

# Analysis of Consumer Behavior in Online Shopping on Social Media

1<sup>st</sup> Steven Lufthanza Bong

Information Systems Department, School of Information Systems  
Bina Nusantara University  
Jakarta, Indonesia  
steven.bong@binus.ac.id

2<sup>nd</sup> Albertus Baskara Yunandito Adriawan

Information Systems Department, School of Information Systems  
Bina Nusantara University  
Jakarta, Indonesia  
albertus.adriawan@binus.ac.id

3<sup>rd</sup> Ghina Kamilah

Information Systems Department, School of Information Systems  
Bina Nusantara University  
Jakarta, Indonesia  
ghina.kamilah@binus.ac.id

4<sup>th</sup> Evaristus Didik Madyatmadja

Information Systems Department, School of Information Systems  
Bina Nusantara University  
Jakarta, Indonesia  
emadyatmadja@binus.edu

**Abstract**— Social media is virtually universally used today. Social media now can develop more on the economy and is not just a platform to share experiences or information. Through social commerce, social media can be utilized as a platform for online product promotion and sales. Instagram, Facebook, YouTube, Whatsapp, Twitter, and TikTok are just a few of the social media sites that can be used as a platform for buying and selling. This research seeks to examine the TAM method's application to consumer behavior in social media-based online commerce. We used a survey given to 400 respondents; the respondents are the population of generation Z in Indonesia who regularly use social media to support this research. We processed the data obtained and the results of data analysis using the TAM method showed that all of the six hypotheses proposed were significant and accepted. So, it can be seen that customer behavior affects online shopping on social media because user behavior is highly influential on user decisions when making transactions on social media.

**Keywords**— Social Media, Online Shopping, and Consumer Behavior.

## I. INTRODUCTION

The development of social media is currently growing rapidly. Almost everyone today uses social media to connect with the outside world and can interact with each other and share various activities carried out on social media accounts online. According to data from Indonesia.id, social media users in Indonesia will reach 191 million in 2022, this information shows that this year social media users have increased by around 12.35% compared to the previous year so the use of social media is growing every year. In Indonesia, WhatsApp is the most widely used, at around 88.7% of the total social media users in Indonesia, followed by Instagram at 84.8%, Facebook at 81.3%, and TikTok at around 63.1.% [1].

Social media has started to influence the economy and is now used for more than just sharing information or day-to-day activities. Social media is expanding quickly in the current period, coupled with the rise in social media users online. Additionally, social media use has started to extend in the direction of the economy, leading to an increase in the number of traders starting online stores. Given the size of the social media user base, company owners may have the opportunity to leverage social media as a platform for online product promotion and sales through social commerce. Social media platforms are used by businesses to conduct

social commerce—direct product sales to customers. Customers may find it simple to check out the products they want to buy right from the social media platform they use with social commerce rather than having to go to another website [2].

According to a poll by Sea Insights done in the month of June 2020, up to 54% of respondents utilize social media to conduct business and boost sales [3]. Several social media platforms, including Instagram, Facebook, YouTube, Whatsapp, Twitter, and TikTok, can be utilized as a platform for buying and selling activities. Social media users are becoming more interested in online buying as a result of the increase in selling activities on social media, which also encourages traders to start selling on the platform.

Because it's so simple to access the internet, consumers can shop online. In addition, online shopping can be used as a platform for electronic communication and trade, which boosts selling points and increases consumer interest in shopping. For these reasons, online shopping is more convenient and more well-liked. Social media shopping has additional advantages since it gives customers access to a wider range of products, allows them to search for the best deals themselves, allows them to read customer reviews, and speeds up the purchasing process.

The research's explanation of the issue is that as the online retail market expands, business owners are beginning to understand what drives consumers to shop online. Social media rivalry for online shops enables business owners to strive for a competitive edge in online sales. Online business owners must also understand consumer behavior that can affect their decision to shop on social media to have a competitive advantage. Therefore, more research is necessary to understand how people use social media for online buying.

The following are the objectives of this study:

- Generation Z and active social media users in Indonesia are the target audience.
- At least 400 participants were given questionnaires to complete for this research.
- This research examines social media with elements for online commerce.

This research was designed to examine how social media-based online commerce fits into the community's existing social relationships. Additionally, this research aims to identify the variables that affect consumers' online and social media purchase decisions.

The aim of this research that we want to achieve is to analyze consumer behavior in social media-based online shopping. This article is intended to serve as a manual for gaining knowledge, understanding, and learning about how to implement strategies to market products that consumers like on social media platforms, as well as information on further research. This research is anticipated to be helpful to other writers as a resource for supplementary information or research questions linked to consumer behavior analysis in online shopping on social media.

## II. LITERATURE REVIEW

Many people now utilize social media to get information and for a variety of other purposes. Users typically select the social media platform they want to use for a variety of reasons, one of which is that it meets their demands. One of the issues is that consumers believe social media can meet their demands, thus they use it. According to Rokeach and deFleur, "one of the variables determining a person's dependence on the media is that a person will be more dependent on a media that can meet a number of his demands at once compared to a media that can only meet a few needs." [4]

Because of the rapid development in the number of social media users in Indonesia, social media is now utilized as a tool to make online buying and selling transactions as well as a place to share daily activities and connect. Nowadays, the development of Social Commerce is accelerating. The use of social media in the context of e-commerce to help buy and sell items and services online is known as social commerce. It evokes a synthesis of two major digital trends: e-commerce and social networking. Due to benefits such as shorter delivery times and lower product and service prices, electronic commerce helps businesses to extend their market and attract new clients [5]. Despite the benefits of internet commerce, consumers perceive online purchases to be riskier than physical transactions [6]

Furthermore, when COVID-19 struck in early 2020, many people were unable to leave the house and were obliged to conduct all of their jobs from home. As a result of the pandemic, many shopping malls have closed to prevent physical contact with others, which has boosted people's buying interest in beginning to move to shop online to satisfy the necessities of everyday life rather than shopping in person. According to Wang et al., COVID-19 can impact the change in consumer behavior and consumers also shift to online grocery shopping in response to COVID-19 [7].

Several previous studies explain consumer behavior in shopping online. According to Rahman, M.A. et al. the main reason people shop online are that it can save time in shopping, and follow by the reason people prefer online shopping. After all, the availability of products offered is more diverse [8].

Research conducted by Kariapper, R. K. A. R. on why consumers choose online shopping compared to traditional shopping shows that people prefer online shopping because of their knowledge of online shopping [9]. People feel that

online shopping is easier to use and easier to access. There is a strong relationship between perceived usefulness, perceived ease of use, and knowledge about online shopping. When people feel that online shopping is more useful, they will change their attitude toward online shopping so that the relationship between usefulness and attitude is quite positive. When attitudes in online shopping change, behavioral intentions in people's shopping also affect so the relationship between attitude and behavioral intention is also very positive.

## III. METHODS

Technology Acceptance Model (TAM) was created by (Fred Davis 1986) which is a theory to predict and explain how technology users can use and accept technology related to user work. TAM has five factors, namely Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, Behavioral Intention to Use, and Actual System Usage. There are two main factors of TAM, namely Perceived Usefulness and Perceived Ease of Use, where these two factors determine the user's acceptance of information technology systems [10].

Perceived Ease of Use is the degree to which a person believes that using a certain system can facilitate one's efforts in doing something, this factor refers to one's belief that the technological system used does not require maximum effort when used.

Perceived Usefulness is the degree to which a person believes that a certain system can improve the performance of using the system, while Attitude Toward Using defines the user's feelings, both positive and negative, to perform the specified behavior.

Behavioral Intention to Use is a person's level of conscious planning to do or not to do a predetermined behavior. Actual System Usage is the real condition of a user in using the system in which the system is used and increasing the productivity of user performance.

The purpose of the TAM method itself is to explain a causal relationship between beliefs and behavior, goals, and the actual use of users of an information system. The TAM method provides a more detailed explanation of the acceptance of internet information with certain dimensions that can affect internet users easily.

The type of study is experimental and the research method that we use is the quantitative method because the data obtained will be processed using statistical techniques and can involve calculating numbers. We also collect data using primary data. In collecting primary data, we use a survey approach that contains questions related to consumer behavior in online shopping which we will distribute to Generation Z who actively uses social media to conduct online transactions as our main target respondent [11].

Our survey uses a questionnaire that we created using Google Forms. The questionnaire that we made uses Indonesian to make it easier for respondents to fill out the questionnaire because it is in accordance with the language used every day. We distributed the questionnaires online to the social media platforms that the researchers have such as Twitter, Instagram, LINE, and Whatsapp.

According to data from the Ministry of Home Affairs, the number of Generation Z in Indonesia is 68,662,815 [12]. The

total respondent data we collected was 400 people, we calculated that data using Slovin's formula, and the percentage of error margin is 5%.

#### IV. DATA COLLECTION

We first conducted a readability test before the researcher began distributing the surveys to the respondents. To determine if the respondents comprehended the questions on the author's questionnaire, a readability test was conducted. This reading test was given out, and 30 respondents completed it. A readability test method was used to examine the questionnaire's data. A result is regarded as low if it is less than 50%, good if it is more than 50%, and excellent if it is more than 75%.

According to the findings of the author's Readability Test, all indicators of the statement have reached the category with a percentage of more than 75%. Based on the percentage results, it may be assumed that potential respondents understand the researcher's assertions about the questionnaire.

#### V. RESULT AND DISCUSSION

We have distributed this questionnaire and have filled it out by 400 respondents, these respondents are the population of generation Z in Indonesia and active users of social media. The first part of our questionnaire is a demographic question that contains gender, age, job, frequently used social media, shopping online on social media frequency, and the reason for shopping online on social media. The result is shown in the table below. From the demographic table below we can see that 58,4% of the respondents are female and 41,6% are male. Most of the respondents' age is in the range of 20-22 years (69,7%), college students (72,1%), frequently used social media is Instagram (49,2%), shopping online on social media frequency is 1-3 times in a month (60,6%), and the reasons for shopping online on social media are promo and discounts (32,9%).

TABLE I. Demographic Table of Respondents from The Questionnaire

Demographic Factor	Indicators	n Value	Percentage
Gender	Male	173	41,6%
	Female	243	58,4%
Age	17 - 19	57	13,7%
	20 - 22	290	69,7%
	23 - 25	69	16,6%
Jobs	Student	41	9,9%
	College Student	300	72,1%
	Employee	60	14,4%
	Entrepreneur	12	2,9%
	Others	3	0,7%
Frequently used social	Instagram	203	49,2%

media			
	Tiktok	178	43,1%
	Twitter	23	5,6%
	Facebook	9	2,2%
Shopping online on media social frequency	Not at all	29	7%
	1 - 3 times	252	60,6%
	3 - 5 times	85	20,4%
	5 - 10 times	37	8,9%
	> 10 times	13	3,1%
The reason shopping on social media	Many products and options are available	116	27,9%
	Affordable prices	91	21,9%
	Promo and discounts	137	32,9%
	Faster and easier	32	7,7%
	Environmental influence	13	3,1%
	Follow the trend	10	2,4%
	Others	17	4,1%

#### A. Numerical Results

We conducted an examination of Cronbach's Alpha and Composite Reliability values to ascertain the veracity of our data. Composite reliability evaluates the true value of a construct's reliability, whereas Cronbach's Alpha is typically employed to test the lower limit of a construct's reliability value. According to Ghazali, Cronbach's Alpha value and the general rule of thumb for composite reliability levels are both greater than 0.7 [13]. To calculate Cronbach's Alpha and Composite Reliability values, we used SmartPLS version 4 according to Table II.

TABLE II. Result of Reliability Test

Construct	Cronbach's Alpha	Composite Reliability
Actual System Use	0.738	0.836
Attitude Toward Using	0.813	0.877
Behavioral Intention to Use	0.829	0.887
Perceived Ease of Use	0.862	0.907

Perceived Usefulness	0.780	0.858
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TABLE III. Research Hypothesis

No	Hypothesis
H1	Perceived ease of use positively affects perceived usefulness in consumer behavior in online shopping on social media.
H2	Perceived usefulness positively affects attitudes toward usage at consumer behavior in online shopping on social media.
H3	Perceived ease of use affects attitude towards usage at consumer behavior in online shopping on social media.
H4	Attitude toward usage positively affects behavioral intention to use at consumer behavior in online shopping on social media.
H5	Perceived usefulness positively affects behavior intention to use at consumer behavior in online shopping on social media.
H6	Behavioral intention to use affects actual system usage at consumer behavior in online shopping on social media.

Next, we test the hypothesis we have made using SmartPLS 4. We use a variety of indicators to assess the hypothesis, including original samples, T-statistics, and P-values. If the original sample reveals a positive value, then the direction is positive; if the results are negative, then the direction is negative. This information can be used to determine the direction of the hypothesis testing. T-Statistics is then utilized to demonstrate significance. Whether the hypothesis has a direction or not must be known before conducting a T-Statistics test. All hypotheses in this research have a direction (one-tailed). The T-Statistics value for each hypothesis in this research must be  $>1.64$  for it to be accepted. For the P-values, a hypothesis can be accepted if the value is  $<5\%$  or  $<0.05$ . The hypothesis can be acceptable hypothesis if the three criteria are fulfilled [14].

TABLE IV. Hypothesis Test Result

Hyp	Path Relationship	Original Sample (O)	T Statistic	P Values	Conclusion
H1	Perceived Ease of Use $>$ Perceived Usefulness	0.774	30.208	0.000	Significant
H2	Perceived Usefulness $>$ Attitude Toward Usage	0.438	6.499	0.000	Significant
H3	Perceived Ease of Use $>$ Attitude Toward Usage	0.349	6.060	0.000	Significant
H4	Attitude Toward Usage $>$ Behavioral Intention to	0.615	9.677	0.000	Significant

	Use				
H5	Perceived Usefulness $>$ Behavioral Intention to Use	0.145	2.223	0.026	Significant
H6	Behavioral Intention to Use $>$ Actual System Usage	0.737	27.622	0.000	Significant

The result of a hypothesis analysis of consumer behavior in online shopping on social media shows 6 significant hypotheses. There are:

- **H1: Perceived Ease of Use  $>$  Perceived Usefulness**

Social media user impressions of the convenience of shopping online influence consumer shopping patterns. So it can be claimed that consumer habits have an effect on online purchasing and that the interaction between the two variables produces favorable results with consumer habits that have a positive and influential impact on online shopping on social media.

- **H2: Perceived Usefulness  $>$  Attitudes Toward Usage**

Perceived usefulness positively influences attitudes toward the usage of online shopping on social media. The research we did because there are many benefits of online shopping through social media that affect the frequency of someone doing online shopping on social media. The relationship between the two also gives positive results.

- **H3: Perceived Ease of Use  $>$  Attitudes Toward Usage**

According to Table IV, which displays the data processing results, the P value is 0.000 and the T-statistics is 6.060. As a result, it may be concluded that the results of this analysis regarding hypothesis 3 are significant and acceptable. Because the T-statistics is  $> 1.64$  and the P value is 0.05, the contribution from this value shows that perceived ease of use has an impact on attitudes toward using in customer behavior in shopping online on social media.

- **H4: Attitudes Toward Usage  $>$  Behavioral Intention of Use**

According to the data analysis outcomes in Table IV, it can be seen that the t-statistics H4 value in the table is 9.677 and the P value is 0.000. The fact that these two values have t-statistics  $> 1.64$  and P 0.05 indicates that attitude toward using has an impact on behavioral intention to use. As a result of this analysis, hypothesis 4 in this research is significant and is accepted because it fulfills the criteria.

- **H5: Perceived Usefulness  $>$  Behavioral Intention of Use**

The hypothesis test results demonstrate that both variables between Attitudes Toward Using and Behavioral Intention to Use are connected. This study demonstrates that the two variables are important and that the ease of shopping online influences customer habits.

- **H6: Behavioral Intention of Use  $>$  Actual System Usage**

From the research that has been done, Behavioral Intention of Use affects Actual System Usage. the relationship between the two is a positive relationship where the user's intention to make online transactions on social media will affect the use of shopping features on social media.

### B. Graphical Result

Figure 1 shows the TAM model framework of five interconnected variables. This framework was made using SmartPLS tools. This framework is related to the topic of our research, namely the analysis of consumer behavior in online shopping on social media to show the relationship of questions based on the variables shown in table 2 and also to analyze the data used to test the results of the hypothesis in table 4.

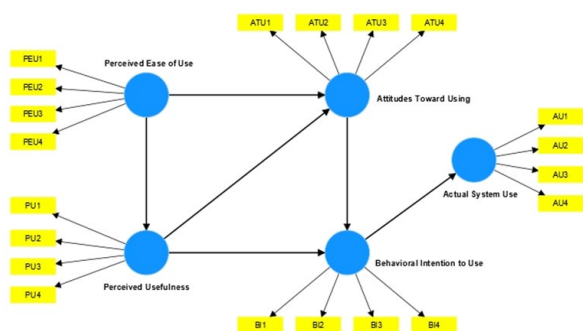


Fig. 1. T-Statistic Diagram.

## VI. CONCLUSION

The purpose of this test is to learn more about a person's activities and journey when using social media for online transactions. Both the TAM method and the questionnaire method of data collection are used in this study. The study's findings show that users' social media usage behaviors have an impact on the buying and selling decisions they make on social media.

This study is based on the results of the questionnaires that have been collected. The questionnaire has a classification of respondents from generation z regarding their experience of buying and selling online on social media. We measure it through several methods including perceived ease of use, perceived usefulness, attitude toward using online shopping, behavioral intention to use, and actual system usage.

The analysis in the study can conclude that the typical customer habit affects online shopping on social media because user habits are highly influential on user decisions when making transactions on social media, as can be seen from the results of the analysis that has been described.

## REFERENCES

- [1] M. A. Rizaty, "Pengguna Tiktok Indonesia Terbesar Kedua di Dunia," DataIndonesia.id, 12 July 2022. [Online]. Available: <https://dataindonesia.id/Digital/detail/pengguna-tiktok-indonesia-terbesar-kedua-di-dunia>. [Accessed 17 October 2022].
- [2] D. Agustina, "FITUR SOCIAL COMMERCE DALAM WEBSITE E-COMMERCE DI INDONESIA," *Jurnal Informatika Mulawarman*, vol. 12, no. 1, pp. 25-29, 2017.
- [3] R. Alika, "Survei: 54% UMKM Pakai Media Sosial untuk Pacu Penjualan saat Pandemi," Katadata.co.id, 2 July 2020. [Online]. Available: <https://katadata.co.id/ekarina/berita/5efdb7a7bea69/survei-54-umkm-pakai-media-sosial-untuk-pacu-penjualan-saat-pandemi>. [Accessed 19 October 2022].
- [4] M. F. Syahreza and I. S. Tanjung, "MOTIF DAN POLA PENGGUNAAN MEDIA SOSIAL INSTAGRAM DI KALANGAN MAHASISWA PROGRAM STUDI PENDIDIKAN EKONOMI UNIMED," *Jurnal Interaksi*, vol. 2, no. 1, pp. 61-84, 2018.
- [5] B. S. T. J. Gallego MD, "Motivations and barriers for the implementation of electronic commerce in Spain: a Delphi study," *Estudios Gerenciales*, vol. 32, no. 140, pp. 221-227, 2016.
- [6] M. C. T. P. E. N. S. C. G. Vos A, "Risk reduction strategies in online shopping: E-trust perspective," *Procedia-Soc Behav Sci*, vol. 147, pp. 418-423, 2014.
- [7] R. X. M. S. D. G. X. C. Yiru Wang, "COVID-19 and Retail Grocery Management: Insights from A Broad-based Consumer Survey," *IEEE Engineering Management Review*, vol. 48, no. 3, pp. 1-21, 2020.
- [8] M. A. I. B. H. E. N. S. S. C. Mohammad Anisur Rahman, "Consumer buying behavior towards online shopping: An empirical study on Dhaka City, Bangladesh," *Cogent Business & Management*, vol. 5, no. 1, pp. 1-22, 2018.
- [9] R. Kariapper, "APPLICATION OF TECHNOLOGY ACCEPTANCE MODEL(TAM)INCONSUMER BEHAVIORAL INTENTION TOWARDSONLINESHOPPING," *Sys Rev Pharm*, vol. 12, no. 3, pp. 322-332, 2021.
- [10] P. A. G. Permana, "Penerapan Metode TAM (Technology Acceptance Model) dalam Implementasi Sistem Informasi Bazaar Banjar," *Jurnal Speed*, vol. 10, no. 1, pp. 1-7, 2018.
- [11] E. R. N. A. P. Tri Irawati, "Penggunaan Metode Technology Acceptance Model (TAM) Dalam Analisis Sistem Informasi Alista (Application Of Logistic And Supply Telkom Akses)," *ACCOUNTING INFORMATION SYSTEM & INFORMATION TECHNOLOGY BUSINESS ENTERPRISE*, vol. 4, no. 2, pp. 106-120, 2019.
- [12] S. Widi, "Ada 68,66 Juta Generasi Z di Indonesia, Ini Sebarannya," DataIndonesia.id, 16 August 2022. [Online]. Available: <https://dataindonesia.id/ragam/detail/ada-6866-juta-generasi-z-di-indonesia-ini-sebarannya>. [Accessed 25 October 2022].
- [13] S. A. M. M. C. Dr. Meiryani, "MEMAHAMI COMPOSITE RELIABILITY DALAM PENELITIAN ILMIAH," Binus University School of Accounting, 12 August 2021. [Online]. Available: <https://accounting.binus.ac.id/2021/08/12/memahami-composite-reliability-dalam-penelitian-ilmiah/>. [Accessed 27 October 2022].
- [14] J. A. Vigim, "KESUKSESAN SISTEM INFORMASI REMUNERASI DI PTN-BH DENGAN MENGGUNAKAN MODEL DELONE DAN MCLEAN : Studi Pada PTN-BH UPI," Universitas Pendidikan Indonesia, Bandung, 2019.