**Original Research Article**

The effect of TikTok Live Streaming Shopping on generation Y and Z Impulse Buying Behaviour – the Example of Indonesia

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Abstract

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| --- |
| **Aim:** Using social media as a marketing tool has given market players a new and interesting way to market their products and services not only in developed markets, but also in emerging ones. One of the important emerging markets for such companies is Indonesia, which has a large consuming market. As part of their marketing campaigns, suppliers used impulsive buying behaviour and other techniques to encourage customers to buy. Nevertheless, there are still some concerns and inconsistencies in literature regarding factors influencing impulsive buying in Indonesia for younger generations namely Gen Z & Y. Therefore, this research investigates the influence of TikTok Live Streaming on consumer impulsive buying behaviour and the factors driving this relationship by using the SOR framework.  **Methodology:** A total of 250 samples were collected using quantitative research methods with non-probability purposive sampling methods from representative samples of Gen Z & Millennials that live in Jakarta who have made purchases on TikTok Live Streaming, thereby ensuring the relevance and contextual alignment of the sample with the study's research objectives. This research used validity and reliability analysis using SmartPLS.  **Results:** The result showed that price promotion and promotion time limit significantly have a positive effect on impulsive buying behaviour the new generations. In addition, price promotion and promotion time limit also significantly have a positive effect on their perceived risk. Meanwhile perceived risk has no effect on impulsive buying behaviour of Gen Z & Y. Trust as the moderating variables cannot moderate the effect of perceived risk on impulsive buying behaviour, promotion time limits might overshadow its effect. However, in our study, trust was found to have a positive influence on the impulsive buying behaviour of Generation Z and Generation Y consumers in Indonesia.  **Conclusion:** This research added insights of the effects of time limits in promotions to the better documented effects of the promotions themselves. It also highlights the importance of trust and especially creating trust by reducing elements of perceived risk, further lowering the barriers for impulse buying. |

*Keywords: Impulsive Buying, TikTok, Live Streaming, Price Promotion, Promotion Time Limit, Perceived Risk, Trust, SOR*

Introduction

**Background of the study**

New developments of purchasing options and their design and marketing spring up with the rapid of information technology and telecommunications. Geographical boundaries between countries are no longer an obstacle in the process of interaction and communication between individuals. This causes several changes in social construction in world society. The internet and the shopping opportunities it offers have entered the lifestyle of new generations for 20 years, further enhanced by moving restrictions during the COVID-pandemic (Bakardjieva, 2005; Nguyen, Armoogum and Binh, 2021). Fashion products are among the most popular items online, mainly apparel and accessories, with a 2022 volume of about USD 700 bn and 15% expected growth rates (Statista, 2024a).

In the past 5 years, social media use in Indonesia has surged, with users increasing from 187 million in 2020 to an estimated 268 million in 2024 (Statista, 2024b). Social media platforms are not just used for connecting people but are increasingly used for direct shopping, known as social commerce, allowing users to by directly on the platform (Hutchinson, 2022), an avenue increasingly explored by sellers, leading to companies engaging in e-commerce online transactions to increase profits from the early 2010s on (Subiantara and Sukoharsono, 2013).

Southeast Asian users have shown increasing interest in shopping on the TikTok Shop, as demonstrated by their rising spending figures exceeding USD 4 bn in 2022 (Huang, Poh and Barinka, 2023) and eyeing over 10 bn for 2025, mainly, but not exclusively, in Asia. Southeast Asian users' gross merchandise value on the platform has increased fourfold in 2023 and on the Chinese version of TikTok, Douyin, users spent 1.41 trillion yuan (equivalent to IDR 3,208.4 trillion) in 2022, a 76 per cent increase on the previous year (Riyanta, 2023).

TikTok, a leading short video platform has seen growth rapidly and is highly popular in Indonesia, with 126 million users as of January 2024 (Statista, 2024b). One of TikTok features is the live streaming, allowing real-time interaction through broadcast videos. This is seen as a powerful marketing tool that offers unique benefits over conventional internet marketing. Brands and small businesses use live streaming to showcase products, engage with the audiences. For example, Indonesian skincare brands such as Skintific, Somethinc, and Studio Tropik frequently use live streaming to boost their sales.

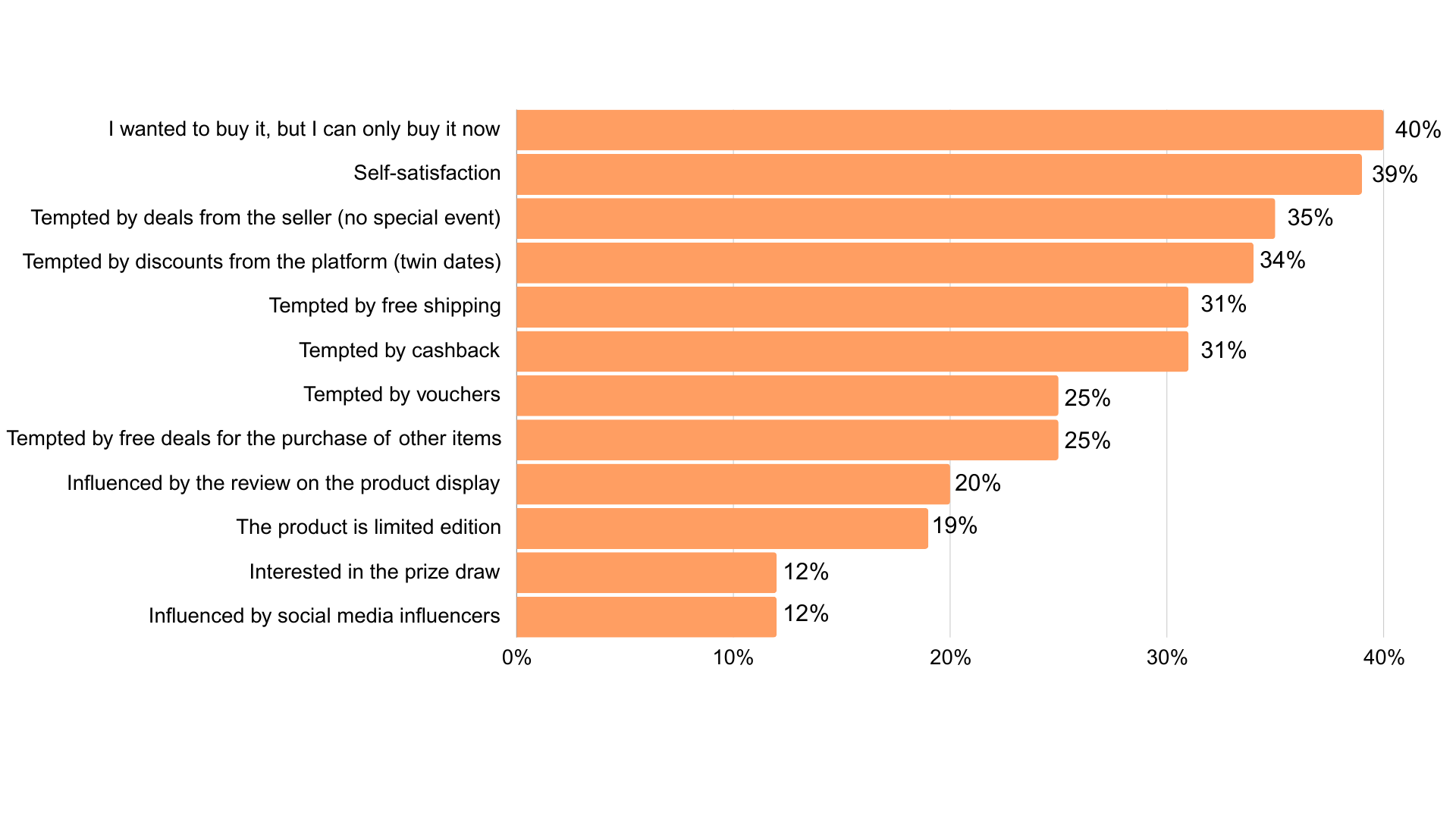
TikTok's big data and algorithms, including retargeting, have transformed online shopping experiences by continuously presenting relevant products to users (Kozinets, 2023). TikTok Shop available in Indonesia further developed by integrating shopping features directly into the app. Customers who are watching the seller's live stream can be directly linked to the TikTok Shop page and can directly make purchases at that time, making live streaming a potent tool for driving impulsive purchases (Lee and Chen, 2021).

However, social media shopping behaviour is dependent on many factors, some of which may even change over time (Wang et al., 2023) or be subject to cultural differences (Kotler et al., 2017; Hanaysha, 2018), which may have affected TikTok’s design decisions. Still, it seems to be a worldwide trend for online shoppers to become increasingly focused and conscious in their use of shopping media (Venticinque, 2022).

**Related issues**

With the increasing number of sellers or brands that are selling its product through live streaming makes customers more likely to do shopping during or slightly after the live stream. Customers tend towards impulsive buying on TikTok because they are tempted by the promotions offered only available during the current stream and fear missing out on special deals (Azizah and Nur, 2022; Chan and Asni, 2023; Fitria, Mahrinasari and Fihartini, 2024). On the other hand, consumers may hesitate to purchase products online due to concerns over reputation and trustworthiness, essential factors in their decision-making process (Kim, Ferrin and Rao, 2008; Firdausiah, Putra and Salsabila, 2023). Traditionally, consumers are more likely to purchase from retailers they perceive as trustworthy (Wang et al., 2015; Miao et al., 2022).

Indonesian Gen Z &Y consumers, like many others, frequently engage in impulsive buying, driven by several factors such as promotions or time limits and social media influencers or opinion leaders (Djafarova and Bowes, 2021). Besides that, promotions also become a strong factor that influence people to do impulsive buying (Iskandar et al., 2023). To address consumers concerns, sellers usually use promotional campaigns or shopping days to attract customers, by implementing certain marketing strategies such as offering flash sales, bundles and other attractive offers like the „national shopping day“ (Yuniarti and Syafri, 2023).

**Figure 1: Reasons for impulse buying in Indonesia (after the Popilix survey by Iskandar et al. (2023, p. 7))**

Previous studies support this statement, indicating that promotions during live streaming on TikTok significantly influence impulsive buying among Generation Z in Indonesia (Refasa et al., 2023) and live streaming on e-commerce platforms in general facilitates impulsive purchasing behaviour (Fitria, Mahrinasari and Fihartini, 2024). This can lead to spending more than intended and later regret over purchases. Despite this, the tendencies are strong (Fitryani, Nanda and Aristyanto (2021); Miranda et al. (2024)). On platforms like TikTok, where people can make a purchase just by one click away, the impulsiveness can occur even more frequently. This also raises ethical concerns about taking advantage of consumers. Overall, impulsive buying can negatively impact individual finances and perceptions of shopping and marketing (Azizah and Nur, 2022; Gumay, Bangsawan and Pandjaitan, 2024).

**Research objectives**

This research aims to explore the prevalence and influence of TikTok Live Streaming on impulse buying among Indonesian consumers, particularly focusing on Generation Z and Millennials. It will examine how factors like price promotion, promotion time limits, perceived risk and trust affect impulsive buying behaviour. Thus, the study seeks to enhance understanding of consumer behaviour in the context of live streaming, helping to adapt marketing approaches. Unlike previous studies that focused on offline shopping or e-commerce, this research will specifically address the impact of live streaming promotions on impulse buying, considering the factors mentioned above s which merit being thoroughly explored in this context. Insights from this study are meant to help marketers tailor their strategies to better engage with Indonesian consumers on TikTok and contribute to the broader theory of consumer behaviour.

Concepts under review

**Reputation and trust in TikTok Live Streaming**

Trust, gained for instance through reputation or ability, may serve as guideline and could in part rationalise buying impulses. Online reviews, product quality, and seller reputation all influenced consumers' purchase decisions in the e-commerce market (Pooja and Upadhyaya, 2022; Chen et al., 2022), and similarly perceived risk seems to influence the relationship between online store cues and the actual purchase, whether impulsive or not (Xiao et al., 2019; Miao et al., 2022). Moreover, online purchase decisions involve a sequence of evaluations made by consumers before making a purchase. This process starts when the consumer decides they need something and want to buy it. They then have to decide where to buy it, which brand and model they want, how much to buy, when to make a purchase, the amount of money they want to spend, and such amount of cash to purchase it.

The marketers are able to influence these choices by giving people information regarding the products or services, complemented by promotions (Mangus et al., 2018). Consequently, understanding the role of promotions, their timing and trust in online purchase decisions is critical for businesses operating in e-commerce environments (Zahara, Rini and Sembiring, 2021), reinforced by strong brands which reduce the risk perceived by consumers (Astutik and Purwanto, 2024).

**Online Purchasing Decision**

Online refers to the connection of internet or other electronic device usage means to conduct transactions or access information (Chaffey and Ellis-Chadwick, 2019). This includes online shopping, online banking, and accessing online resources such as news websites or social media. Online shopping has become increasingly popular due to the convenience and accessibility offered by the internet. Online platforms have enabled businesses to reach a wider audience and connect with customers in ways that offer an alternative to on-site buying and are constantly updated (Pollak and Markovič, 2022; Kiang, Raghu and Shang, 2000).

When people want to buy something, they go through a series of choices before actually making the purchase. This process starts when the person decides they need something and wish to buy it, initiating the process of taking a purchasing decision (Stuchlý et al., 2023; Kotler, Keller and Opresnik, 2017). The next step is to choose where and through which channels to get the wanted item or service, deciding on model and brand, on when to effect the purchase and how much one is willing to spend (Hale et al., 2022). Through communication with (prospective) customers on their offerings, trying to inform, educate or simply become known, marketers may affect their purchasing decisions, which are designed to entice, but can also help, consumers to make a decision (Hanaysha, 2018).

People are guided by personal experience, but might also look for information from other sources and are prone to be influenced by promotional measures (Salem, 2018). It is likely that a combination of experience, personal beliefs (e.g. around sustainability) prima facie objective information and seller marketing lies at the bottom of the actual purchasing decision (Wang et al., 2015; Wu and Huang, 2023). Other sources of information are online reviews or comments on social media (Pooja and Upadhyaya, 2022), but live streaming on Tik Tok combined with promotion may overlay existing views (Wongsunopparat and Deng, 2021), which this paper is exploring.

**The S-O-R Model**

The Stimulus-Organism-Response (S-O-R) model is a psychological framework used to explain human behaviour by analyzing the interaction between external stimuli, internal organismic processes, and behavioural responses (Russell and Mehrabian, 1977). Frequently applied in environmental psychology, this model helps researchers understand the underlying causes of individual response and is also used in various global management theories (Bakker et al., 2014).



**Figure 2: the S-O-R model (property of the authors)**

External stimuli, such as promotions, trigger internal psychological processes, or "organisms," which mediate the relationship between stimuli and responses (Zhang, Wang and Zhang, 2021). Recent related research applied the S-O-R model to consumer behaviour, examining how factors like trust and promotions impact impulsive buying (Sanjaya, Barkah and Sulistiowati, 2023; Li et al., 2024).

In this research, it underlies the assumptions on the roles of emotions in the course of exploration how price promotions, time limits, and trust (stimuli) influence perceived risk (organism) and, ultimately, consumer impulsive buying behaviour (response).

Introduction to and Measurement of Consumer Impulsive Buying Behaviour

A spontaneous decision to purchase a certain good or service prior to making a real purchase is known as impulse buying behaviour (Lee and Chen, 2021; Fitryani, Nanda and Aristyanto, 2021). This unplanned action stems from an emotional or psychological trigger that momentarily persuades a buyer to have to satisfy a need (Lee and Chen, 2021). In his seminal work, Stern (1962) categorized impulse buying into four types: pure impulse, suggestive impulse, planned impulse, and reminder impulse purchases. Pure impulse buying occurs when a consumer makes a sudden, unplanned purchase, while suggestive impulse buying is influenced by marketing such as promotions. Planned impulse buying involves taking advantage of a promotion known before, and reminder purchases occur when a consumer recalls a previous intention to buy.

The rise of e-commerce and digital platforms like TikTok and Instagram has amplified impulse buying behaviour, as such platforms use targeted advertising and personalized content to emotionally engage consumers (Fitryani, Nanda and Aristyanto, 2021; Gong and Liu, 2025). Planned impulse buying is particularly common during live streaming, where sellers offer limited-time promotions, making the shopping experience more engaging and prompting impulsive purchases (Herlina, 2023; Dwiastono, 2024). Online shopping, especially through live streaming platforms, leads to increased impulsivity in purchasing decisions (Wardah and Harti, 2021).

**Introduction to and Measurement of Price Promotion effects**

Price promotions are commonly used marketing strategies that are designed to increase perceived value and encourage purchasing. It is used to attract customers and boost sales by lowering prices (or cost of purchasing in the case of e.g. transport cost promotions). This strategy not only enhances consumer satisfaction but also influences purchasing decisions and impulsive behaviour (Hosseini et al., 2020), leading to unplanned purchases in the form of impulsive buying. There is, for instance, a significant effect of discounts on online purchasing on Shopee (Masruroh, Djaelani and Mustapita, 2022). By implementing price promotions, consumers prone to impulse buying are thus attracted.

Types of price promotion strategies that sellers commonly use, including buy one get one, coupons or vouchers, loyalty programs, seasonal sales, and flash sales where promotional price offers are valid for a very short time, see also next section (Łepkowska, 2022). In addition, special shopping “festival” days can influence purchasing decisions, including impulse buying (Yulianto, Sisko and Hendriana, 2021).

**Introduction to and Measurement of Promotion Time Limit effects**

Price promotion is also associated with price time limits, where usually sellers will provide a time limit to trigger buyers to buy immediately, thus impulsive buying. Promotion time limit is defined as the limitation time of the promotion being offered by the seller (Yuniarti and Syafri, 2023)While doing live streaming, sellers usually will set promotion price time limits, usually the end the live stream, making consumers' perceived risk of scarcity increase, an effective method (Yulianto, Sisko and Hendriana, 2021). Limited-time promotions significantly encourage impulsive purchases . Time pressure leads to hurried purchasing decisions, driven by the fear of missing out (FOMO) (Marjerison, Hu and Wang, 2022).

**Introduction to and Measurement of Trust**

Trust refers to the confidence a customer has in a company's ability to deliver on its promises (Moorman, Deshpandé and Zaltman, 2001). It has been demonstrated that trust has a favourable impact on consumer loyalty and purchase intentions, also through building brands and creating brand-related elements of trust (Chaudhuri and Holbrook, 2001; Wang et al., 2015). Trust can also be established through various means such as website design, security features, but also interactional ones such as customer service (Lee and Turban, 2001; Miao et al., 2022).

Customer trust is the customer's belief in a brand, product/service or business. Trust involves not only believing that someone is reliable but also being willing to act on that belief. This also means accepting dependency on whoever one trusts, one more reason why building trust can be a challenge (Fuchs, Weissleder and Najmaei, 2022). While when shopping on a physical site consumers have more opportunity to evaluate merchandise and accord trust to the seller by virtue of being able to physically assess the site and the people involved (Mangus et al., 2018), people who do take the step to shop online do so because of other sources of trust (Bauman and Bachmann, 2017; Mahliza, 2020).

Value in online shopping stems from utilitarian, hedonistic and social value, however, trust plays a central role, both trust in players involved and in the ability of the product and the shopping experience to provide said values, both for initial and repeated transactions (Wu and Huang, 2023). Trust also depends on the ability of the brand or seller to leverage the emotional connection with its customers by showing benevolent behaviour, e.g. sensitivity, transparency, honesty, and reliability (Herlina, 2023). Other contextual aspects gain in importance, such as legal protection, which can also differ across countries (Pratama and Deniesa, 2023), an aspect not, however, researched in this paper.

Trust is an essential factor that may effectively promote the emergence of impulsive purchasing behaviour. In other words, customers are more likely to make impulsive, unplanned purchases when they have trust in a brand or platform (Chen et al., 2022).

**Introduction to and Measurement of Perceived Risk**

The term "perceived risk" describes how people subjectively evaluate the risks or un-predictabilities that could arise from a certain course of action or choice. It includes a number of factors, including time, psychological, social, financial, and performance risks (Pathak and Pathak, 2017). Customers are less likely to buy a specific product when they perceive a high level of risk. Perceived risk is consumers' awareness that purchasing something may result in unfavourable outcomes or dissatisfaction (Dowling, 2006) with the possibility that consumers will regret the purchase.

Perceived risk in this research is the result or can arise from the existence of price promotions and price time limits given by sellers or brands when selling their product on live streaming which is assumed can lead customers to have impulsive buying behaviour. The price promotion time limitations that are set by the seller can increase part of the perceived risk for consumers (Qalati et al., 2021). This is due to the fear of product unavailability or scarcity, as the time limit means that consumers do not have much time and the desired product might no longer be available or could be sold out (Snoj, Pisnik and Mumel, 2004).

However, other criteria apart from the fear of missing an opportunity for measuring consumer’s perceived risk in online shopping consist of purchasing process risk, financial risk and product performance risk, which, for the last two aspects, can be addressed by the promotion as such (Sreya and Raveendran, 2023).

**Table I: SOR Components and Related Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **SOR Components** | **Research Variables** | **Dimensions** | **Sources** |
| **Stimulus (S)** | **Promotion Time Limit** | Perceived Time Pressure  Urgency to Decide/Purchase Quickly  Fear of Missing Out (FOMO)  Scarcity Perception | Zhang et al., 2022  Payne & Bettman, 1996  Marjerison et al., 2022  Yulianto et al., 2021 |
| **Price Promotion** | Attractiveness of Price Promotion  Perceived Favourable Price/Deal Value  Impact on Purchase Intention | Wongsunopparat & Deng, 2021 Sreya and Raveendran, 2023 |
| **Trust** | Ability  Benevolence  Integrity  Willingness to depend | Kotler et al., 2017  Le & Hoang, 2020  Herlina, 2023 Wu and Huang, 2023 |
| **Organism (O)** | **Perceived Risk** | Purchasing Process Risk  Financial Risk  Product Performance Risk | Sreya & Raveendran, 2023  Snoj, Pisnik and Mumel., 2004  Qualati et al., 2021 |
| **Response (R)** | **Impulsive Buying Behaviour** | Spontaneity  Strength of Compulsion and Intensity  Excitement and Stimulation  Indifference to the Consequences | Azizah et al., 2022  Rook and Fisher, 1995 |

Methodology and Hypotheses

A survey with 250 participants was conducted, using a questionnaire probing participants' engagement with TikTok Live Streaming, their impulse buying behaviour, and demographic information. Non-probability purposive sampling was employed to deliberately select participants from Generation Y and Z in Jakarta who had prior experience with TikTok Live Shopping, thereby ensuring the relevance and contextual alignment of the sample with the study's research objectives.

Table 1 shows the measurement for PTL, PP, T, PR and IBB according to the dimension presented in the Table 1 and the reviewed literature. The research utilizes a quantitative approach with a non-probability purposive sampling. This type of sampling method is relevant as the focus lies on Indonesian Gen Z and Millennial consumers aged 17-40 years living in Jakarta, who have participated in TikTok Live Streaming and made purchases through the platform (Malhotra, Nunan and Birks, 2017).

**Table 2. Research Variables and Related Questions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Research Variables** | **Question Code** | **Question** | **Sources** |
| **Promotion Time Limit** | PTL1 | I feel that the promotion time given in live streaming is usually relatively short. | Zhang et al., 2022 Payne & Bettman, 1996 Marjerison et al., 2022 Yulianto et al., 2021  Łepkowska, 2022 |
| PTL2 | I feel like I have less time to decide if I want to buy something that’s on sale live. |
| PTL3 | The time pressure because of the promotion time limit pushes me to buy as quickly as possible. |
| PTL4 | I feel that if the product is not purchased immediately, I may not be able to purchase a product with the same promotion. |
| **Price Promotion** | PP1 | I am easily attracted to price promotion. | Wongsunopparat & Deng, 2021  Yulianto, Sisko and Hendriana, 2021  Marjerison, Hu and Wang, 2022 |
| PP2 | I buy products from TikTok live streaming because of the price promotion. |
| PP3 | I buy products from TikTok live streaming because of the cheap price and the good quality. |
| PP4 | The price promotion offered by streamers on TikTok live streaming is more favourable compared to other platforms. |
| PP5 | Discounts on TikTok live streaming platform are more attractive than others. |
| **Trust** | T1 | I have strong beliefs in live streaming platforms. | Kotler et al., 2017 Le & Hoang, 2020  Wu and Huang, 2023 |
| T2 | I trust the live streaming platform’s integrity. |
| T3 | I believe that the live streaming platform suggestion is relevant. |
| T4 | I believe that a live streaming platform has the ability to satisfy my needs and wants. |
| **Perceived Risk** | PR1 | I feel uncomfortable buying products on TikTok live streaming. | Sreya & Raveendran, 2016 Snoj et al., 2004 Qualati et al., 2021 |
| PR2 | I worry that the products do not meet my expectations. |
| PR3 | I worry that the price offered is higher than other platforms. |
| PR4 | I worry that the product quality is not worth the price. |
| **Impulsive Buying Behaviour** | IBB1 | While watching TikTok live streaming, I often buy things spontaneously. | Azizah et al., 2022  Rook, 1987 |
| IBB2 | When I watch a seller's Live Streaming on TikTok, I often buy something that I didn’t intend to buy. |
| IBB3 | I have a sudden urge to purchase something during a flash sale in Live Streaming. |
| IBB4 | I ended up spending more money than I previously set out to spend. |
| IBB5 | I feel regret after buying the product on live streaming. |

The questionnaire uses a Likert scale to measure respondents' answers to indicate their level of agreement or disagreement with a statement of each variable with a scale from strongly agree to strongly disagree. In order to perform data analysis, we used the partial least squares (PLS) method using SmartPLS. Therefore, this research tests the following research model to assess the determinantal factors that influence the consumer impulsive buying behaviour in Indonesia.

**Conceptual Framework**

A diagram of a flowchart

AI-generated content may be incorrect.**Figure 3: Conceptual framework (property of the authors)**

Based on what has been presented in the conceptual framework, there are 6 hypotheses are formulated in this research, as follow:

H1: Price Promotion affects Perceived Risk

H2: Promotion Time Limit affects Perceived Risk

H3: Price Promotion affects Consumer Impulsive Buying Behaviour

H4: Promotion Time Limit affects Consumer Impulsive Buying Behaviour

H5: Perceived Risk affects Consumer Impulsive Buying Behaviour

H6: Trust affects Consumer Impulsive Buying Behaviour

Findings

**Demographics and products bought**

Various sample characteristics such as gender, age, location, occupation, purchasing behaviour, and type of products were analyzed using a descriptive analysis technique. As illustrated in the table, female respondents (66.4%) dominated as compared to males (33.6%), with most of 91.6% of them living in Jakarta, most under 22 years old.

Regarding their online impulsive purchasing behaviour on TikTok Live Streaming, 43.6% had made less than two purchases in the last three months. Another 43.2% answered that they had made between one and three purchases. The remaining 11.2% have made up to six purchases, while a few had made more than seven. Main products bought during TikTok Live Streaming were skincare products (46.8%), followed by apparel (19.2%), beauty products (15.6%), food (13.2%), and household products (5.3%).

**Table 3: Demographics and Purchasing Behaviour on TikTok**

|  |  |
| --- | --- |
| **Profile** | **(%)** |
| **Gender** |  |
| Male | 33.6 |
| Female | 66.4 |
| **Location** |  |
| Jakarta | 91.6 |
| Other | 8.4 |
| **Age (years)** |  |
| 18-22 | 51.2 |
| 23-27 | 39.6 |
| 28-32 | 2.4 |
| 33-40 | 4.4 |
| Other | 2.4 |
| **Occupation** |  |
| Student | 83.2 |
| Employee | 12.0 |
| Other | 4.8 |
| **Online Impulsive Purchasing Behaviour on TikTok Live Streaming (last 3 months)** |  |
| Less than 2 purchases | 43.6 |
| 1-3 purchases | 43.2 |
| Up to 6 purchases | 11.2 |
| More than 7 purchases | 2.0 |
| **Main Products Bought on TikTok Live Streaming** |  |
| Skincare Products | 46.8 |
| Apparel | 19.2 |
| Beauty Products | 15.6 |
| Food | 13.2 |
| Household Products | 5.3 |

**Validity and Reliability Analysis Results (Outer Model)**

The convergent validity was tested using Composite Reliability (CR), Outer Loading or Factor Loading, and Average Variance Extracted (AVE). As table 4. shows, all indicators. Convergent validity is assessed based on the outer loading results for each indicator, where the loading factor limit is 0.70 in which the indicator can be declared to have high validity and fulfill the convergent validity test if the outer loading value is > 0.70.

Based on the results, the Cronbach's Alpha and Composite Reliability values of the IBB, PP, PR, PTL and T variables have values above 0.7, which indicates that all constructs are reliable. According to Sarstedt et al, (2017) the AVE is higher than 0.5 or more indicating that most of the variance in each indicator was accounted for by its own construct (Gefen et al., 2000; Rita et al., 2019). In this research, the AVE value of the IBB, PP, PR, PTL and T variables has a value above 0.5 which indicates sufficient convergent validity.

**Table 4 : Results of the measurements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Items** | **Outer loading** | **Cronbach's Alpha** | **Composite Reliability** | **Average Vari-ance Extracted (AVE)** |
| Impulsive Buying Behaviour | | | | |
| IBB1 | 0.865 | 0.903 | 0.906 | 0.721 |
| IBB2 | 0.858 |
| IBB3 | 0.847 |
| IBB4 | 0.846 |
| IBB5 | 0.830 |
| Price promotion | | | | |
| PP1 | 0.934 | 0.953 | 0.955 | 0.842 |
| PP2 | 0.932 |
| PP3 | 0.916 |
| PP4 | 0.911 |
| PP5 | 0.895 |  |  |  |
| Perceived risk | | | | |
| PR1 | 0.966 | 0.972 | 0.973 | 0.923 |
| PR2 | 0.956 |
| PR3 | 0.961 |
| PR4 | 0.960 |
| Promotion time limit | | | | |
| PTL1 | 0.911 | 0.867 | 0.868 | 0.719 |
| PTL2 | 0.915 |
| PTL3 | 0.792 |
| PTL4 | 0.762 |
| Trust | | | | |
| T1 | 0.833 | 0.868 | 0.871 | 0.717 |
| T2 | 0.829 |
| T3 | 0.877 |
| T4 | 0.846 |

Following the convergent validity test the table 5 presents outer loading results. It shows that all variable items have an outer loading value above 0.7. Therefore, all variable items are valid for the research model. The result indicates that the convergent validity results remain consistent, confirming the high validity of the measurement instruments.

Each construct's cross loading value is tested to make sure its correlation with the measurement item is higher than that of the other constructs. According the results presented in the following table, it can be concluded that the discriminant validity requirement has been met.

**Table 5: Cross Loading Test Results**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | IBB | PP | PR | PTL | T | T x PR |
| IBB1 | **0.865** | 0.391 | 0.326 | 0.343 | 0.460 | -0.293 |
| IBB2 | **0.858** | 0.349 | 0.305 | 0.375 | 0.437 | -0.234 |
| IBB3 | **0.847** | 0.375 | 0.335 | 0.366 | 0.390 | -0.331 |
| IBB4 | **0.846** | 0.356 | 0.346 | 0.368 | 0.351 | -0.228 |
| IBB5 | **0.830** | 0.388 | 0.339 | 0.323 | 0.338 | -0.240 |
| PP1 | 0.421 | **0.934** | 0.765 | 0.449 | 0.291 | -0.286 |
| PP2 | 0.390 | **0.932** | 0.747 | 0.414 | 0.315 | -0.263 |
| PP3 | 0.383 | **0.916** | 0.785 | 0.457 | 0.263 | -0.299 |
| PP4 | 0.419 | **0.911** | 0.757 | 0.456 | 0.290 | -0.291 |
| PP5 | 0.394 | **0.895** | 0.659 | 0.414 | 0.310 | -0.295 |
| PR1 | 0.378 | 0.817 | **0.966** | 0.574 | 0.315 | -0.351 |
| PR2 | 0.349 | 0.765 | **0.956** | 0.533 | 0.252 | -0.383 |
| PR3 | 0.366 | 0.765 | **0.961** | 0.582 | 0.280 | -0.366 |
| PR4 | 0.395 | 0.768 | **0.960** | **0.560** | 0.287 | -0.391 |
| PTL1 | 0.329 | 0.412 | 0.518 | **0.911** | 0.282 | -0.289 |
| PTL2 | 0.336 | 0.404 | 0.513 | **0.915** | 0.282 | -0.294 |
| PTL3 | 0.410 | 0.395 | 0.470 | **0.792** | 0.251 | -0.297 |
| PTL4 | 0.340 | 0.406 | 0.478 | **0.762** | 0.254 | -0.335 |
| T1 | 0.376 | 0.245 | 0.229 | 0.291 | **0.833** | -0.161 |
| T2 | 0.387 | 0.303 | 0.236 | 0.217 | **0.829** | -0.185 |
| T3 | 0.380 | 0.273 | 0.247 | 0.303 | **0.877** | -0.143 |
| T4 | 0.437 | 0.261 | 0.283 | 0.262 | **0.846** | -0.200 |
| T x PR | -0.313 | -0.312 | -0.388 | -0.359 | -0.205 | **1.000** |

Variables can be considered to have good discriminant validity if the root AVE value of each construct is greater than the correlation value between constructs and other constructs (Hair et al. 202x). From the table, the root AVE value is the value on the diagonal axis. It shows that the root AVE value is greater than the correlation value of other variables. For example, the IBB variable has an AVE root value of 0.849, which is greater than the AVE root value of the PP variable (0.438), PR (0.388), PTL (0.418) and T (0.468).

**Table 6: Fornell-Lacker results**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | IBB | PP | PR | PTL | T |
| IBB | **0.849** |  |  |  |  |
| PP | 0.438 | **0.918** |  |  |  |
| PR | 0.388 | 0.811 | **0.961** |  |  |
| PTL | 0.418 | 0.478 | 0.585 | **0.848** |  |
| T | 0.468 | 0.320 | 0.296 | **0.316** | **0.847** |

**Structural Model Analysis (Inner Model)**

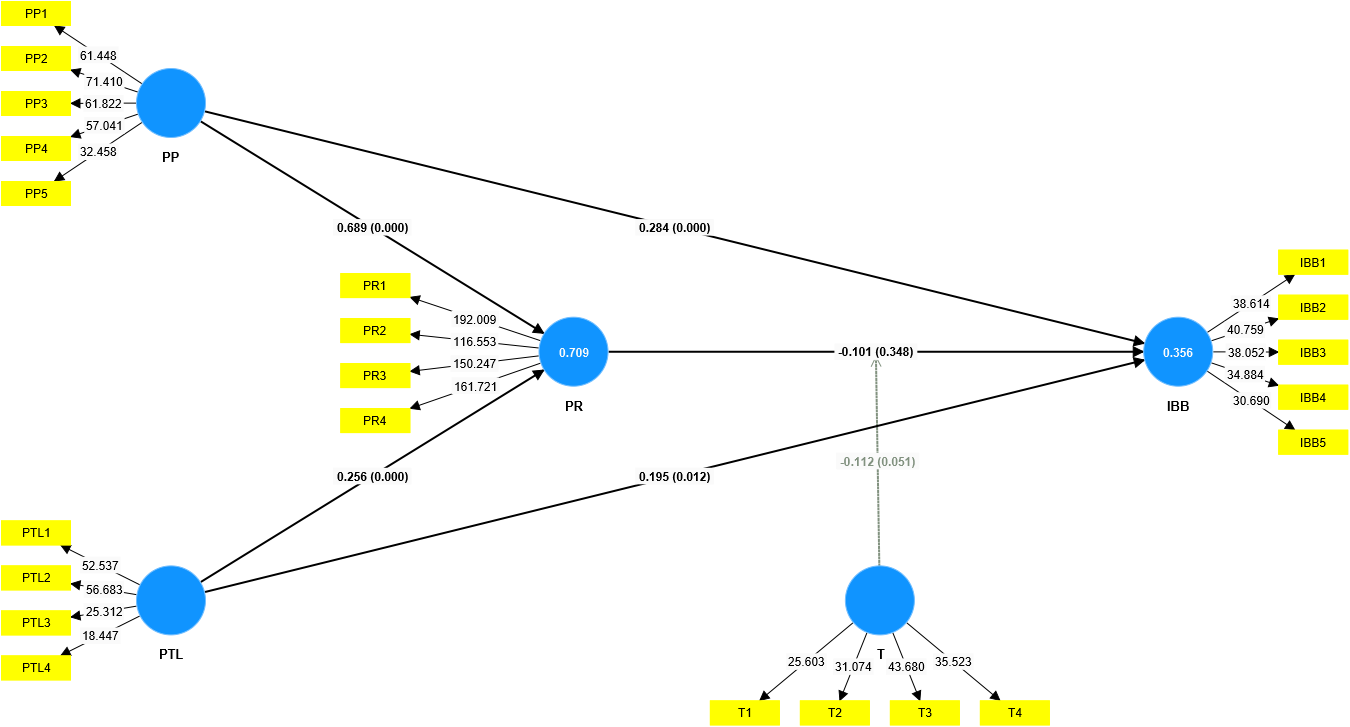
**R Square Test**

Based on the results shown below, the R-square value for PP, PR, PTL and T variables on IBB is 35.6%. It indicates that the distribution of IBB variables can be explained by PP, PR, PTL and T variables by 35.6%. The R Square value for PP and PTL variables on PR is 70.9%. It indicates that the distribution of PR variables can be explained by PP and PTL variables by 70.9%.

* For IBB, the R-Square result is 0.356, R-Square adjusted is 0.343
* For PR, the R-Square result is 0.709, R-Square adjusted is 0.706

**Hypothesis Testing**

Hypothesis testing can be used to partially test the effect of exogenous variables (Y) on endogenous variables (X). The P value in the hypothesis test must be below 0.05 for Ha to be accepted and the t table value must be above 1.96.



**Figure 4 Result of Hypothesis Testing (property of the authors)**

**Table 7: Results of Hypothesis Testing**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hypotheses** | **Path** | **Original Sample (O)** | **T statistics** | **P values** | **Description** |
| H1 | PP → PR | 0.689 | 14.950 | 0.000 | Accepted |
| H2 | PTL → PR | 0.256 | 5.579 | 0.000 | Accepted |
| H3 | PP → IBB | 0.284 | 3.500 | 0.000 | Accepted |
| H4 | PTL → IBB | 0.195 | 2.527 | 0.014 | Accepted |
| H5 | PR → IBB | -0.101 | 0.939 | 0.348 | Rejected |
| H6 | T → IBB | 0.319 | 5.154 | 0.000 | Accepted |

Therefore, hypotheses H1, H2 and H4 are accepted.

DISCUSSION

**Review of the results on hypotheses**

This study is examined the influencing factors including price promotion (PP), promotion time limit (PTL), perceived risk (PR) and trust (T) on consumer impulsive purchasing behaviour among generation Z. The findings extracted from the analytic model show that PP and PTL influence both PR and IBB. PP has a positive significant effect on PR which indicates the direction of the relationship between PP and PR is positive with a t statistic of 14,950 (above 1.96) and a p value of 0.000 (below 0.05) thus, H1 is accepted.

PTL has a positive significant effect on PR, which shows the direction of the relationship between PTL and PR is positive with a t statistic of 4.650 (above 1.96) and a p value of 0.000 (below 0.05), as the result, H2 is accepted.

Price Promotion (PP) on Impulsive Buying Behaviour (IBB) also shows a positive significant effect of 0.284 (positive) which shows the direction of the relationship between PP and IBB is positive with a t statistic of 3.500 (above 1.96) and a p value of 0.000 (below 0.05), as the result, H3 is accepted.

Promotion Time Limit (PTL) has a positive significant effect on Impulsive Buying Behaviour (IBB) of 0.195 which shows the direction of the relationship between PTL and IBB is positive with a t statistic of 2.527 (above 1.96) and a p value of 0.014 (below 0.05), as the result, H4 is accepted.

However, Perceived Risk (PR) turns out has no significant effect on Impulsive Buying Behaviour (IBB) with -0.101 since it has a p-value of 0.348 (above 0.05) and t-statistics of 0.939 (below 1.96), as the result, H5 is rejected.

Trust (T) has a positive effect on IBB of 0.319 (positive) which shows the direction of the relationship between T and IBB is positive with a t statistic of 5.154 (above 1.96) and a p value of 0.000 (below 0.05) as the result, H6 is accepted.

While Trust (T) as the moderating variable cannot moderate the effect of Perceived Risk (PR) on Impulsive Buying Behaviour (IBB) -0.112 since it has a p value of 0.051 (above 0.05) and a t statistic of 1.951 (below 1.96), as the result, H7 is rejected.

**Insights**

The positive significant effects that exist between Price Promotion (PP) and Perceived Risk (PR), as well as between Promotion Time Limit (PTL) and Perceived Risk (PR), suggest that when consumers encounter price promotions and limited-time offers during live streaming, they perceive less risk associated with their purchase (Sreya and Raveendran, 2023; Mahliza, 2020). This phenomenon can be attributed to several factors.

First, the existence of Price Promotion (PP) can create a perception of value and affordability among consumers, reducing concerns about overpaying or receiving a product of poor quality. In addition, the urgency created by the Promotion Time Limit (PTL) customers may perceive a lower risk if they focused more on the advantages of the offer than on any potential risks, leading to a lower perception of risk (as in Sreya and Raveendran, 2023). When consumers see price promotions, they feel like they are getting a good deal, which makes them excited and more likely to encourage impulsive buying (see also the Popilix survey results, Iskandar et al., 2023).

The attraction of a discount creates a sense of urgency and excitement, prompting them to buy things spontaneously without thinking it through. Promotion Time Limit (PTL) has a positive significant effect on Impulsive Buying Behaviour (IBB) since it may create a sense of urgency and Fear of Missing Out (FOMO) among consumers as a result of limited-time offerings. The stimulus of PTL seems to directly trigger the response (Zhang, Wang and Zhang, 2021) – Perceived Risk (PR) turns out not to have significant effect on Impulsive Buying Behaviour (IBB), as shown by Sanjaya, Barkah and Sulistiowati (2023). This means that consumers may have a high level of trust in platforms and sellers.

Trust has a positive effect on IBB, it may happen because when consumers trust a platform, they feel more secure and confident in their purchases (Herlina, 2023). Trust also enhances the shopping experience, making promotions more effective and encouraging spontaneous buying behaviour. Therefore, high trust levels lead to increased impulsive buying.

Trust as the moderating variable cannot moderate the effect of Perceived Risk (PR) on Impulsive Buying Behaviour (IBB). Although trust is an essential factor of online shopping, it may not have a significant moderating effect on the relationship between perceived risk and impulsive buying behaviour, contrary to some other findings (e.g. Xiao et al., 2019; Miao et al., 2022). Consumers' impulsive purchases are often driven by immediate emotional responses and situational factors (Lee and Chen, 2021), rather than trust and perceived risk. Therefore, even when consumers have high levels of trust in the platform, the involvement of price promotions and promotion time limits is likely to overshadow the moderating role of trust, the timing issue might prevail (Zahara, Rini and Sembiring, 2021; Wardah and Harti, 2021).

Conclusion

Price promotion and promotion time limits have been found to positively influence Gen Z & Y's impulsive buying behaviour in Indonesia. Brands and sellers can use this to attract consumers and encourage them to make purchases immediately (see Dwiastono, 2024; Herlina, 2023), while still giving consumers enough time to find out about product details to avoid regret in the end.

The importance of trust in influencing impulsive buying behaviour among new generations has also been demonstrated. Brands or businesses should further prioritize efforts to enhance trustworthiness and credibility in the brand and continue to maintain and increase consumers' sense of trust in the brand. This could be done by improving product quality, offering reliable customer service (Herlina, 2023), and encouraging transparent and genuine interactions with customers during live streaming, giving honest product recommendations, and responsive customer service so that customers will trust and believe that the brand or business is reliable (Fitryani, Nanda and Aristyanto, 2021).

To reduce perceived risk, brands or sellers should provide details about product information including features, specifications and instructions by conducting live demonstrations and showcasing the product and also address common concerns while live streaming in order to help consumers when making purchases (Wu and Huang, 2023). Providing clear return and refund policies can also help reduce perceived risk for new generation consumers.

Limitations and Outlook

Since the research specifically only uses TikTok as the platform to measure the behaviour where most of the users are dominated by young people which results in a sample that is not representative of the broader population. Moreover, this research only focuses on consumer impulsive buying behaviour on TikTok platform, it may not be representative for other social media or e-commerce platforms. Therefore, the findings of this study may not be generalizable to other platforms.

The following future research directions are suggested:

1. Investigate Factors Influencing Purchase Decisions: Future research should delve into the specific factors that influence consumers' purchase decisions on the TikTok Shop. This could involve examining additional variables such as price, product variety, brand loyalty, and social influence to gain a more comprehensive understanding of the decision-making process.
2. Explore Contextual Factors: Considering the unique context of the TikTok Shop as an emerging online shopping platform, future studies can explore the role of contextual factors such as user-generated content, social interactions, and influencers in shaping consumers' perceptions, trust, and purchase decisions.
3. Longitudinal Studies: Conducting longitudinal studies can provide insights into the dynamic nature of reputation, trust, and purchase decisions on the TikTok Shop. Examining changes in consumer behaviour and perceptions over time can help identify trends, challenges, and opportunities for fashion businesses and the TikTok Shop.
4. Comparative Studies: Comparative studies that examine the reputation, trust, and purchase decisions on other e-commerce platforms or social media platforms can provide a broader perspective. Comparing different platforms can help identify unique features, strengths, and weaknesses, contributing to a more comprehensive understanding of consumer behaviour in the online fashion retail landscape.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

Disclaimer (Artificial intelligence)

Authors hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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