p-ISSN: 2723-6609 e-ISSN: 2745-5254
Vol. 5, No. 10 October 2024 http://jist.publikasiindonesia.id/

The Influence of Social Interaction, Digital Celebrities Relationship, and Sale Proneness to Online Impulse Buying in Social Commerce

Ismeralda Putri Hasiani[1*], Triana Rahajeng Hadiprawoto[2]
Universitas Indonesia, Depok, Indonesia
Email: aldahasiani@gmail.com[1*]

*Correspondence

Keywords:
Social interaction; Impulse buying; Parasocial relationship; Sale proneness; Social commerce

ABSTRACT

This research examines factors influencing consumers' impulse buying behavior in social commerce. This study adopts a quantitative approach. The research was conducted in Indonesia. The research population is TikTok app users who frequently use the TikTok Shop feature. This study reports the responses of 303 respondents using non-probability and purposive sampling techniques. Data were primarily gathered through self-reported online questionnaires. Partial Least Square (PLS) was then used to test the hypothesized relationships. This study's results indicate that social interactions, parasocial relationships with digital celebrities, and sale proneness are proven to influence the urge to buy impulsively, resulting in impulse buying behavior. Our study highlights the importance of online social interaction, parasocial relationships with digital celebrities, and sale proneness in influencing the urge to buy impulsively, resulting in impulse buying behavior. To our knowledge, this study is the first to find what caused impulse buying in social commerce in Indonesia. Almost no previous research has examined sale proneness as a moderating role, especially in developing countries. Social commerce must focus on creating a conducive buying and selling environment in social commerce, creating healthy price competition with conventional business actors and MSMEs, limiting and preventing market monopoly, and limiting or even prohibiting the sale of cheap products originating from China.

Introduction

In today's era, one of the social media application platforms widely used by people worldwide is TikTok. TikTok is a social media application used to create, share, and watch short videos. It was developed by ByteDance, a technology company from China (Herman, 2019). TikTok was first launched in 2016. The user growth rate of TikTok has rapidly increased over time. According to Business of Apps (2022) data, as of Q3 2022, TikTok has reached 1.534 billion monthly active users worldwide. TikTok is also very popular in Indonesia and a widely used social media application. According to data from We Are Social, Indonesia ranked second with 99.1 million active TikTok users (Rizaty, 2022). TikTok users in Indonesia spend an average of 23.1 hours monthly on the platform.

Starting from an entertainment-based platform where users can consume content based on their interests, now TikTok has more features and uses (investopedia.com, 2023). It is simple; users need to log in and watch videos. They also can interact by liking, commenting, and sharing the video. Users can swipe up if they dislike the video, and the following will appear. This application is ideal for people needing quick entertainment because the average video duration is short. The five types of content most TikTok users favor are comedy, education, fashion and beauty, talent, and food (Elmira, 2020). Additionally, TikTok has become a platform for promoting various products (investopedia.com, 2023). Creators recommend and endorse products on their feeds, then direct viewers to purchase them on marketplaces or e-commerce platforms.

Seeing this phenomenon, in 2021, TikTok launched a new feature called TikTok Shop (techinasia.com, 2021). TikTok Shop is a social commerce feature that allows users and content creators to promote and sell products through the TikTok app. The functionality of this new shopping feature was introduced on TikTok in response to the increased sales of various products after they were promoted through the social media platform. TikTok Shop has long been awaited as a social commerce feature, bringing in-app shopping and simplified product discovery into the platform. This enables users to shop on TikTok without leaving the app or switching to other marketplaces and e-commerce platforms. According to an Adweek-Morning Consult survey in May 2021, 15% of adults and 36% of Gen Z have made purchases on TikTok. The survey also found that 49% of TikTok users are inclined to purchase products or services after seeing ads, promotions, or reviews on TikTok (Pflughoeft, 2021). This finding aligns with the findings from Zafar et al. (2021), who mentioned that businesses integrate social media to influence users' impulsive purchase behavior.

Impulse buying is unplanned shopping triggered by situational marketing and social cues in the online environment (Zafar et al., 2021); Chan et al., (2017). Research conducted by Chen et al. (2016); Zafar et al., (2020) suggests that social media has several interactive stimulators that can potentially influence impulsive purchases. According to a study conducted by Zafar et al. (2020), one of the factors that can influence impulsive buying is the parasocial relationship with digital celebrities, also known as social media influencers. This highlights the importance of digital celebrity relationships for businesses in triggering impulsive behavior.

Another study conducted by Xu et al. (2020) suggests that online social interactions are also a crucial element that can lead someone to make impulsive purchases. Xu et al. (2020) also found that source credibility, observational learning, and review quality are essential antecedents of the perceived usefulness of an online review. Furthermore, source credibility, observational learning, and perceived usefulness positively influence positive affect, which subsequently leads to the urge to buy and ultimately results in someone making an impulsive purchase (Xu et al., 2020).

Research conducted by Muratore (2016) found another factor that can influence consumers' tendency for impulsive buying: sale proneness. Sale proneness is an increased inclination to respond to sales offers through discounts, where the offered price positively

affects purchase evaluations (Jacinda, 2019; Lichtenstein et al., 1993). The results of the study by Jacinda also support the research conducted by Muratore (2016), indicating that sale proneness and impulsive buying have a significant and positive relationship.

In this research, we adopt the Stimulus-Organism-Response framework (SOR) to investigate the possible impact of digital influencers, online social interaction, and TikTok's user interface as a stimulus on consumers' impulse buying behavior. Additionally, this study examines the role of perceived usefulness, positive affect, and parasocial relationship as organism or cognitive or affective states that influence the urge to buy impulsively, resulting in response to impulse buying behavior. Sale proneness is also being examined as a moderating variable between the urge to buy impulsively and impulse buying behavior.

Methods

This research type is explanatory, which aims to explain the causal relationship between variables through hypothesis testing (Sugiyono, 2015). This study uses a quantitative approach. The research was conducted in Indonesia. The research populations are TikTok app users. The sample used in this study was taken using a non-probability sampling approach and a purposive sampling technique based on specific criteria. The sample criteria set in this study are TikTok app users who frequently use the TikTok Shop feature and are above 18 years old. To determine the sample size in this study, the approach proposed by Hair et al. (2014) was used, which is the number of statements/items multiplied by 5.

The number of statement items in this study is 55 statements multiplied by 5, with the minimum number of samples in this study being 275. The number of data analyzed was 303. Data is obtained by distributing online questionnaires via Google Forms using a six-point Likert scale (from 1 = strongly disagree to 6 = strongly agree). The data analysis technique uses Partial Least Square (PLS). Model evaluation in PLS analysis is carried out in the measurement model (outer model) and the structural model (inner model). The former is a measurement model that shows the relationship between variables and their indicators. The latter indicates hidden or latent variables between exogenous and endogenous variables (Hair Jr. J. E, 2021). The measurement in this study can be seen in Table **1**.

Table 1.
Measurement tools

Variable	Items	Adapted Sources
Review Quality	1. The reviews on the TikTok Shop platform are complete 2. The reviews on the TikTok Shop platform are accurate 3. The reviews on the TikTok Shop platform are credible 4. The reviews on the TikTok Shop platform by other users on TikTok Shop are objective (according to the truth)	Xu *et al*. (2020). Park et al. (2007)

Source Credibility	1. People who left reviews on TikTok Shop are knowledgeable in evaluating quality of products 2. People who left reviews on TikTok Shop are experts in evaluating the quality of products 3. People who left reviews on TikTok Shop are trustworthy 4. People who left reviews on the TikTok Shop website are reliable	Xu *et al*. (2020), Cheung et al. (2009)
Observational Learning	1. It is easy for me to observe that many people purchase products on TikTok Shop 2. I observe that the sales volumes of products on TikTok Shop are high 3. I observed whether people on TikTok Shop were buying the products I saw 4. I usually read other people's reviews and comments about a product on TikTok Shop	Xu *et al*. (2020), Zhang et al. (2014)
Website Ease of Use	1. I think the navigation to get product information in TikTok Shop is simple 2. For me, getting product information on the TikTok Shop is easy 3. In TikTok Shop, relevant information is presented in a prominent and easy-to-find manner 4. TikTok provides clear and concise navigation menus and icons that are easy to understand	Xu *et al*. (2020), Liu et al. (2013)
Similarity	1. I feel that my favorite digital celebrities or those I follow on TikTok share similar values with me 2. I feel that my favorite digital celebrities or those I follow on TikTok have similar interests 3. I feel like my favorite digital celebrities, or the ones I follow on TikTok, have similar preferences to me 4. I feel like my favorite digital celebrities, or the ones I follow on TikTok, use products for the same reasons	Xiang et al., (2016)
Expertise	1. I feel that my favorite digital celebrities, or the ones I follow on TikTok, are knowledgeable about the products and brands they promote 2. I feel that my favorite digital celebrities or those I follow on TikTok are experts in their fields and also experts on the products and brands they promote 3. I feel that my favorite digital celebrities or those I follow on TikTok are experienced in choosing the products and brands they promote	Xiang *et al*. (2016)

	4. I feel that my favorite digital celebrities or the ones I follow on TikTok have more knowledge and information about the promoted products and brands compared to other people	
Likeability	1. I find my favorite digital celebrities or the ones I follow on TikTok fun and likable 2. I feel like my favorite digital celebrities or the ones I follow on TikTok are good people 3. I feel like my favorite digital celebrities or the ones I follow on TikTok are popular 4. I feel excited to see content created by my favorite digital celebrities or those I follow on TikTok	Xiang *et al*. (2016)
Perceived Usefulness	1. Using the TikTok Shop app can improve my performance in shopping 2. Using the TikTok Shop app can increase my productivity in shopping 3. Using the TikTok Shop app can increase my effectiveness in shopping 4. Using the TikTok Shop app can increase my knowledge about the benefits of a product.	Xu *et al*. (2020), Parboteeah et al. (2009)
Positive Affect	1. When shopping at TikTok Shop, I feel excited 2. While shopping at TikTok Shop, I felt enthusiastic 3. While shopping at TikTok Shop, I felt inspired 4. When I shop at TikTok Shop, I feel happy	Xu *et al*. (2020), Floh dan Madlberger (2013)
Parasocial Relationship	1. I feel close enough to use the posts of my favorite digital celebrities as a reference when I want to find recommendations or buy a product 2. I feel comfortable with the messages delivered by the digital celebrities I follow on their TikTok accounts 3. I can rely on the information I get from my favorite digital celebrities 4. I feel fascinated by my favorite digital celebrities on social media, especially TikTok 5. I feel that the accounts of my favorite celebrities or those I follow are helpful for my interests or likes (in specific categories such as beauty, etc)	Zafar *et al.* (2020)
Urge to Buy Impulsively	1. I have the desire to purchase items that are both in line with and out of my shopping intention at TikTok Shop	Xu *et al*. (2020), Parboteeah et al. (2009)

	2. I have the urge to buy items that do not align with my shopping intentions at TikTok Shop 3. I incline to purchase items outside my shopping goals on TikTok Shop 4. I tend to buy things I have no desire to buy when I scroll through TikTok Shop	
Sale Proneness	1. A discount from TikTok Shop on a product can be one of the reasons for me to buy it 2. When I buy a product with a discount from TikTok Shop, I feel like I am getting a good deal 3. I have my favorite products, but I usually buy them when there is a discount from TikTok Shop 4. Others should try to buy items that are on sale from TikTok Shop 5. I am more likely to buy items that have a discount from TikTok Shop	Jacinda (2019), Lichtenstein et al. (1993)
Impulse Buying Behavior	1. The purchases I make at TikTok Shop sometimes happen spontaneously 2. The purchases I make at TikTok Shop sometimes happen unplanned 3. I do not intend to purchase before viewing the content posts of digital celebrities on TikTok Shop 4. Before opening TikTok, I had no intention of making a purchase 5. I cannot resist purchasing TikTok Shop	Zafar *et al.* (2020)

Results and Discussion

In examining the first-order outer model, which investigated the variables and dimensions constituting impulse buying, it was observed that the outer loadings exceeded 0.5, suggesting that no adjustments to the model were necessary. The evaluation of construct reliability relied on Cronbach's Alpha values (>0.6), Composite Reliability values (>0.7), and AVE values (>0.5) for each variable. The findings presented in Table 3 demonstrate the reliability of each variable and dimension. Subsequent analysis indicates that the second-order variable, impulse buying, satisfies the criteria. Both Cronbach's Alpha and Composite Reliability values meet the stipulated standards, affirming the reliability of all constructs. Additionally, AVE values surpassing 0.5 indicate the reliability of the correlation between indicators and the underlying variable or dimension.

Table 2.
Validity and reliability of variables

Variable	Indicators	*Mean*	*Outer Loading*	*AVE*	*Cronbach's Alpha*	*Composite Reliability*
Expertise	EX1	4.799	0.841	0,717	0,858	0.910
	EX2	4.611	0.876			

	EX3	4.789	0.878			
	EX4	4.551	0.789			
Impulse Buying Behavior	IB1	4.155	0.848	0,624	0,849	0.892
	IB2	4.135	0.884			
	IB3	3.901	0.761			
	IB4	4.254	0.669			
	IB5	3.528	0.769			
Likeability	LI1	5.007	0.848	0,676	0,840	0.893
	LI2	4.937	0.786			
	LI3	4.970	0.836			
	LI4	4.974	0.818			
Observational Learning	OL1	4.848	0.761	0,581	0,756	0.846
	OL2	4.865	0.812			
	OL3	4.894	0.825			
	OL4	5.043	0.636			
Positive Affect	PA1	4.492	0.918	0,764	0,896	0.928
	PA2	4.545	0.918			
	PA3	4.333	0.811			
	PA4	4.624	0.844			
	PSR1	4.396	0.835			
Parasocial Relationship	PSR2	4.640	0.848	0,695	0,855	0.919
	PSR3	4.653	0.843			
	PSR4	4.538	0.831			
	PSR5	4.706	0.810			
Perceived Usefulness	PU1	4.399	0.917	0,706	0,834	0.904
	PU2	4.363	0.904			
	PU3	4.482	0.847			
	PU4	4.769	0.670			
Review Quality	RQ1	4.409	0.814	0,667	0,904	0,889
	RQ2	4.422	0.836			
	RQ3	4.449	0.827			
	RQ4	4.482	0.789			
Source Credibility	SC1	4.201	0.879	0,775	0,856	0,932
	SC2	3.997	0.865			
	SC3	4.399	0.900			
	SC4	4.403	0.879			
Similarity	SI1	4.568	0.821	0,699	0,862	0,903
	SI2	4.680	0.858			

	SI3	4.604	0.873			
	SI4	4.429	0.790			
Sale Proneness	SP1	5.066	0.836	0,644	0,862	0,900
	SP2	5.000	0.804			
	SP3	4.782	0.733			
	SP4	4.815	0.803			
	SP5	4.944	0.832			
Urge to Buy Impulsively	UBI1	4.353	0.765	0,728	0,874	0,914
	UBI2	3.934	0.899			
	UBI3	3.743	0.890			
	UBI4	3.911	0.852			
Website Ease of Use	WE1	4.657	0.837	0,708	0,863	0,907
	WE2	4.855	0.867			
	WE3	4.861	0.839			
	WE4	4.690	0.822			

According to the results presented in Table 5, three direct links between independent and dependent variables do not demonstrate statistical significance. These include the relationship between review quality and positive affect, where the p-value is 0.498 (>0.05), and the correlation between confidence source credibility and positive affect, indicating a p-value of 0.273 (>0.05). Furthermore, the associations between website ease of use and positive affect, with a p-value of 0.712 (>0.05), were also identified as not statistically significant.

Table 3.
Summary of causal relationship analysis

Hypothesis	Path Coefficient	t-value	p-value	Result
H1a: RQ -> PU	0.355	4.286	0.000	Accepted
H1b: SC -> PU	0.224	2.810	0.005	Accepted
H1c: OL -> PU	0.220	3.334	0.001	Accepted
H2a: RQ -> PA	-0.039	0.678	0.498	Rejected
H2b: SC -> PA	0.069	1.095	0.273	Rejected
H2c: OL -> PA	0.111	2.072	0.038	Accepted
H3: WE -> PA	0.026	0.370	0.712	Rejected
H4a: SI -> PSR	0.471	8.075	0.000	Accepted
H4b: EX -> PSR	0.200	3.351	0.001	Accepted

Hypothesis	Path Coefficient	t-value	p-value	Result
H4c: LI -> PSR	0.242	4.538	0.000	Accepted
H5: PU -> PA	0.567	10.153	0.000	Accepted
H6: PSR -> PA	0.235	4.091	0.000	Accepted
H7: PA -> UBI	0.362	4.737	0.000	Accepted
H8: PSR -> UBI	0.163	2.025	0.043	Accepted
H9: UBI -> IB	0.745	21.848	0.000	Accepted
H10: SP -> IB	0.084	2.120	0.034	Accepted
SP x UBI -> IB	0.078	2.207	0.027	Accepted

From the results of testing H1a, as shown in Table 3, it can be observed that Review Quality significantly positively influences the Perceived Usefulness of using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.355 (positive sign / has a direct effect), the t-statistic of 4.286 (>1.960), and the p-value of 0.000 (≤0.05). It also can be determined that H1b, Source Credibility, significantly positively influences the Perceived Usefulness of using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.224 (positive sign / has a direct effect), the t-statistic of 2.810 (>1.960), and the p-value of 0.005 (≤0.05). H1c declared that observational learning significantly positively influenced the perceived Use of TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.220 (positive sign / has a direct effect), the t-statistic of 3.334 (>1.960), and the p-value of 0.001 (≤0.05).

From the results of testing H2a, as shown in Table 3, it can be observed that Review Quality is insignificant in influencing the Positive effect of using TikTok Shop in the overall sample (n=303). This is evident from the β value of -0.039 (negative sign / has an opposite effect), the t-statistic of 0.678 (<1.960), and the p-value of 0.498 (≥0.05). For H2b, it was also declared that source credibility is insignificant in influencing the positive effect of using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.069 (positive sign / has a direct effect), the t-statistic of 1.095 (<1.960), and the p-value of 0.273 (≥0.05). However, It can be observed that Observational Learning is significant in influencing the Positive effect of using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.111 (positive sign / has a direct effect), the t-statistic of 2.072 (>1.960), and the p-value of 0.038 (≤0.05).

H3 declared that website ease of use does not significantly influence the positive effect of using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.026 (positive sign / has a direct effect), the t-statistic of 0.370 (<1.960), and the p-value of 0.712 (≥0.05).

From the results of testing H4a according to Table 3, it can be seen that similarity significantly influences parasocial relationships with digital celebrities using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.471 (positive sign / has a direct effect), the t-statistic of 8.075 (<1.960), and the p-value of 0.000 (≤0.05). For H4b, it also declared that expertise significantly influences the parasocial relationship with digital celebrities in using TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.200 (positive sign / has a direct effect), the t-statistic of 3.351 (<1.960), and the p-value of 0.001 (≤0.05). The result for H4c also declared that likeability significantly influences the parasocial relationship with digital celebrities in the use of TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.242 (positive sign / has a direct effect), the t-statistic of 4.538 (<1.960), and the p-value of 0.000 (≤0.05).

Based on the findings of the H5 analysis as presented in 3, it is evident that perceived usefulness significantly impacts the positive effect associated with using TikTok Shop in the entire sample (n=303). This is underscored by the β value of 0.567 (indicating a positive and direct effect), a t-statistic of 10.153 (exceeding 1.960, indicating statistical significance), and a p-value of 0.000 (falling below 0.05, demonstrating significance). H6 also declared that it is evident that parasocial relationships with digital celebrities significantly influence the positive effects associated with the use of TikTok Shop in the entire sample (n=303). This is apparent from the β value of 0.235 (indicating a positive and direct effect), a t-statistic of 4.091 (exceeding 1.960, indicating statistical significance), and a p-value of 0.000 (falling below 0.05, demonstrating significance).

From the results of the H7 testing, as shown in Table 3, it can be observed that positive affect significantly influences the urge to buy impulsively in using TikTok Shop in the overall sample (n=303). This is apparent from the β value of 0.362 (indicating a positive and direct effect), a t-statistic of 4.737 (exceeding 1.960, indicating statistical significance), and a p-value of 0.000 (falling below 0.05, demonstrating significance). For H8, it can also be observed that parasocial relationships with digital celebrities significantly influence the urge to buy impulsively through TikTok Shop in the overall sample (n=303). This is apparent from the β value of 0.163 (indicating a positive and direct effect), a t-statistic of 2.025 (exceeding 1.960, indicating statistical significance), and a p-value of 0.043 (falling below 0.05, demonstrating significance). In the H9 test processing, according to Table 3, it can be observed that the urge to buy impulsively significantly influences impulse buying behavior in the use of TikTok Shop in the overall sample (n=303). This is evident from the β value of 0.745 (positive / has a direct effect), a t-statistic of 21.848 (>1.960), and a p-value of 0.000 (≤0.05).

In this research, an extra examination was carried out to explore the impact of Sale proneness on the connections between the urge to buy impulsively and impulse buying behavior. The test outcomes, as presented in Table 5, reveal an association in which sale proneness serves as a mediator. This relationship was statistically significant, as indicated by a p-value of 0.027 (<0.05).

Conclusion

Based on the analysis, this research explores the stimuli and organisms driving impulse buying behavior on TikTok Shop by adapting the models of Xu et al. and Xiang et al., focusing on social interactions and parasocial relationships. This study further modifies the model by adding sale proneness as a moderator between the urge to buy impulsively and impulse buying behavior, based on Mandolfo et al. research. Key findings reveal that review quality, source credibility, and observational learning positively impact perceived usefulness, while observational learning enhances positive affect. Parasocial relationships, influenced by factors like similarity and expertise, directly boost the urge to buy impulsively, which drives impulse buying behavior. Sale proneness moderates this relationship, reducing the impact of impulse buying. Variations in findings, particularly regarding source credibility and website ease of use on positive affect, may stem from differences in platforms studied, as previous studies focused on group shopping platforms, whereas this research examines TikTok Shop users.

Bibliography

Abdelsalam, S., Salim, N., Alias, R. A., & Husain, O. (2020). Understanding Online Impulse Buying Behavior in Social Commerce: A Systematic Literature Review. *IEEE Access*, *8*, 89041–89058. https://doi.org/10.1109/ACCESS.2020.2993671

Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of Electronic Word-of-Mouth: Informational and Normative Determinants of On-line Consumer Recommendations. *International Journal of Electronic Commerce*, *13*(4), 9–38. https://doi.org/10.2753/JEC1086-4415130402

Djafarova, E., & Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. *Computers in Human Behavior*, *68*, 1–7. https://doi.org/10.1016/j.chb.2016.11.009

Elmira, P. (2020, December 15). Konten-konten Teratas TikTok Selama 2020, dari Komedi hingga Edukasi. *Liputan6.Com*. https://www.liputan6.com/lifestyle/read/4433825/konten-konten-teratas-tiktok-selama-2020-dari-komedi-hingga-edukasi

Herman, J. (2019). *How TikTok is Rewriting the World*. The New York Times. https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.htm

Iqbal, M. (2022, November 11). *TikTok Revenue and Usage Statistic (2022)*. Business of Apps. https://www.businessofapps.com/data/tik-tok-statistics/

Jacinda, A. R. (2019). *Analisis faktor-faktor yang memengaruhi pembelian impulsif: studi kasus generasi milenial muslim sebagai pengguna Go-Pay* [Skripsi]. Uiversitas Indonesia.

Lee, Y. Y., & Gan, C. L. (2020). Applications of SOR and para-social interactions (PSI) towards impulse buying: the Malaysian perspective. *Journal of Marketing Analytics*, *8*(2), 85–98. https://doi.org/10.1057/s41270-020-00077-5

Lichtenstein, D. R., Ridgway, N. M., & Netemeyer, R. G. (1993). Price Perceptions and Consumer Shopping Behavior: A Field Study. *Journal of Marketing Research*, *30*(2), 234–245. https://doi.org/10.1177/002224379303000208

Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems*, *55*(3), 829–837. https://doi.org/10.1016/j.dss.2013.04.001

Mandolfo, M., Bettiga, D., Lamberti, L., & Noci, G. (2022). Influence of Sales Promotion on Impulse Buying: A Dual Process Approach. *Journal of Promotion Management*, *28*(8), 1212–1234. https://doi.org/10.1080/10496491.2022.2060415

Muratore, I. (2016). Teens as impulsive buyers: what is the role of price? *International Journal of Retail & Distribution Management*, *44*(11), 1166–1180. https://doi.org/10.1108/IJRDM-08-2015-0120

Parboteeah, D. V., Valacich, J. S., & Wells, J. D. (2009). The Influence of Website Characteristics on a Consumer's Urge to Buy Impulsively. *Information Systems Research*, *20*(1), 60–78. https://doi.org/10.1287/isre.1070.0157

Park, D.-H., Lee, J., & Han, I. (2007). The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement. *International Journal of Electronic Commerce*, *11*(4), 125–148. https://doi.org/https://doi.org/10.2753/JEC1086-4415110405

Pflughoeft, A. (2021, May 12). *Shopping on TikTok: The app's upcoming feature*. DwseretNews. https://www.deseret.com/2021/5/12/22431088/shopping-on-tiktok-update/

Rizaty, M. A. (2022). *Pengguna Tiktok Indonesia Terbesar Kedua di Dunia*. https://dataindonesia.id/Digital/detail/pengguna-tiktok-indonesia-terbesar-kedua-di-dunia

Xiang, L., Zheng, X., Lee, M. K. O., & Zhao, D. (2016). Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. *International Journal of Information Management*, *36*(3), 333–347. https://doi.org/10.1016/j.ijinfomgt.2015.11.002

Xu, H., Zhang, K. Z., & Zhao, S. J. (2020). A dual Systems Model of Online Impulse Buying. *Industrial Management & Data Systems*, *120*(5), 845–861.

Zafar, A. U., Qiu, J., Li, Y., Wang, J., & Shahzad, M. (2021). The impact of social media celebrities' posts and contextual interactions on impulse buying in social commerce. *Computers in Human Behavior*, *115*, 106178. https://doi.org/10.1016/j.chb.2019.106178

Zafar, A. U., Qiu, J., & Shahzad, M. (2020). Do digital celebrities' relationships and social climate matter? Impulse buying in f-commerce. *Internet Research, 30*(6), 1731–1762. https://doi.org/10.1108/INTR-04-2019-0142

Zafar, A. U., Qiu, J., Shahzad, M., Shen, J., Bhutto, T. A., & Irfan, M. (2020). Impulse buying in social commerce: bundle offer, top reviews, and emotional intelligence. *Asia Pacific Journal of Marketing and Logistics*, *33*(4), 945–973. https://doi.org/10.1108/APJML-08-2019-0495

Zhang, K. Z. K., Zhao, S. J., Cheung, C. M. K., & Lee, M. K. O. (2014). Examining the influence of online reviews on consumers' decision-making: A heuristic–systematic model. *Decision Support Systems*, *67*, 78–89. https://doi.org/10.1016/j.dss.2014.08.005

.