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Impulsive Shopping Behavior via Live Streaming on Shopee: Testing the Theory of Planned Behavior (A Study of Maranatha University Students)

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ARTICLE INFO	ABSTRACT
Article History: Submitted: 20 February 2025 Reviewed: 07 June 2025 Revision: 15 January 2026 Accepted: 11 February 2026 Publish: 30 March 2026 Keywords: Theory of Planned Behavior (TPB), Impulsive Buying Behavior, Live Streaming Commerce, Shopee Live, Purchase Intention Corresponding Author: Zefa Arya Nugraha email: Zefaaryan02@gmail.com	This study aims to analyze impulsive buying behavior through live streaming on the Shopee e-commerce platform using the Theory of Planned Behavior as the theoretical framework. The method used in this study is a survey of Maranatha University students as respondents, aimed at exploring their perceptions of how various elements in live streaming influence impulsive buying behavior. The data were analyzed using Structural Equation Modeling (SEM) techniques and SmartPLS 3.0 software to test the relationships between the variables. The results of the hypothesis testing show that consumers' attitudes toward impulsive buying are positively related to their intention to make impulsive purchases; subjective norms from their surrounding environment also have a positive effect on impulsive buying intention; and individuals' perceptions of behavioral control also positively influence impulsive buying intention. Furthermore, impulsive buying intention significantly affects actual impulsive buying behavior on the Shopee live streaming platform. The author suggests that e-commerce platforms encourage the use of engaging marketing stimuli for consumers.

INTRODUCTION

Indonesia has seen a significant surge in internet penetration and smartphone usage. The number of internet users in Indonesia has reached 79.5% of the total population as of early 2024, a 2.75% increase compared to early 2023. This represents a higher growth rate than the 2.66% increase recorded during the 2022–2023 period (teknologi.bisnis.com, 2024). This is reflected in the projection for Indonesia's e-commerce growth, which is expected to reach 30.5% in 2024, making it the country with the highest e-commerce growth rate in the world according to the German e-commerce research firm ECDB (Katadata.com, 2024). Platforms like Shopee offer a variety of new features to attract customers, one of which is live streaming.

E-commerce has grown rapidly, with many platforms—such as Shopee—offering new features to attract customers, one of which is live streaming, which allows products to be showcased in real time. This phenomenon has influenced consumer behavior, as people often make impulse purchases during live streaming sessions. Shopee is one of the largest e-commerce platforms in Indonesia and has seen a significant surge in traffic. In September 2023, Shopee recorded 237 million visits, representing an increase of nearly 38% (Ahdiat, 2023).

For Shopee, live streaming provides users with a real-time experience. Watching streamers showcase products live allows users to feel a sense of real-time presence and obtain direct information about the products being offered. This can create a sense of urgency and a desire to immediately purchase the featured products. The ever-increasing popularity of Shopee Live also reflects a trend in changing consumer behavior, with consumers increasingly prioritizing interactive and immediate shopping experiences through social media and e-commerce platforms. According to a survey conducted by Ipsos, Shopee Live emerged as the most popular live streaming feature among local brands and SMEs. Shopee Live leads in terms of awareness among local brands and SMEs, with a recognition rate of 96%. TikTok Live also scored 87%, Lazada Live 71%, and Tokopedia Play recorded a figure of 62%. The success of Shopee Live demonstrates that this platform has become the top choice for many local businesses looking to leverage live streaming features to promote their products more effectively.

Live streaming can encourage impulsive buying, which is a purchasing decision made without prior planning. Impulsive buying is often triggered by emotional factors, a sense of urgency, or stimuli encountered while shopping. Research findings indicate that marketing strategies focused on live streaming can influence impulsive buying behavior in e-commerce (Chen & Lin, 2018). A live streamer has the ability to interact directly with consumers through live streaming, allowing them to showcase products from various angles and provide more detailed and in-depth explanations. In this way, live streaming can trigger impulsive purchases because consumers feel a greater sense of closeness and engagement with the products being offered. Similar findings were reported by Wu & Gao (2020) and Zhang et al. (2022), who identified that the presence of live streaming in e-commerce creates real-time interaction between sellers and viewers. This type of interaction has the potential to influence consumers' purchasing decisions, encouraging them to make spontaneous transactions. This phenomenon highlights the important role of live streaming in increasing engagement and influencing consumer behavior within the digital commerce ecosystem. Platforms like Shopee, limited-time offers, instant discounts, or eye-catching products featured during live streaming sessions can prompt consumers to make purchases without giving it much thought beforehand.

The role of live-streaming commerce refers to buying and selling activities that take place on e-commerce platforms via live streams (Chao-Hsing & Chien-Wen, 2021). This concept involves various live-streaming platforms that provide the technology and infrastructure enabling the creation of a virtual environment where real-time interactions, entertainment, activities, and commercial transactions can occur simultaneously. Commerce via live streams, often referred to as live-streaming commerce, is a new phenomenon in the world of e-commerce. Live streaming commerce combines the element of direct social interaction—a key characteristic of live streaming—with product promotion and sales activities (Cai et al., 2018). Generally, live streaming activities focused on product sales involve a streamer showcasing various aspects of a product and encouraging the audience to make a purchase.

The phenomenon of impulse buying in e-commerce arises when marketers use strategies to stimulate impulse purchases, such as sharing attractive product photos and videos via live streaming. This approach captures users' attention on platforms like Shopee, which then sparks the intention to buy. By leveraging real-time interactive content, live streaming taps into emotional triggers that encourage consumers to make spontaneous and unplanned purchases. The combination of entertainment, product demonstrations, and social engagement creates an environment where consumers are more likely to act on impulse, which ultimately boosts sales and the frequency of interactions with the platform. This strategy not only enhances the overall shopping experience but also expands the potential for marketers to directly influence consumer behavior.

Customers can purchase products directly by clicking the orange shopping cart icon next to the comment field (Prihatiningsih et al., 2023). Shopee's marketing communication activities encourage impulse buying (Fissudur et al., 2021). The phenomenon of impulse buying is one of the factors that can make the marketing methods used by various marketplaces, including Shopee, successful (Kinasih & Wuryandari, 2023). Impulse buying is a key factor in e-commerce. Currently, approximately 50% of total consumer spending is influenced by technological advancements that provide various quick and flexible purchasing options, which ultimately encourage consumers to make impulse purchases (Venia, 2021). Impulse buying is often associated with the term "unplanned buying," which refers to any purchase made by a consumer without prior planning (C. Nagedeepa, 2015).

This study aims to test the use of the Theory of Planned Behavior (TPB) as a theoretical framework capable of explaining the purchase decision-making process, particularly in the context of impulsive purchasing decisions. The TPB, developed by Ajzen, identifies that individual behavior is influenced by attitudes, subjective norms, and planned behavioral control, all of which play a crucial role in understanding impulsive purchasing decisions in e-commerce. According to Kotler & Armstrong (2020), e-commerce refers to online platforms accessible to individuals via computer devices, which enable businesses to conduct commercial transactions and facilitate consumer in obtaining information related to products or services. E-commerce has grown rapidly alongside advances in digital technology, making it one of the primary methods for conducting modern business activities. These platforms not only make it easier for businesses to expand their market reach but also allow consumers to make purchases, compare prices, and search for information more efficiently without having to physically visit a business location. E-commerce plays a role in providing the information consumers need, which can influence their purchasing decisions, including impulse purchases. E-commerce is not merely about buying and selling transactions; it is also about how online platforms connect businesses with consumers through relevant information, promotions, and shopping experiences that trigger purchasing actions. One increasingly important aspect of e-commerce is the ability to quickly influence consumers' purchasing decisions, which are sometimes impulsive. This process is often influenced by external factors such as limited-time promotions, discounts, or exclusive offers communicated through various online media, including e-commerce websites and apps. These factors, which are reflected in the TPB as subjective norms and behavioral control, can influence consumers' intention to purchase products spontaneously without prior planning.

This study seeks to explore in greater depth how the elements of the Theory of Planned Behavior—including attitudes toward purchasing, social influence from others, and perceived control over purchasing decisions—can explain the phenomenon of impulsive purchasing in the rapidly growing world of e-commerce. This study demonstrates that the TPB is used to explain the of impulsive purchasing via live streaming on Shopee. An individual's attitude toward impulsive purchasing via live streaming can be influenced by prior experiences, perceptions of the benefits of impulsive purchasing, and so on. Subjective norm may include the influence of friends or influencers who support or oppose impulsive purchasing, as well as an individual's perception of the ease or difficulty of making impulsive purchases via live streaming, such as the availability of funds or the technical ability to make a purchase. By using the TPB as a theoretical framework, this study examines impulsive purchasing decisions via live streaming on Shopee.

This study focuses on an e-commerce company, Shopee. PT Shopee International Indonesia is a company that specializes in online product sales, better known as the Shopee app. This app is an e-commerce platform that allows users to shop directly through the app without having to access the website via a computer. Shopee offers the convenience of shopping anytime and anywhere via mobile devices. Shopee entered the Indonesian market in late May 2015 and officially began full operations in late June 2015. Since its launch in Indonesia, Shopee has grown rapidly by introducing various features that make it easier for consumers to find the products they're looking for. In addition to offering a wide range of product categories, Shopee has also introduced various innovations to enhance the shopping experience, such as secure payment systems, attractive discount programs, and efficient delivery services. Shopee also leverages technology to provide live-streaming features and interactive promotions that are increasingly capturing consumers' attention. As a subsidiary of Garena, headquartered at in Singapore, Shopee has successfully secured a significant position in the Indonesian market. According to research by Data.ai (as reported by Liputan6.com, 2024), more than half of respondents (67%) cited Shopee as the top choice among online sellers, followed by Tokopedia (16%) and Lazada (6%). Meanwhile, TikTok Shop, a new entrant, remains far behind with a share of just 6%. Additionally, in the "Brand Used Most Often" (BUMO) metric, Shopee continues to dominate with 80%, followed by Tokopedia (10%), while Lazada and TikTok Shop each recorded only 6%.

The researcher is interested in conducting research on a group of college students in Bandung. College students are a group that tends to be familiar with technology and e-commerce. They frequently use apps and online platforms to shop, search for information, and interact with others. Therefore, they may be more open to using live-streaming features during the purchasing process.

Researchers can focus on students at Maranatha Christian University. Students at Maranatha Christian University in Bandung are concentrated in a single geographic location, making it easier to access them and collect research data. Additionally, selecting students from Maranatha Christian University in Bandung can provide a deeper understanding of consumer behavior within the local context of Bandung.

This prompted the researchers to conduct a study titled "Impulsive Shopping Behavior via Live Streaming on Shopee: Testing the Theory of Planned Behavior (A Study of Maranatha University Students)."

Impulsive Buying

Impulsive purchasing is the behavior of consumers making immediate purchases without any prior shopping plans or goals. Previous studies have supported a significant relationship between the impact of social media and sales outcomes, and have analyzed the impulsive purchasing behavior of online consumers on traditional social media platforms (Nuseir, 2020; Zafar et al., 2021). However, few of these studies have highlighted the unique characteristics of live-streaming platforms and analyzed the phenomenon of online consumers' impulsive purchasing (Li, Kang, Zhao, et al., 2022). Specifically, online consumers can enjoy a rich shopping experience due to the interactive cyber-physical environment provided by e-commerce platforms (Sun et al., 2019).

Live Streaming

Live streaming has now become a hugely popular phenomenon across various platforms in Indonesia, reflecting rapid advancements in the digital world. The process of live streaming, or live video broadcasting, allows a streamer to broadcast video in real time over the internet to a viewing audience. This gives viewers the opportunity to watch live videos while engaging in social interaction, which adds value to their products and shopping experience (Ming et al., 2021). As live streaming grows in popularity, many businesses are leveraging social media platforms as a means to boost their sales performance more effectively. This phenomenon has given rise to social commerce, where businesses can increase their sales through online transactions. Chen et al. (2018) explain that live streaming is a transmission that uses communication technology to send images and sound from one location to another, allowing the audience to feel as though they are participating in the event while interacting through live comments.

Attitude Toward Behavior and Impulsive Buying Intention

An attitude toward a specific action is defined as a person's positive or negative evaluation of a behavior, brand, ideology, or other entity that evokes feelings, shaped by beliefs about the possible outcomes resulting from that behavior (prominent beliefs) and an evaluation of those outcomes. Consequently, a person develops an attitude toward that behavior. Based on the theory of planned behavior, a person tends to have a positive attitude toward actions believed to produce desired consequences and a negative attitude toward actions considered to have unpleasant consequences.

Attitudes toward behavior play a crucial role in understanding consumers' intentions to make impulse purchases (Styvén et al., 2017). Consumers who spend more time browsing products in stores tend to have a positive view of impulse buying (Utama et al., 2021). Therefore, the retail sector is expected to foster positive consumer attitudes toward impulsive buying, which can serve as a strategy to address competition (Liang et al., 2021). Consequently, the research hypothesis can be stated as follows:

- *H1: Attitudes toward behavior have a positive influence on impulsive buying intention.*

Subjective Norm Regarding Impulsive Buying Intention

Individuals are influenced by social forces reflected through subjective norms. Subjective norms encompass a person's beliefs about the extent to which significant others believe that

someone should or should not perform a certain action. In the context of subjective norms, the primary determining factor is normative beliefs. The focus of these normative beliefs is the extent to which relevant people or groups accept or reject certain behaviors. Subjective norms are assumed to measure the social pressure individuals face in performing or avoiding a particular activity. In general, this type of norm has a weaker influence on the intentions of people who possess strong internal control.

Impulsive purchasing can also be influenced by subjective norms (Abbas et al., 2022). When consumers feel supported by others in making impulsive purchases, they are more likely to engage in impulsive buying behavior (Jain, 2021). The dynamics of how the environment's consumer perceptions and ultimately influences impulsive purchasing decisions are an area worth studying (Zhu et al., 2020). Thus, companies are expected to encourage consumers to make impulsive purchases through subjective norms, which in turn can increase the company's sales and profitability (Sari et al., 2021). Therefore, the hypotheses can be stated as follows:

- *H2: Subjective norm has a positive effect on impulsive buying intention*

Perceived Behavioral Control on Impulsive Buying Intention

The third predictor of intention in the TPB is perceived behavioral control, which refers to an individual's view of their ability to perform a specific behavior, as determined by their assessment of the ease or difficulty of performing that behavior. The importance of this variable in the new business development process lies in its predictive power, as it reflects an individual's belief that they will be able to control that behavior. Perceived behavioral control helps improve behavioral predictions.

Perceived behavioral control serves as another factor influencing consumers' intentions to make impulse purchases (Shim & Altmann, 2016). Impulse purchases are influenced by how consumers perceive the ease of making such purchases (Li & Kang, 2023). Companies that provide convenience in the shopping process can motivate consumers to make impulsive purchases (Iyer et al., 2020)

- *H3: Perceived behavioral control has a positive effect on impulsive buying*

Intention

Attitude Toward Online Behavior, Online Consumer Subjective Norm, and Online Perceived Behavioral Control Have a Positive Effect on Impulsive Shopping Behavior, Mediated by Impulsive Buying Intention

According to the Theory of Planned Behavior (TPB), intention plays a crucial role in determining whether a person will engage in a particular behavior or not. A strong intention to perform an action typically encourages individuals to be more committed and more likely to carry out that action. Conversely, if that intention is absent or weak, the likelihood that the individual will perform the action is very low. TPB emphasizes that these factors contribute to the formation of intention and, ultimately, to the behavior itself. Therefore, the stronger a person's intention, the greater the likelihood that they will turn that intention into actual action. In this context, TPB helps explain how the combination of personal attitudes, social influences, and perceived control can shape intentions that ultimately drive specific behaviors. These intentions serve as a crucial starting point for understanding consumer behavior, including in the context of impulse buying, where the decision to purchase something spontaneously is often influenced by these factors.

In the context of impulsive purchasing, intention plays a crucial role in linking the influence of factors such as attitudes, social norms, and behavioral control to the decision to make a spontaneous purchase. Impulsive purchasing refers to the act of buying goods without prior planning, which is typically triggered by external stimuli such as advertisements, promotions, or social influence. Intention acts as a mediating variable that links attitudes, subjective norms, and behavioral control to actual behavior (impulsive purchasing). In other words, although factors such as attitudes or social influence can affect the decision to make an impulsive purchase, an individual's intention plays a key role in determining whether they will actually carry out the purchase. For example, even if someone is tempted by a promotion that appears on a social media platform or during a live stream, their intention to make an impulsive purchase will only materialize if they have a positive attitude toward the purchase and feel that they can carry it out easily.

Plans to purchase specific items often change once shoppers are in the store, and these additions or changes are referred to as impulsive buying behavior, which frequently occurs in shopping malls (Alghifari & Fakhri, 2023). Impulsive purchases are typically triggered by an interest in unique products, attractive prices, and specific promotions (Wijaya & Setyawan, 2020). This impulsive shopping behavior is one of the main drivers of growth in Indonesia's retail industry (Firzatullah, 2023). It is important to understand the factors that trigger impulsive buying behavior, such as attitude toward behavior, subjective norm, and perceived behavioral control. The results of a study by Rahmasari and Sugiyanto (2024) reveal that attitude toward behavior, subjective norm, and perceived behavioral control have a positive effect on impulsive buying behavior, either directly or indirectly through impulsive buying intention.

- *H4: Attitude Toward Online Behavior, Online Consumer Subjective Norm, and Perceived Online Behavioral Control Have a Positive Effect on Impulsive Shopping Behavior, Mediated by Impulsive Buying Intention*

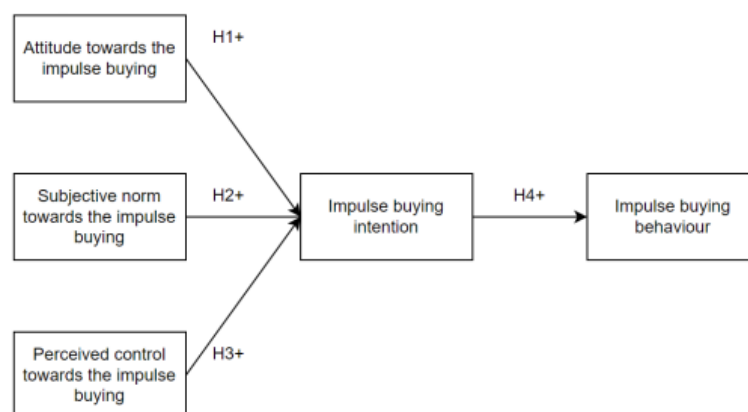


Figure 1. Research Hypotheses

RESEARCH METHOD

This study is a quantitative study because it uses data collection and analysis methods that produce numbers and statistics to answer the research questions (Sugiyono, 2020). This study is of the *causal-explanatory* type because it aims to determine whether there is a cause-and-effect

relationship between the variables under study. In other words, this study attempts to explain why or how a phenomenon occurs. The objective is to describe the influence of the TPB on purchase intention, and the influence of purchase intention on *impulsive buying* during *Shopee live streams*.

A population is the entire group of individuals or objects that share characteristics relevant to the research objectives (Ghozali, 2020). In the context of this study, the population is all college students in Bandung. A sample is a portion of the population selected to serve as a representative sample in the study. In this study, the sample consists of students at Maranatha Christian University in Bandung.

The sampling technique used in this study was purposive sampling, which is a method of selecting a sample based on specific criteria relevant to the research objectives (Sugiyono, 2020). This sampling method aims to ensure that the selected respondents possess information or characteristics that can support the achievement of the research objectives. The sample size was determined using the formula proposed by Hair et al. (2014), which involves calculating a sample size five times the number of indicators used in the study.

Data collection in this study was conducted using two types of data: primary and secondary data. Primary data was collected directly from respondents via a distributed questionnaire, which served to obtain relevant and specific information related to the research topic. Meanwhile, secondary data was obtained from existing sources, such as relevant literature, scientific journals, and statistical data that support the analysis and discussion in this study. This combined approach is expected to provide a more complete and comprehensive picture of the issue under investigation. Primary data collection was conducted using a questionnaire, in which respondents were asked to answer a series of structured questions designed to gather the information needed for the study.

To achieve the objectives of this study, the researcher used *Structural Equation Modeling* (SEM), which is a multivariate analysis technique within the category of multivariate dependent statistical techniques; this technique is employed when the researcher seeks to explain or predict one or more dependent variables (Ghozali, 2013). Data processing was performed using *SmartPLS 3.0*. The model used is as follows:

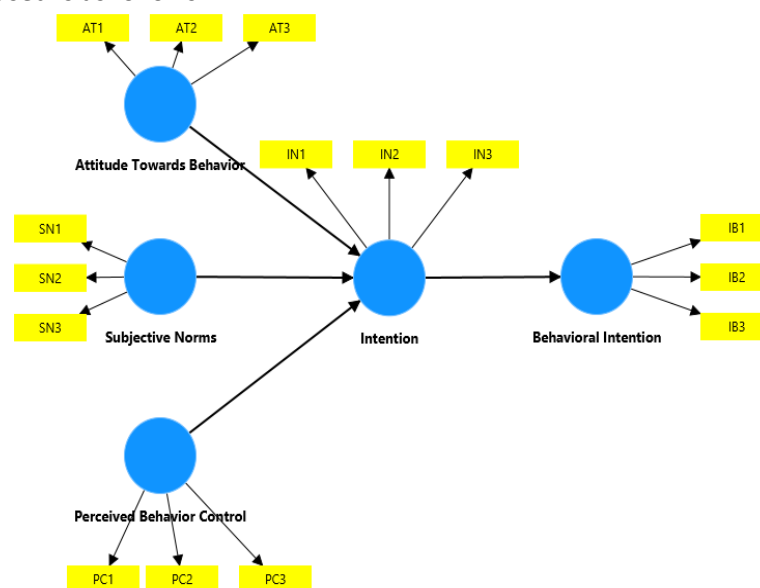


Figure 2. Research Model

Source: data analysis using SmartPLS 4.0 (2024)

Outer model testing is conducted to ensure that the measurements taken are suitable for use as measurements (valid and reliable) (Ghozali, 2013). If the test results indicate that the indicators meet the criteria for validity and reliability, then it can be concluded that the measurement model is sound and can proceed to structural model testing. To test the outer model, the researcher used SmartPLS 3.0. This test produced several outputs, namely convergent validity, discriminant validity, and reliability.

a. Convergent Validity

Convergent validity is a measure used to assess the extent to which measurement items or score components correlate with the score of the construct being measured. In general, if an indicator has a correlation value greater than 0.7 with the construct being measured, then that indicator is considered to have good convergent validity, as it indicates a strong relationship between the indicator and the construct. However, according to W. Abdillah (2018), outer loading values ranging from 0.5 to 0.6 can also be considered sufficient to indicate a significant relationship between the indicator and the construct, even if they are not as high as 0.7. Convergent validity is also important in the context of quantitative data analysis because it helps ensure that the instruments used in the research can measure the intended construct precisely and accurately. In research involving measurement models, such as factor models or Structural Equation Modeling (SEM), ensuring good convergent validity is an essential step to enhance the reliability and validity of research results.

b. Discriminant Validity

Discriminant validity is when the cross-loading correlation with a latent variable must be greater than the correlation with other latent variables.

c. Reliability Test

A reliability test aims to assess the degree of internal consistency of a measurement instrument used in a study (Ghozali, 2018). In testing reliability, there are two commonly used methods: Cronbach's Alpha (CA) and Composite Reliability (CR). Cronbach's Alpha serves to measure the lower bound of a variable's reliability, indicating the extent to which the items within the measurement instrument are consistent with one another. Meanwhile, Composite Reliability provides a more accurate picture of the actual reliability level of the measured variable by accounting for inter-item variation (W. Abdillah, 2018). For both methods, the results must be greater than 0.7 for the variable to be considered reliable. Cronbach's and Composite Reliability values provide a stronger indication of the extent to which the variable can be relied upon to measure the intended concept.

Abdillah and Hartono (2015) state that the inner model, or structural model, describes the causal relationships among latent variables, which are constructed based on existing theoretical foundations. The inner model serves to predict the causal relationships among these latent variables. Through the bootstrapping process, T-statistic test parameters are used to test for the presence of causal relationships (Hair et al., 2011). The following tests were conducted on the inner model:

a. Coefficient of Determination (R^2)

The R^2 value is used to measure the extent to which exogenous variables can explain the variation in endogenous variables. The higher the R^2 value, the better the model's predictive ability and the stronger the proposed research model (Hair Jr., 2014). Based on the rule of thumb proposed by Barclay et al. and Hair et al. in Wijaya (2019:99), R^2 values can be categorized as follows: 0.25 is considered low, 0.50 is moderate, and 0.75 is considered strong.

b. T-Test

The hypothesis testing in this study is a one-tailed test; this study uses a right-tailed test. This test uses a significance level of 5% and assumes that 95% of the results of the hypothesis testing are correct, since the confidence level typically used in business research is 95% or a significance level of $p = 0.05$ (Indrawati, 2015).

The T-statistic value must be greater than 1.65 for H_0 to be rejected and H_1 accepted; however, if the T-statistic value is less than 1.65, then H_0 is accepted and H_1 is rejected. The hypothesis tests to be conducted in this study are as follows:

- Hypothesis 1: *Attitudes Toward Online Behavior* Regarding Impulsive Purchases Have a Positive Effect on *Impulsive Buying Intentions on the Shopee Live Streaming Platform*.
- Hypothesis 2: *Online Consumers' Subjective Norms* Regarding Impulsive Purchasing Have a Positive Effect on *Impulsive Buying Intention on Shopee's Live Streaming Platform*.
- Hypothesis 3: *Online Perceived Behavioral Control* Regarding Impulsive Buying Has a Positive Effect on *Impulsive Buying Intention on Shopee's Live Streaming Platform*.
- Hypothesis 4: *Online Consumers' Attitudes Toward Behavior, Subjective Norms, and Perceived Behavioral Control* have a positive effect on *impulsive buying behavior*, mediated by *impulsive buying intentions on Shopee's live streaming platform*.

In the research methods section, all techniques and procedures must be stated (specify the name if the method is standard, or provide a description if the procedure is new or modified). Include the full research location, the number of respondents (if applicable), how to process the results of observations, interviews, or questionnaires (if applicable), and how to measure performance benchmarks; the general methodology does not need to be described in detail, but it is sufficient to refer to the reference book.

RESULTS AND DISCUSSION

Demographic Analysis of Respondents

The respondents in this study consisted of 57 men and 63 women. This nearly balanced gender distribution reflects relatively equal participation from both genders. The majority of respondents were young, with 36 respondents under the age of 18, 29 respondents between the ages of 18 and 22, 25 respondents between the ages of 23 and 25, and 30 respondents over the age of 25.

This focus on the younger age group aligns with the characteristic that they are students.

All research participants—120 respondents—acknowledged being familiar with *the Shopee platform*. This high level of awareness indicates that *Shopee* is a well-known *platform* among respondents. All 120 respondents confirmed that they watch *live streams* on *Shopee*. This universal participation in watching *live streams* indicates that the *platform* is their preferred choice, and respondents reported varying frequencies of watching *live streams* on *Shopee*: 15 respondents very rarely, 26 respondents rarely, 50 respondents often, and 29 respondents very often. These data reflect varying levels of interaction with the *Shopee live streaming platform* itself.

Table 2. Demographic Analysis of Respondents

		Frequency	Percent
Gender	Male	57	47.5
	Female	63	52.5
Age	< 18 years	36	30.0
	18–22 years	29	24.2
	23–25 years	25	20.8
	> 25 years	30	25.0
Are you familiar with Shopee?	Yes	120	100.0
Do you watch Shopee live streams?	Yes	120	100.0
Frequency	Very rarely	15	12.5
	rare	26	21.7
	often	50	41.7
	very often	29	24.2
	Total	120	100.0

Source: Data analysis using SmartPLS 4.0 (2024)

Outer Model Testing (Measurement Model)

If the test results indicate that the indicators meet the criteria for validity and reliability, then it can be concluded that the measurement model is sound and can proceed to the structural equation modeling phase. To test *the outer model*, the researcher used SmartPLS 3.0

a. Convergent Validity

Convergent validity is a measure used to assess the extent to which measurement items or score components correlate with the score of the construct being measured. In general, if an indicator has a correlation value greater than 0.7 with the construct being measured, then that indicator is considered to have good convergent validity, as it indicates a strong relationship between the indicator and the construct. However, according to W. Abdillah (2018), *outer loading* values ranging from 0.5 to 0.6 can also be considered sufficient to indicate a significant relationship between the indicator and the construct, even if they are not as high as 0.7. Convergent validity is also important in the context of quantitative data analysis because it helps measure the intended construct precisely and accurately. In research involving measurement models, such as factor models or

In Structural Equation Modeling (SEM), ensuring good convergent validity is an essential step for improving the reliability and validity of research results.

Table 3. Convergent Validity

	<i>Attitude Toward Behavior</i>	<i>Behavioral Intention</i>	<i>Intention</i>	<i>Perceived Behavioral Control</i>	<i>Subjective Norms</i>
AT1	0.797				
AT2	0.831				
AT3	0.866				
IB1		0.830			
IB2		0.765			
IB3		0.842			
IN1			0.819		
IN2			0.811		
IN3			0.833		
PC1				0.842	
PC2				0.828	
PC3				0.835	
SN1					0.802
SN2					0.847
SN3					0.852

Source: data analysis using SmartPLS 4.0 (2024)

Since the *outer loading* values exceed 0.500, the criterion for *convergent validity* has been met, meaning that the items are able to measure the construct they are intended to measure.

b. Discriminant Validity

Discriminant validity is defined as the *cross-loading* correlation with a latent variable must be greater than the correlation with other latent variables.

Table 4. Discriminant Validity

	<i>Attitude Toward Behavior</i>	<i>Behavioral Intention</i>	<i>Inten tion</i>	<i>Perceived Behavioral Control</i>	<i>Subjective Norms</i>
<i>Attitude Toward Behavior</i>	0.832				
<i>Behavioral Intention</i>	0.813	0.813			
<i>Intention</i>	0.795	0.806	0.82 1		
<i>Perceived Behavioral Control</i>	0.739	0.724	0.85 2	0.835	
<i>Subjective Norms</i>	0.797	0.826	0.80 1	0.739	0.834

Source: Data analysis using SmartPLS 4.0 (2024)

c. Reliability Test

A reliability test aims to assess the degree of internal consistency of a measurement instrument used in a study (Ghozali, 2018). In reliability testing, there are two commonly used methods: *Cronbach's Alpha* (CA) and *Composite Reliability* (CR). *Cronbach's Alpha* serves to measure the lower bound of a variable's reliability, indicating the extent to which the items within the measurement instrument are consistent with one another. Meanwhile, *Composite Reliability* provides a more accurate picture of the actual reliability level of the measured variable by accounting for variation among measurement items (W. Abdillah, 2018). For both methods, the results must be greater than 0.7 for the variable to be considered reliable. A higher *Cronbach's Alpha* value indicates that the measurement instrument has better consistency, while *Composite Reliability* provides a stronger indication of the extent to which the variable can be relied upon to measure the intended concept.

Table 5. Reliability

	Cronbach's alpha	Composite reliability (rho_a)
<i>Attitude Toward Behavior</i>	0.777	0.781
<i>Behavioral Intention</i>	0.743	0.747
<i>Intention</i>	0.759	0.759
<i>Perceived Behavioral Control</i>	0.783	0.784
<i>Subjective Norms</i>	0.781	0.781

Source: data analysis using SmartPLS 4.0 (2024)

Based on the table above, the *Cronbach's Alpha* (CA) and *Composite Reliability* (CR) values of the variables studied have exceeded the criterion value of 0.700. Thus, the reliability of the variables studied in this research is good.

Inner Model Testing (Structural Model)

a. Coefficient of Determination (R^2)

The R^2 value is used to measure the variation resulting from changes. Based on the rule of thumb proposed by Barclay et al. and Hair et al. in Wijaya (2019:99), R^2 values can be categorized as follows: 0.25 is considered low, 0.50 is moderate, and 0.75 is considered strong.

Table 6. R

	<i>R-squared</i>	<i>Adjusted R-squared</i>
<i>Behavioral Intention</i>	0.649	0.646
<i>Intention</i>	0.807	0.802

Source: data analysis using SmartPLS 4.0 (2024)

For the *behavioral intention* variable, which is the dependent variable, an *adjusted R-squared* value of 0.646 was obtained, indicating that the influence of the *Behavioral Intention* variable is strong. An *adjusted R-squared* value was also obtained for the *Intention variable*, indicating a strong influence.

b. t-test

The hypothesis testing in this study is a one-tailed test; this study uses a right-tailed test. This test uses a significance level of 5% and assumes that 95% of the results of the hypothesis testing are correct, since the confidence level typically used in business research is 95% or a significance level of $p = 0.05$ (Indrawati, 2015).

The *path* coefficient or *inner model* value indicates significance in hypothesis testing. The *path* coefficient or *inner model* score, as indicated by the T-statistic value, must be greater than 1.65 for H0 to be rejected and H1 accepted; however, if the T-statistic score is less than 1.65, H0 is accepted and H1 is rejected. The hypotheses tested in this study are as follows:

- Hypothesis 1: Online consumers' attitudes toward impulse buying have a positive effect on the intention to make impulse purchases on *the Shopee live-streaming platform*.
- Hypothesis 2: Online consumers' subjective norms regarding impulsive buying have a positive effect on the intention to make impulsive purchases on *Shopee's live-streaming platform*.
- Hypothesis 3: Online consumers' perception of control over impulsive purchases has a positive effect on their intention to make impulsive purchases on *Shopee's live-streaming platform*.
- Hypothesis 4: Online consumers' intent to make impulse purchases has a positive effect on impulse buying behavior on *Shopee's live streaming platform*.

Table 7. t-Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-statistic (O/STDEV)	P- values
<i>Attitude Toward Behavior → Intention</i>	0.225	0.225	0.079	2.843	0.004
<i>Subjective Norms → Intention</i>	0.252	0.256	0.085	2.961	0.003
<i>Perceived Behavioral Control → Intention</i>	0.500	0.496	0.069	7.267	0.000
<i>Intention → Behavioral Intention</i>	0.806	0.803	0.047	17.208	0.000

Source: data analysis using SmartPLS 4.0 (2024)

For Hypothesis 1, the calculated t-value was 2.843, with a significance level of 0.004. This means that the calculated t-value is greater than the critical t-value ($2.843 > 1.65$). Therefore, H1 is accepted, meaning that online consumers' attitudes toward impulse buying have a positive effect on their intention to make impulse purchases on *the Shopee live-streaming platform*.

For the test of Hypothesis 2, the calculated t-value was 2.961, with a significance level of 0.003. This means that the calculated t-value is greater than the critical t-value ($2.961 > 1.65$). With , we accept H2, which means that online consumers' subjective norms regarding impulse buying have a positive effect on their intention to make impulse purchases on *the Shopee live-streaming platform*.

For Hypothesis 3, the calculated t-value was 7.267, with a significance level of 0.000. This means that the calculated t-value is greater than the critical t-value ($7.267 > 1.65$). Therefore, H3 is accepted, meaning that online consumers' perception of control over impulsive purchases has a positive effect on their intention to make impulsive purchases on *the Shopee live-streaming platform*.

For the test of Hypothesis 4, a calculated t-value of 17.208 was obtained, with a significance level of 0.000. This means that the calculated t-value is greater than the critical t-value ($17.208 > 1.65$). Therefore, H4 is accepted, meaning that online consumers' intent to make impulse purchases has a positive effect on impulse buying behavior on *the Shopee live streaming platform*.

Table 8. Correlation Analysis

<i>Attitude Toward Behavior</i>	AT1	Impulse purchases on <i>the Shopee live-streaming platform</i> are intriguing.	0.797
	AT2	I like to make impulse purchases while watching Shopee <i>live streams</i> .	0.831
	AT3	Impulse buying on <i>the Shopee live streaming platform</i> is a great idea.	0.866
<i>Behavioral Intention</i>	IB1	I will make an impulse purchase if people who are important to me encourage me to do so.	0.830
	IB2	Recommendations from close friends will make me want to try an impulse purchase.	0.765
	IB3	The opinions of people who are important to me will influence my decision to make an impulse purchase on <i>the Shopee live-streaming platform</i> .	0.842
<i>Intention</i>	IN1	I'll be able to use <i>the Shopee live-streaming platform</i> for impulse purchases.	0.819
	IN2	My use of <i>the Shopee live streaming platform</i> for impulse purchases is entirely under my control.	0.811
	IN3	I have the resources, knowledge, and skills to make impulse purchases on <i>the Shopee live streaming platform</i> .	0.833
<i>Perceived Behavioral Control</i>	PC1	If the opportunity arises, I intend to make an impulsive purchase on <i>the Shopee live streaming platform</i> .	0.842
	PC2	If given the opportunity, I can predict that I will make an impulse purchase on <i>the Shopee live-streaming platform</i> in the future.	0.828
	PC3	I'm likely to make an impulse purchase on <i>the Shopee live-streaming platform</i> in the near future.	0.835
<i>Subjective norms</i>	SN1	When shopping on <i>the Shopee live-streaming platform</i> , I often think, "Buy now, think later."	0.802
	SN2	When shopping on <i>the Shopee live-streaming platform</i> , I often buy things based on how I feel at the moment.	0.847
	SN3	When shopping on <i>the Shopee live-streaming platform</i> , I often buy things without thinking first.	0.852

Source: data analysis using SmartPLS 4.0 (2024)

Based on the table above, the researcher will discuss the correlation between the items and the variables. Based on the correlation values listed, for the *Attitude Toward Behavior* (AT) variable, the statement with the highest correlation value is AT3 ("Impulse buying on *the Shopee live-streaming platform* is a good idea.") with a value of 0.866, indicating that the majority of respondents hold a strong positive attitude toward impulse buying on Shopee as a good idea. On the other hand, the statement with the lowest correlation value is AT1 ("Impulsive buying on *Shopee's live-streaming platform* is interesting.") with a value of 0.797; while it still indicates a positive attitude, it is not as strong as the other statements.

For *Behavioral Intention* (IB), the statement with the highest correlation value was IB3 ("The opinions of people who are important to me will influence my decision to make an impulse purchase on *the Shopee live-streaming platform*.") with a value of 0.842. This indicates that the opinions and influence of close associates have a significant impact on an individual's intention to make an impulse purchase. The statement with the lowest correlation value in IB is IB2 ("Recommendations from close friends will make me want to try making an impulse purchase.") with a value of 0.765, indicating that the influence of recommendations from close friends has a lower impact than other factors in shaping the intention to make impulse purchases.

For *Intention* (IN), the statement with the highest correlation value was IN3 ("I have the resources, knowledge, and skills to make impulse purchases on *the Shopee live-streaming platform*.") with a value of 0.833. This indicates that most respondents feel they have sufficient resources to make impulse purchases. The statement with the lowest correlation value in IN is IN2 ("My use of *the Shopee live-streaming platform* for impulse purchases is entirely under my control.") with a value of 0.811, indicating that some respondents feel less confident about having full control over their impulse-buying behavior.

For *Perceived Behavioral Control* (PC), the statement with the highest correlation value was PC3 ("I am likely to make impulsive purchases on *the Shopee live-streaming platform* in the near future") with a value of 0.835, indicating that most respondents felt they were likely to make impulsive purchases in the near future. The statement with the lowest correlation value in PC is PC2 ("If given the opportunity, I can predict that I will make an impulsive purchase on *the Shopee live-streaming platform* in the future.") with a value of 0.828, indicating that respondents may find it more difficult to predict their impulsive behavior in the future.

Finally, for *Subjective Norms* (SN), the statement with the highest correlation value was SN3 ("When shopping on *the Shopee live-streaming platform*, I often buy things without thinking first.") with a value of 0.852, indicating that many respondents tend to make purchases without careful consideration when shopping on Shopee. The statement with the lowest correlation value in SN was SN1 ("When shopping on *the Shopee live-streaming platform*, I often think, 'Buy now, think later'") with a value of 0.802, indicating a slightly lower tendency to decide to buy something without prior consideration.

Online consumers' attitudes toward impulse buying have a positive effect on their intention to make impulse purchases on Shopee's live-streaming platform.

The theory underlying this hypothesis is the Theory of Planned Behavior (TPB), which states that an individual's attitude toward a specific behavior (Attitude toward Behavior/ATB) can influence their intention to engage in that behavior. In the context of this study, attitudes toward impulsive purchases via live streaming on Shopee were evaluated through two main components: behavioral belief and outcomes evaluation. The results of the hypothesis testing indicate a significant positive

between consumers' attitudes toward impulsive purchasing and their intention to engage in impulsive purchasing on Shopee's live-streaming platform. The more positive consumers' attitudes toward impulsive purchasing, the higher their intention to engage in such behavior. Attitudes toward behavior play a crucial role in understanding consumers' intentions to make impulsive purchases (Styvén et al., 2017). Consumers who spend more time browsing products in a store tend to have a positive view of impulse buying (Utama et al., 2021).

Online consumers' subjective norms regarding impulse buying have a positive effect on their intention to make impulse purchases on the Shopee live-streaming platform.

Subjective norm (SN) is one of the key components of the Theory of Planned Behavior (TPB), which refers to the social influence of people in an individual's social circle—such as family, friends, or coworkers—that can affect a person's intention to engage in a specific behavior. In this context, the subjective norm reflects an individual's perception of the extent to which others, or their social group, support or do not support the behavior they intend to perform. If a person feels that those around them view a certain behavior as positive or appropriate, then that individual is likely to have the intention to engage in it. The results of the hypothesis testing indicate a positive and significant relationship between subjective norms and both impulsive purchasing and the intention to engage in impulsive purchasing on the Shopee live-streaming platform. Impulsive purchasing can also be influenced by subjective norms or social influence stemming from family, friends, and other close associates (Abbas et al., 2022). When consumers feel supported by others in making impulsive purchases, they are more likely to engage in impulsive shopping behavior (Jain, 2021). To enhance subjective norms (SN), Shopee can employ social marketing strategies that reinforce the idea that impulsive purchases on their platform are viewed positively or supported by others, such as friends or respected influencers.

Online consumers' perception of control over impulsive purchases has a positive effect on their intention to make impulsive purchases on the Shopee live-streaming platform.

Perceived Behavioral Control (PBC) is an individual's belief in their ability to perform or control a specific behavior. The Theory of Planned Behavior (TPB) states that the higher an individual's perceived control over a behavior, the stronger their intention to engage in that behavior. The results of the hypothesis testing show a positive and highly significant effect between perceived control over impulsive purchasing and the intention to engage in impulsive purchasing on the Shopee live-streaming platform. This indicates that factors such as an individual's ability, resources, and self-control play a significant role in shaping the intention to engage in impulsive purchasing within the Shopee live-streaming environment. Perceived behavioral control serves as another factor influencing consumers' intention to make impulsive purchases (Shim & Altmann, 2016). Impulsive purchasing is influenced by how consumers perceive the ease of making impulsive purchases (Li & Kang, 2023).

Online consumers' intention to make impulse purchases has a positive effect on impulse buying behavior on Shopee's live-streaming platform.

This hypothesis posits that the intention to engage in a certain behavior influences the likelihood that the behavior will actually occur. In the context of this study, the intention to make impulsive purchases via live streaming on Shopee is believed to be positively associated with actual impulsive purchasing behavior. The results of the hypothesis test show a positive and highly significant relationship between the intention to make an impulsive purchase and actual impulsive

purchasing behavior on Shopee's live-streaming platform. This indicates that the stronger an individual's intention to make an impulsive purchase, the more likely they are to actually do so in an interactive live-streaming environment such as Shopee.

This impulsive shopping behavior is one of the main drivers of growth in Indonesia's retail industry (Firzatullah, 2023). The findings of a study by Rahmasari and Sugiyanto (2024) reveal that ATB, SN, and PBC have a positive effect on impulsive buying behavior, either directly or indirectly through impulse buying intention.

CONCLUSION

First, the results of the first hypothesis test revealed that consumers' attitudes toward impulse buying are positively associated with their intention to engage in impulse buying on Shopee. This finding is consistent with the Theory of Planned Behavior (TPB), which asserts that a positive evaluation of a behavior tends to increase the likelihood that an individual will engage in it. Second, the subjective norms of an individual's social environment were also found to have a positive influence on the intention to engage in impulse buying. This suggests that an individual's perception of others' approval of impulsive buying behavior can motivate them to engage in such behavior. Third, the results of the third hypothesis test indicate that an individual's perception of control over their behavior also has a positive effect on the intention to make impulsive purchases. This suggests that an individual's belief in their ability to control or manage impulsive buying behavior on Shopee is a key factor in forming the intention to do so. Fourth, the intention to make impulsive purchases significantly influences actual impulsive purchasing behavior on Shopee's live-streaming platform. This finding illustrates that the stronger an individual's intention to make an impulsive purchase, the more likely they are to act on that intention in the context of an interactive and dynamic online shopping environment such as live streaming.

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