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## Factors That Influence Impulse Buying in Live Commerce in Indonesia

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### ***Abstract:***

*This research aims to identify factors that influence impulse buying in live commerce in Indonesia. The method used is causal explanatory research with a non-probability sampling technique using a purposive sampling approach, and data analysis was carried out using Structural Equation Modeling-Partial Least Square (SEM-PLS). The sample consisted of users of the Shopee e-commerce application who had shopped via live streaming, especially Erigo fashion products. The research results show that streamer interactivity and expertise have a positive effect on perceived enjoyment, while product usefulness and product price have an effect on perceived usefulness. Apart from that, promotional information and promotional time limits have an impact on perceived value. Other findings show that perceived enjoyment, perceived usefulness, and perceived value influence the urge to buy impulsively and act as mediating variables that strengthen the relationship between the main variables and impulsive buying. Practically, this research implies that sellers and e-commerce platform developers can optimize interactivity factors, promotional strategies, and product information to increase impulse purchases through live streaming.*

**Keywords:** Live commerce, impulse buying, interactivity, perceived usefulness, perceived value

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### **1. Introduction**

The ongoing development of e-commerce currently requires companies to continue to innovate in marketing forms and models. With the rapid development of network technology and mobile terminals in recent years, the direct commerce mode provides new opportunities for the sustainable and healthy development of e-commerce (Li et al., 2022). Live Commerce is a new type of social interaction platform that provides a way to promote the consumption of sustainable products online, the way it works is by combining a stereo environment, preferential prices, diversified products, fast payment methods, convenient logistics services and other aspects, providing the best impression for consumers, and stimulate consumer purchase intentions, thereby encouraging product sales and gaining large profits (Zhang et al., 2022). Furthermore (Zhang et al., 2022) revealed that live commerce as a business model that is currently

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developing not only brings large profits but also has high acceptance among contemporary consumer groups, furthermore live commerce is able to change consumer behavior which leads to impulse buying.

Impulse buying refers to purchases that are not planned or result from exposure to a stimulus and deciding to buy on the spot (Li et al., 2022). Research conducted by (Sun et al., 2019) found that more than 80% of young customers making impulse purchases online, it is also stated that when compared to web-based e-commerce, live streaming can encourage higher authenticity and interactivity during online shopping, this encourages more customers to buy impulsively. There are two forms of purchases that are generally made by consumers, namely planned purchases and sudden purchases. Intentional purchasing refers to consumers' planned purchasing behavior. Impulse buying behavior tends to be unplanned but is carried out because consumers are stimulated by positive emotions and have an immediate desire to own a particular item (Rook & Fisher, 1995). Impulse buying is also defined as consumer behavior that occurs spontaneously and is temporarily out of control, and has a strong desire to buy (Wells et al., 2011). Impulse buying behavior is very common, this is due to several factors, for example consumers' attention to hedonism and lifestyle that must be fulfilled (Zhang et al., 2022).

Impulsive purchases are currently often made by consumers on various media platforms. The convenience and availability factor of the marketplace encourages people to carry out buying and selling activities online so that there is no need for sellers and buyers to meet face to face, and there is no need to queue to make transactions. Online shopping is now felt to be easier and saves time compared to going directly to the shop or supermarket. Consumers feel safe and rely on it. In Indonesia, online shopping has experienced a drastic increase, marked by the development of business actors operating in the online marketplace industry such as Tokopedia, Shoopee, Lazada, Blibli, and Bukalapak.

Shopee is a top marketplace in Indonesia as one of the most popular online shopping applications on Android and iOS based on the number of visits on the Shopee platform. Shopee e-commerce is an online product buying and selling application ranging from daily necessities to fashion at affordable prices, easy transaction processes, and timely delivery of goods. Shopee also provides facilities for sellers to easily market their products. Apart from that, Shopee provides security for buyers regarding buyer data and transaction process data and provides good and integrated logistics arrangements so that it can build consumer trust. Shopee uses the internet and social media as an interactive two-way interaction platform with its users. Shopee consistently creates content and provides various kinds of information, such as providing information about shopping festivals. Shopee also provides promotions ranging from free shipping, cashback, vouchers, flash sales and other promotions so that various promotions attract many visitors to the Shopee platform (Darmawan and Gatheru, 2021).

The presence of e-commerce platforms in Indonesia is currently a phenomenon in itself regarding impulse purchases made by consumers. Before the presence of e-commerce platforms that provide live streaming services, consumers tended to make purchases directly, or purchase online via websites. Impulse buying occurs more in

the case of hedonic products because they are purely symbolic. Female consumers are more likely to be impulsive for clothing, food and drink products, perfume, bags and shoes as well as gadgets and smartphones. Meanwhile, male consumers tend to be more impulsive in the hobby, automotive, PC, laptop, film, automotive and video game shopping product categories. In general, women's product choices are products with a tendency for self-actualization, while men's product choices are with a tendency for self-satisfaction (Putra, Said and Hasan, 2017). The current tendency for impulsive buying has become a phenomenon in itself for business people and academics to examine further the factors that influence impulsive buying and the relationship between reviewing changes in consumer purchasing behavior.

There are four domains which are aspects of impulse buying. First, purchasing products without proper prior planning. Second, purchasing products based on the price of a product, the goods or product itself and aesthetics. Third, there are purchases without related information, alternative purchases of other products and the value of the product itself. Fourth, purchasing products with encouragement from other parties psychologically and directly through face-to-face (Kang et al., 2021).

Research examining impulse buying via live streaming has previously been conducted in several developed countries. For example, (Primadewi et al., 2022) reviewed e-commerce live streaming in its use to search for new products and study purchasing intentions from people's perspectives. Furthermore (Akram et al., 2018) found that impulse purchases can be directly influenced by the live streaming method using social media, but are not effective if done using a web platform. More (Sun et al., 2019) explains that live streaming e-commerce can foster a more authentic and interactive shopping experience and bridge the distance between customers and the products presented and influence consumer impulse buying.

Other research themes examining impulse buying via live streaming have also been identified with various factors. For example (Liu & Shrum, 2013) which revealed that the main factor influencing live streaming is the charm of the live streamer. And (Bilal et al., 2021) found that three dimensions of social presence (social presence of live streaming platforms, viewers, live streamers) and telepresence have a positive and significant influence on consumer trust and flow conditions, thus triggering consumer impulse buying behavior. Then (Nuryani et al., 2022) revealed that there are sales promotion factors, positive emotions, motivation and price perceptions as factors that influence impulse buying.

However, research that addresses the theme of impulse buying on live streaming in Indonesia is still rarely conducted. Thus, this research is important to carry out. This research adopts the S-O-R (stimulus-organism-response) framework to study consumer behavior in live streaming commerce. Citing previous E-commerce literature, this research introduces situational factors as stimuli that influence customers' cognitive and affective perceptions. This research adopts interactivity and expertise to describe perceived enjoyment, then indicators of product usefulness and product price to perceive its usefulness, and information on promotional incentives and promotional time limits to describe the benefit value.

In this research, indicators as stimuli use six indicators, namely interactivity, expertise, product usability, product price, promotional incentive information, promotional time limit (Lee & Chen, 2021). Then the form of indicator organism used is perceived enjoyment, perceived usefulness and profit value. The overall indicator is considered to be an incentive to buy impulsively for consumers. This research model is the first research conducted in Indonesia. Based on the absence of this research, this research is considered as research that is worthy of being carried out.

## **2. Theoretical Background**

### **S-O-R (Stimulus-Organism-Response)**

SOR (stimulus-organism-response) theory is a cognitive psychology theory that studies human behavior by adding the mediating process of “individual psychological activity” based on the “stimulus-response” theory, emphasizing the mediating role of individual physiological and psychological factors. psychological activity. SOR theory posits that the behavioral decision (i.e., response) in which a consumer decides to approach or avoid not only originates from attention to external environmental factors, i.e., stimulation, but also from sensory cognition of the consumer's internal state, i.e., the organism (Jacoby, 2002).

Previous research on Live streaming commerce implies that real-time interactions between viewers and live broadcasters in live broadcasts provide viewers with a strong sense of presence, meeting viewers' needs, can directly influence the attitudes and behavior of potential consumers (Gao et al., 2018). Therefore, the presence of live streaming commerce is a strong stimulus to influence consumer behavior. In the model, “organism” refers to the intermediary affective and cognitive states of humans that mediate the influence of stimuli on individual responses (Wu & Li, 2018). Affective states refer to an individual's emotional response to an environmental stimulus, while cognitive states are associated with mental processes when facing a stimulus (Kim et al., 2020).

### **Interactivity**

Interactivity is defined as “the extent to which two or more communicating parties can act on each other, on the communication medium, and on the message and the extent to which these influences are synchronized” (Liu & Shrum, 2013). Although interactivity is defined from different perspectives, experts generally agree that interactivity refers to the extent to which interaction occurs in reciprocal communication between two parties (Bonner, 2010). In social interaction studies, interactivity is conceptualized as a stimulus (Kang et al., 2021). Interactivity is also said to stimulate customers' physiological arousal thereby influencing their attitudes and purchasing intentions. In online commerce, interactivity acts as an important atmospheric cue to stimulate consumers' cognitive and emotional states and subsequently influence behavioral responses (Sheng & Joginapelly, 2012)

### **Expertise**

Expertise is basically defined as "the extent to which the endorser is considered to have sufficient knowledge, experience or skills to promote the product" (Alfarraj et al., 2021). Furthermore (Reimann & Markauskaite, 2018), Expertise is the main feature that an influencer must have in order to can be successful, well known and followed, and considered a credible source of information for its fans. An influencer will not be considered to have expertise in a particular field unless his fans believe him to be skilled, proficient, and has sufficient knowledge (Reimann & Markauskaite, 2018). According to (Reimann & Markauskaite, 2018), expertise will not only shape the level of credibility felt by the influencer but can also shape customer behavior and purchasing intentions. Therefore, the expertise that a social media influencer possesses can greatly determine a customer's level of engagement, and therefore, their intent to purchase as well.

### **Product Usefulness**

Product utility is defined as the consumer's perception that a product or service provides benefits that meet their needs. Product usability can increase market size (Moldovan et al., 2011). Consumers will be interested in the usefulness of the product and make purchasing decisions quickly to satisfy their desires (Li et al., 2018). Furthermore (Moldovan et al., 2011) defines product usefulness, namely the ability of a product to provide users with practical benefits for certain purposes in the context particular object, compared to not using an object or using an alternative object. These benefits relate to user time and energy expended, safety (accuracy, reliability, and trustworthiness), and quality of results, products with features that better meet consumers' basic needs, also have better long-term survival rates.

### **Product Price**

According to Samuelson in (Djatkiko & Pradana, 2016) price is a factor that is determined by the interaction between demand and supply in production factors. Price is also an amount of money used as a medium of exchange to obtain a product or service. According to (Amstrong, 2012) pricing decisions depend on a very complex set of environmental and competitive forces. The company does not just set a single price, but sets a pricing structure in the form of a structure that includes different items in each product line. Items that can be used to measure prices are reasonable prices, fixed prices, reliable prices, and relative prices. Product Price in this research is defined as a promotional strategy in which vendors reduce the retail costs of certain items to attract consumers (Lee & Chen, 2021).

### **Promotion Incentive Information**

Promotional incentive information is used by e-commerce companies to publicize promotional activities and introduce product information before and during live commerce, especially to highlight the preference power of price discounts (Wang et al., 2021) E-commerce merchants attract users by influencing consumers' sensitivity to prices thereby increasing consumer participation and purchasing power. Especially in the marketing mode on e-commerce platforms, to encourage consumers to immediately purchase certain goods, promotional incentives are often stronger than daily purchasing activities, which directly affects price-sensitive consumers' perception of trust, value and purchase intention (Zhang et al., 2022).

Promotional incentive information can make consumers feel the attraction of promotions to save money, as well as interest in participating in the ongoing live streaming promotional process, thereby encouraging public participation and enthusiasm for consumption. Through this short-term stimulation tool, the broadcast space will create an increase in purchases from consumers, as well as strengthen the perception of consumer trust with a system of obtaining discounts or promos provided by dance sellers as well as being able to reduce perceived risks and eliminate doubts before buying, and make impulsive purchasing decisions from consumers (Lee, 2018).

### **Promotion Time Limit**

According to (Wu & Li, 2018) limited time promotion is a form of promotion or offer that provides a certain number of periods until the product is no longer available to be offered again. What sellers need to do is communicate to consumers to immediately buy the products they offer before the set time limit. This time determination is the authority and right of the seller to sell his products by determining the time limit and quantity of products to be sold. Time limit marketing is a strategy for marketing products by providing limited time to create a sense of urgency for buyers so that they can speed up the process of making purchasing decisions. Several strategies that are often used to implement the Time Limit Marketing strategy include live streaming, flash sales (Aggarwal & Vaidyanathan, 2003).

### **Perceived enjoyment**

Perceived enjoyment can be defined as the level of satisfaction that consumers feel while making online purchases on a particular website, in terms of its ability to provide happiness, without prejudice to the performance they will experience. The more enjoyable the online shopping process is on a particular website, the more likely consumers will purchase on that website (Childers et al., 2001). Perceived enjoyment in this research is the extent to which someone feels good, happy, or satisfied with the situation they feel when participating in live streaming commerce.

Live streaming commerce refers to a marketing behavior in which live streamers use computers, mobile phones and other network terminals to promote products by live streaming, and then provide shopping links to facilitate transactions in a short time. Live streaming commerce not only allows consumers to experience the benefits of shopping but also helps in developing virtual social relationships with live streamers during real-time interactions (Lee & Chen, 2021).

### **Perceived Usefulness**

Perceived usefulness was originally defined by (Davis, 1989) as "the extent to which a person believes that using a particular system will improve his or her job performance," perceived usefulness (PU) is considered a major part of TAM. In the context of social media, Perceived usefulness is defined by (Kusyanti et al., 2018) as "the extent to which social media users believe that the use of certain social media sites helps them achieve their goals. In this research, perceived usefulness is defined as the consumer's assessment when using the live streaming commerce feature in participating in online commerce.

**Perceived value**

Perceived value was first introduced by Monroe and Krishnan who proposed that whether consumers make a purchase or not will depend on the correlation between the benefits they obtain from the product they want to buy and the costs they pay for it. The more the perceived benefits exceed the perceived costs, the higher the consumer's perceived value. Research focusing on perceived value has mostly been conducted from the two different perspectives of rationality and sensibility (Sánchez-Fernández & Iniesta-Bonillo, 2007).

**Urge to buy impulsively**

According to (Gusti et al., 2018) states that impulsive buying is spontaneity in purchasing decisions where consumers do not consider the function and use of the product purchased or the benefits contained in the product. Thus, it can be concluded that impulse buying is a purchase that is made suddenly and immediately without any prior intention, where the buyer is in a certain environment and situation that encourages spontaneous buying, without consideration and value considerations. contained in the product. Factors that influence impulse buying (Afif and Purwanto, 2020) consist of factors that encourage consumers to make purchases related to emotional feelings, promotional activities with discounts or other means that create a desire to buy a product, lifestyle factors that reflect. in their habit of consuming time and money to buy something even though the item may not be useful.

**3. Methodology**

This research uses a Casual Explanatory research design. Casual is a variable that influences other variables (Cooper & Schindler, 2014). Explanatory research is research that aims to explain the relationship between variables and research phenomena. Thus, casual explanatory is explaining the relationship between variables and testing hypotheses that have been previously formulated and aims to explain various events and research phenomena (Cooper & Schindler, 2014).

**Population and Sample**

The population in this study is all Indonesian people who use e-commerce applications, so the population size in this study is not known with certainty. Because the population size is not known with certainty, in determining the sample the researcher used a non-probability sampling technique using a subjective purposive sampling approach. Purposive sampling was carried out because it is likely that the researcher understands that the required information can be obtained from a certain target group who are able to provide the desired information because they do have that information and meet the criteria set by the researcher.

Based on the sampling technique used, the criteria set in determining the sample are:

1. All users of the Shopee e-commerce platform
2. Users who have shopped online via live streaming shopping on the Shopee application
3. Users who shop for Erigo fashion products via live streaming shopping on the Shopee application

4. Users who are exposed to promotional advertisements for Erigo fashion products from live streaming on Shopee

### Data Analysis Methods

This research uses the Partial Least Square (PLS) method in data analysis, with the Structural Equation Modeling-Partial Least Square (SEM-PLS) approach, which is one type of SEM. SEM combines regression analysis, factor analysis, and path analysis, which maps causal relationships in path diagrams. SEM analysis includes three steps: testing the validity and reliability of the instrument (confirmatory factor analysis), testing the relationship between variables (path analysis), and designing a predictive model.

1. Descriptive Analysis

Descriptive analysis aims to describe the characteristics of research objects based on sample or population data without making general conclusions. Techniques that are often used are average calculations and index analysis to map respondents' responses to variable indicators.

2. Inferential Analysis

Inferential analysis is used to test hypotheses, divided into parametric and non-parametric inferential statistics. Regression (including moderation and two-stage regression) uses SPSS, while causality analysis is carried out using SEM or Path Analysis.

3. Evaluation of the Measurement Model (Outer Model)

- a) Convergent Validity: Using outer loading ( $>0.7$ ) and AVE ( $\geq 0.5$ ).
- b) Discriminant Validity: Using cross loadings values ( $>0.7$ ) and Fornell-Larcker Criterion, by comparing the square root of AVE and correlation between constructs.
- c) Reliability: Tested through composite reliability and Cronbach's alpha (both  $>0.7$ ).

4. Evaluation of the Structural Model (Inner Model)

- a) Adjusted  $R^2$ : Assesses how much the endogenous variable is explained by the exogenous variable. A value of 0.75 indicates a strong model, 0.50 moderate, and 0.25 weak.
- b) Cross-validated Redundancy ( $Q^2$ ):  $Q^2$  value  $> 0$  indicates good predictive relevance.

5. Hypothesis Testing (Bootstrapping)

Hypothesis testing uses t-statistical values from bootstrapping with SmartPLS 3.0, comparing the results with the t-table (t value = 1.96 at  $\alpha = 0.05$ ). Path coefficients range from -1 to +1 to measure the strength and direction of the relationship between constructs. Indirect and total effects were also taken into account to analyze mediation effects.



#### 4. Empirical Findings/Result

##### Validity Test

##### Convergent Validity

**Table 1. Convergent Validity Test Results**

Variabel	Item	Outer Loading	AVE
Expertice	E1	0.745	0.606
	E2	0.773	
	E3	0.777	
	E4	0.816	
Interactivity	I1	0.761	0.548
	I2	0.714	
	I3	0.727	
	I4	0.712	
	I5	0.749	
	I6	0.728	
	I7	0.788	
Perceived Enjoyment	PE1	0.745	0.562
	PE2	0.738	
	PE3	0.729	
	PE4	0.749	
	PE5	0.787	
Perceived Usefulness	PEU1	0.791	0.631
	PEU2	0.818	
	PEU3	0.792	
	PEU4	0.802	
	PEU5	0.768	
Promotion Incentive Information	PII1	0.756	0.581
	PII2	0.718	
	PII3	0.761	
	PII4	0.806	
	PII5	0.768	
Product Price	PP1	0.818	0.650
	PP2	0.802	
	PP3	0.798	
Product Usefulness	PRU1	0.840	0.670
	PRU2	0.798	
	PRU3	0.816	
Promotion Time Limit	PTL1	0.787	0.588
	PTL2	0.738	
	PTL3	0.761	

	PTL4	0.779	
	PV1	0.829	0.643
Perceived Value	PV2	0.805	
	PV3	0.772	
	UBI1	0.714	0.532
Urge To Buy Impulsively	UBI2	0.743	
	UBI3	0.763	
	UBI4	0.707	
	UBI5	0.718	

Source: primary data processed in 2024

Table 1 shows that the overall outer loading value in this study is greater than 0.7, which means this research instrument is valid. Apart from that, instrument validation can also be seen from the AVE value for each variable which is greater than 0.7 so it can be said that each variable passes convergent validity.

### Discriminant Validity

The discriminant validity test was carried out using cross loadings values and the Fornell-Larcker Criterion. The expected cross loadings value is greater than 0.7. By ensuring that the correlation of the construct with the measurement items is greater than other constructs. The following is the output of the cross loadings values:

**Table 2. Discriminant Validity Test Results**

	Interactivity	Urge to Buy Impulsively	Expertise	Perceived enjoyment	Perceived usefulness	Perceived value	product price	product usefulness	Promotion incentive information	Promotion time limit
Interactivity	0.740									
Urge to Buy Impulsively	0.421	0.729								
expertise	0.370	0.338	0.778							
perceived enjoyment	0.463	0.563	0.431	0.750						
perceived usefulness	0.369	0.463	0.349	0.513	0.794					
perceived value	0.385	0.543	0.363	0.531	0.407	0.802				
product price	0.394	0.457	0.399	0.502	0.466	0.457	0.806			
product usefulness	0.421	0.343	0.372	0.431	0.367	0.343	0.391	0.818		
promotion incentive information	0.378	0.422	0.382	0.514	0.466	0.403	0.532	0.383	0.762	
promotion time limit	0.417	0.545	0.327	0.470	0.433	0.484	0.367	0.334	0.412	0.767

Source: primary data processed in 2024

Table 2 shows that the square root of AVE is 0.740; 0.729; 0.778; 0.750; 0.794; 0.802; 0.806; 0.818; 0.762, all greater than the correlation value of each construct. The results of the instrument reliability test can be seen from the CR values which all show numbers more than 0.7 in table 16.

**Cross Loading****Tabel 3. Hasil Uji Cross Loading**

	Intera ctivity	Urge to Buy Impul sively	Exper tice	Percei ved enjoy ment	Percei ved useful ness	Percei ved value	product price	product use fulness	Promo tion incentive informa tion	Promo tion time limit
E1	0.192	0.223	0.745	0.275	0.270	0.225	0.258	0.220	0.268	0.181
E2	0.311	0.274	0.773	0.350	0.255	0.306	0.326	0.259	0.285	0.273
E3	0.279	0.241	0.777	0.347	0.298	0.270	0.306	0.330	0.281	0.213
E4	0.349	0.305	0.816	0.359	0.267	0.319	0.342	0.336	0.351	0.336
I1	0.761	0.353	0.308	0.400	0.329	0.299	0.342	0.367	0.294	0.338
I2	0.714	0.289	0.289	0.313	0.261	0.239	0.279	0.331	0.299	0.294
I3	0.727	0.300	0.237	0.335	0.240	0.304	0.276	0.267	0.241	0.251
I4	0.712	0.288	0.294	0.326	0.254	0.318	0.304	0.335	0.274	0.278
I5	0.749	0.332	0.263	0.334	0.266	0.275	0.253	0.292	0.263	0.320
I6	0.728	0.277	0.216	0.313	0.248	0.269	0.236	0.261	0.245	0.326
I7	0.788	0.332	0.299	0.366	0.299	0.286	0.338	0.320	0.337	0.347
PE1	0.312	0.391	0.327	0.745	0.376	0.414	0.373	0.361	0.378	0.328
PE2	0.385	0.384	0.311	0.738	0.345	0.397	0.345	0.309	0.388	0.351
PE3	0.322	0.426	0.263	0.729	0.378	0.367	0.375	0.314	0.360	0.299
PE4	0.320	0.439	0.295	0.749	0.364	0.383	0.334	0.271	0.374	0.391
PE5	0.392	0.465	0.406	0.787	0.452	0.430	0.446	0.359	0.425	0.387
PEU1	0.245	0.348	0.293	0.405	0.791	0.333	0.346	0.240	0.411	0.322
PEU2	0.335	0.399	0.326	0.467	0.818	0.391	0.411	0.349	0.420	0.359
PEU3	0.253	0.339	0.243	0.377	0.792	0.289	0.333	0.264	0.339	0.321
PEU4	0.285	0.359	0.252	0.385	0.802	0.288	0.370	0.311	0.340	0.327
PEU5	0.334	0.387	0.267	0.395	0.768	0.307	0.381	0.281	0.337	0.386
PII1	0.315	0.312	0.286	0.396	0.384	0.311	0.392	0.276	0.756	0.338
PII2	0.264	0.309	0.270	0.319	0.380	0.248	0.365	0.246	0.718	0.272
PII3	0.269	0.326	0.317	0.410	0.330	0.326	0.391	0.284	0.761	0.351
PII4	0.300	0.382	0.293	0.448	0.369	0.311	0.455	0.334	0.806	0.336
PII5	0.291	0.282	0.289	0.376	0.325	0.327	0.419	0.311	0.768	0.269
PP1	0.321	0.360	0.319	0.388	0.366	0.349	0.818	0.319	0.429	0.282
PP2	0.319	0.367	0.363	0.437	0.401	0.368	0.802	0.310	0.443	0.298
PP3	0.313	0.379	0.277	0.387	0.357	0.389	0.798	0.317	0.411	0.309
PRU1	0.359	0.292	0.352	0.351	0.310	0.286	0.334	0.840	0.326	0.284
PRU2	0.326	0.260	0.271	0.300	0.255	0.269	0.294	0.798	0.308	0.197
PRU3	0.347	0.288	0.287	0.397	0.328	0.285	0.328	0.816	0.307	0.324
PTL1	0.329	0.433	0.267	0.363	0.317	0.372	0.269	0.288	0.299	0.787
PTL2	0.315	0.359	0.220	0.309	0.285	0.338	0.293	0.230	0.312	0.738
PTL3	0.334	0.367	0.232	0.357	0.314	0.356	0.259	0.244	0.273	0.761

PTL4	0.303	0.498	0.278	0.403	0.401	0.411	0.305	0.261	0.373	0.779
PV1	0.314	0.450	0.334	0.435	0.349	0.829	0.372	0.269	0.323	0.393
PV2	0.304	0.432	0.302	0.453	0.305	0.805	0.383	0.280	0.361	0.394
PV3	0.308	0.425	0.234	0.388	0.325	0.772	0.343	0.276	0.283	0.376
UBI1	0.257	0.714	0.256	0.401	0.299	0.431	0.340	0.275	0.284	0.384
UBI2	0.374	0.743	0.269	0.467	0.353	0.448	0.367	0.262	0.317	0.437
UBI3	0.344	0.763	0.282	0.428	0.365	0.396	0.368	0.268	0.306	0.427
UBI4	0.283	0.707	0.211	0.392	0.351	0.348	0.293	0.273	0.281	0.346
UBI5	0.263	0.718	0.204	0.351	0.318	0.345	0.288	0.164	0.356	0.387

Source: primary data processed in 2024

The table above shows that the loading value of each item on the construct is greater than the cross loading value, namely above 0.7.

### Reliability Test

To ensure that there are no problems related to measurement, the next step in evaluating the outer model is to test reliability by looking at composite reliability and Cronbach's alpha. The results of composite reliability and Cronbach's alpha will show a good value if it is above 0.70. The following is the output value of composite reliability and Cronbach's alpha.

**Table 4. Reliability Test Results**

	Cronbach's Alpha	Composite Reliability	Keterangan
Interactivity	0.863	0.894	Reliabel
Urge to Buy Impulsively	0.780	0.850	Reliabel
expertice	0.784	0.860	Reliabel
perceived enjoyment	0.805	0.865	Reliabel
perceived usefulness	0.854	0.895	Reliabel
perceived value	0.722	0.844	Reliabel
product price	0.731	0.848	Reliabel
product usefulness	0.755	0.859	Reliabel
promotion incentive	0.820	0.874	Reliabel
information			
promotion time limit	0.766	0.851	Reliabel

Source: primary data processed in 2024

Table 4 shows that the composite reliability and Cronbach's alpha values for all constructs are above 0.70, which indicates that all variables are declared reliable.

### Coefficient of Determination Test

#### R Square

The R Square value is expected to be between 0 and 1. R Square is the R Square value that has been corrected based on the standard error value, which provides a stronger picture than R Square in assessing the ability of an exogenous construct to explain endogenous constructs.

**Table 5. R Square Test Results**

	R Square	R Square Adjusted
Urge to Buy Impulsively	0.423	0.420
perceived enjoyment	0.293	0.290
perceived usefulness	0.257	0.254
perceived value	0.284	0.281

Source: primary data processed in 2024

Based on the results of the analysis above, it can be concluded that the bank performance variable obtained by the Adjusted R Square value is 0.420; 0.290; 0.254; 0.281 This result explains that the percentage of employee performance that can be explained by justice and benevolence is 42.0%; 29.0%; 25.4%; 28.1% while 58.0%; 71.0%; 74.6%; 71.9% was influenced by other factors not included in this research. Thus, the Adjusted R Square value above is in the weak category.

### Q Square

Q Square value  $> 0$  indicates the model has predictive relevance. Conversely, if the Q Square value  $< 0$  indicates the model lacks predictive relevance. The Q Square values (0.02), (0.15), and (0.35) can be concluded that the predictive relevance values are (weak), (medium), and (strong).

**Table 6. Q Square Test Results**

	(1-R Square)	Q Square
Urge to Buy Impulsively	0.577	0.783
perceived enjoyment	0.707	
perceived usefulness	0.743	
perceived value	0.716	

Source: primary data processed in 2024

Based on the results of the data analysis above, it can be concluded that the Q2 value for bank performance is 0.783. Because  $Q2 = 0.783 > 0$ , it can be concluded that justice, benevolence and sincerity have predictive relevance for bank performance.  $Q2 \text{ value} = 0.783 \geq 0.35$ , so it can be concluded that the relevance of predictions is very strong.

### Hypothesis Testing

This research hypothesis testing was carried out by looking at the Bootstrapping calculation results. In this study, a confidence level of 95% was used so that the limit of inaccuracy ( $\alpha$ ) = 5% = 0.05, the t-table value was 1.96. If the t-statistic value is smaller than the t-table value (t-statistic  $< 1.96$ ), then H01 is accepted and H1 is rejected. If the t-statistic value is greater than or equal to the t-table (t-statistic  $> 1.96$ ), then H01 is rejected and H1 is accepted. The following are the results of Bootstrapping calculations in this research:

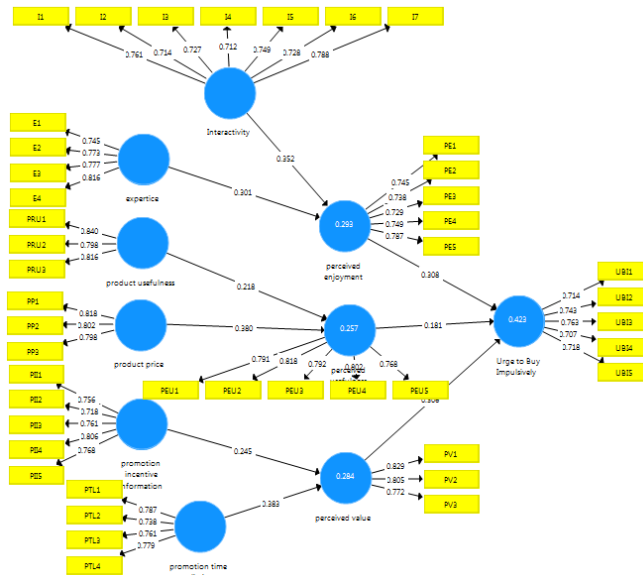


Figure 1 Hypothesis Test Results

The results of the bootstrapping analysis using SmartPLS are as follows:

Table 7. Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
I -> PE	0.352	0.353	0.048	7.398	0.000
E -> PE	0.301	0.304	0.050	5.958	0.000
PE -> UBI	0.308	0.310	0.060	5.163	0.000
PERU -> UBI	0.181	0.182	0.048	3.781	0.000
PP -> UBI	0.306	0.304	0.056	5.417	0.000
PP -> PERU	0.380	0.376	0.049	7.793	0.000
PROU -> PERU	0.218	0.220	0.048	4.555	0.000
PII -> PV	0.245	0.247	0.050	4.892	0.000
PTL -> PV	0.383	0.384	0.046	8.328	0.000

Source: primary data processed in 2024

Table 8. Hypothesis Test Results for Indirect Relationships

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Interactivity -> perceived enjoyment -> Urge to Buy Impulsively	0.108	0.110	0.028	3.808	0.000
expertise -> perceived enjoyment -> Urge to Buy Impulsively	0.093	0.094	0.023	3.943	0.000
product price -> perceived usefulness -> Urge to Buy Impulsively	0.069	0.069	0.021	3.242	0.001

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product usefulness -> perceived usefulness -> Urge to Buy Impulsively	0.039	0.041	0.015	2.563	0.011
promotion incentive information -> perceived value -> Urge to Buy Impulsively	0.075	0.075	0.020	3.785	0.000
promotion time limit -> perceived value -> Urge to Buy Impulsively	0.117	0.117	0.028	4.112	0.000

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## 5. Discussion

### Interactivity influences perceived enjoyment

The test results for the interactivity and perceived enjoyment variables among consumers using Shopee live streaming show that there is proven to be a positive and significant relationship between these two variables, which indicates that Hypothesis 1 is supported, meaning, the better the interaction created by the streamer when making sales on live streaming on Shopee, the better. The higher the level of satisfaction felt by consumers when making purchases online.

The results of this research are supported by research by Childers et al., (2001) which states that the more enjoyable the online shopping process is on a particular website, the greater the likelihood that consumers will buy on that website. Then this research also supports research conducted by (Lee and Chen, 2021). Furthermore, this research also supports research conducted by Harahap and Wahyuni, (2023). This research also supports research conducted by Abdullah et al. (2016) that perceived interactivity influences customer perceived value.

### Expertise influences perceived enjoyment

The test results for the variables expertise and perceived enjoyment among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 2 is supported. This means that the higher the streamer's ability to promote products and the streamer's ability to influence consumers, the higher the online shopping satisfaction felt by consumers and triggering impulse purchases.

This research supports research conducted by Lee and Chen, (2016) which found that expertise had a positive and significant effect on perceived enjoyment. Then this research also supports research conducted by Lee & Chen, (2021). In this case, streamers who have the ability to invite other people to follow their social media accounts and are then able to attract sympathetic followers, will find it easier to make sales online. Apart from that, it is also able to trigger impulse purchases for consumers when they see streamers as their idols making sales online.

### Product Usefulness influences perceived usefulness

The test results of the product usefulness and perceived usefulness variables for consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 3 is supported. This means that the higher the value of the product being sold, the higher the level of product satisfaction felt by consumers. Apart from that, the suitability of the product for the price given is also a special consideration for consumers when making a purchase. The more complete the level of quality of product information conveyed in online sales, the higher the level of satisfaction felt by consumers.

This research supports research conducted by Research conducted by Lee and Chan, (2021) also found that product usefulness has a positive effect on perceived usefulness. Then Park and Lin (2017) found that product suitability had a positive effect on purchase intention. Then Rahmiati and Yuannita, (2019) also found that product suitability can trigger purchases for consumers.

#### **Product price has a positive effect on perceived usefulness**

The test results for the product price and perceived usefulness variables among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 4 is supported. This means that the more attractive the price of the product offered to consumers in online live streaming sales, the higher the level of trust in using or purchasing the product offered by the streamer. Price is one of the big triggers in influencing someone to make a purchase. The price offer given triggers someone's interest in making a purchase.

This research is in line with research conducted by Suleman & Zuniarti, (2019) which found that product prices are able to trigger online purchases for consumers and prices also influence consumer perceptions of online shopping satisfaction. Furthermore, this research also supports research conducted by Lee et al., (2021) which states that product price is the main predictor in influencing sudden purchasing behavior and is able to increase consumer satisfaction in online shopping. Lastly, this research is also in line with research conducted by Chen, & Zhao, (2020) which found that product price increases the level of online shopping satisfaction for consumers and is then able to increase impulse purchases.

#### **Promotion incentive information influences perceived value**

The test results for the Promotion incentive information and perceived value variables for consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 5 is supported. This means that published information on discounts or incentives is able to attract impulse purchases for consumers and increase perceived value. The more often the seller provides information about price discounts, the higher the value perceived by consumers. Consumers assume that incentive information from prices will be able to reduce the money spent from the normal price of a product. Thus, this marketing practice is aimed at encouraging consumers to immediately buy certain goods because this method is often more attractive and can influence the perception of trust, value and purchase intentions of price-sensitive consumers.



This research is in line with research conducted by Prasilowati et al., (2021) who believe that price promotions have a significant influence on customer satisfaction. Chen (2021) shows that price promotions and gift promotions in promotional incentives can effectively increase consumers' perceived savings and reduce perceived risks, thereby increasing consumers' purchase intentions. Apart from that, Zhang et al., (2022) found that promotion incentive information had an effect on perceived value.

### **Promotion time limits affect perceived value**

The test results for the Promotion time limit and perceived value variables for consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 6 is supported. This means that promotional prices for a certain time can trigger customer satisfaction in online shopping and can increase consumer confidence in the product. The more often sellers use time limit promotions during live streaming, the higher the value perceived by consumers in making purchases.

This research is in line with research conducted by (Regina et al., 2021; Peng and Liang 2013) who found that sales promotion limits or sales promotion have a positive and significant effect on perceived value. According to Shon and Kim, (2022) sale promotions are carried out for a limited time to stimulate market demand on a large scale. Based on its characteristics, sales promotions are classified into two; namely monetary promotions related to the price value of a product, for example price reductions (for example discounts, vouchers & coupons), and non-monetary promotions not related to the price value of a product, for example giveaways or free product testimonials.

### **Perceived enjoyment influences the urge to buy impulsively**

The test results for the variables Perceived enjoyment and urge to buy impulsively among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 7 is supported. This means that the higher the level of shopping satisfaction felt by consumers during a livestreaming, the higher the level of impulse purchases made by consumers. In this case, consumers who feel the satisfaction of shopping online will trigger their intention to make a sudden purchase, thus the streamer can display products with the best offers to trigger impulse purchases from consumers.

This research is in line with research conducted by (Adelaar, et al., 2003; Xiang et al., 2016) which found a positive relationship between individual emotional responses and impulsive buying behavior. Therefore, in the context of social commerce platforms, users who feel that using social commerce platforms is enjoyable are more likely to buy goods impulsively.

**Perceived enjoyment mediates the relationship between interactivity and expertise on the urge to buy impulsively**

The test results for the Perceived Enjoyment variable mediating the relationship between interactivity and expertise on the urge to buy impulsively among consumers using Shopee live streaming show that there is proven to be a positive and significant relationship between these two variables, which indicates that Hypothesis 8 is supported. Perceived enjoyment is defined as the level of satisfaction that consumers feel when making online purchases on a particular website, in terms of its ability to provide happiness, without prejudice to the perceived performance. The more enjoyable the online shopping process is on a particular website, the more likely consumers will purchase on that website.

This research found that interactions supported by a feeling of enjoyment when watching live streaming will influence consumers' attitudes towards making impulse purchases. The role of perceived enjoyment is able to strengthen the relationship between interactivity and impulse buying for consumers. The results of this research are the first research and no previous literature has been found that uses perceived enjoyment as a mediating variable between the interactivity variable and the urge to buy impulsively.

**Perceived usefulness influences the urge to buy impulsively**

The test results for the variables Perceived usefulness and urgency to buy impulsively among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 9 is supported. This means that the higher the usefulness offered by a product when carrying out online sales promotions, especially during live streaming, the higher the impulse purchases made by consumers. Cognitive reactions, such as usefulness, are important factors in the impulse buying process (Lee, 2018). This research is in line with research conducted by Sari et al., (2021) which found that the perceived usefulness factor had a positive and significant effect on impulsive buying.

**Perceived usefulness mediates the relationship between product usefulness and product price on the urge to buy impulsively**

The test results for the variables Perceived usefulness, product usefulness and product price on the urge to buy impulsively among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 12 is supported. This means that the higher the perceived usefulness of the product by consumers and supported by the ease of use of purchasing products online, the higher the level of impulse purchases made by consumers. Consumers who feel the value of a product offered online via live streaming will change their behavior in making purchasing decisions. In this way, the streamer is able to notice that the value of the product and the price of the product offered are the closest predictors in influencing consumer attitudes in making online and impulsive purchases.

Cognitive reactions, such as usefulness, are important factors in the impulse buying process (Lee, 2018). However, although perceived usefulness and perceived ease of

use have been proposed as factors in previous impulse buying models, research that addresses the relationship between the two is still rare. However, research conducted by (Kusyanti et al., 2018) found that the perceived usefulness factor had a positive and significant effect on impulsive buying.

### **Perceived value influences the urge to buy impulsively**

The test results for the variables Perceived value and urge to buy impulsively among consumers using Shopee live streaming show that there is a positive and significant relationship between these two variables, which indicates that Hypothesis 11 is supported. This means that the higher the value perceived by consumers of a product offered during online sales, the higher the impulse purchases made by consumers. Consumer value is an important concept in marketing literature that refers to what consumers want and believe when shopping or enjoying services. When reading online reviews, consumers will get more utilitarian value and hedonic value than other values. This research is in line with research conducted by Ningsih and Andjarwati (2021) who found that the perceived value factor influences impulsive buying tendencies.

### **Perceived value is able to mediate the relationship between promotion time limit and promotion incentive information on the urge to buy impulsively**

The test results for the Perceived value variable in mediating the relationship between promotion time limit and promotion incentive information on the urge to buy impulsively among consumers using Shopee live streaming show that there is proven to be a positive and significant relationship between these two variables, which indicates that Hypothesis 12 is supported. This means that the higher the level of time limit promotions carried out by sellers and supported by the value satisfaction felt by consumers, the more it will trigger and suppress impulse purchases for consumers. Promotions carried out online are one of the important factors in increasing the perceived value of consumers (Park and Lennon, 2009). Jeffrey and Hodge (2007) show that under external stimuli, consumers exhibit perceived impulsive buying behavior, often accompanied by emotional and cognitive responses. Businesses use online promotions to attract consumers. If consumer satisfaction is met, impulsive buying behavior can occur.

## **6. Conclusions**

The results of the analysis show that interactivity and expertise have an effect on perceived enjoyment, while product usefulness and product price have a positive effect on perceived usefulness. Promotion incentive information and promotion time limit have an influence on perceived value. Apart from that, perceived enjoyment influences the urge to buy impulsively and mediates the relationship between interactivity and expertise on the urge to buy impulsively. Perceived usefulness also influences the urge to buy impulsively and mediates the relationship between product usefulness and product price on the urge to buy impulsively. Likewise, perceived value has an influence on the urge to buy impulsively and is able to mediate the

relationship between promotion time limit and promotion incentive information on the urge to buy impulsively.

This research theoretically shows that impulse purchases on e-commerce live streaming are influenced by the factors interactivity, expertise, product price, promotion time limit, promotion incentive information, perceived usefulness, perceived enjoyment, and perceived value. The roles of perceived usefulness, perceived enjoyment, and perceived value have also been proven to be able to mediate the relationship between these variables and the urge to buy impulsively, so these results can be a reference for future researchers to explore other factors that might influence impulsive buying. The practical implication is that developers, companies, managers, or parties who sell online via live streaming on e-commerce or social media can consider these factors to increase sales in a sustainable manner. Streamers need to have good interaction skills to encourage impulse purchases, while companies can utilize marketing strategies such as promotion time limits and providing promotional information to attract consumer attention and encourage impulse purchases.

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