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Determinants of impulse buying of Tokopedia mobile application users: Does brand image mediate it?

Meisa Reresimi^{1*}, Ngadino Surip Diposumarto², Yuary Farradia³, Agus Setyo Pranowo⁴, Didik Notosudjono⁵

^{1,2,3,4}*Faculty of Economics and Business, Universitas Pakuan, Bogor Indonesia.*

⁵*Faculty of Engineering, Universitas Pakuan, Bogor Indonesia.*

Corresponding author: Meisa Reresimi (Email: reresimi73@gmail.com)

Abstract

Impulse buying is a consumer behavior characterized by making purchases suddenly without extensive consideration in decision-making. This study aims to examine the factors influencing impulse buying, with brand image serving as a mediating variable. The factors tested include paylater, flash sales, e-commerce diversity, and the urge to buy. The research methodology employed is quantitative, utilizing the Structural Equation Modeling (SEM) approach. Data processing was conducted using Smart-PLS to test and estimate the models. The results indicate that the use of paylater significantly influences impulse buying behavior ($\beta = 0.327$, $p < 0.000$), flash sales ($\beta = 0.241$, $p < 0.000$), and urge to buy ($\beta = 0.191$, $p < 0.000$), and has a positive and significant effect on brand image. Flash sales ($\beta = 0.169$, $p < 0.000$), paylater ($\beta = 0.169$, $p < 0.000$), urge to buy ($\beta = 0.185$, $p < 0.000$), and brand image ($\beta = 0.149$, $p < 0.000$) positively and significantly affect impulse buying. The study also shows that brand image mediates the influence of paylater ($\beta = 0.049$, $p < 0.003$), flash sales ($\beta = 0.036$, $p < 0.013$), and urge to buy ($\beta = 0.028$, $p < 0.011$) on impulse buying positively and significantly.

Keywords: Brand image, Flash sale, Impulse buying, Paylater, Urge to buy.

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1. Introduction

The development of e-commerce in Indonesia has experienced rapid growth in recent years, driven by increasing internet and smartphone penetration across the country. Market analysis shows that e-commerce marketplace models such as Tokopedia, Bukalapak, Shopee, and Lazada have a significant market share [1]. The success of this marketplace is primarily due to the ease of access for sellers to sell online without the need for a physical store, as well as various features that support a comfortable shopping experience for consumers [2]. The C2C e-commerce model introduced by Tokopedia and Bukalapak provides opportunities for individuals to sell products online, creating an inclusive digital economy ecosystem [1]. Overall, e-commerce in Indonesia continues to grow and offers various business models to meet the needs of consumers and business actors. One of the positive impacts of the development of science and technology can be observed in the economic sector, marked by an increase in people's income. However, sometimes people unknowingly use their income to purchase products they should not buy. This behavior can be referred to as unplanned purchases or impulse buying [3]. Ease of access to products, ease of the purchase process, lack of social pressure, and ease of delivery of goods make online shoppers behave more impulsively than offline shoppers, one of which is on the Tokopedia marketplace. Some consumers may have a preference for using an e-commerce platform that does not require downloading other applications to be able to use certain features [4]. Based on data released by Katadata [2] stated that the trend of visits to e-commerce sites in Indonesia decreased in early 2023. This trend was observed among the five e-commerce platforms with the highest visitor numbers, namely Shopee, Tokopedia, Lazada, Blibli, and Bukalapak. In February 2023, the Shopee site received only 143.6 million visits. This figure represents a decrease of approximately 16% compared to January 2023 and a 25% decline from the achievement at the end of the previous year.

A positive consumer attitude towards a product or brand tends to influence their purchasing decisions. In this study, the pay-later, flash sale, urge to buy, and brand image will be examined to understand their effects on impulse buying. Pay-later is growing in Indonesia. Each fintech pay-later company strives to be the best. Pay-later, or payment later, is a payment method that allows consumers to buy products or services without paying immediately [5]. In a time-limited flash sale situation, consumers are often tempted to make impulse purchases for fear of missing out on a great deal. The urge to make impulse purchases increases because consumers feel they must act quickly to secure the deal before time runs out [6]. Flash Sale is one of the discount programs that uses a time period. Tokopedia is in third place with revenue of IDR 275.8 trillion in 2022, behind Shopee Indonesia, which earned revenue of IDR 718 trillion, and Lazada, which earned revenue of IDR 301 trillion [7]. In an increasingly competitive digital world, especially in the e-commerce sector, brand image is one of the main factors influencing consumer behavior, including impulsive purchasing decisions [8]. Users of e-commerce applications such as Tokopedia tend to make purchases without prior planning when they have a positive perception of the brand.

Through a deeper understanding of the influence of brand image, this study seeks to uncover how consumer perceptions of Tokopedia's image can mediate the effects of other factors that influence impulsive buying. Brand image here acts as an intervening variable, meaning that the existence of a good brand image can strengthen or weaken the relationship between determinants of impulsive buying, such as promotions, product quality, and celebrity endorsements [9]. Research conducted by Parameswari and Ginny [5] stated that the PayLater method is an option for marketplace users for various purchases of goods, which is indeed a choice. The convenience often associated with this method can lead to an increase in impulsive online purchases beyond the respondents' needs. The research conducted by Christian et al. [10] stated that Flash Sale and brand image together have a significant influence on online impulsive purchases. When viewed partially, flash sale has a positive and significant influence. Research by Luthfia [11] states that payments using Paylater have a partial positive and significant effect on online impulse buying behavior.

The researcher identifies an opportunity to address a research gap in this study. Firstly, there is limited research examining impulse buying among Tokopedia mobile app users. Although numerous studies have explored impulse buying, specific research focusing on Tokopedia mobile app users remains scarce. With the rapid growth of e-commerce in Indonesia and the popularity of apps like Tokopedia, understanding the determinants of impulse buying specific to Tokopedia mobile app users is essential. Secondly, previous studies have not concentrated on the population of active undergraduate students in DKI Jakarta. Since undergraduate students possess unique characteristics and needs and operate within a dynamic urban environment like DKI Jakarta, this study aims to provide a more targeted understanding of the factors influencing impulse buying within this group. Thirdly, there is a lack of research on the role of brand image as an intervening variable. This study can offer valuable insights into how brand image mediates the relationship between determinant factors and impulse buying.

2. Theoretical Background

Impulsive buying behavior in general is defined as a sudden desire to purchase a product without careful consideration of the product and the potential consequences of the purchase, which is characterized by relatively quick decision-making [12]. Impulse buying refers to irrational purchasing behaviors influenced by emotions [13, 14]. PayLater, commonly called buy now, pay later, is a fintech product that provides consumers with the option to make payments later in one or more installments. Buy now, pay later, offered by retailers or sellers, usually involves a third party that enables buyers to pay for online services in installments [15]. PayLater has the same function as a credit card, where this product helps consumers obtain products or services without having to pay immediately [16]. The paylater payment method is a new alternative in Indonesia for making payments other than credit/debit cards and mobile banking. According to Novendra and Aulianisa [17], fintech companies that offer paylater-based payment services benefit from late fees, monthly account maintenance

fees, and processing fees for each payment made by their users. The paylater model is considered to have advantages over credit cards in terms of registration, as registering to use paylater is easier than obtaining a credit card because it does not require as many prerequisites as a credit card [18]. However, PayLater does not work with banks as a creditor, where PayLater allows users who are unable to pay loans to still make online loans [17].

According to Aribowo and Edi [19] said that flash sales are a method used to offer a product by cutting the price of the product being sold and the quantity within a limited time period according to the policy of each e-commerce. Rahmania et al. [20] stated that the purpose of providing price cuts is to encourage consumers to purchase products in large quantities, enabling purchasing activities to be conducted in cash or within a shorter timeframe. The existence of a flash sales program can increase and sustain sales, helping a company to become dominant among consumers. [21] explains that the purpose of holding flash sales or discounts is to maintain the stability of the money cycle. Smith and Hanover [22] it was said that the existence of products with discount programs or flash sales attracts consumers' attention to purchase, especially during the COVID-19 pandemic, when family incomes have decreased, leading consumers to prefer products offering discounts or flash sales.

Urge to buy is a state of desire experienced when encountering an object in the environment and is a precursor to impulse buying behavior [23]. The urge to buy can be explained as a type of irrational desire and can manifest as an intention to make an impulsive purchase [24]. This will result in direct purchases to satisfy the sense of obligation to buy, which then leads to impulsive buying behavior [25]. According to Arzanagh and Danaei [26] the urge to buy feeling blocks consumers from searching for other alternatives and directs consumers to engage in impulse buying behavior. Wade and Krouse [27] state that brand image is what consumers think or feel when they hear or see a brand name or, in essence, what consumers have learned about the brand. According to Kim and Chao [28] if consumers have a positive image of a brand, then consumers will repurchase the product. Tariq et al. [29] state that the customer's view of a brand is known as brand image, and it consists of the associations and beliefs in the customer's mind about a particular brand.

PayLater is a feature that allows users to make purchases and pay later by utilizing credit services provided by Tokopedia. This feature offers convenience and comfort for users, thereby encouraging impulsive purchases [15]. By not having to pay immediately, users tend to feel freer to spend money, especially if they are tempted by attractive products or discount offers [17]. The time constraints in Flash Sales create an atmosphere that encourages impulsive decisions, where users feel rushed to take advantage of the opportunity before the offer expires [20]. This often results in impulse purchases that may not have been planned in advance. Research by Parameswari and Ginny [5] stated that the PayLater method can lead to an increase in online impulsive purchases outside of the respondents' needs. Research by Cuandra [30] states that there is a significant influence on the relationship between perceived benefits and perceived security on the intention to use PayPal.

Urgency to buy is a strong urge or sudden desire to make an impulsive purchase. Tokopedia Mobile Application users often experience the influence of the Urge To Buy, which can trigger impulsive buying behavior [23]. This drive can arise from several factors that influence user purchasing decisions. One of the factors that influences the urge to buy is the existence of an attractive discount or promotional offer. When users see a product at a lower price than usual, they feel interested and tempted to immediately take advantage of the offer [26]. Tokopedia Mobile Application users are often influenced by reviews or recommendations from friends or other users [23].

To maintain and improve brand image, Tokopedia needs to ensure that the use of PayLater and Flash Sale is carried out with transparency, honesty, and fairness. In addition, Tokopedia can also enhance its brand image by providing a good shopping experience and responsive customer service. By offering a positive experience to Tokopedia Mobile Application users, whether through quality service, guaranteed product quality, or satisfactory delivery speed, Tokopedia can strengthen user perceptions of quality and integrity as a trusted e-commerce brand. Paper [6, 11] states that improving brand image involves providing a good shopping experience and responsive customer service.

The influence of the urge to buy or the desire to purchase has a significant impact on brand image among Tokopedia mobile application users. In this context, the urge to buy refers to a strong desire or impulse from users to make spontaneous purchases when using the Tokopedia application [23]. First, the urge to buy can strengthen Tokopedia's brand image as a platform that presents attractive and enticing offers. When Tokopedia mobile application users feel a strong desire to buy a product impulsively, this reflects that Tokopedia has succeeded in creating a shopping experience that arouses user interest [24]. Tokopedia can strengthen users' perception of it as an e-commerce brand that provides opportunities to obtain products at the best prices [25]. The urge to buy impulsively can cause users to feel compelled to make unplanned or unnecessary purchases [26]. The influence of brand image plays a significant role in impulsive purchases among Tokopedia Mobile Application users. When users perceive Tokopedia as a trusted, innovative, and high-quality e-commerce brand, they tend to be more confident in making impulsive purchases [24, 31]. If users perceive that Tokopedia often offers opportunities to obtain products at discounted prices, "flash sale" promos, or other limited exclusive offers, they may feel compelled to purchase the product immediately so as not to miss the opportunity [27]. Brand image that emphasizes special and exclusive offers can arouse the urge to make impulsive purchases in users [32].

H₁: Paylater positively and significantly affects impulse buying

H₂: Flash Sale positively and significantly affects impulse buying

H₃: Urge to buy positively and significantly affects impulse buying

H₄: Brand image positively and significantly affects impulse buying.

H₅: Paylater effect on brand image positively and significantly

H₆: Flash sale effect on brand image positively and significantly

H₇: Paylater effect on brand image is positive and significant.

H₈: Brand image mediates the effect of PayLater on impulse buying positively and significantly.

H₉: Brand image mediates the effect of flash sales on impulse buying positively and significantly.

H₁₀: Brand image mediates the effect of the urge to buy on impulse buying positively and significantly.

3. Research Methodology

The type of research used in this study is quantitative research. Quantitative research methods, as stated by Sugiyono [33], namely, a research method based on the philosophy of positivism, are used to study a specific population or sample, with data collection through research instruments, and quantitative and statistical data analysis aimed at testing the established hypotheses. The main variables in this study are nine, consisting of five independent variables, namely the use of Paylater and Flash Sale, Urge To Buy; one dependent variable, namely Impulse Buying; and one intervening variable, namely Brand Image. The variables are operationalized through operational definitions as in Table 1.

Table 1.
Operationalization of Research Variables.

No	Variable Definition	Indicator	Code
1	Paylater	It has many benefits that make in the next 6 months	P1
		The convenience felt	P2
		Use the paylater feature as often as possible within 6 next month	P3
2	Flash Sale	Always shop at Tokopedia	FS1
		Always take advantage of Flash Sales at Tokopedia	FS2
		Shop when there is a Flash Sale offer	FS3
		Feel motivated to buy a product	FS4
		Buying products in Tokopedia Flash Sale spontaneously (without thinking) long	FS5
		Not planned previously	FS6
		Get products at affordable prices	FS7
		Save money than buying normally	FS8
3	Urge To Buy	Experiencing a sudden urge to buy product	UB 1
		View a number of products even though they are not on the shopping list	UB 2
		A strong urge to make unplanned purchases	UB 3
		Feeling the urge to buy something	UB 4
4	Impulse Buying	Buying things spontaneously	IB1
		Purchases are influenced by emotional states	IB2
		Shopping without Think long when looking at a product	IB3
		Shopping is a necessity That happened suddenly	IB4
5	Brand Image	The brand is considered the best brand	BI 1
		Professional to provide a good reputation	BI 2
		The brand is considered to have succeeded in maintaining its name in the eyes of consumers.	BI 3
		Brand business processes can be trusted to maintain the name in the eyes of consumers	BI 4

The population in this study consists of all undergraduate students in South Jakarta who use the Tokopedia Mobile Application. The data collection technique employed is non-probability sampling with a purposive sampling method. Purposive sampling is defined as a data collection technique based on specific considerations [33]. According to Hair et al. [34], to determine the number of samples whose population is not known for sure, the number of indicators is multiplied by 5-10. Therefore, the indicators are 31 times 5 ($31 \times 5 = 155$). It can be concluded that the number of samples to be used in this study is at least 155 respondents who are Active Strata 2 Students in South Jakarta and use the Tokopedia Mobile Application. This research applies the Structural Equation Modeling (SEM) analysis approach to analyze factors, path analysis, and regression [35]. Test processing using Structural Equation Modeling (SEM), namely checking related validity and reliability, testing the model between variables, and assessing predictive ability [36]. In conducting data processing, researchers use data processing tools, namely Smart-PLS, to conduct model testing and model estimation.

4. Results and Discussion

4.1. Results

4.1.1. Outer Model Test

Outer model is a model that specifies the relationship between latent variables and their indicators, or it can be said that the outer model defines how each indicator relates to its latent variables. The outer model is interpreted by examining several factors, including: convergent validity value, discriminant validity value, composite reliability, Average Variance Extracted (AVE), and Cronbach's alpha.

Table 2.
Loading Factor Indicator Value

	BI (Y1)	FS (X2)	IB (Y2)	TO (X3)	PP (X1)	UTB (X3)
BI1	0.791					
BI2	0.833					
BI3	0.891					
BI4	0.877					
BI5	0.877					
BI6	0.863					
BI7	0.844					
BI8	0.853					
BI9	0.824					
FS1		0.750				
FS2		0.790				
FS3		0.825				
FS4		0.779				
FS5		0.830				
FS6		0.841				
FS7		0.787				
FS8		0.786				
FS9		0.743				
IB1			0.692			
IB2			0.736			
IB3			0.729			
IB4			0.757			
IB5			0.755			
IB6			0.764			
PP1					0.841	
PP2					0.737	
PP3					0.729	
PP4					0.828	
PP5					0.798	
PP6					0.808	
PP7					0.859	
PP8					0.852	
PP9					0.761	
UTB1						0.788
UTB2						0.807
UTB3						0.766
UTB4						0.802
UTB5						0.785

The table above displays the loading factor values for indicators that represent various research variables. The loading factor value indicates the level of contribution of each indicator to the measured variable. Indicator IB.1, which has a loading factor value below 0.7, needs to be further evaluated because it does not meet the construct validity criteria in Structural Equation Modeling (SEM)-based analysis. This low value indicates that IB.1 has a weak contribution to the Impulse Buying variable and has the potential to reduce the overall quality of the model.

To improve the validity and reliability of the Impulse Buying variable, the appropriate step is to remove IB.1 from the model and re-analyze using Algorithm II. By eliminating this indicator, it is expected that the model can produce more accurate estimates while ensuring that the remaining indicators have a strong relationship with their latent variables. This approach aligns with the principles of SEM analysis, where only indicators with significant contributions are included in the final model. The results of the Algorithm 2 test showed an increase in the validity of the measurement model after the IB1 indicator in the Impulse Buying variable (IB/Y2.1) was removed, because it previously did not meet the loading factor

threshold of ≥ 0.7 . This revision resulted in all indicators in the Impulse Buying variable having a loading factor value of ≥ 0.7 , indicating a significant contribution to its construct.

4.2. Average Variance Extracted (AVE)

One of the main metrics used to evaluate convergent validity is the Average Variance Extracted (AVE), which calculates the proportion of variance explained by the construct for all of its indicators [34]. To calculate AVE, the loading factor value of each indicator is squared, and then the average is taken. AVE is considered to meet the validity requirements if its value is 0.50 or higher, indicating that the construct can explain at least 50% of the variance of its indicators. The complete results are presented in the table below.

Table 3.
Average Variance Extracted Value (AVE).

Variables	Average Variance Extracted (AVE)	AVE Limit	Information
BI (Y1)	0.724	0.50	Valid
FS (X2)	0.629	0.50	Valid
IB (Y2)	0.582	0.50	Valid
PP (X1)	0.644	0.50	Valid
UTB (X3)	0.624	0.50	Valid

AVE value of construct obtained Brand Image (Y1) 0.724, Celebrity Endorsement (Z) 0.616, Flash Sales (X2) 0.629, Impulse Buying (Y2) 0.582, Paylater Usage (X1) 0.644 and Urge to Buy (X4) 0.624. Based on the AVE results, it shows that all constructs of each latent variable have an AVE value > 0.50 , so it can be concluded that it is valid.

4.3. Composite Reliability

Composite reliability is a measure used to assess the reliability of indicators on a variable. A variable can be considered to meet the criteria for composite reliability if it has a value greater than 0.70. The following are the composite reliability values for each variable used in this study.

Table 4.
Composite Reliability.

Variables	Composite Reliability	Cronbach's Alpha
BI (Y1)	0.959	0.952
FS (X2)	0.938	0.926
IB (Y2)	0.874	0.820
PP (X1)	0.942	0.931
UTB (X3)	0.892	0.851

All variables in this study have composite reliability values that exceed the minimum accepted threshold of > 0.70 . This indicates that each variable meets a high reliability standard. Therefore, it can be concluded that all variables in this study are reliable in their measurements, indicating high confidence in the data collected.

4.4. Hypothesis Testing

The next test is to determine the significance of the influence of independent constructs on the dependent variable and to evaluate the hypotheses. Using a significance level of 5%, if the t-statistic value > 1.96 , then the null hypothesis (H_0) is rejected.

Table 6.
Coefficient Value (Original Sample), Standard Error and T-Statistics.

Direct Influence					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
PP -> IB	0.169	0.171	0.035	4.865	0.000
FS -> IB	0.169	0.169	0.037	4.620	0.000
UTB -> IB	0.185	0.187	0.043	4.325	0.000
PP -> BI	0.327	0.327	0.062	5.242	0.000
FS -> BI	0.241	0.239	0.066	3.658	0.000
UTB -> BI	0.191	0.193	0.053	3.578	0.000
BI -> IB	0.149	0.146	0.040	3.679	0.000
Indirect influence					
FS -> BI -> IB	0.036	0.035	0.014	2.489	0.013
PP -> BI -> IB	0.049	0.048	0.016	2.996	0.003
UTB -> BI -> IB	0.028	0.028	0.011	2.557	0.011

Based on the research results it shows that all hypotheses are accepted. This can be seen from the significance value < 0.05 and the t-statistic value > 1.96 . This indicates that Paylater, Flash Sale, and Urge to Buy, along with Brand Image, have a positive and significant influence on Impulse Buying. The results of the hypothesis test also demonstrate that Brand Image mediates the influence of Paylater, Flash Sale, and Urge to Buy on Impulse Buying.

5. Discussion

Based on the test results, it was found that the paylater variable had a positive and significant effect on brand image. Thus, it can be said that paylater is a determining factor in increasing or decreasing the brand image of Tokopedia mobile application users. This finding indicates that the Paylater feature plays an important role in shaping brand perception in the minds of consumers. As one of the services that provides easy payment, Paylater increases user convenience in making transactions, which ultimately impacts a positive image of Tokopedia. This feature aims to provide convenience for users in managing their payments while increasing consumer satisfaction and loyalty [37]. The existence of Paylater considered to have a significant role in shaping consumer perceptions of brand image [38].

Flash sales positively affect the brand image. Flash sales are designed to offer products at very competitive prices for a limited time, thus creating urgency for consumers to shop immediately [39]. In the context of very tight e-commerce industry competition, flash sales are a strategic element to differentiate Tokopedia from other platforms [40]. By creating a sense of urgency, flash sales not only grab consumers' attention but also positively influence customers' attitudes towards the brand, thereby fostering loyalty and improving overall brand perception [41, 42]. This is also in line with research studies that emphasize the broader context of e-commerce marketing, where such promotional strategies are important for driving sales and increasing brand awareness, Cuong [43]. Qotrunnada [44] a strong brand image can lead to improved purchasing decisions and long-term customer relationships. Omar et al. [45] underline the importance of offering a variety of online shopping experiences, which can positively influence customers' perceptions and attitudes towards the brand. When customers engage with Tokopedia's features, their interactions contribute to the overall brand reputation [46].

The test results show that the urge to buy variable has a positive and significant influence on brand image among Tokopedia mobile application users. This implies that it is not just a matter of fast transactions or increasing sales figures; there is something deeper that occurs behind the shopping experience. This sensation creates a moment that often triggers the urge to buy. A positive consumer experience, in turn, encourages repeat purchases and brand loyalty [47]. A deep emotional connection between a brand and a consumer can lead to increased brand loyalty and active engagement [47]. Furthermore, the Urge to Buy also reflects Tokopedia's success in creating an attractive and interactive shopping environment. Strategies that trigger urgency, such as countdown timers or limited stock quantities, create a sense of exclusivity and competition among consumers [48]. Deep impression that Tokopedia is a dynamic platform and is able to provide a unique shopping experience [49].

Based on the test results, it was found that the paylater variable had a positive and significant effect on impulse buying. Thus, it can be said that paylater is a determining factor in the increase and decrease in impulse buying of Tokopedia mobile application users. By offering the convenience of buying now and paying later, Paylater has created a more spontaneous and emotional shopping experience. Paylater plays its role, providing a sense of freedom that strengthens the emotional appeal of impulse shopping decisions [50]. Purchasing decisions are driven by emotional appeals, such as the desire to own something new or to follow the latest trends [51]. In some cases, Paylater can even create the illusion that consumers have greater financial capacity than in reality, thus increasing the chances of making unplanned purchases [51].

PayLater increases impulsive buying behavior. Consumers are often driven by a momentary desire to acquire something without considering whether the item is truly needed Zhong et al. [52]. Vannisa et al. [6] suggest that the pleasant sensation of "catching" a shopping opportunity is often followed by a financial burden that is felt later. Paylater, which was initially a symbol of freedom, can turn into a source of pressure if not used wisely. Education about financial management, payment reminder features, and transparency in credit use are important steps that can make Paylater an empowering tool, not just a convenience [37]. The results of the study showed that attractive price offers for a limited time were able to change consumer purchasing decisions that were initially unplanned into actions that were carried out quickly [6]. Consumers are more likely to make unplanned purchasing decisions, just to make sure they don't miss out on the opportunity [42].

From a consumer psychology perspective, flash sales create a feeling of "want to be fulfilled now," which can accelerate purchasing decision-making [53]. This increases the consumer's sense of self-worth because they feel like they have successfully obtained the best deal. In many cases, these impulse purchases are more influenced by emotions and momentary urges rather than by rational needs or careful financial planning [53]. Based on the test results, it was found that the urge to buy variable has a positive and significant effect on impulse buying. Thus, it can be said that the urge to buy is a determining factor in the increase and decrease in impulse buying among Tokopedia mobile application users. Features such as "Flash Discounts," "Limited Products," or urgency-themed notifications create a fear of missing out that triggers consumers to act quickly. Melati et al. [54]. Parsad et al. [55] stated that individuals with a high tendency toward impulsive buying are more likely to engage in impulsive behavior, which directly influences their purchasing decisions. Nyrhinen et al. [56] also, it was found that shopping convenience and targeted advertising in the context of online shopping can create positive attitudes toward products and encourage impulse purchases.

Based on the test results, it was found that the brand image variable has a positive and significant effect on impulse buying. Thus, it can be said that brand image is a determining factor in the increase and decrease in impulse buying of Tokopedia mobile application users. In a digital environment such as the Tokopedia application, brand image is not only formed from visual identity but also from the overall experience received by consumers, ranging from service quality,

platform reputation, to transaction security. Brand image plays an important role in shaping consumer behavior by embedding itself in the consumer's psychological framework, which can influence purchasing decisions and behavior [57]. When Tokopedia is recognized as an innovative platform that offers exclusive products, consumers feel compelled to buy immediately because they are concerned about missing out on a special opportunity [58].

Based on the results of the mediation hypothesis testing of brand image between paylater, flash sale, and urge to buy on impulse buying, it shows that brand image mediates the influence of paylater, flash sale, and urge to buy on impulse buying positively and significantly. As an intervening variable, brand image not only functions as a link between paylater, flash sale, urge to buy, and impulse buying but also becomes a key element that shapes consumer perceptions of the value and credibility of these features. This influence occurs because consumers tend to use features such as paylater only if they feel that the e-commerce platform, in this case Tokopedia, has a positive and trusted reputation [59]. The use of PayLater, integrated with a strong brand image, can create the impression that purchasing through Tokopedia is not only easy but also provides a pleasant and trustworthy experience [60]. For example, consumers who feel proud of the Tokopedia brand are more likely to use PayLater to spontaneously purchase desired products because they feel that the platform understands their needs and provides relevant solutions [60]. As a mediating variable, brand image serves as a reinforcement of consumer perception of the value and credibility of the flash sales offered. A positive and strong brand image provides consumers with a sense of security and confidence to make impulsive purchases. Brands influence consumers in impulsive buying [61].

6. Conclusions and Recommendation

Based on the results of hypothesis testing and the discussion that has been carried out, the conclusions of this study can be formulated. This study successfully identified various factors that influence brand image and impulse buying in the context of Tokopedia's e-commerce application. All independent variables, namely the use of PayLater, flash sales, and urge to buy, positively and significantly influence brand image and impulse buying. This finding confirms the importance of diverse marketing strategies in building brand perception and encouraging impulsive buying decisions. In addition, brand image is proven to have a positive and significant influence on impulse buying and acts as a mediator that strengthens the relationship between independent variables and impulse buying. This shows that positive brand perception is key in strengthening the impact of promotion on consumer behavior.

To address the limitations of this study, further researchers are advised to consider the development of marketing strategies. Tokopedia and other e-commerce platforms are encouraged to continue utilizing Paylater, Flash Sales, and Urge to Buy as core strategies. However, efforts should be made to improve brand image to enhance the impact of these strategies, for example, through promotional designs that align with brand values. To increase the effectiveness of promotions, it is recommended to conduct more specific consumer segmentation based on demographics, psychographics, or purchasing behavior. This approach can help develop strategies that are more tailored to the needs of each segment.

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