

# ONLINE IMPULSE BUYING; FACTORS EFFECT OF IMPULSIVE SYSTEM STIMULI AND ORGANISM

Adi Santoso<sup>1a\*</sup>; Siska Maryunitasari<sup>1b</sup>; Naning Kristiyana<sup>1c</sup>

<sup>1</sup>Universitas Muhammadiyah Ponorogo, Ponorogo, Jawa Timur Indonesia

[adisantoso@umpo.ac.id](mailto:adisantoso@umpo.ac.id)<sup>a</sup>; [siskamaryunitaa@gmail.com](mailto:siskamaryunitaa@gmail.com)<sup>b</sup>; [nrafakristi@gmail.com](mailto:nrafakristi@gmail.com)<sup>c</sup>

Correspondences Author: [adisantoso@umpo.ac.id](mailto:adisantoso@umpo.ac.id)

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## ABSTRACT

This study aims to explore the factors that influence impulse buying behavior on social commerce platforms caused by review quality, source credibility, and observational learning which are mediated by positive effects. The population of this study is consumers on social commerce platforms. A total sample of 318 respondents. This research method is path analysis with analysis tools using the statistical software AMOS 24. This research found that review quality and source credibility had no effect on the positive effect, but observational learning had a significant effect on the positive effect. The results of this research also found that review quality, source credibility, and positive effect affected impulse buying behavior, but observational learning had no significant effect on impulse buying behavior. Furthermore, the positive effect can mediate the relationship between observational learning and impulse buying behavior, but cannot mediate between review quality, and source credibility on impulse buying behavior. Marketers to increase impulsive buying behavior must create a positive effect on consumers and must also pay attention to review quality, source credibility, and observational learning because these three things can increase impulsive buying behavior. So that should be the full attention of the company. The results of this study have a novelty that can be used to extend theoretical research. Research with this new research model also reveals the understanding that social interaction can motivate impulsive buying behavior. Meanwhile, this research also discusses the effects of mediating variables.

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## Introduction

Technology that continues to develop from year to year makes the internet integrated into various fields of economics, health, society, culture, religion and so on which encourages people to be able to adapt to activities that are integrated with the internet, this has an impact on increasing the number of internet users. the only one in Indonesia (Rhani, 2020). This is supported by the results of a 2021-2022 internet penetration and usage behavior survey conducted by the Association of Indonesian Internet Service Providers (APJII). .69 million (Cut Salma, 2022). The development of the internet also has an impact on changes in individual behavior, where the internet encourages individuals to interact unlimitedly by distance and space so that broader social relations are built (Shao, 2009). From Shao's statement, it can be concluded that internet technology brings benefits to human life and social behavior. One of the benefits of internet technology for social life is its implementation in the business industry, the majority of industrial sectors use the internet to support the businesses they run (Parboteeah et al., 2016). (O'cass & Fenech, 2003) said that the internet has offered many conveniences for its users. (Igbaria et al., 1994) states that there is pleasure and ease that is felt by every activity with the presence of technology, so this factor is a strong reason for changing behavior in using technology in supporting its activities.

Internet technology and cell phones that are connected to social commerce media can provide convenience for consumers, as well as for producers (Lin & Lin, 2013). Social commerce based on social networking platforms is part of e-commerce (Kutabish & Soares, 2020). Websites in social commerce platforms as a facility for exchanging information between users (K. Z. K. Zhang, Hu, et al., 2014a). Social commerce is defined as the use of internet-based media that users use to participate in selling, buying, and comparing information sharing of market products and services in online communities (Zhou et al., 2013). The platform that implemented social commerce for the first time was Facebook (Bansal & Chen, 2011). Then, followed by other platforms such as Instagram, Pinterest, Twitter, Snapchat, WhatsApp, and Tiktok (Firmansyah N, 2014; Riyanto, 2022). One of the functions of using a social commerce platform is to sell or buy products or services, share information, exchange opinions, and receive reliable advice (Ickler et al., 2009). Most MSMEs prefer to use social commerce to run their business rather than other platforms (Calin, 2019). Social commerce has significant differences compared to other platforms because social commerce has much broader social factors (especially in interactions between users) (Farivar & Yuan, 2017). So in particular, social commerce users have the nature of mutual influence and tend to create impulsive buying behavior (Shi & Chow, 2015).

Impulse buying behavior is buying behavior suddenly and quickly without any pre-shopping intention in purchasing a product (Beatty & Ferrell, 1998; Y. F. Chen & Wang, 2016). The driving force for the emergence of impulsive buying behavior is the innate nature of each individual's personality (Beatty & Ferrell, 1998), and according to (Youn & Faber, 2000) stimulation from promotions carried out by sellers to attract consumers to make impulsive purchases. (Afiyan, 2013) states that marketing strategies such as price discounts, word of mouth, and clear delivery of product information can increase impulse purchases. The results of the study found that one of the reasons for impulse buying behavior by consumers was the ease of access (accessibility) online to obtain these products (T. Chen, 2011) and (I.-L. Wu et al., 2020) also found that Impulse purchases tend to be caused by online shopping rather than traditional shopping. The tendency for impulse buying behavior to increase in online transactions is due to the effect of the illusion experienced by consumers that online transactions will not spend the money they have (E. J. Park et al., 2012). Previous researchers have researched various factors of impulsive buying behavior, namely positive consumer factors (Lin & Lin, 2013), internal factors, and external factors (Dawson & Kim, 2004). In the latest research according to empirical evidence, some researchers conduct research on social commerce (J. V. Chen et al., 2016). Thus, in the context of online purchases, social factors play an important role in impulse buying (J. V. Chen et al., 2016; Xiang et al., 2016).

Many consumers when making purchases on online shopping sites begin to pay attention not only to ease of access but to the quality of information from product reviews (Zhu et al., 2020). The quality of reviews is something that can be relied upon to make a purchase decision (C.C. Chen & Chang, 2018; Chakraborty, 2019; Huang et al., 2019). Increasing the number of sales will have an impact on increasing online reviews (D. H. Park & Lee, 2007). (Wells et al., 2009) also revealed that the creation of good-quality review information can increase the likelihood of impulse purchases. The collection of information about a product can create changes in consumer behavior (Filieri et al., 2018). Consumers can trust a product based on sources that inform products that are perceived as reliable (Filieri, 2016). Reliable information sources are generally easily accepted by consumers, but if the source cannot be trusted, consumers will ignore the information and consider the information invalid (Eaagly, 1993; Hovland, 1953; K. Z. K. Zhang, Zhao, et al., 2014). The trust that consumers feel is likely to lead to impulsive purchase intentions because it is caused by a credible source (Weismueller et

al., 2020). Digitalization makes it easier for consumers to make observations on other consumers who have purchased the product they want. This has a big role in a comparison between the knowledge possessed by consumers and the facts experienced by consumers who have made previous purchases. Limited consumer knowledge due to the scarcity of information obtained in the process of purchasing a product (Bikhchandani et al., 1992). (Zafar et al., 2019a) revealed that interactive social media which is usually formulated with observational learning can encourage impulsive purchases. Observational learning has the ease of accessing information making it suitable for application in online purchases (N. Hu et al., 2014). The impact of observational learning (for example observing high sales volume) will be able to arouse impulsive buying behavior in consumers (Zafar et al., 2019a). From some of the elaborations in previous research, it can be concluded that several factors influence the increase in impulsive buying behavior, for example, factors from the quality of reviews (Xu et al., 2020), the credibility of sources (K. Z. K. Zhang, Hu, et al., 2014a) and observational learning (Zafar et al., 2019a) which allegedly caused them to make impulse purchases on social commerce platforms.

The ease of access to online shopping has made 82% of Indonesians prefer to shop online, but the result of this easy access has harmed the people of Indonesia (Kurniawan, 2022). Few of them shop online to meet their basic needs, instead, it leads to impulse purchases (Saleh, 2017). From this, problem phenomena arise such as exploding expenses due to less important items, shopping appetites that are difficult to control, and difficulty distinguishing between wants and needs (Soviati, 2022).

In addition to the phenomenon of problems with objects that have been described, this research is also based on the findings of research gaps from previous studies. As shown in Table 1 below:

**Table 1. Research Gap**

No	Gap Type	Gap description
1	Research Controversy	(Zafar, Qiu, Li, et al., 2021) in his research found that observational learning had a significant effect on the urge to buy impulsively. Meanwhile, (J. V. Chen et al., 2016) in his research found results that observational learning had no significant effect on the urge to buy impulsively.
2	Limitation Gap	Research on impulse buying conducted by previous studies so far has not used the theory of latent state traits (LST). In fact, (J. V. Chen et al., 2016) said that the Latent state-trait (LST) theory has a close relationship with impulse buying behavior and is suitable for application in the context of social commerce and electronic commerce. Thus, it is necessary to develop this research regarding the theory of latent state traits (LST).

**Source:** (J. V. Chen et al., 2016; Zafar et al., 2021)

The novelty of this study compared to previous research; researchers used a positive effect variable as a mediating variable to answer the GAP problem from previous research. (Table 1. Research Gap).

## Literature Reviews

### Stimuli-Organism-Response Theory (SOR)

The S-O-R (Stimuli Organism Response) theory was put forward by (Mehrabian & Russell, 1974) the development of this theory stems from environmental psychology but is now

experiencing development not only in psychological science. The S-O-R theory model includes three stages, namely stimulus (S), organism (O), and response (R). The definition of stimulus (S) according to (Eroglu et al., 2001) is a cause that is influenced by a person's internal state or can be described as an influence that can stimulate someone. According to (Bagozzi, 1986) consumer behavior described in the S-O-R theory states that the resulting stimulus comes from outside the person. Organism (O) refers to an individual's affective and cognitive intermediary state that mediates the influence of a stimulus on an individual's response (Y. L. Wu & Li, 2018). Furthermore, the SOR theory model also explains that response (R) is the final result or final decision of a person, which is described by approach or avoidance behavior (Donovan et al., 1994; Sherman et al., 1997). So, the S-O-R theory model builds methods of human behavior by analyzing human cognitive and affective states that are influenced by environmental stimuli (Shah et al., 2021). According to (Sultan et al., 2021) the S-O-R theory can explain all behaviors that are generated by various marketing stimuli and psychological factors.

The more people make online purchases, the more researchers use the S-O-R theory to interpret online buying behavior (C. Chen & Yao, 2018). Previous researchers said that SOR theory is a valid theoretical way to understand online consumer behavior that is influenced by online website stimuli (Dahlén & Lange, 2002; Oh et al., 2008; Williams & Dargel, 2004). In the results of a survey (Chan et al., 2017) regarding online impulsive buying behavior, it was found that the S-O-R theory was the most popular. Specifically, a framework has been established for online impulse buying (Liu et al., 2013). For example, (Xu et al., 2020) use the S-O-R framework and shows that online social interaction (stimuli) has a significant positive impact on perceived benefits and positive effects (organism), and then influences impulse buying impulses (response). Similarly, (C. Chen & Yao, 2018) found the quality of website architecture and promotional campaigns to be important stimuli in impulse buying. In this study, the researcher adopted the S-O-R framework to test review quality, source credibility, and observational learning (stimuli) as stimuli, which are mediated by positive effects (organisms), then give the final response impact on impulse buying behavior (response).

### **Latent state-trait theory (LST)**

Latent state-trait theory (LST) is a psychological theory that was expanded by (Steyer et al., 1999), which states that human behavior depends on environmental factors or conditions (states), individual factors (traits) as well as the interaction between the two factors that determine. A trait reflected in individual characteristics that are relatively stable in all situations and can be a differentiator between two individuals (Hertzog & Nesselroade, 1987). Conversely, mental states refer to individual attributes that tend to change depending on environmental conditions (Hertzog & Nesselroade, 1987). And circumstances can be a differentiator between one situation and another in an individual's life (Wells et al., 2009). Previous researchers adopted ESG theory which focused on the role played by the psychological state of consumers about consumer impulsive buying behavior when making offline purchases generally influenced by the store atmosphere (D. Rook et al., 1995). Meanwhile, in online purchases, impulsive behavior can occur due to websites, posts, reviews, and celebrity endorsements (Parboteeah et al., 2009).

(Pornpitakpan & Han, 2013) said that the factors of interest in shopping online and offline were positively influenced by impulse buying behavior. According LST theory, (Hoa, 2021) emphasizes that impulsive purchases are positively or negatively influenced by individual characteristics and human personality. And (J. V. Chen et al., 2016) revealed that the theory that is suitable for describing online impulsive buying behavior in the context of social commerce and electronic commerce is the Latent state-trait (LST) theory. Several researchers have adopted this theory in the context of social commerce. For example, (Wells et al., 2009) conducted research by adopting ESG theory as a theory to explain impulse buying on social commerce platforms. Furthermore, (Zafar et al., 2021) also apply ESG theory in their research

on impulse purchases on social commerce platforms. This study adopts two theories, namely SOR theory and LST theory as theories to examine impulsive buying behavior on social commerce platforms. Referring to the LST theoretical framework, the impulse buying behavior variable is considered (latent).

### Customer behavior

Consumer behavior is the behavior of individuals choosing goods to meet needs and has an impact on purchases (Raorane & Kulkarni, 2011). Meanwhile, according to (Moye & Kincade, 2002) the definition of consumer behavior is the way individuals determine where they will choose to make shopping transactions. A consumer can behave in various ways when shopping. In the buying process, consumers can be influenced by several factors, namely personal, psychological, social, and cultural factors (Gull & Pervaiz, 2018). There is a difference between consumer behavior when shopping online and shopping in a traditional retail environment (Fong & Yazdanifard, 2014). Online consumer behavior is less price sensitive, whereas traditional supermarket consumers are more price-sensitive (Andrews & Currim, 2004). (Díaz et al., 2017) also argues that the online buying process is different from offline buying, different buying processes will have different consumer behavior depending on the method used.

### Impulse Buying Behavior

Impulse buying behavior is an unplanned purchase that occurs by consumers who feel an unexpected desire to buy products instantly (Y. F. Chen & Wang, 2016). Impulse buying as a benchmark is important for understanding buying behavior from a behavioral angle in consumer psychology, finance, society, and psychiatry (Chauhan et al., 2021). The occurrence of impulsive purchases is caused by the urge that consumers feel to buy a product without prior consideration (L. Zhang et al., 2021). Thus, the urge to buy is considered the direct cause of impulsive buying (Bandyopadhyay et al., 2021). Some researchers reveal that consumers feel that impulsive buying behavior is not something wrong, but instead, they think that impulsive buying behavior is something profitable (Dittmar et al., 1996). According to (Stern, 1962) there are several types of impulse purchases including pure impulse purchases triggered by new purchases or actions that damage normal purchases, reminder impulsive purchases refer to information or advertisements that are remembered, suggestive impulsive purchases are defined as functional purchases when consumers see the product First-time and planned impulse purchases reflect the consumer's desires in mind while simultaneously taking advantage of special prices or coupon offers.

The description of the indicators of impulse buying behavior from several previous researchers is shown in table 2 below:

**Table 2. Description of the “Impulse Buying Behavior” Indicator**

No	Indicator	Source
1	a. Sudden push b. Constantly buying things on the spur of the moment c. Not reflective d. Immediate and kinetic	(Rook et al., 1995)
2	a. Make a sudden purchase b. Feel happy and excited c. Have a strong urge to buy	(Beatty & Ferrell, 1998)
3	a. Feel the unexpected desire b. Strong c. Persistent	(Y. F. Chen & Wang, 2016)

**Sources:** (Beatty & Ferrell, 1998; Y. F. Chen & Wang, 2016; Rook et al., 1995)

## Review Quality

According to (K. Z. K. Zhang, Hu, et al., 2014a) the definition of online reviews is consumer perceptions about the quality of online review information. And receiving quality information will show confidence in the recipient of the information (Bhattacharjee & Clive, 2016). Online reviews as a reference for negative or positive consumer comments on a product or seller (Hennig-Thurau et al., 2004). And if there is an increase in the number of positive reviews, then the number of people who recommend the product will also increase (D. H. Park & Lee, 2007). Research (Bickart & Schindler, 2001) also states that someone who will be looking for information about a product tends to believe in online reviews rather than sales promotions.

The description of the indicators of review quality from several previous researchers is shown in table 3 below:

**Table 3. Description of the “Review Quality” Indicator**

No	Indicator	Source
1	a. Objective b. Understandable c. Credible d. Clear	(D. H. Park et al., 2007)
2	a. Relevance b. Understanding c. Adequacy d. objectivity	(D. H. Park & Kim, 2008)
3	a. Depth b. Adequacy c. Relevance d. Factuality	(Filieri, 2015)

**Source:** (Filieri, 2015; D. H. Park et al., 2007; D. H. Park & Kim, 2008)

(Cheung et al., 2009) revealed that a person's attitude can be influenced by the quality of the information to be obtained. Searching for information online is not just for realistic purposes, but also for fun (E. J. Park et al., 2012). According to (Fiore & Yu, 2001) scripts have the benefit of being able to create fun imaginations. Consumers will feel safe shopping on a website if there are high-quality online reviews, and will then build a positive perception of the website (Xu et al., 2020). Thus, when consumers find positive product reviews, potential consumers will have the assumption that the product is what consumers previously wanted (D. H. Park & Lee, 2007).

Online reviews become an important factor of social influence (Deutsch, 1955). The influence of online reviews acts as a provider of information and recommendations (D. H. Park et al., 2007). Online reviews that have high quality can influence consumer shopping behavior (D. H. Park & Lee, 2007; Sparks et al., 2013). Furthermore, reviews are used by consumers to judge a product better and tend to buy the product (J. Wang & Chang, 2013). The results of the study show that website quality is positively related to purchase intention (Poddar et al., 2009). (Hoa, 2021) also states that website quality can positively influence impulse purchases. (Zafar, Qiu, Shahzad, et al., 2021) in his research found that top review information had a significant positive effect on the urge to buy impulsively.

From this elaboration, the researchers proposed the first and second hypotheses proposed in this study as follows:

*H1: High review quality will have a highly positive effect*

*H2: High review quality will have a high impulse buying behavior*

### Source Credibility

Credibility is how many individuals receive sources of information about knowledge, and experience, that is relevant and make trusted sources an objective and impartial description (Kautsar et al., 2012). And (Ballantine & Yeung, 2015) defines the credibility of a source as the main factor that determines one's trustworthiness. According to (Ohanian, 1990) the credibility of the source indicates a positive quality in the provider of information that can influence the acceptance of information on the contents of that information. (Biswas et al., 2006; J. D. Mittelstaedt et al., 2000) states that in general changes in individual attitudes are caused by messages received from sources that have high credibility.

The description of the indicators of source credibility from several previous researchers is shown in table 4 below:

<b>Table 4. Description of the “Source Credibility” Indicator</b>		
<b>No</b>	<b>Indicator</b>	<b>Source</b>
1	a. Competence b. Can be trusted c. Dynamism	(Miller & Hewgill, 1964a)
2	a. Safety b. Qualification c. Dynamism	(Berlo et al., 1969a)
3	a. Credible b. Experience c. Can be trusted d. Reliable	(Filieri et al., 2018)

**Source:** (Berlo et al., 1969b; Filieri et al., 2018; Miller & Hewgill, 1964b)

(Wu & Wang, 2011) revealed that a brand if it has online reviews from credible sources will create pleasure for consumers. Having credible reviews will also set a website apart from others. In addition, it will build a positive influence and feel comfortable for consumers when buying on the website (Xu et al., 2020). Thus, if consumers find high product sales on the website, they will find information that helps identify product quality and determine purchasing decisions (Xu et al., 2020). (Cheung et al., 2009) also considers that if online reviews are from a trusted source, it can reduce the risk that consumers feel when shopping on websites. The study (K. Z. K. Zhang, Hu, et al., 2014a) found that there was a positive effect on source credibility on the positive effect. Research (Xu et al., 2020) also found similar results, namely that there was a positive effect from source credibility on the positive effect.

The credibility of the source can indicate the level of perception of the attractiveness, trustworthiness, and expertise of the supporter which influences the effectiveness of the support (Dholakia & Sternthal, 1977; Ohanian, 1991). Source credibility can support explaining the progress of a message (Weismueller et al., 2020). So it can show three source effects that greatly influence buying interest, attitudes towards a brand, and attitudes towards advertising (Amos et al., 2008; Phua et al., 2018; S. Wang & Scheinbaum, 2018). According to (Biswas et al., 2006; J. Mittelstaedt et al., 2000) if the message has good credibility, consumers tend to accept and trust the message. Conversely, if a message has poor credibility, consumers will tend to reject and distrust the message. The results of research from (Weismueller et al., 2020) reveal that the source credibility sub-dimensional has a positive impact on purchase intention. Findings in other studies also show that source credibility has a significant positive effect on purchasing decisions (Kautsar et al., 2012).

From this elaboration, the researchers proposed the third and fifth hypotheses proposed in this study as follows:

*H3: High source credibility will have a highly positive effect*

*H4: High source credibility will have a high impulse buying behavior*

### Observational Lierning

Observational learning is defined as how far the process of observation is from individual to other individuals regarding the product that has been purchased (Y. Chen et al., 2011). According to (Bandura, 1977) observing other people's choices and the information obtained can influence individual behavior. (J. V. Chen et al., 2016) said that an individual who has limited information will tend to imitate others. Research (Y. Wang & Yu, 2015) also reveals that some consumers find information about a product that can be learned from consumers who have made purchases, and this information can be combined with their own experiences, which can then produce an accurate purchase decision.

The description of the indicators of observational lierning from several previous researchers is shown in table 5 below:

**Table 5. Description of “Observational Lierning” Indicators**

No	Indicator	Source
1	a. It's easy to see which products are being bought the most b. It is easy to observe a high volume of product sales	(Zhang et al., 2014a)
2	a. Following previous consumers b. Observing past consumer actions c. Often read previous consumer comments	(Wang & Yu, 2015)

**Source:** (Wang & Yu, 2015; Zhang et al., 2014b)

According to (Fulk et al., 1987) observational learning can significantly increase the social presence felt by individuals. And the social presence that is felt can be the pleasure of shopping on shopping sites (Hassanein & Head, 2007). A product that can generate rapid sales is influenced by good quality according to consumer opinion (J. Zhang, 2010). Consumers lead to developing a better attitude toward a product with high sales simultaneously from shopping websites (Xu et al., 2020). In this context, it is supported by previous research, namely research (Xu et al., 2020) which found that observational lierning has a positive effect on positive effects. The same results were also found in research (K. Z. K. Zhang, Hu, et al., 2014a) that observational lierning had a significant positive effect on the positive effect.

Social interaction plays an important role in online impulse buying (K. Z. K. Zhang, Hu, et al., 2014a). The social interaction in question is behavior-based social interaction, commonly known as observational learning (Y. Chen et al., 2011; K. Z. K. Zhang, Hu, et al., 2014a). Observational learning connected with information cascade theory (Bikhchandani & Sharma, 2000), has been shown to influence a person's purchasing decisions (Y. Chen et al., 2011; K. Z. K. Zhang, Hu, et al., 2014a). According to (Bikhchandani et al., 1992) someone who will make a purchase tends to have observational behavior towards all previous buyers compared to limited consumer knowledge due to scarcity of information. Whereas research (F. Wang et al., 2021) found that observational learning has a significant positive effect on the efficiency of the online shopping process. (Zafar et al., 2019b) also found that there was a significant effect of observational lierning on the urge to buy impulsively.

From this elaboration, the researchers proposed the fifth and sixth hypotheses proposed in this study as follows:

*H5: High observational lierning will have a high positive effect*

*H6: High observational lierning will have a high impulse buying behavior*



## Positive Effect

Effects have been defined as variables that can influence an action including unplanned purchases (Gardner et al., 1988; Rook Dennis W & Gardner Meryl P, 1993; D. W. Rook, 1987). There are two types of effects, namely positive effects and negative effects (K. Z. K. Zhang, Hu, et al., 2014a). The psychological literature says that when individuals are in a good mood or are facing positive influences, they tend to engage in approach behavior rather than avoidance behavior (Beatty & Ferrell, 1998). Furthermore, according to (Watson et al., 1988) a high positive effect is a state of high enthusiasm, full concentration, and pleasant individual participation. Meanwhile, a low positive effect is a state of sad and lethargic individuals.

Research (Mohan et al., 2013) states that there is a significant influence of positive effects on impulsive purchases. Meanwhile, the negative effect has no significant effect on impulse buying. Positive effects tend to be the extent to which a person subjectively feels positive moods such as pleasure, interest, and alertness (Bandyopadhyay et al., 2021). (Donovan et al., 1994) argues that a pleasant environment plays a role in influencing impulsive purchases. This is supported by research (Beatty & Ferrell, 1998) which found that the positive variable effect significantly influences the consumer's urge to buy impulsively. Similar results were also found by (K. Z. K. Zhang, Hu, et al., 2014a) a positive effect significantly on impulse buying.

The description of the indicators of the positive effect from several previous researchers is shown in table 6 below:

**Table 6. Description of the “Positive Effect” Indicator**

No	Indicator	Source
1	a. Enthusiastic b. Interested c. determined d. Active e. Strong	(Watson et al., 1988)
2	a. Enthusiastic b. Enthusiastic c. Proud d. Inspired	(Beatty & Ferrell, 1998)
3	a. Exciting b. Like c. Interested d. Enthusiastic	(Chang et al., 2014)

**Source:** (Beatty & Ferrell, 1998; Chang et al., 2014; Watson et al., 1988)

From this elaboration, the researchers proposed the seventh hypothesis proposed in this study as follows:

*H7: A high positive effect will have a high impulse buying behavior*

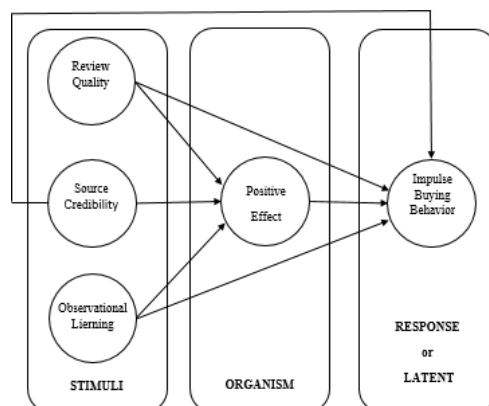
*H8: The positive effect acts as a mediation in the effect of review quality, source credibility, and observational learning on impulse buying behavior*

## Research Model

(Figure 1. Research Model) This research model is based on the Stimuli-Organism-Response (SOR) theoretical model developed by (Mehrabian & Russell, 1974) using the impulse buying literature. In this study, the stimulus in question is review quality, source credibility, and observational learning. Furthermore, for organisms, namely the positive effect that mediates the effect of the stimulus on individual responses. Meanwhile, the response in this study is impulse buying behavior which is the final response of the individual. We also

adopt the Latent state-trait (LST) theory extended by (Steyer & Schmitt, 1999). In LST theory we adopt latency as impulse buying behavior. The following hypothesis relationships will be explained in (Figure 1. Research Model):

**Figure 1. Research Model**



## Research Methodology

### Research Sites

To test the hypothesis empirically, we collected data using an online survey on the three most popular social commerce shopping sites in Indonesia (namely: TikTok Shop, Instagram Shop, and Facebook Shop). The online survey method was chosen because according to (Cheung et al., 2009) this method allows for the collection of real field information from online consumers in their daily lives, thereby increasing the realism of the research. Now Indonesian people do online shopping using social commerce. Supported by the survey results, 86% of Indonesians make shopping transactions via social media such as TikTok Shop 45%, Instagram Shop 10%, Facebook 10%, and the remaining 21% on platforms (Sulaiman & Rachmati, 2022). The social commerce shopping site provides a variety of products for consumers. In addition, it also provides social interaction information, such as consumer reviews and sales volume. Therefore, it seems that social commerce websites can be an appropriate context for investigating the extent to which online social interaction factors influence impulse buying behavior.

### Measure

In this study, we used a constructed measure that was well-validated by previous researchers. However, we made minor modifications to suit the research context, and we used a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The description of the appendix in the research model is explained in table 7 below:

**Table 7. Appendix**

No	Variable	Dimensions	Source
1	Review Quality	a. Each review has a complete reason b. Every review is objective c. Every review can be trusted d. Every review is clear	(D. H. Park et al., 2007)
2	Source Credibility	a. I like to shop at places that have high credibility b. I love shopping where I have a memorable experience c. I love to shop at places I can trust d. I love to shop at a reliable place	(Filieri et al., 2018)

3	Observational Lierning	a. It's easy for me to observe the products that are on social trading websites being bought by a large number of people b. I observed that the volume of product sales on social commerce websites is high c. Often when I want to buy a product from a brand, I follow previous consumers who have bought the product d. Often when I want to buy a product from a brand, I read previous consumer comments	(Wang & Yu, 2015; Zhang et al., 2014a)
4	Impulse Buying Behavior	a. I bought something spontaneously b. I immediately buy the product I like without thinking twice c. I bought it without planning d. I often make impulse purchases	(Badgaiyan & Verma, 2015; E. J. Park et al., 2012)
5	Positive Effect	a. I am always excited when shopping b. I am always enthusiastic when shopping c. I always feel proud when I shop d. Shopping can inspire me	(Beatty & Ferrell, 1998)

**Source:** (Badgaiyan & Verma, 2015; Beatty & Ferrell, 1998; Filieri et al., 2018; D. H. Park et al., 2007; E. J. Park et al., 2012; Wang & Yu, 2015; Zhang et al., 2014a)

### Data Collection

In this study, researchers used quantitative methods. The population of this study is consumers who shop in social commerce, especially TikTok Shop, Instagram Shop, and Facebook Shop. The number of samples in this study was 318 respondents. The sampling method used in this study is non-probability sampling with a snowball sampling technique. Snowball sampling is a sample determination technique that starts with a small number, then spreads more and more because the previous sample invited friends to be sampled, and so on according to Sugiyono (Salma, 2021). Furthermore, for data collection using primary data. The method of data collection, namely online questionnaires. Because this research conducted an online survey in Indonesia, the researcher carried out translation and "re-translation" to ensure the quality of the translation. At the same time, to avoid duplication, the researcher asked respondents to fill in their email addresses in the questionnaire. The method in this study uses the path analysis method. Then, to analyze the research model the researcher used the AMOS 24 statistical software.

### Findings

#### Respondent Identity

In this study, we had 318 respondents. The gender criteria were dominated by women with a total sample of 246 and 72 men. According to the results of our research on social commerce, most sellers offer more products for women and most women have a liking

character. shop than men. Supported by research (Yulistara. Arina, 2013) that women tend to be impulsive. Furthermore, the age criteria are dominated by the age of 21-30 years because this age is the age of teenagers who mostly have the character of shopping and the age of adulthood or 21-30 years is a productive age. Research results (Paypal, 2019) also show that social commerce users in Indonesia are 42% aged 21-30 years, 38% aged 31-40 years, 11% aged 41 years and over, and the remaining 9% are 20 years and under. In terms of education criteria, it is dominated by high school or equivalent education because there are more people in Indonesia with high school education levels compared to D3, S1, and S2 levels. Supported by the results of a survey (Kusnandar, 2022) 2022 that the number of Indonesian people with a high school education level is equal to several 57,533,189 people, a D3 number of 3,517,178 people, an S1 number of 12,081,571 people and a Master degree of 855,757 people. Furthermore, for the income criterion, which is dominated by income <Rp. 1,000,000, Indonesian people whose total income is <Rp. 1,000,000 prefer to shop online rather than shop offline because apart from the ease of access when shopping, the main reason is also that the prices are competitive. The research results from the Association of Internet Service Providers (APJII) note that the reason most consumers prefer to shop online is that the price is much cheaper than buying directly at the store (Annur, 2020). Lastly, the respondents in this study spend time in a day exploring social commerce with a predominance of <1 hour.

**Table 8. Characteristics of Respondents**

<b>Respondent Profile</b>		<b>n = 318</b>
<b>Attribute</b>	<b>Distribution</b>	<b>Sample</b>
Gender	Male	72
	Female	246
Age	< 20 years	46
	21 – 30 years	270
	31 – 40 years	2
	41– 50 years	1
	>51 years	0
last education	Equivalent High School	181
	D3	18
	S1	121
	S2	1
Income	<Rp1.000.000	158
	Rp1.000.000 – Rp1.999.999	75
	Rp2.000.000 – Rp2.999.999	31
	Rp3.000.000 – Rp4.999.999	29
	>Rp5.000.000	25
Time spent in a day browsing social commerce shopping sites.	<1 an hour	163
	1 – 5 hours	128
	6 – 10 hours	16
	>10 hours	11

**Source:** Primary data processed 2022

### Data analysis

There are model testing criteria in the Structural Equation Model (SEM). This test shows the results of the Goodness-of-Fit index according to the criteria recommended by the Structural Equation Model (SEM). The following test results are described in table 9 below:

**Table 9. Structural Equation Model (SEM) Feasibility Test Results**

Goodness-of-Fit Index	Cut-off-value	Results	Information
Chi-Square	Expected small	420.938	Good
GFI	$\geq 0.90$	0.90	Good
AGFI	$\geq 0.90$	0.90	Good
TLI	$\geq 0.90$	0.90	Good
CFI	$\geq 0.90$	0.912	Good
NFI	$\geq 0.90$	0.90	Good
RMSEA	$\leq 0.08$	0.072	Good
CMIN/DF	$\leq 2.00$	2.631	Good

**Source:** Primary data processed in 2022

From the test results, it can be concluded that all the results of the values have met the requirements according to the Structural Equation Model (SEM) recommendations and are suitable for use.

#### Measurement Models

Table 10 explains that all indicators give a loading factor  $\geq 0.05$  and p-value  $\leq 0.05$ , so it can be concluded that all indicators are declared valid.

**Table 10. Results of Confirmatory Factor Analysis for Measurement Models**

Variables and Indicators (N = 318)	Loading Factor
<b>Impulse Buying Behavior</b>	
I bought something spontaneously	0.800
I immediately buy the product I like without thinking twice	0.856
I bought it without planning in advance	0.837
I often make impulse purchases	0.736
<b>Positive Effect</b>	
I am always excited when shopping	0.878
I am always enthusiastic when shopping	0.885
I always feel proud when I shop	0.752
Shopping can inspire me	0.710
<b>Review Quality</b>	
Each review has a complete reason	0.700
Every review is objective	0.657
Every review can be trusted	0.696
Every review is clear	0.784
<b>Source Credibility</b>	
I like to shop at places that have high credibility	0.583
I love shopping where I have a memorable experience	0.632
I love to shop at places I can trust	0.744
I love to shop at a reliable place	0.817
<b>Observational Learning</b>	
It's easy for me to observe the products that are on social trading websites being bought by a large number of people	0.652
I observed that the volume of product sales on social commerce websites is high	0.740
Often when I want to buy a product from a brand, I follow previous consumers who have bought the product	0.417
Often when I want to buy a product from a brand, I read previous consumer comments	0.574

**Source:** Primary data processed in 2022

## Results

In Table 12 and Figure 2 it is explained that RQ has no significant effect on PE (Std.  $\beta$  = 0.178; CR = 1.685; p-value =  $\geq 0.05$ ), RQ has a significant effect on IBB (Std.  $\beta$  = 0.299; CR = 2.924; p-value =  $\leq 0.05$ ), SC has no significant effect on PE (Std.  $\beta$  = -0.123; CR = -0.915; p-value =  $\geq 0.05$ ), SC has a significant effect on IBB (Std.  $\beta$  = -0.559; CR = -2.499; p-value =  $\leq 0.05$ ), OL has a significant effect on PE (Std.  $\beta$  = 0.503; CR = 2.672; p-value =  $\leq 0.05$ ), OL has no significant effect on IBB (Std.  $\beta$  = -0.066; CR = -0.358; p-value =  $\geq 0.05$ ) and PE have a significant effect on IBB (Std.  $\beta$  = 0.467; CR = 6.161; p-value =  $\leq 0.05$ ). So, from these results, it can be concluded that H2, H4, H5, and H7 are accepted, while H1, H3, and H6 are rejected.

The Sobel test approach is used to test the PE variable as a mediating variable. Table 13 explains the effect of RQ on IBB with PE as a mediating variable. The results of testing the effect of RQ on IBB (Unstd.  $\beta$  = 0.403 and SE = -0.138) and RQ on PE (Unstd.  $\beta$  = 0.211 and SE = 0.125). The statistical results of the Sobel test = were 0.235 and p-value  $0.114 \geq 0.05$ . So it can be concluded that PE is not a mediating variable for the relationship between RQ and IBB. Furthermore, for the effect of SC on IBB with PE as a mediating variable. The results of testing the effect of SC on IBB (Unstd.  $\beta$  = -0.559 and SE = 0.224) and SC on PE (Unstd.  $\beta$  = -0.183 and SE = 0.202). The statistical results of the Sobel test = -0.057 and p-value  $0.391 \geq 0.05$ . So, it can be concluded that PE is not a mediating variable for the relationship between SC and IBB. And for the effect of OL on IBB with PE as a mediating variable. The results of testing the effect of OL on IBB (Unstd.  $\beta$  = -0.168 and SE = 0.469) and OL on PE (Unstd.  $\beta$  = 1.131 and SE = 0.467). The statistical results of the Sobel test = 0.083 and p-value  $0.019 \leq 0.05$ . So, it can be concluded that PE is a mediating variable for the relationship between OL and IBB. From the test results, it can be concluded that H8a and H8b are rejected while H8c is accepted.

**Table 12. Hypothesis Testing**

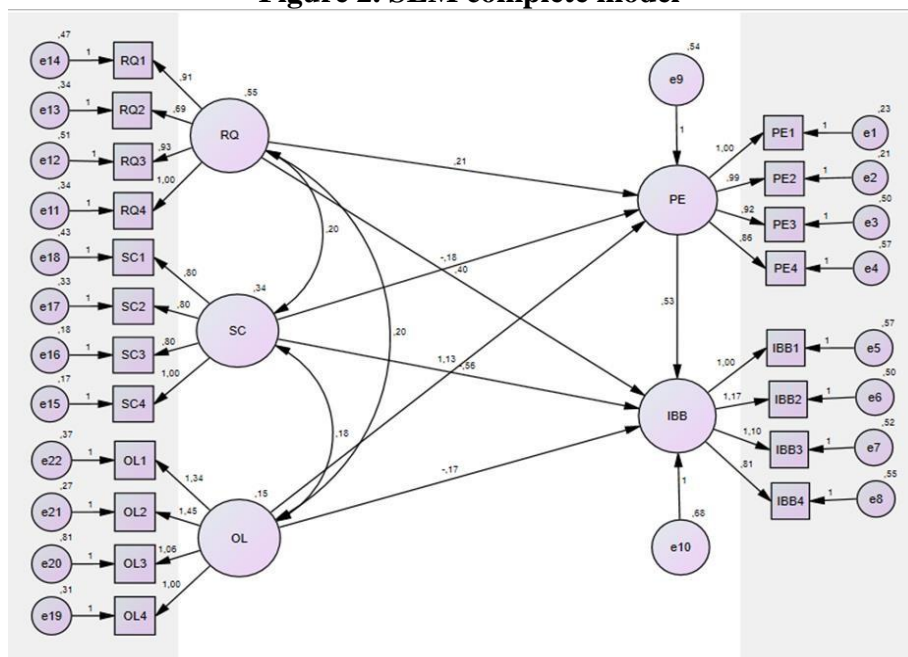
Relationships between constructs	$\beta$ is not standard	Standard $\beta$	SE	CR
H1: RQ -> PE	0,211	0,178	0,125	1,685
H2: RQ -> IBB	0,403	0,299	0,138	2,924
H3: SC -> PE	-0,184	-0,123	0,202	-0,915
H4: SC -> IBB	-0,559	-0,327	0,224	-2,499
H5: OL -> PE	1,131	0,503	0,423	2,672
H6: OL -> IBB	-0,168	-0,066	0,469	-0,358
H7: PE -> IBB	0,532	0,467	0,086	6,161

**Source:** Primary data processed in 2022

**Table 13. Sobel test results**

Relationships between constructs	Sobel test statistics	p-Value
H8a: RQ -> PE -> IBB	0,235	0,114
H8b: SC -> PE -> IBB	-0,057	0,391
H8c: OL -> PE -> IBB	0,083	0,019

**Source:** Primary data processed in 2022

**Figure 2. SEM complete model**

## Discussion

The results of this study indicate that the quality of the review information does not affect the positive effect. The amount of information available in social commerce will have the potential to change consumer behavior. The phenomenon in the object of this study found that people who shop in social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) do not consider the quality of information from a product post in social commerce important, so whether or not the quality of the information will not affect consumers in increasing impulsive buying behavior. Over-information will trigger consumer concern because they receive too much information, (D. H. Park & Kim, 2008) also reveals that high-quality information is vulnerable to receiving excessive information compared to low-quality or simple information. According to (Xu et al., 2020) when consumers receive a lot of information load, they tend to need a lot of cognitive effort to digest this information, so this will cause negative emotions.

We found that quality reviews influence impulse buying behavior. In the context of social commerce, the information obtained can be a reflection of consumers regarding understanding, perceptions, and attitudes towards products as well as being able to change consumer behavior in purchasing products. This research phenomenon found that consumers who make purchases in social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) consider that the quality of reviews plays an important role in purchasing products in social commerce and can increase impulsive buying behavior. The higher the quality of review information, the more impulsive buying behavior will increase. (Xie et al., 2017) also revealed that high-quality reviews can give potential customers a sense of trust. It is supported by the findings (K. Z. K. Zhang et al., 2018) which say that reviews can influence impulsive buying behavior.

Furthermore, our empirical results found that source credibility has no positive effect. Consumers with highly impulsive buying behavior tend not to care about the credibility of the information source of the product they are going to buy. This research phenomenon shows that consumers on social commerce platforms (such as TikTok Shop, Instagram Shop, and Facebook Shop) consider credible sources to have no role in creating a positive effect on consumers. The existence of source credibility is more likely to change consumer behavior than to changes in consumer attitudes. So whether or not there is information from credible

sources does not affect or have an impact on positive emotions or attitudes towards consumers. Therefore, this is one of the reasons for the absence of the influence of source credibility on the positive effect on consumers in social commerce.

Our findings show that there is an influence of source credibility on impulsive buying behavior in the context of social commerce. As expected, it is likely that when consumers find a source from a credible social commerce platform, they will tend to buy a product. Research phenomena that occur in social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) assume that source credibility plays an important role in increasing impulsive buying behavior. So that when consumers obtain credible information it will increase impulsive buying behavior and vice versa if the information obtained does not have credibility it will decrease impulsive buying behavior. The same thing was also said by (Kautsar et al., 2012) that information about a product is said to be successful depending on sources that are considered credible. Consumers when they receive credible information will tend to make more purchase changes and will instead make purchases that were not previously planned (X. Hu et al., 2019).

We found positive the effect of the observational learning effect. As expected in this study, if consumers find many other people making purchases on social commerce, these consumers will tend to think that social commerce has a positive impact. In the results of research on social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) the volume of sales on these platforms is indeed high compared to other platforms so from this phenomenon consumers who carry out observational learning tend to create a positive effect. Similar results were also stated by (Eroglu et al., 2005) that if you find a shopping site that has a high sales volume, it will give a positive perception of the shopping site. Observational learning can create social interactions that are felt by others, to provide pleasure when shopping on shopping sites (Fulk et al., 1987; Hassanein & Head, 2007).

Furthermore, our findings reveal that observational learning does not affect impulsive buying behavior. It is possible that when consumers continue to carry out observational learning and then find changing results, impulsive buying behavior in consumers will decrease. From research phenomena in social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) consumers think that observational learning cannot increase impulsive buying behavior. Impulse buying can be increased when consumers see people they know buying a product compared to people they don't know, so this may also be the cause of whether or not there is an influence of observational learning on impulsive buying behavior in social commerce. It is supported by research results that impulsive purchases can be increased when consumers see people they know make purchases on shopping sites (Cho et al., 2014; Lup, 2004).

Our findings show that there is a positive effect on impulsive buying behavior. It is possible that when consumers make purchases in social commerce, they feel pleasure and excitement which can trigger unplanned purchases. In our research phenomenon in social commerce (such as TikTok Shop, Instagram Shop, and Facebook Shop) consumers who have positive emotions will create impulsive buying behavior. So positive emotions play an important role in increasing impulsive buying behavior. This is consistent with findings (Donovan et al., 1994) that a pleasant environment plays an important role in impulsive buying behavior. Consumers who have positive emotions generated when they are on shopping sites can create impulsive purchases, and conversely, consumers who have negative emotions encourage not to make impulsive purchases (D. W. Rook, 1987; Shiv & Fedorikhin, 1999).

The results of the study indicate that the positive effect does not act as a mediation in the relationship between the influence of review quality on impulse buying behavior. To create a quality review effect on impulse buying behavior, there is no need for a positive effect mediating variable, because the results of this study only show a direct effect with a p-value of



$0.003 \leq 0.05$  while for the results of an indirect effect with a p-value of  $0.114 \geq 0.05$ . The results of our study also show that the positive effect does not act as a mediation in the relationship between the influence of source credibility on impulse buying behavior. As a driving force for the influence of source credibility on impulse buying behavior, there is no need for a positive effect mediating variable, because the results of this study only show a direct effect with a p-value of  $0.012 \leq 0.05$  while results of an indirect effect with a p-value of  $0.391 \geq 0.05$ . Furthermore, the results of our study found a significant effect of observational learning on impulse buying behavior mediated by a positive effect. To encourage a significant influence of observational learning on impulse buying behavior, it is necessary to have a positive effect mediating variable, because the results of this study indicate that there is no significant direct effect of observational learning on impulse buying behavior with a p-value of  $0.720 \geq 0.05$  but has no effect directly with a p-value of  $0.019 \leq 0.05$ . Therefore, it can be concluded that the positive effect mediating variable does not play a role in the influence of review quality and source credibility on impulsive buying behavior. Due to the high behavior of impulsive buying, the positive effect variable is not needed. However, the positive effect acts as a mediating variable in the relationship between learning observation and impulsive buying behavior because observational learning by consumers usually always gives variable results, so the role of a positive effect mediating variable is needed.

## Conclusions

This study focuses on the influence of review quality, source credibility, and observational learning on impulse buying behavior mediated by a positive effect. From the results of this study, it was found that observational learning had a significant effect on the positive effect. However, for review quality and source credibility, there is no significant effect on the positive effect. Furthermore, the results of the study found that review quality, source credibility, and positive effect had a significant effect on impulse buying behavior. However, observational learning has no significant effect on impulse buying behavior. For further results, it is found that the positive effect variable can be a mediating variable from observational learning to impulse buying behavior. However, the positive effect variable cannot play a role as a mediating variable from review quality and source credibility to impulse buying behavior.

This study adopted the S-O-R and LST models which were declared valid to be used as a theoretical basis for a study in the context of online impulse buying. Review quality, source credibility, and observational learning as “stimuli”, positive effect as “organism” and impulsive buying behavior as “response/latent”. The relationship found by adopting the S-O-R theory between positive effects and impulsive buying behavior is also consistent with previous studies (such as (Xu et al., 2020; K. Z. K. Zhang, Hu, et al., 2014b)). The research also adopted ESG theory and found the same relationship between the quality of review information and impulsive buying behavior. This study shows that online social interaction is a major factor in consumer behavior when making “unplanned” purchases online. Thus, this research can broaden our understanding of the influence of online social interaction.

The results of this study provide new insights for practitioners. An important implication for implementing online marketers in increasing impulsive buying behavior must be aware of the importance of online social interaction. In increasing, online social interaction practitioners can include factors from online social interaction such as online reviews, lists of sales transactions, and sales volume on their sales sites. Furthermore, practitioners must also ensure the quality of online reviews and the credibility of sources. Then, as a way of enhancing consumer observational learning, practitioners should provide clear instructions on the list of sales transactions and sales volume. Thus, consumers can easily recognize the beginning of their buying behavior.

This study has limitations that must be overcome by future researchers. The validity of the empirical study is limited by the small sample size and the sample being dominated by women, which biases the analysis and interpretation of the research results. The impact (J. V. Chen et al., 2016) is, therefore, future research is suggested to use a larger sample size, especially for the male gender. Furthermore, this research only examines consumer stimuli, so future research should be able to add marketer stimuli to the research model to provide more comprehensive results and be able to test whether the two stimuli have different effects.

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