Humza et al., 2025; Majeed et al., 2026; Azzahra & Tualeka, 2026). Likewise, studies on price discounts and displays in stores show that promotional and visual stimuli can stimulate impulse buying by making products more visible and more attractive to buy (Noor, 2020; Sattar et al., 2025; Tahir et al., 2026; Ahmad & Khalid, 2026). The results show that promotional tactics need to be examined in conjunction with other store attributes, and not as individual marketing tools. Product characteristics are also a significant stimulus, as consumers may react involuntarily to the perceived attractiveness, design, utilitarian value, or appropriateness of a product. Product characteristics can be particularly powerful when they are being considered in a non-commercial way, but rather simply to purchase a specific product (Fatima et al., 2026; Arghistani & Codini, 2026). Impulse buying research in the digital shopping context indicates that product attributes and browsing patterns can interact to lead to impulse buying, suggesting that apparel product attributes can influence the process of browsing and shopping and impulse buying can in turn be affected by product characteristics (Park et al., 2012; Sabir et al., 2025; Daud et al., 2026; Al Sayed Noor et al., 2026). Furthermore, when it comes to personality, culture, and store stimuli, it is found that impulse buying arises from the interaction between external stimuli of the retail environment and internal stimuli of the consumer's personality and culture (Miao et al., 2019; Niaz et al., 2025; Khan et al., 2026; Anoop & Rahman, 2026).

As retail markets grow and consumer life is becoming more dynamic, these interacting dimensions are becoming more and more relevant. The context of Thailand is very useful to consider when discussing impulse buying because the retail sector in Thailand is dynamic, with a variety of shopping environments, modern retail formats, promotions, and increasingly complex consumer markets. For retailers, it is crucial to understand the spontaneous buying phenomena in such a context to craft marketing strategies, and it also adds to the general knowledge of consumer behaviour in the Asian retail market. Studies on impulse buying have been conducted in online, social commerce, and other international markets, but the different contexts with varying market structures, consumer cultures, and retail environments suggest that the results of one context cannot simply be transferred to another (Akram et al., 2018; Khan et al., 2025; Naeem et al., 2026; Preethi, 2026). Furthermore, the growing adoption of structured empirical models enables the investigation of various determinants in a single model, instead of studying them individually (Husnain et al., 2018; Ghauri et al., 2025; Javed et al., 2026; VM, 2026). The current study examines the factors that influence the impulse buying tendency of the retail sector in Thailand, using a model that combines factors of financial availability, time availability, family influence, store environment, promotional strategies, and product-related attributes into a single analytical framework.

2. LITERATURE REVIEW

2.1. CONCEPTUALIZATION OF IMPULSE BUYING BEHAVIOR

As buying decisions are not always the result of conscious thought or careful consideration, impulse buying has become an important field of consumer behavior research. Rather, consumers might feel compelled to buy a product when they see an appealing product, a marketing message, or a good shopping situation. Impulse buying is thus different from routine or planned buying because it is spontaneous and has a short time between exposure to a product and the decision to buy it. An extensive meta-analytic analysis reveals that impulse buying has a multidimensional nature, with antecedents falling under several categories: consumer characteristics, situational factors, and marketing stimuli (Iyer et al., 2019; Qaisrani et al., 2025; Saeed et al., 2026; Sharma et al., 2026). This multidimensionality affords the basis for looking at personal and environmental determinants, rather than a single psychological factor, when explaining impulsive buying.

The psychological basis for impulse buying may also be explained by the reactions of the individual disposition to the present circumstances. Consumers have varying degrees of impulsive tendency, emotional responsivity, self-control, and sensitivity to environmental cues. These properties are related to the degree of immediate purchase response to the shopping stimulus (Khalil et al., 2025; Zafar et al., 2026; Chen et al., 2026). A cognitive-affective perspective suggests that behavior is a result of a combination of relatively stable personal dispositions and situational factors: a specific store stimulus can trigger different outcomes when used by different consumers (Mischel & Shoda, 1995). This view is especially important when it comes to retail impulse purchase since it facilitates an integrated examination of personal availability and store conditions.

2.2. PERSONAL DETERMINANTS OF IMPULSE BUYING

Personal conditions are one of the significant streams of research into impulse buying because people entering the retail environment bring a range of resources, motives, and dispositional behaviors with them. Financial availability is particularly important, as it can limit the initial financial constraints consumers have when faced with appealing offers if they do not have sufficient funds. This can lead to a higher likelihood of a consumer turning that impulse into a purchase, and thus a higher availability of money to make the transaction. Empirical studies on shopping-center consumers showed that an important situational factor related to impulse shopping behavior is the availability of money along with the shopping environment (Hendra & Kaihatu, 2019; Nasir et al., 2025; Masaud et al., 2026; Ahluwalia, 2026). This relationship suggests that financial resources do not have to be independent of the retail stimuli; they can also heighten consumers' sensitivity to opportunities that they encounter during the shopping process.

Even the psychological aspect of a surprise buy can be affected by financial resources. If the consumer feels they have enough money, their perceived sacrifice of an unplanned purchase could be less restrictive. However, if money is tight, consumers may be deterred from making spontaneous purchases even when they are buying with strong intention. From studies of consumers' impulse buying, it has been found that people spend significant amounts on items that they may not have planned on buying in the first place, demonstrating the economic significance of spontaneous purchases (O'Brien, 2018; Hussain et al., 2026; Arghashi et al., 2026). In that sense, financial availability is a relevant personal circumstance for converting the potential impulse created by a retail stimulus into sales.

Another situational resource that can impact impulse buying is time. Customers who have a reasonable amount of time to shop might find more products, promotional displays, and environmental stimuli than customers who have to shop in a hurry. The more time spent on browsing, the greater the chance for product exposure, potentially leading to unplanned purchases. Situational influences on impulse buying behaviour have been studied, highlighting that impulse buying behaviours are influenced not only by individual attributes but also by the context of the shopping occasion (Febrilia & Warokka, 2021; Rauf et al., 2026; Aggarwal et al., 2026). Gender can also impact the relationships between the consumer traits and situational conditions, and impulse buying, but this impact should be examined in a context-specific manner and not as a universal behavioral pattern (Atulkar & Kesari, 2018; Choudhary et al., 2026). Using this evidence, the importance of integrating individual and situational factors to explain retail impulse purchases is reinforced.

2.3. FAMILY INFLUENCE AND SOCIAL DETERMINANTS

Consumer purchases often happen in a social context, and family influence is another factor that is relevant to purchasing. Family members can influence product preferences, purchasing decisions, comparisons of alternatives, and feelings about whether or not the purchase is wanted or warranted. This influence can be especially significant when people are making unplanned purchases, as the social interactions can either reinforce or discourage immediate purchase decisions. Family buying behavior studies reveal that family members, especially children, can affect the buying decision of the family, suggesting that consumer behavior is not solely individualistic but also a part of interpersonal relationships (Ali & Kerpčarová, 2019; Gillani et al., 2026). The results from Chinese social commerce show that the online environment and environmental issues, such as the environment and consumers can significantly affect impulse buying, suggesting that social interaction can be a factor that boosts impulse buying behavior (Akram et al., 2018; ul ibad & Audi, 2026). While such evidence comes from digital commerce, it's a broad implication that buying decisions can be influenced by social cues around consumers.

The influence of personal and social factors increases in complexity when personality and cultural factors are taken into account. The consumer's reaction to a retail stimulus depends on psychological attributes and cultural orientations, which shows that the external stimuli can not be interpreted without the consumers' internal characteristics. The research that combines personality, culture, and store stimuli has shown that the combination of individual and environmental influences can lead to impulse buying (Miao et al., 2019; Shah et al., 2026). This result offers theoretical justification for considering family influences and personal circumstances as complementary aspects of an integrated model of impulse buying.

2.4. STORE ENVIRONMENT AND IMPULSE BUYING

One of the most studied external factors for impulse buying is the physical store environment. The emotional and cognitive reactions of consumers can be influenced by the store layout, atmosphere, accessibility, and visual presentations, along with product arrangement, lighting, and ambience in the store. A positive climate could allow customers to stay longer in the store, and they will be exposed to more products, which means more opportunities for spontaneous buying. Retail stores' physical features are researched, and it is concluded that physical features of retail stores can have an impact on consumer impulse buying behavior by creating the overall shopping environment (Nishanov & Ahunjonov, 2016; Saleem & Audi, 2026). Store atmosphere can play a specific part, as consumers don't assess products independently of their environment. The positive affective responses to an appealing retail setting could increase the likelihood of consumers accepting an unplanned purchase. The results for female shoppers suggest that the results of the atmosphere and visual cues in the store environment can impact impulse buying, thus supporting the significance of atmospheric and visual conditions in impacting spontaneous buying responses (Vinish et al., 2020; Naveed et al., 2026). This means that retailers could tangibly encourage impulse buying by designing spaces to allow customers to browse, find products, and enjoy a positive emotional connection. Research in the field of retail checkout behavior has found that there are multiple factors that can affect a consumer's impulse buying behavior at the checkout (Pallikkara et al., 2021; Zahdi et al., 2026). This indicates that the store environment should not be viewed in isolation, but rather as the store environment in general and the specific store environment where purchasing decisions are made.

2.5. PROMOTIONAL STRATEGIES AND IMPULSE BUYING

Promotional strategies are also a significant external stimulus as they can generate a sense of urgency, scarcity, savings, or exceptional value. When product prices are discounted, they can tempt consumers to buy something that is not on their list. Product discounts can entice consumers to buy something that they didn't intend to buy. Therefore, promotional activity is especially relevant to impulse buying as it can create an instant buying opportunity from a passive product exposure. The evidence of retailers' promotional tools shows their ability to change the purchasing process of consumers, which indicates that promotional mechanisms have a significant role in the retail decision-making process (Baig & Imtiaz, 2020; Yousuf et al., 2026).

Economic and psychological mechanisms may be at play when price promotions affect impulse buying. On an economic level, the consumer might feel that the reduced-price product represents a lower financial sacrifice. The uncertainty that arises from a temporary promotion can generate a sense of urgency and make it less likely for consumers to delay making a purchase. Price promotions of fast-moving consumer goods have been shown to increase impulse purchasing, and service factors have been shown to play a role in the relationship as well (Hosseini et al, 2020; Shahzad & Ali, 2026). Thus, the effectiveness of the promotion is not just a function of whether or not the discount is offered, but also depends on how the consumers view the promotional opportunity.

Economic incentives in visual retail communication are highlighted by empirical studies that show that price discounts and in-store promotions can play a major role in impulse buying (Noor, 2020; Hussain & Ali, 2026). The interaction is the reason for the promotion and store environment being considered as two things that are not entirely independent of each other to be used as separate variables. Promotional framing can additionally influence consumers' interpretation of marketing messages. The way the offer is presented can have an impact on how consumers perceive value and attractiveness, so there can be different responses if the same offer is presented differently. Promotional framing has been shown to impact consumers' responses, and the impact can differ across cultures; this evidence has been found across different cultures (Zeng & Hao, 2016; Hassan et al., 2026). This is particularly important in Thailand because the marketing mix and the retail environment in which it is targeted can affect the behavioral reactions to the promotion.

2.6. PRODUCT-RELATED ATTRIBUTES

The other important impulse buying trigger is the product's characteristics, which can evoke automatic reactions from consumers, related to product quality, design, appearance, novelty, functionality, packaging, and perceived attractiveness. Product-related stimuli are especially significant when a consumer is not ready to buy and is shopping. If the product characteristics are higher than the consumers' expectations, it may lead to an unplanned purchase. In the field of merchandising, research on apparel buying behavior highlights the product factors and the behaviors that facilitate impulse buying in e-commerce, which will be useful in the study of spontaneous purchase. Research concerning apparel buying behavior shows that product factors and browsing behavior can be related to impulse buying in e-commerce, hence the importance of the product characteristics in spontaneous buying behavior (Park et al., 2012; ur Rehman & Ali, 2026). Based on evidence of packaging design, in-store promotions, and pricing, it was found that these can work together to influence consumers' impulse buying (Chan, 2018; Ilyas & Ali, 2026). Product-related attributes are thus accompanied by promotional and environmental attributes, which give the consumer specific reasons to convert attention to purchase. Product quality and satisfaction could also be a factor in determining purchase decisions, as consumers are more inclined to act positively if the product is reliable, has value, or meets their needs. Studies that focused on the perceptions of products, brand image, and customer satisfaction have confirmed the relevance of product-related perceptions in consumer purchasing decisions (Waluya et al., 2019; Tufail & Ali, 2026). Conceptually, planned purchasing and impulse purchasing are two distinct forms of buying, but it is important to note that this evidence underscores the general idea that consumers' perceptions of the characteristics of the merchandise are important in the process of forming a purchase decision.

2.7. EMOTIONAL AND PSYCHOLOGICAL MECHANISMS

Rational assessment of price, product, and financial resources is not the only factor that influences impulse buying. Emotional responses can offer an instant psychological mechanism by which environmental stimuli can create spontaneous purchase intention. Positive emotions and excitement, enjoyment, and hedonic experiences may lessen consumers' inclination to engage in deep processing before buying a product. Research into the relationship between relatively stable consumer characteristics and impulsive purchasing behaviors shows that both consumer traits and emotions are important (Ahn & Kwon, 2020; Butt & Ahmad, 2026). This viewpoint helps to understand how identical retail stimuli can have various impacts based on consumer emotions. Emotion and impulse purchases are also linked online, where online shopping can create positive experiences in itself. Consumers' involvement in shopping environments can be boosted due to flow experiences and hedonic browsing, which in turn can enhance their impulse purchase tendencies (Shahpasandi et al., 2020; Siddique et al., 2025). The difference between the digital and physical retail environment is not significant, but the mechanism of behaviour applies to conventional retail; that is, the more engaged and positive the experiential response, the less deliberation in purchasing behaviour.

Self-regulation is another psychological mechanism. Consumers can feel an impulse but vary from one to another in their capacity to act on or suppress that impulse. Individuals can use if-then planning to control automatic reactions to social influences and decrease their tendency to impulse purchase (Thürmer et al., 2020; Siddique et al., 2025). This finding shows that impulse buying is a combination of external cues and regulatory abilities of consumers, thus supporting the integrated model that integrates both personal and environmental factors.

2.8. INTEGRATED PERSPECTIVE ON IMPULSE BUYING

There is a growing body of literature that supports an integrated explanation of impulse buying instead of an isolated explanation. Personal conditions give consumers the ability and willingness to react to external stimuli, while store environment, promotions, and product attributes give consumers the immediate stimuli that can trigger spontaneous buying. The study of the personal and in-store factors of Generation Y consumers has direct support that these factors can explain impulse buying behavior together (Husnain et al., 2018; Iqbal et al., 2025). This integrated approach is especially suitable in retail research since at the moment of shopping, the shopper receives several stimuli concurrently.

Environmental factors may provide positive reinforcement for each other within the marketing domain. Promotional activity can create a sense of increased value, product availability can enable immediate purchase completion, visual merchandising can grab attention, and store atmosphere can enhance emotional engagement. The results of the visual merchandising analysis, the store atmosphere, money availability, and the level of promotional activity showed that the combination of these variables has a positive effect on impulse buying behavior (Wijaya & Setyawan, 2020; Farras et al., 2025). Thus, in studying the individual determinants in isolation, one may get only part of the explanation of spontaneous purchases.

The digital marketing revolution has added more and more stimuli that consumers must deal with. Purchase intentions can be positively affected by the repeated exposure and reinforcement of purchase involvement provided by social media marketing, promotional communication, and interactive content. Social network marketing has been proven to be relevant to the consumer's purchase intention, especially for fashion-related markets (Imtiaz et al., 2019; Bukhari et al., 2025). The results of this study are relevant to the retail sector in Thailand but also confirm the general hypothesis that marketing stimuli can influence consumer purchasing response, which is the basis for this study. Consumer lifestyles and purchasing contexts can also influence impulse buying. Impulse buying has been linked to online marketplaces, lifestyle characteristics, mobile marketing, and discounts, indicating that impulse buying is sensitive to variations in the consumer environment (Nurul Ittaqullah et al., 2019; Zahid et al., 2025). Studies carried out in the COVID-19 period also found that shifts in the consumer's situation might affect food choice, food waste, and impulse buys (Scacchi et al., 2021). The results highlight the situational aspect of impulse buying and the importance of studying it in a well-defined market context.

2.9. IMPULSE BUYING IN EMERGING RETAIL MARKETS

The retail environment of emerging markets offers a unique context in which impulse buying can be explored because consumers can experience four elements—increased availability, lifestyle changes, modern retail formats, and more complex promotional practices—all at the same time. The retail market expansion leads to more opportunities for the customer to be exposed to products and marketing stimuli that can lead to spontaneous purchases. Retail consumption is a significant phenomenon, and its importance continues to grow in the world's retail market, as evidenced by global data. The global retail-market evidence shows how important retail consumption is and how large it is, making it an important managerial issue (Rafique et al., 2025).

Impulse buying has also been the subject of a great deal of research in Asia, such as in Pakistan, China, Indonesia, and Malaysia. The study findings from Pakistani consumers show that situational factors can impact online impulse buying behavior, thereby highlighting situational conditions in emerging market environments (Iftikhar & Iqbal, 2020). Impulse buying, as a key determinant in the understanding of spontaneous consumer demand, has also been found to have a material impact on retail markets, as shown in research in Indonesia (Shelton et al., 2021; Umair et al., 2025). The results here provide a solid regional foundation for continued exploration and show that consumers' responses are still context-dependent. The cultural aspect is relevant in this regard since consumer values and social orientations can affect their reactions to promotional and retail stimuli. The study of consumer ethics and social responsibility proves that the form of consumer decision-making is related to personal and social orientations (Arli & Tjiptono, 2018; Naeem et al., 2025). Similarly, individual-level collectivist values have been explored as one of the contextual influences on consumers' behavior in the fashion context (Soomro, 2019).

Even though there is a lot of literature, there are some limitations. Previous studies have tended to focus on one or more factors among consumer characteristics, promotions, store atmosphere, and financial resources separately, thereby potentially failing to capture the combined effect of personal and environmental factors. Second, much of the evidence comes from the online realm or from overseas contexts, so that existing findings are difficult to directly apply to the in-person retail context in Bangkok. Third, interactions between consumer characteristics and situational stimuli have been identified in previous studies, but fewer studies have tried to merge financial availability, time availability, family influence, store environment, the marketing message, and the product attribute into a single empirical framework. The evidence that impulse buying has several antecedents that occur concurrently supports the need for such integration (Badgaiyan et al., 2016; Ditta et al., 2025). The present study aims to explore the possible factors that can influence impulse buying behavior, such as financial availability, time availability, family influence, store environment, promotional strategies, and product-related attributes, which are interrelated with each other. It particularly targets Bangkok consumers to offer empirical evidence from the retail industry in Thailand, thus broadening the geographical and contextual perspectives of existing research on impulse buying.

3. THEORETICAL BACKGROUND

The factors influencing impulse buying in retail stores can be regarded as the aggregate effect of the consumers' personal resources, society and cultural factors, and environmental triggers. Retail purchases are not always made for one reason, but rather the immediate retail context is related to the consumer's resources and perceptions of products and promotion. Given the multi-dimensionality of impulse buying, the present conceptual framework has, therefore, taken into account four independent constructs as predictors of the dependent construct: money availability (MA), time availability (TA), family influence (FI), store environment (SE), and promotional activities (PLA); and product attributes (PA) as a predictor. This framework is aligned with the evidence that personal and situational factors are interconnected in decision-making for spontaneous purchase (Atulkar & Kesari, 2018; Iyer et al., 2019; Iqbal et al., 2025).

Money availability is the consumer's perceived ability to make discretionary purchases when shopping. If the consumer has some money, the money constraint will be less during the act of purchase and is more likely to be acted upon by a purchasing impulse than if he did not have money. In this way, the first relation is given as:

H1: The availability of money is associated with a positive impact on impulse buying behavior.

Time availability also gives consumers more time to window shop, assess products, and receive unexpected product prompts to buy. More time for shopping may mean more time in front of eye-catching displays and products, which may lead to more spontaneous buying. Hence:

H2: Time availability positively influences impulse buying behavior.

The family influence refers to the degree of influence that family members have on the consumer's purchase decision. Consumer behaviour is interwoven with interpersonal relationships, and family opinions, preferences, and recommendations can stimulate purchasing behaviour. Therefore:

H3: Family influence positively influences impulse buying behavior.

Another important behavioral stimulus is the retail environment. Ambience, layout, visual presentation, and general shopping atmosphere can engage and stimulate consumers and lead to spontaneous buying. Store characteristics and environmental factors have been previously highlighted as items that support impulse buying (Nishanov & Ahunjonov, 2016; Vinish et al., 2020; Zafar et al., 2025). Thus:

H4: Consumer attitude towards the store positively affects impulse buying behaviour.

Promotional activities, such as discounts, special offers, and promotional displays, can add value and urgency to products, leading consumers to buy items that are not part of their original plans. In line with this behavioral mechanism, research on promotion practices and impulse buying justifies this claim (Qaisar et al., 2018; Ullah et al., 2025). Accordingly:

H5: Promotion activities have a positive impact on impulse purchasing behavior.

Product attributes are consumers' perceptions of the attractiveness, product quality, design, and related attributes of a product. Consumer interest in attractive merchandise can be gained and create purchasing motivation immediately, especially if the consumers are surprised by the attractive merchandise. Hence:

H6: Product attributes have a positive impact on impulse buying behavior.

The proposed structural relationship is given as:

$$IBB = \beta_0 + \beta_1 MA + \beta_2 TA + \beta_3 FI + \beta_4 SE + \beta_5 PLA + \beta_6 PA + \varepsilon \quad (1)$$

IBB depicts impulse buying behavior, *MA* stands for money availability, *TA* stands for time availability, *FI* stands for family influence, *SE* stands for store environment, *PLA* stands for promotional activities, *PA* stands for product attributes, β_0 is the intercept, β_1–β_6 are the structural coefficients, and ε is the unexplained error term.

The study adopted a multidimensional approach to the operationalization of impulse buying behavior, which consisted of six explanatory constructs: Money availability, Time availability, Family influence, Store environment, Promotional activities, and Product attributes, and impulse buying behavior was the dependent variable. There were three questionnaire items to measure each of the following variables: Money availability, Time availability, Family influence, Store environment, and Promotional activities, with product attributes measured by two items. Impulse buying behavior was assessed with eight items that were developed to assess consumers' unplanned and immediate buying tendencies. There were five demographic items in the questionnaire to collect basic background information of the respondents. All constructs that were substantive were measured using structured statements, which were evaluated on a Likert-type response scale, where the respondents could determine the extent to which each statement was representative of their perceptions and shopping experiences. The structure of the measurement was found to have good internal consistency, and the reported values of reliability showed that the constructs were suitable for subsequent empirical analysis. Structured online questionnaires were used to gather primary data from retail consumers in Bangkok, Thailand. The virtual version allowed consumers to be reached with various shopping experiences and allowed consistent responses to be gathered. The data were screened, and 305 valid responses were retained for final analysis. Hence, the sample yielded a sufficient empirical basis to be used in the investigation of the proposed relationships between personal, social, and retail-environmental factors and impulse buying behavior. The data were initially screened and descriptively analyzed using SPSS. Later, the measurement and structural models were assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The assessment of the indicators included loadings, Cronbach's alpha, composite reliability, average variance extracted, and discriminant validity (Fornell–Larcker criterion and Heterotrait–Monotrait ratio). The structural assessment involved the hypotheses of direct relationships of the six determinants with impulse buying behavior, and the explanatory power of the model was evaluated by the coefficient of determination. This methodological approach offered a systematic framework to evaluate the measurement and the proposed behavioral relationships.

4. RESULTS AND DISCUSSION

The measurement structure and reliability of the variables used in this study are shown in Table 1. Five demographic items were included along with the main constructs employed when explaining impulse buying behavior. Three items are used to represent each of the three categories: money availability, time availability, family influence, store environment, and promotional activities. Product attributes are measured with two items. Impulse buying behavior is measured using eight items, which give relatively extensive coverage of the dependent construct and thus allow different dimensions of the impulse buying tendencies to be captured. The reliability results indicate that all constructs show a high internal consistency. The reliabilities of all substantive variables are above the commonly accepted reliability value of 0.70, suggesting that items within each construct are reliable and measure the underlying concept that the construct was designed to measure. Family influence and impulse buying behavior show strong internal consistency, and product attributes show acceptable reliability, as it is measured by just two indicators. Likewise, the money available reliability, time available reliability, store environment reliability, and promotional activities reliability are evidence of the appropriateness of the respective measurement items. Overall, the results show that the questionnaire is reliable as a measurement basis for further data analysis. The measures for most constructs are multiple indicators, which increases the strength of the representation of the theoretical concept, and the relatively fewer number of items of the product-attributes scale shows an adequate level of reliability, even though it does not affect the level of consistency in the measures. Thus, the constructs can then be evaluated for convergent and discriminant validity and then move on to structural model estimation.

Table 1: Items Representing the Variables

Variables	Items	Reliability
Demographic Information	5	0.842
Money Availability	3	0.884
Time Availability	3	0.836
Family Influence	3	0.925
Store Environment	3	0.891
Promotional Activities	3	0.857
Product Attributes	2	0.831
Impulse buying behavior	8	0.902

To assess the measurement model, indicator loadings, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) for the constructs used in this study are examined in Table 2. The results confirmed that the measurement instruments have good reliability and convergent validity and can be used in the next stage of testing, which is the structural model analysis. With PLS-SEM, the reliability of the indicators and the reliability of the constructs are crucial for supporting the validity of the observed items representing their respective latent variables (Hair et al., 2019). Overall, there is very high quality of measurement in the results for money availability. The factor loadings of its indicators are high, and Cronbach's alpha and composite reliability are very high, showing very good internal consistency. The AVE is also higher than the minimum required value, which means that the construct accounts for a significant amount of the variance in its indicators. The results confirm that the construct of money availability is a solid consumer-resource measure. A similar methodological rigor is also highlighted in the PLS-SEM literature, and adequate indicator reliability and convergent validity are seen as prerequisites for meaningful structural interpretation (Hair et al., 2011; Hair et al., 2013).

Family influence also exhibits good measurement properties. The relationships with the underlying construct are significant for all three indicators, the reliability estimates are high, and the AVE is considerably higher than the threshold value. This means that the products are consistently reflecting the social impact on consumers' buying behaviours associated with family. The strong measurement performance is more significant given that family influence is considered an interpersonal determinant which can influence differently from individual financial and situational characteristics. The internal consistency and convergent validity of the measurements of time availability are also good. There are good loadings on its three indicators, and reliability coefficients indicate internal consistency. The percent of indicator variance accounted for by the latent construct is high for AVE. Therefore, the availability of time could be considered a suitable predictor of impulse buying behavior with no need to worry about poor measurement quality. The loadings of the indicator for the store environment are acceptable, and the reliability values are above the accepted methodological threshold. It also has relatively low reliability estimates, but they are acceptable. The AVE also shows good convergent validity. The finding is relevant as it shows that store-related stimuli are an integral part of consumers' immediate purchasing context, which is in line with previous research findings regarding the importance of the store in impulse buying (Nishanov & Ahunjonov, 2016).

In spite of having only two indicators, the product attributes construct is reliable and has good convergent validity. Both indicators are also meaningful, and the reported reliability measures and AVE indicate the measurement requirements. This is consistent with the use of product-related attributes as an independent determinant, instead of as a part of the overall store environment. Likewise, the performance of the indicators in the promotional activities is good concerning indicator internal consistency and convergent validity. The findings are similar to the study that highlights discount, promotional framing, and other marketing strategies as drivers of consumers' impulsive buying reactions (Qaisar et al., 2018; Noor, 2020). Last but not least, there is a high level of measurement quality for the indicators of impulse buying behavior. The internal consistency, composite reliability, and convergent validity of the construct are high, adequate, and satisfactory, respectively, demonstrating that the items have a high degree of internal consistency and show a high level of convergent validity. This is because impulse buying is a complex behavioural construct, which is reflected in purchase responses rather than a purchase decision in the moment (Iyer et al., 2019).

Table 2: Loadings, Cronbach's Alpha, Composite Reliability, and AVE

Construct	Items	Loading	Cronbach's Alpha	CR	AVE
Money Availability	MA1	0.914	0.936	0.958	0.883
	MA2	0.932			
	MA3	0.921			
Family Influence	FI1	0.917	0.918	0.948	0.858
	FI2	0.929			
	FI3	0.908			
Time Availability	TA1	0.903	0.899	0.938	0.835
	TA2	0.887			
	TA3	0.916			
Store Environment	SE1	0.801	0.756	0.861	0.674
	SE2	0.842			
	SE3	0.815			
Product Attributes	PA1	0.861	0.719	0.867	0.766
	PA2	0.889			
Promotional Activities	PLA1	0.832	0.781	0.872	0.696
	PLA2	0.858			
	PLA3	0.819			
Impulse Buying Behavior	IBB1	0.754	0.939	0.951	0.741
	IBB2	0.901			
	IBB3	0.924			
	IBB5	0.771			
	IBB6	0.913			
	IBB7	0.918			
	IBB8	0.927			

Table 3 shows the Fornell–Larcker criterion to check the discriminant validity of the constructs to be included in the proposed model. The results show that each construct is empirically different from the other constructs since each construct's diagonal value, representing variance shared with itself, is higher than each construct's corresponding inter-construct correlation. This shows that the constructs are measuring different aspects of consumer behavior and not the same. Generally, the relationships between constructs are moderate, meaning that there are meaningful relationships, but not so obvious that there are significant overlaps between constructs. The strongest correlation of family influence is with money availability, while the relationships with store environment, product attributes, promotional activities, and time availability are comparatively low. Impulse buying behavior is positively correlated with all explanatory constructs, with relatively high correlation with store environment, promotional activities, and time availability. This suggests that impulse buying can be conceptualized as a behaviour under personal influences and immediate retail stimuli, which is consistent with the previous literature. The construct of money availability has relatively unique relationships with the other constructs, and product attributes have relatively weak relationships with personal factors. The relationship between promotional activities and store environment is positive, which indicates that exposure to promotional activities may be related to exposure to an attractive retail environment. Time availability also has positive yet separate relationships with the retail-related constructs.

Table 3: Discriminant Validity Matrix (Fornell-Larcker Criterion)

Construct	FI	IBB	MA	PA	PLA	SE	TA
FI	1						
IBB	0.551	1					
MA	0.681	0.468	1				
PA	0.331	0.487	0.205	1			
PLA	0.372	0.575	0.233	0.524	1		
SE	0.319	0.598	0.179	0.321	0.469	1	
TA	0.192	0.521	0.067	0.301	0.427	0.382	1

The Heterotrait–Monotrait (HTMT) ratio is another measure of discriminant validity among the study constructs and is reported in Table 4. As seen in the results, all the HTMT values were below the commonly accepted value of 0.85, which suggests that the constructs are empirically separate from each other. The results of the above findings support the results obtained from the Fornell–Larcker criterion in Table 3. The highest association is between family influence and money available, but this is still within the acceptable discriminant-validity range. Likewise, the relationships of impulse buying and the major explanatory variables are still below the recommended level. The associations between impulse buying behavior and promotional activities, the store environment, and family influence are relatively high compared to other relationships, in terms of conceptual relevance to consumers' spontaneous buying action. However, these relationships are not to a degree that would suggest that there is construct redundancy. The relatively weak HTMT values in the other constructs (money availability, product attributes, time availability, and other constructs) further support that money, product attributes, time availability, and other constructs represent different aspects of the consumer decision-making environment. Specifically, the relatively low correlation between time and money availability suggests that these two resources are not the same; that is, consumers' financial situation and their time to shop are different.

Table 4: Heterotrait-Monotrait Ratio (HTMT)

	FI	IBB	MA	PA	PLA	SE	TA
FI							
IBB	0.592						
MA	0.731	0.493					
PA	0.401	0.571	0.248				
PLA	0.414	0.641	0.271	0.671			
SE	0.376	0.682	0.214	0.436	0.582		
TA	0.205	0.563	0.081	0.391	0.514	0.448	

Table 5 shows an R^2 value of 0.684 for impulse buying behaviour. This means that the money availability, time availability, family influence, store environment, promotional activities, and product attributes variables collectively account for 68.4% of the variance of consumers' impulse buying behavior. The rest of the variation (31.6%) is due to other factors not accounted for in the model, suggesting that there is strong explanatory power.

Table 5: R^2

Construct	R Square
Buying Behavior	0.684

The estimated direct relationships between the six proposed determinants are presented in Table 6. The findings lend empirical support to the conceptual framework, as all six predictors show a positive and statistically significant relationship with impulse buying behaviour. Therefore, the results suggest that both the consumers' situation and the stimuli from the store play a role in spontaneous buying. This result of money availability has a positive and statistically significant impact on impulse buying behavior, which indicates that consumers having more financial flexibility are more likely to make impulse purchases. If consumers feel they have enough money to buy, the financial constraint of the current purchase is lowered, and it becomes easier to change their impulse into action. It aligns with the wider evidence which has shown that situational resources can have an impact on consumers' susceptibility to impulse buying (Atulkar & Kesari, 2018). It further helps represent the availability of money as an important situational facilitator of spontaneous consumption. Availability of time is also positively and significantly related to impulse buying behavior. The relatively stronger effect suggests that consumers with more time to spend while shopping are more likely to use the time to browse and to be presented with more stimuli to buy. More time spent shopping can lead to higher exposure to products, displays, and ads, which can be another chance to make an unplanned purchase. The finding underscores the significance of situational factors in the understanding of impulse buying and is consistent with studies highlighting the synergistic effect of personal and situational factors in impulse buying (Husnain et al., 2018).

The influence of the family is also positively related to impulse buying behavior. While its impact is relatively low compared to a few situational and environmental variables, its statistical significance shows that the impulse to buy isn't entirely dependent on personal preference. Immediate buying opportunities may be enhanced by family members' influence on product evaluations, their encouragement of specific purchases, and so on. The result is especially significant in retail settings where the buying decision might take place in a socially mediated environment, which is in line with the research that looked at the influence of family members on consumers' buying behaviour (Ali & Kerpčarová, 2019). It is found that the store environment is one of the most influential factors in impulse buying behavior. Emotional involvement, attention, spontaneous buying tendencies, and overall positive attitude of the consumers are driven to a greater extent by the attractive and stimulating retail environment. The layout, atmosphere, visual presentation, and other environmental cues can then be immediate cues for inadvertent eating. This discovery corroborates earlier studies that provide evidence of the influence store attributes have on impulse buying of consumers (Nishanov & Ahunjonov, 2016). Retail research also suggests that the store environment can play a key role in inducing impulse buying, supporting the importance of the store-environment elements identified. This is further confirmed by similar retail evidence of store-environment elements that have an effect on inducing impulse buying (Vinish et al., 2020).

There is a positive and significant relationship between the promotional activities and impulse buying behavior. Discounts, special offers, marketing displays, and other marketing tools can make consumers feel like they are getting more value and make them feel like they need to buy. These tactics can prompt buyers to alter their buying intentions and react to in-store offers. The findings corroborate the findings of previous studies, which have shown that promotional practices are one of the factors that can have a significant impact on consumers' impulse buying responses (Qaisar et al., 2018; Noor, 2020). The product attributes positively affect impulse buying behavior and are statistically significant. A product that has appealing features can grab the attention of consumers and enhance the chances of an unplanned purchase. Thus, product appearance, perceived quality, design, and other salient attributes may act as immediate stimuli when shopping. This is consistent with prior research which found that consumers' impulsive buying is affected by product characteristics (Park et al., 2012).

Table 6: Direct Relationship between Impulse and Buying Behavior

Relationship	Beta	SE	T-Value	P-Value
MA → IBB	0.214	0.043	4.977	0.000
TA → IBB	0.281	0.042	6.690	0.000
FI → IBB	0.154	0.048	3.208	0.002
SE → IBB	0.276	0.041	6.732	0.000
PLA → IBB	0.132	0.049	2.694	0.008
PA → IBB	0.119	0.046	2.587	0.010

5. CONCLUSIONS

This study investigates factors affecting impulse buying behavior in the retail environment by combining personal, social, and environmental factors within one empirical model. The study was driven by the fact that impulse buying does not solely originate from one factor of the consumer or marketing stimulus, but rather from the interaction between the resources available to the consumer, their social environment, and the immediate retail environment. The research analyzed the impact of money availability, family influence, time availability, store environment, promotional activities, and product attributes on the impulse buying behavior of 305 retail consumers in Bangkok using primary data. Using PLS-SEM allowed for a systematic evaluation of both the quality of the measurement model and the suggested structure. The test evaluation indicated that the reliability and validity of the constructs in the study were good. The acceptability of internal consistency and convergent validity in general was supported by the results of the indicator loadings, Cronbach's alpha, composite reliability, and average variance extracted. In addition, the Fornell–Larcker criterion and HTMT assessment showed that there was enough difference among constructs. These results offer assurance that the measurement instrument was robust enough to reflect the various aspects of consumers' purchasing situations and their retail experiences. The structural results are consistent with the hypothesized relationships. The availability of funds has a significant effect on buying behavior, which suggests that consumers with more financial flexibility can better convert spontaneous purchase intentions into actual purchases. Shopping time also shows up as a strong positive influence and indicates that customers who have more time to shop have more time to go through their shopping, see stimuli, and make unplanned purchases. Family influence is also an important factor, with the family being a place where interpersonal and household issues can become factors in impulse buying decisions and not just individual decisions. The importance of retail-related determinants is also important. Store environment shows a significant positive relationship with impulse buying behavior, which means there is a need for atmosphere, layout, visual presentation, and other store environmental characteristics in order to stimulate impulse buying. Promotional activities, similarly, have a positive effect, suggesting that discounts, special offers, and other promotional incentives can push customers out of their initial buying intentions. Product attributes also have a strong positive effect, indicating that the product's characteristics are important and can get consumers' attention and motivate them to buy the product right away. The model is quite explanatory, as the determinants included together explain 68.4% of the variance of the impulse buying behavior. This indicates that the suggested model has great explanatory power and explains part of the spontaneous buying process in the retail setting studied. However, the unexplained proportion suggests other factors, such as emotional state, personality traits, hedonic motivation, shopping orientation, and digital influences, should be explored in future research. A combination of approaches is more likely to be effective for the retailer than just relying on a promotional pricing approach. Enhancing the store environment, improving the product presentation, developing a well-planned promotional campaign, and making the shopping process easier can all contribute to impulse buying. Meanwhile, knowledge of consumers' financial and temporal status and family influence can help marketers craft more effective marketing strategies.

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