Factors Influencing Consumer Online Shopping Behavior During National Online Shopping Day: Perspective of Indonesian Generation Z

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Abstract

The massive development of internet technology has been able to change human life to be more advanced. It can be observed from fulfillment of the needs and behavior of people who have changed a lot, especially in shopping. Now, many people have moved from conventional shopping visiting stores directly to online shopping. This behavior change is not ignored by businesspeople. They are competing to make the right strategy to attract more consumers to online shopping. One of the strategies is the National Online Shopping Day. The aim of this research are to determine the factors and dominant factor that influence Generation Z in Bandung in online shopping during National Online Shopping Day. This research uses quantitative methods with data analysis techniques using factor analysis. The sample in this research is 156 respondents. The results showed that there are four dominant factors that influence the decisions of Generation Z in Bandung in online shopping during National Online Shopping Day. These are trust factor, shopping habits factor, information quality factor, and price factor. The most dominant factor influencing the online shopping decisions of Generation Z consumers in Bandung during National Online Shopping Day is the trust factor.

Keywords

Factor Analysis, Generation Z, National Online Shopping Day, Online Shopping, Online Shopping Behavior

1. Introduction

The massive increase in the development of internet technology has been able to change human life to be more advanced. It has also changed people's habits, which is in shopping. The easiness and convenience of obtaining products and services makes more people move from conventional shopping to online shopping. Based on a survey by We Are Social in April 2021, it was reported that as many as 88.1% of internet users in Indonesia used e-commerce to buy certain products in recent months. This figure has exceeded the average percentage of e-commerce globally, which is 78.6%. With this achievement, Indonesia is the country with the highest use of e-commerce in the world. On the other hand, the Covid-19 pandemic has also succeeded in accelerating the growth of e-commerce in Indonesia. Based on a SIRCLO report and Katadata Insight Center, the Covid-19 pandemic made 17.5% of offline buyers start trying to shop online.

Suryani, Nurhadi and Fauzi (2020) stated that changes in consumer behavior in shopping need to be considered by businesspeople to adjust the right marketing strategy by adjusting changes in customer behavior. Along with the increasing number of internet users and the enthusiasm of Indonesian people for online shopping, they have finally started exploring electronic-based marketing or e-marketing. One of the e-marketing strategies that often do every year now is National Online Shopping Day or better known as National Online Shopping Day. National Online Shopping Day is the biggest online shopping day in Indonesia, which is held every December 12. The aim is to encourage and educate Indonesian people about the easiness of online shopping and as an effort to advance e-commerce industries in Indonesia. Due to the extraordinary achievements when it was first held, now National Online Shopping Day has become a routine event held every year by many e-commerce companies in Indonesia.

Based on various sources on the internet for data on the number of online shopping transactions during National Online Shopping Day, it shows that the number of online shopping transactions during National Online Shopping Day has increased significantly in each year of its implementation. (Figure 1)

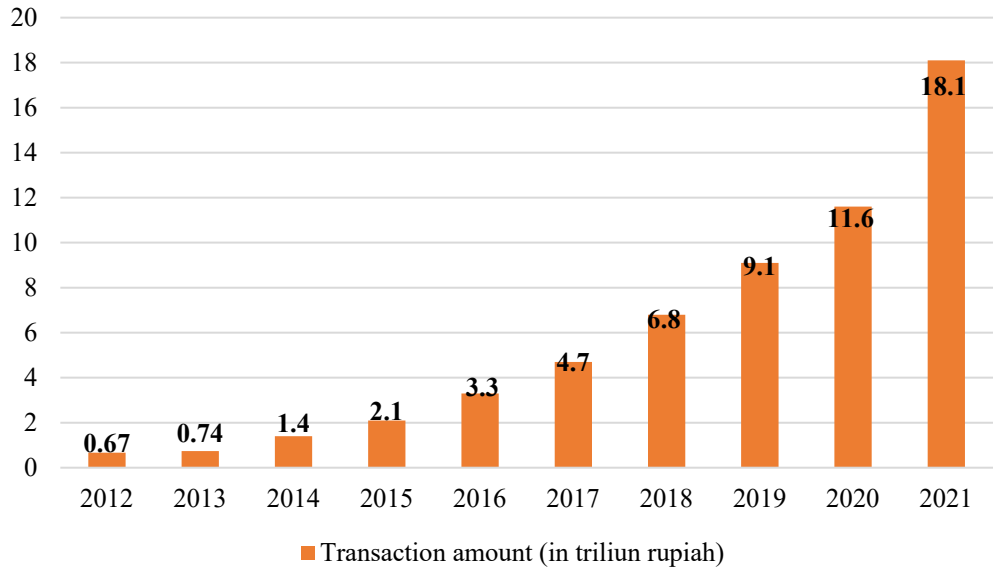

Figure 1. Online Shopping Transactions during National Online Shopping Day from 2012 to 2021
Source: Processed by researchers

Nielsen Indonesia's research survey on the implementation of National Online Shopping Day 2021 showed that online shoppers in National Online Shopping Day 2021 were dominated by generation Z and millennials. They are from the age range of 15 to 34 years as much as 34% and from the age range of 24-34 years as much as 32%. On the other hand, results of The National Socio-Economic Survey (SUSENAS) in 2019 on internet users and online shops based on generation were dominated by generation Z and millennials. From 44 million Generation Z internet users, 3.8 million (9%) of them like to shop online and from 46.7 million internet users of the millennial generation, 7.8 million (17%) of them like to shop online. Based on the results of the surveys, researchers saw a percentage gap between online buyers of generation Z during National Online Shopping Day and outside National Online Shopping Day event. Generation Z is the generation born from 1997 to 2012 (Stillman and Stillman, 2018). Based on the results of the Indonesian Population Census in 2020, the population pyramid is dominated by Generation Z. 27.94% of 270.20 million population are Generation Z. Generation Z is a generation that grows while technology develops rapidly. Therefore, they are often known as the I-Generation or the internet generation. Due to their ability to adapt to good technology, e-commerce technology has become very easy for them to master. This is what makes this generation become the largest e-commerce market in Indonesia.

Based on this description, interesting problems to be studied are follows:

1. What are the factors that influence the online shopping decision of Generation Z consumers in Bandung during the National Online Shopping Day?
2. What are the most dominant factors that influence the online shopping decision of Generation Z consumers in Bandung during the National Online Shopping Day?

2. Literature Review

Shopping Online

Sari in Hariyanto and Trisunarno (2020) said that the definition of online shopping is a process of purchasing goods or services using the internet without meeting face-to-face between sellers and buyers in person. Haubl and Trifts in Hasibuan and Rombe (2020) explain that online shopping is defined as buying and selling activities through computer

devices where consumers connect to the internet and then interact with online retailers. According to Harahap and Amanah (2018), online shopping can be interpreted as the desire of consumers to spend their money to get something they want in an online store. This process occurs by utilizing internet technology.

The Consumer Purchase Decision Process

According to Kotler and Keller (2019:214), the step of making a purchase process by consumers begins with problem recognition, information search, alternative evaluation, purchase decision, and post-purchase behavior.

Factors Affecting Online Shopping Decisions

According to Agustini (2017), the factors influencing online shopping decisions are as follows:

a. Product Quality
   Product quality is considered as the ability of a product to perform its functions, such as product suitability, product shape, product design, and product style or appearance that can affect the long-term performance of a business.
b. Easeness
   Easeness of use is one of the things that online buyers consider. Easeness of learning, easeness of using, easeness of operating according to what they want, and flexible use are the reasons why consumers choose to shop online.
c. Information Quality
   Information quality is defined as the customer's perception of the information quality related to products or services provided by a website or company.
d. Trust
   According to Mowen, et al in Mahadika (2021), consumer trust is all the knowledge possessed by consumers and all the conclusions made by consumers about objects, attributes, and benefits.

According to Edward, Diansari and Winawati (2018), the factors influencing product purchasing decisions through online shops are influenced by three main factors such as:

a. Trust
   Trust in online shopping is closely related to consumer confidence in intermediaries and online stores. The higher the level of consumer confidence, the higher the level of consumer purchases.
b. Price
   Price is one of the cues used by consumers in the perception process, where price will affect the consumer's assessment of a product.
c. Time
   Many people believe that online shopping can save a lot of time because online shopping does not make consumers leave their place.

According to Wijaya and Warnadi (2019), the factors influencing online shopping decisions are as follows:

a. Trust
   Trust is the willingness of consumers to trust products with all the risks due to the promised expectation that they can provide positive results for consumers.
b. Easeness
   Easeness can illustrate how consumers believe using technology will be effort-free. The convenience factor has an impact on consumer behavior. The higher the consumer's ease of perception using the system, the higher the information technology utilization.

According to the Jakpat survey (2019), the most effective strategies in attracting consumers during the *National Online Shopping Day* 2019 event are as follows:

a. Sales Promotion
   According to Kotler and Armstrong (2018:472), sales promotion consists of short-term incentives to encourage the purchase or sale of a product or service.

b. Price
According to Kotler and Armstrong (2018:54), price is the amount of money a customer must pay to get the product. According to Tjiptono (2020), price is used by consumers as an indicator of how the price relates to the benefits of a product

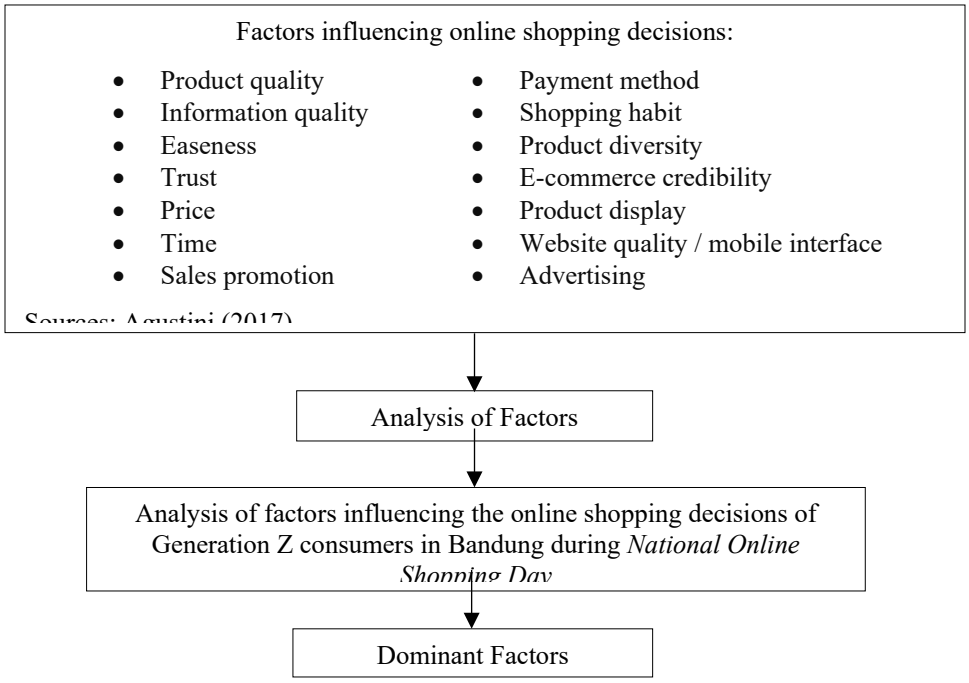

Figure 1. Research Framework

c. Payment Method
A payment method is a method used by consumers to pay for goods or services purchased from sellers. According to Banwari in Azis, et al (2022), payment methods in e-commerce are one of the features to attracting customers to shopping online.

d. Easeness of Use
According to Davis in Sumarwan and Tjiptono (2018:139), easeness of use is how much computer technology is considered relatively easy to understand and use.

e. Shopping Habits
According to Kotler Armstrong (2018:150), consumer purchasing behavior is very different for different products. More complex decisions usually involve more buyers and buyers' considerations.

f. Products Diversity
Product diversity can be an attraction for consumers in choosing products, so that consumers can choose products according to their own needs and tastes (Avianty, et al, 2019).

g. E-Commerce Credibility
According to Kotler Keller in Maulana (2020), corporate credibility is defined as consumers believing that a company can design and deliver products or services that can meet customer needs and desires.

h. Product Display
According to Setianingtyas Nurlaili in Almamada et al. (2021), product display is an image designed to be displayed attractively for customers. According to Jasmine in Almamada et al. (2021), the appearance of a product has an influence on consumers' purchasing decisions.

i. Website Quality or Mobile Interface
Website quality is a measurement method based on the opinions of individuals who use it (Permana, 2020:98).

j. Advertising
Advertising can be used to build a long-term image for a product and trigger quick sales (Kotler and Armstrong, 2018: 415).

3. Research Method

This research used quantitative research methods, using 156 respondents as a sample. The data source of this research was obtained using questionnaire techniques and literature review. Then its data analysis techniques use factor analysis.

4. Result and Discussion

Factor analysis is a statistical approach that can be used to reduce many variables to several or one factor (Widayat, 2018: 19). According to Malhotra in Widayat (2018:20), the factor analysis model can be formulated as follows:

$$X_i = A_{i1}F_1 + A_{i2}F_2 + A_{i3}F_3 + \cdots + A_{im}F_m + V_i\mu_i$$

Description:

X_i = Standard variable *i* (mean is zero, standard deviation is one)
A_{ij} = The regression coefficient of the variable *i* is the common factor for *j*
F = Common factor
V_i = Standardized regression coefficient of variable *i* on unique factor *i*
μ_i = Unique factor variable *i*
m = Number of common factors

The results of the factor analysis test using SPSS version 25 are as follows:

Table 1. Kaiser-Meyer-Olkin (KMO) Test Analysis and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy		.828
Bartlett's Test of Sphericity	Approx. Chi-Square	552.619
	df	91
	Sig.	.000

Table 1 shows that the KMO test value is 0.828. According to Widayat (2018:22), if the KMO value is low or <0.5, then the factor analysis model is considered "inappropriate" and conversely. Based on this theory, the factor analysis model in this research is 'correct' and can be further processed. In addition, the value of Bartlett's Test of Sphericity or its significance level is 0.000. According to Sugiharti, et al. (2021:37) in factor analysis, this assumption is fulfilled if Bartlett's Test of Sphericity has a significance value of < 0.5. Based on this theory, it means that there is a significant correlation between the variables used in this research. Furthermore, the result of the factor extraction process is attached, which is presented in Anti-Image Correlation.

Table 2. Anti-Image Correlation

No.	Factor / Variable	MSA
1	Product quality	0.814
2	Information quality	0.852
3	Trustworthiness	0.824
4	Easeness	0.854
5	Time	0.860
6	Price	0.729
7	Sales promotion	0.786
8	Payment method	0.834
9	Shopping habits	0.834
10	Product choice	0.836
11	Credibility E-commerce	0.879
12	Product display	0.850

13	Website quality / mobile interface	0.823
14	Advertisement	0.794

Table 2 shows the MSA value of each variable > 0.5. According to Raharjo (2018), the MSA value on Anti-Image Correlation is declared feasible if it has a value of more than 0.5. Variables that have an MSA value of less than 0.5 will be removed and then retested. Based on this theory, the 14 variables in the research were considered qualified and eligible for factor analysis. Furthermore, a table of communalities of this research is attached.

Table 3. Communalities

Communalities		
	Initial	**Extraction**
X_1	1.000	.584
X_2	1.000	.483
X_3	1.000	.589
X_4	1.000	.545
X_5	1.000	.548
X_6	1.000	.755
X_7	1.000	.622
X_8	1.000	.670
X_9	1.000	.541
X_{10}	1.000	.652
X_{11}	1.000	. 443
X_{12}	1.000	.407
X_{13}	1.000	.671
X_{14}	1.000	.661

Extraction Method: Principal Component Analysis.

Table 3 shows the extraction of each variable. According to Islami (2020:94), communallity number as a benchmark for the initial of 1.000 where when the output extraction value gets closer to the number, the correlation in these variables is higher. Based on this, the variable with the highest correlation value is X_6 with an extraction is 0.755. While the lowest correlation value is in the variable X_{12} with an extraction 0.407. Furthermore, this is a table of factoring results using SPSS version 25.

Table 4 shows the results of factoring in this research. The determination of the number of factors is determined based on the eigenvalues. According to Malhotra in Widayat (2018: 23), determination is based on eigen values. Only those factors that have an eigenvalue of 1.00 are used or considered as significant factors. Meanwhile, factors that have an eigenvalue of <1.00 are not considered significant factors. Then there are four new factors formed from the original 14 variables.

Each of the 14 variables in this research had a variance value of 1, so the total variance obtained was 1x14 = 14. To find out the variance value of the four new factors that have been formed, it can be calculated as follows:

$$\text{Factor component 1: } \frac{4.422}{14} \times 100 = 31.58\%$$
$$\text{Factor component 2: } \frac{1.478}{14} \times 100 = 10.56\%$$
$$\text{Factor component 3: } \frac{1.218}{14} \times 100 = 8.7\%$$
$$\text{Factor component 4: } \frac{1.054}{14} \times 100 = 7.53\%$$

Based on the calculation results above, total variance value of the four new factors was 58.37% of all original factors or variables in this research. Over 41.63% is explained by other factors that are not included in the four new factors. Furthermore, the result of the matrix of components rotated using SPSS version 25 is attached

Table 4**.** Results of the Factoring

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	4.422	31.586	31.586	4.422	31.586	31.586	2.649	18.923	18.923
2	1.478	10.560	42.146	1.478	10.560	42.146	2.155	15.390	34.312
3	1.218	8.702	50.848	1.218	8.702	50.848	1.851	13.219	47.531
4	1.054	7.526	58.374	1.054	7.526	58.374	1.518	10.843	58.374
5	.915	6.532	64.907						
6	.740	5.283	70.189						
7	.713	5.090	75.279						
8	.664	4.740	80.019						
9	.625	4.467	84.485						
10	.516	3.683	88.168						
11	.472	3.374	91.542						
12	.429	3.064	94.606						
13	.410	2.927	97.534						
14	.345	2.466	100.000						

Extraction Method: Principal Component Analysis.

The Rotated Component Matrix is one of the important outputs in factor analysis. According to Widayat (2018:24), a factor matrix is a matrix that contains coefficients called factor loading, reflecting the correlation between variables and factors formed. The loading value indicates that the variables of these factors are strongly correlated (Table 5). The grouping of factors or variables in this research is based on the largest value in each row, so one factor or variable only belongs to one new factor of the four new factors formed. Components of the new formed factors are presented on Table 6.

Table 5**.** Rotated Component Matrix

	Component			
	1	**2**	**3**	**4**
X_1	.760	-.021	.035	.066
X_2	.418	.112	.543	.031
X_3	.688	-.061	.160	.295
X_4	.142	.111	.674	.242
X_5	.156	.691	.068	.205
X_6	.050	.181	.067	.846
X_7	.247	.119	.266	.690
X_8	.257	.740	.051	.231
X_9	.002	.700	.224	.038
X_{10}	.172	.566	.501	-.226
X_{11}	.626	.201	.098	.032
X_{12}	.543	.206	.245	.099
X_{13}	.729	.368	.057	-.006
X_{14}	.033	.157	. 787	.130

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 6. New Factor Components

Factor	Factor Name	Variant Value	Component	Loading Factor
I	Trust Factor	31.58%	Product Quality (X_1)	0.760
			Trust (X_3)	0.688
			E-Commerce Credibility (X_{11})	0.626
			Product Display (X_{12})	0.543
			Website Quality / Mobile Interface (X_{13})	0.729
II	Shopping Habits Factor	10.56%	Time (X_5)	0.691
			Payment Methods (X_8)	0.740
			Shopping Habits (X_9)	0.700
			Product Choice / Diversity (X_{10})	0.566
III	Information Quality Factors	8.7%	Information Quality (X_2)	0.543
			Easeness (X_4)	0.674
			Advertising (X_{14})	0.787
IV	Price Factor	7.53%	Price (X_6)	0.846
			Sales Promotion (X_7)	0.690

5. Conclusion

Based on the results of the factor analysis test, four dominant factors were formed from the 14 extracted original factors that influenced generation Z online shopping decisions in Bandung during *National Online Shopping Day*. The first factor consists of product quality, trust, e-commerce credibility, product appearance, and website/mobile interface quality, named the trust factor with a component value of 31.56%, so that the trust factor becomes the first dominant factor. The second factor consists of time variables, payment methods, shopping habits, and product choice/diversity, named the shopping habit factor with a component value of 10.56%, so that the shopping habit factor becomes the second dominant factor. The third factor consists of variables of information quality, convenience and advertising named the information quality factor with a component value of 8.7%, so that the information quality factor becomes the third dominant factor. The fourth factor consists of a price promotion and sales variable named the price factor with a component value of 7.52%, so that the price factor becomes the fourth dominant factor. Based on the value of the components of each factor, it can be concluded that there are four dominant factors that influence generation Z online shopping decisions in Bandung during *National Online Shopping Day*, namely trust factors, shopping habits factors, information quality factors, and price factors. The most dominant factor influencing the online shopping decisions of Generation Z consumers in Bandung during *National Online Shopping Day* is the trust factor, with a component value of 31.56%.

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