

The Effect of Consumer Traits and Situational Factors on Impulsive Buying: Moderating Effects of Gender on Indonesian E-commerce Users During the COVID-19 Pandemic

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ABSTRACT: The world is experiencing limitations in its activities due to the Corona Virus (Covid 19) which first appeared at the end of 2019 in China. Since the implementation of the Covid 19-based lockdown policy and restrictions on store operating hours, people have felt very limited in meeting their daily needs. This condition changes the behavior patterns of consumers who were originally accustomed to buying products offline or directly visiting physical stores, now turning to online.

The purpose of this study was to analyze the effect of the consumer nature variables indicated by the subvariables of impulsive buying tendencies, shopping enjoyment tendencies, and materialism, and situational factors variables indicated by the person's situation, website quality, motivational activities by retailers, and product attributes on impulse buying by using a questionnaire with a structural equation model (SEM). The findings in this study conclude that all hypotheses produce statistical figures that show a positive and significant effect, including gender also has a positive and significant influence in moderating the relationship between consumer traits and situational factors with impulse buying behavior. This study indicate that from a quantitative perspective, the shopping enjoyment tendency variable has the greatest influence in encouraging e-commerce users to make impulse purchases.

KEY WORD: Consumer Traits, Situational Factors, Impulse Buying, Covid-19

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I. INTRODUCTION AND LITERATURE REVIEW

Over the past two years, the world has experienced limitations in its activities due to the Corona Virus (Covid 19) which first appeared at the end of 2019 in China. Covid 19 brings about substantial psychological, social and professional changes, such as job loss, low savings, fear and stress during overseas visits, an uncertain future, and physical and mental health problems (Bradbury-Jones & Isham, 2020). Pantano et al., (2020) show that consumers have been trying to adapt their shopping habits during the Pandemic and at the same time have found benefits from online services that they have never used before. Based on the shift in consumer buying behavior, the Global Web Index (2020) data states that currently the percentage of users aged 16 to 64 years who use online shopping applications via mobile phones 78.2%, while those who visit retail websites or online stores are 87.3%, and 87.1% of people who buy products online (Graha, 2016). This will certainly trigger intense competition among internet-based online shopping companies such as e-commerce in Indonesia during the Covid 19 pandemic, such as Tokopedia, Shopee, Lazada, Bukalapak, Blibli and others with the aim of winning the market. E-commerce market competition during the Pandemic can be seen from the comparison of the number of visitors for each e-commerce in the fourth quarter of 2020 and 2021 which is listed in Table 1.

Table 1: Comparison of the Number of E-commerce Visitors in Indonesia in the Fourth Quarter of 2020 and 2021

E-commerce	Number of Visitors	
	Year of 2020	Year of 2021
Tokopedia	114,67 Million	157,44 Million
Shopee	129,3 Million	138,78 Million

Lazada	36,26 Million	28,17 Million
Bukalapak	38,58 Million	25,76 Million
Orami	6,19 Million	16,68 Million
Blibli	22,41 Million	15,69 Million
Ralali	4,33 Million	5,92 Million
Bhinneka	4,44 Million	3,31 Million
Average	44,52 Million	48,97 Million

Source: iPrice, 2022

Table 2: Comparison of E-Commerce Users by Gender

E-commerce	Men (%)	Women (%)	Average
Shopee	52%	77%	65%
Tokopedia	22%	9%	16%
Lazada	14%	10%	12%
Bukalapak	9%	2%	6%
Average	24%	25%	25%

Source: Snapchart Research, 2020

This encourages researchers to use gender as a moderating (reinforcing) variable, because both age and gender/gender can include resources related to spending, making it more common among certain social or demographic groups (Iyer et al., 2020).

A review of the existing literature shows three types of stimulus factors that regulate consumer impulse buying, namely external, situational, and internal stimulus factors (Sen & Nayak, 2021). However, studies on the influence of various internal stimulus factors on impulse buying are rarely conducted. This is because, at first, it will be difficult for researchers to adopt a taxonomic approach to understand the phenomenon of impulse buying. In this context, this study will only identify specific internal stimulus factors such as consumer traits and situational factors that influence impulse buying, because they are considered to still need immediate attention. Therefore, this study explores the relevant literature and identifies three internal stimulus factors, which include impulse buying tendencies, shopping enjoyment tendencies, and materialism which is part of consumer traits, and four situational factors that include one's situation, website quality, activity motivation by retailers, as well as product attributes, are related to impulse buying and can be perceived as potential antecedents for impulse buying that consistently need to be investigated.

According to (Kotler, P. and Keller, 2012), consumer behavior is the study of how individuals, groups and organizations choose, buy, use and place goods, services, ideas or experiences to satisfy their wants and needs. The concept of the consumer behavior approach teaches that marketers tend to be more customer-oriented and not just selling what the company produces.

According to (Beatty & Elizabeth Ferrell, 1998), impulse buying is a sudden and immediate purchase without any pre-purchase intention, either to buy a certain product category or to fulfill a certain buying task. The behavior occurs after experiencing the urge to buy and tends to be spontaneous and without much reflection or impulsivity.

Badgaiyan & Verma (2015) identified the influence of situational factors related to consumers (availability of money and time, family influence) and store-related factors (sales promotion, store environment, store employees, store atmosphere) on impulse purchases. Other studies have also proposed four dimensions of the consumer personality model, including impulsivity, risk taking, non-planning and liveliness (Millon, 1987). Therefore, this study uses four indicators in measuring consumer trait variables, including: impulse buying tendencies, shopping convenience tendencies, and materialism (Atulkar & Kesari, 2018).

The difference between men and woman in more impulsive shopping was not due to gender, but to overall purchase frequency, and they suggested that if men and women made the same number of purchases, the difference would disappear (Kollat, 1968). Furthermore, in the case of buying tissue and coffee at the supermarket, men were more likely to be impulsive buyers than women (Cobb & Hoyer, 1986). However, in most studies, the differences between men and women are based solely on quantitative results on the impulse buying scale or on the number of impulse purchases made in a given time period, and no investigations have been conducted into the structure or style of impulse buying.

1.2 Research Objectives

The purpose of this study was to analyze the effect of the consumer nature variables indicated by the subvariables of impulsive buying tendencies, shopping enjoyment tendencies, and materialism, and situational factors variables indicated by the person's situation, website quality, motivational activities by retailers, and product attributes on impulse buying

1.3 Research Methodology and Data Analysis

The type of research carried out in this study is causal research with quantitative techniques. Based on the implementation time, this type of research uses a cross-sectional implementation time, where this study collects data that is carried out in one research time period. The population in this study are the top five E-commerce users in Indonesia, including; Tokopedia, Shopee, Bukalapak, Lazada, and Blibli during the COVID-19 pandemic. The data were analyzed using the AMOS method, which is a type of covariance-based technique for structural equation modeling (SEM) analysis. AMOS handles large sample sizes with a minimum sample of 200 to 800 and assumes a multivariate normal distribution, uses reflective indicators, and also allows for less model complexity. The sampling method used in this study is non-probability sampling using a purposive sampling technique, namely a sampling technique with certain considerations (Sugiyono, 2017). The variables in this study consisted of one independent variable, two dependent variables, which were further broken down into seven independent sub-variables and one moderating variable. The independent variable is the consumer traits variable containing three sub-variables in the form of impulsive buying tendencies, shopping enjoyment tendencies, materialism, and situational factors containing four sub-variables including person's situation, web quality, motivational activities by retailers, and product attributes. The moderating variable is gender (men and women), while the dependent variable is impulse buying.

The distribution of this questionnaire was carried out on January 24 to February 14, 2022, with a total of 722 questionnaires collected, but only 500 questionnaires could be sampled to match the number of sample taking proportions that had been previously determined and had met the criteria. Of the 500 answers to the questionnaire, the data will be edited and coded for each item to make it easier to tabulate the data.

The results of the questionnaire data collection regarding the general description of E-Commerce users in Indonesia during the COVID-19 pandemic, will be shown in Table 3.

Table 3: Characteristics of respondents

Demographic Variables	Category	Frequency	Percentage
Gender	Male	184	46%
	Female	216	54%
Age	14-19	126	25.2
	20-30	292	58.4
	31-40	62	12.4
	41-50	10	2
	> 50	2	0.4
Income per month	< Rp 1.000.000,-	24	4,8
	Rp 1.000.000 - Rp 5.000.000	54	10,8
	Rp 5.000.000 - Rp 10.000.000	97	19,4
	> Rp 10.000.000	188	37,6
Internet experience	< 1 year	12	2.4
	1-5 year	84	16.8
	6-10 year	200	40
	> 10 year	204	40.8
E-commerce options	Tokopedia	216	43.2
	Shopee	183	36.6
	Bukalapak	41	8.2
	Lazada	38	7.6
Shopping frequency	Blibli	22	4.4
	1 time	26	5.2
	2-4 time	123	24.6
	5-10 time	204	40.8
	> 10 time	147	29.4
Reason	Having free time during the Pandemic	28	5.6
	There is a promo	263	52.6
	Saving time	45	9
	Mood Effect	41	8.2
	Product quality	25	5
	Personality Factors (hedonic/consumptive)	25	5
	Attractive Website Display	3	0.6
	Have more money	32	6.4
Difficult to get certain items offline	38	7.6	

Table 3 show that characteristics of respondents based on gender in this study as many as 256 respondents (51.2%) were female, more dominant in online impulse purchases on e-commerce sites during the COVID-19 pandemic. Meanwhile, male respondents were 244 (48.8%). This shows that more women make impulse purchases during the Covid-19 pandemic. These results may indicate that women generally use feelings more in making purchases than men who use logic when shopping.

Characteristics of respondents based on age showed that from a total of 500 E-commerce users based on age characteristics, it can be seen that respondents aged 20-30 years are more dominant in terms of online shopping without a plan (impulse buying) on certain E-commerce which amounted to 292 respondents (58.4%), then respondents with an age range of 14-19 years as many as 126 respondents (22.2%), then at the age of 31-40 years as many as 62 respondents (12.4%), in the fourth rank, namely with an age range of 40- 50 years old which was only filled by 10 respondents (2%), and lastly, only 2 people (0.4%) who met the criteria and were willing to fill out the questionnaire. This means that in the age segment, E-commerce is dominated by users with an age range of 20-30 years.

Characteristics of respondents based on income per month that the average monthly income of respondents in the study is divided into 137 respondents who do not have income. Then respondents who have an income range of Rp 5,000,000 - Rp 10,000,000 as many as 97 respondents (19.4%) . Respondents who have an income range of Rp 1,000,000 - Rp 5,000,000. Respondents who have an income range below Rp 1,000,000 are 24 respondents (4.8%). Finally, income above Rp 10,000,000 is owned by 188 respondents (37.6%). The ability to make a good income allocation will make a person get the maximum benefit from his current income and keep a person away from consumptive nature which is closely related to impulsive buying behavior.

Characteristics of respondents based on internet experience, the average respondent has internet experience for a period of more than 10 years with a percentage of 40.8 percent or as many as 204 people. Furthermore, the experience of surfing the internet for a period of 6 to 10 years was experienced by 200 respondents or by 40 percent, then the experience of using the internet between 1 and 5 years was experienced by 16.8 percent of the respondents or as many as 84 people. And the lowest percentage is at 2.4 percent experienced by respondents with internet experience under 1 year. This indicates that, nowadays the internet is a relevant and very common thing in all circles/segments of society, because anyone can access it easily.

The characteristics of the respondents based on the most frequently visited E-commerce and which succeeded in encouraging impulse buying behavior during the COVID-19 Pandemic, the proportion of the top five E-commerce users was based on the calculation of the number of visitors ranked in each E-commerce in the third quarter of 2021 divided by the total number of visitors. sample (500), so that a balanced result is obtained. Therefore, it was found that the majority of respondents chose E-commerce Tokopedia as the most frequently visited e-commerce and succeeded in triggering impulse buying behavior during the COVID-19 Pandemic, with a percentage of 43.2 percent, then in second place, Shopee can compete with Tokopedia with a percentage of 36.6 percent, Bukalapak with a percentage of 8.2 percent, Lazada with a percentage of 7.6 percent, and finally Blibli with a percentage of 4.4 percent.

Characteristics of respondents based on the reasons for choosing online shopping in E-commerce which is a driving factor in impulse buying behavior during the COVID-19 pandemic, most of the respondents, totaling 263 people (52.6%) tend to choose promos as a driving factor in impulsive online shopping through E-commerce during a pandemic. Furthermore, in the second rank, which was chosen by many respondents, namely for reasons of saving time with a percentage of 9 percent or as many as 45 respondents. In the third place, 41 respondents or 8.2 percent of them considered the influence of mood to be one of the driving factors for impulsive behavior when shopping online. Fourth, the factor in the form of difficulty in obtaining certain goods offline became the choice of 38 respondents or if the percentage was 7.6 percent. After that, as many as 32 respondents (6.4%) chose the factor of having more money. A total of 28 respondents or 5.6 percent chose another driving factor in the form of having free time during the Pandemic. As many as 25 respondents chose the driving factor in the form of product quality, as well as the number of respondents who chose the Personality factor (hedonic/consumptive) with a percentage of 5 percent by 25 respondents. Finally, the lower results were shown by respondents who chose an attractive website display, which only amounted to 3 people or 0.6 percent. Seeing these conditions, it can be concluded that most respondents consider promos as a strong reason to choose online shopping impulsively in E-commerce during the Pandemic.

Next, in the data section, the measurement results of the model were carried out using sem with the help of the following AMOS 22 software. The measurement model of this study used validity and reliability, which could be assessed through factor loadings, average variance extracted (AVE) for for calculating discriminant validity, cross loading, fornell-larcker criterion for calculating convergent validity, and cronbach alpha, and composite reliability for calculating reliability. Semua hasil pengukuran model tersebut dapat dilihat pada Tabel 4, Tabel 5, Tabel 6, dan Tabel 7.

Table 4: Convergent Validity

Variabel	Indikator	Loading Factor	AVE
Impulse Buying Tendency	IBT1	0,956	0,913
	IBT2	0,958	
	IBT3	0,949	

	IBT4	0,950	
	IBT5	0,965	
Shopping Enjoyment Tendency	SET1	0,969	0,918
	SET2	0,959	
	SET3	0,939	
	SET4	0,967	
Materialism	M1	0,959	0,921
	M2	0,959	
	M3	0,95	
	M4	0,971	
Person's Situation	PS1	0,968	0,935
	PS2	0,967	
	PS3	0,965	
Website Quality	WQ1	0,968	0,923
	WQ2	0,957	
	WQ3	0,955	
	WQ4	0,964	
Motivational Activities by Retailers	MAR1	0,964	0,932
	MAR2	0,965	
	MAR3	0,967	
Product Attribute	PA1	0,965	0,916
	PA2	0,94	
	PA3	0,96	
	PA4	0,963	
Impulse Buying	IB1	0,963	0,927
	IB2	0,959	
	IB3	0,967	

The SEM model that meets convergent validity can be said to be valid, if the value of factor loadings > 0.7, communality > 0.5, and the AVE value > 0.5 (Abdillah & Jogiyanto, 2009). Based on Table 4.10, it can be seen that all indicators have a loading factor value > 0.7. This value indicates that these indicators can measure the latent variable. When viewed from the AVE size, it is known that all AVE values > 0.5, which means that the indicators in the form of IBT, SET, M, PS, WQ, MAR and IB are valid in measuring the latent variables so that they can be used for further testing. Further analysis will be carried out on the discriminant validity data will be carried out which contains the cross loading and fornell-larcker criterion, shown in Tables 5 and 6.

Table 5: Cross Loading

Item	Product Attributes	Impulse Buying (Y)	Shopping Enjoyment Tendency	Motivational Activities by Retailers	Impulse Buying Tendency	Website Quality	Materialism	Person's Situation
PA1	0.972	0.67	0.56	0.554	0.561	0.559	0.555	0.562
PA2	0.959	0.645	0.54	0.538	0.535	0.537	0.546	0.544
PA3	0.97	0.665	0.567	0.553	0.568	0.572	0.552	0.572
PA4	0.971	0.661	0.554	0.547	0.55	0.558	0.561	0.575
IB1	0.667	0.976	0.694	0.681	0.68	0.681	0.689	0.681
IB2	0.66	0.974	0.692	0.677	0.692	0.673	0.689	0.675
IB3	0.669	0.977	0.697	0.685	0.683	0.681	0.691	0.684
SET1	0.568	0.71	0.974	0.573	0.572	0.586	0.571	0.573
SET2	0.559	0.685	0.969	0.58	0.558	0.558	0.556	0.567
SET3	0.54	0.667	0.959	0.564	0.545	0.541	0.537	0.55
SET4	0.555	0.696	0.973	0.571	0.573	0.574	0.568	0.57
MAR1	0.555	0.681	0.575	0.977	0.591	0.565	0.574	0.578

MAR2	0.551	0.68	0.573	0.977	0.594	0.564	0.586	0.576
MAR3	0.554	0.686	0.583	0.978	0.581	0.569	0.593	0.587
IBT1	0.541	0.678	0.568	0.591	0.965	0.556	0.573	0.556
IBT2	0.551	0.683	0.56	0.568	0.967	0.564	0.562	0.572
IBT3	0.565	0.674	0.552	0.591	0.96	0.554	0.569	0.583
IBT4	0.537	0.669	0.55	0.579	0.961	0.554	0.558	0.579
IBT5	0.564	0.684	0.568	0.576	0.97	0.584	0.573	0.569
WQ1	0.585	0.685	0.574	0.573	0.572	0.974	0.582	0.573
WQ2	0.546	0.669	0.569	0.555	0.568	0.969	0.567	0.553
WQ3	0.547	0.666	0.554	0.551	0.558	0.968	0.573	0.552
WQ4	0.555	0.68	0.567	0.568	0.567	0.972	0.575	0.577
M1	0.549	0.697	0.555	0.574	0.56	0.581	0.97	0.561
M2	0.566	0.68	0.561	0.587	0.567	0.59	0.969	0.563
M3	0.539	0.675	0.547	0.574	0.572	0.549	0.965	0.579
M4	0.565	0.692	0.573	0.586	0.582	0.575	0.976	0.576
PS1	0.59	0.682	0.57	0.571	0.58	0.573	0.575	0.978
PS2	0.559	0.68	0.566	0.587	0.574	0.564	0.572	0.978
PS3	0.559	0.683	0.575	0.584	0.584	0.566	0.576	0.977

Note: PA-Product Attributes, IB-Impulse Buying, SET-Shopping Enjoyment Tendency, MAR-Motivational Activities by Retailers, IBT-Impulse buying tendency, WQ-Website Quality, M-Materialism, PS-Person's Situation.

From the results of the estimated cross loading in Table 5, it can be concluded that the cross loadings value for each indicator of each latent variable is greater than the value of the other latent variables and has a value > 0.7. This means that each latent variable already has a good measure of discriminant validity, where some latent variables have a measure that is highly correlated with other constructs. It can also be seen that the cross loadings value generated through discriminant validity testing results in the largest cross loading value on one indicator of the variable compared to other variables. This indicates that all indicators that have been selected in this study are declared valid based on discriminant validity testing.

Tabel 6: Fornell-Larcker Criterion

	Product Attributes	Impulse Buying (Y)	Shopping Enjoyment Tendency	Motivational Activities by Retailers	Impulse Buying Tendency	Website Quality	Materialism	Person's Situation
PA	0.968							
IB(Y)	0.682	0.976						
SET	0.574	0.712	0.969					
MAR	0.566	0.698	0.59	0.977				
IBT	0.572	0.702	0.58	0.602	0.965			
QW	0.575	0.695	0.583	0.579	0.583	0.971		
M	0.572	0.707	0.576	0.598	0.588	0.592	0.97	
PS	0.582	0.697	0.583	0.594	0.593	0.581	0.587	0.978

In table 4.12 Fornell's larcker criterion, it can be explained that the value of the product attributes (PA) variable is 0.968, the impulse buying variable is (IB) 0.976, the shopping enjoyment tendency (SET) variable is 0.969, the motivational activities by retailers (MAR) variable is 0.977, the impulse buying tendency (IBT) variable is 0.965, the website quality variable (WQ) is 0.971, the materialism variable is 0.970, and the person's situation variable is 0.978. So it can be concluded that the model is valid because it has met discriminant validity.

Tabel 7: Reliability Test Results

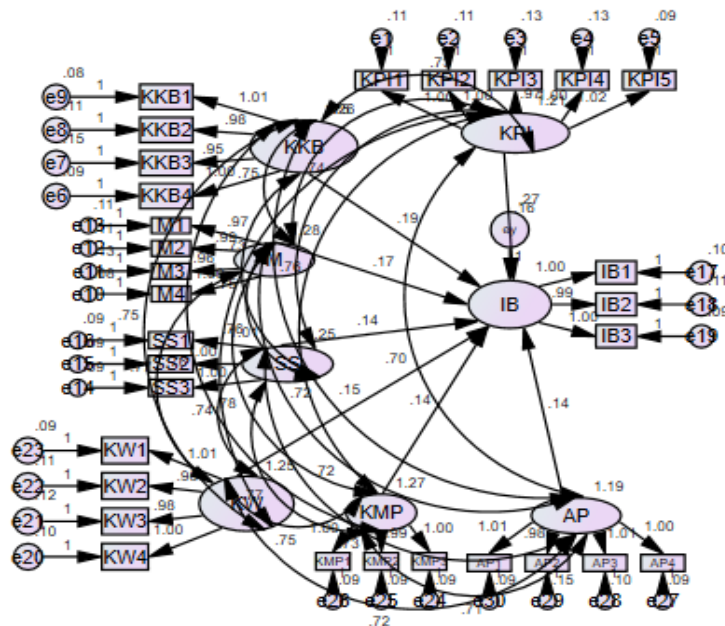
Variabel	Cronbach Alpha	Composite Reliability	Keterangan
Impulse Buying Tendency	0,981	0,981	Reliable
Shopping Enjoyment Tendency	0,978	0,978	Reliable
Materialism	0,979	0,979	Reliable
Person's Situation	0,977	0,977	Reliable
Website Quality	0,980	0,980	Reliable
Motivational Activities by Retailers	0,976	0,976	Reliable

Product Attribute	0,978	0,978	Reliable
Impulse Buying	0,975	0,975	Reliable

Based on Table 7, all values of Cronbach's Alpha and composite reliability are appropriate and reach the predetermined standard where the standard is 0.7 so that the eight variables used in this study are reliable variables.

Then, the test of the measurement model (outer model) has been carried out previously using confirmatory factor analysis (CFA). Based on the confirmed model, the analysis process is carried out on the model with the full model image shown in Figure 1.

Figure 1: Structural Model Test Results



The full test of the SEM model is carried out with two kinds of tests, namely the suitability of the model and the significance of causality. The full SEM model test is used to see the feasibility of the model or the suitability of the model. The conformity indices of the model used are no different from the indices in confirmatory factor analysis (CFA). Evaluation of the suitability of the structural equation model can be done by comparing the recommended fit indices as presented in Table 8.

Table 8: Evaluation of the Goodness of Fit in the Structural Model

GOF	Acceptable Match Level	Model Index	Explanation
Chi-square	chi-square $\leq 2df$ (good fit), $2df < \text{chi-square} \leq 3df$ (marginal fit), $\text{chi-square} > 3df$ (bad fit)	654.120 > 3df	Bad Fit
p-value	$P \geq 0.05$ (good fit), $p < 0,05$ (bad fit)	0.055	Good Fit
GFI	$GFI \geq 0.9$ (good fit), $0.8 \leq GFI \leq 0.9$ (marginal fit)	0.925	Good Fit
RMR	$RMR \leq 0.5$ (good fit)	0.012	Good Fit
RMSEA	$0.05 < RMSEA \leq 0.08$ (good fit), $0.08 < RMSEA \leq 1$ (marginal fit)	0.071	Good Fit
TLI	$TLI \geq 0.9$ (good fit), $0.8 \leq TLI \leq 0.9$ (marginal fit)	0.988	Good Fit
NFI	$NFI \geq 0.9$ (good fit), $0.8 \leq NFI \leq 0.9$ (marginal fit)	0.975	Good Fit
AGFI	$AGFI \geq 0.9$ (good fit), $0.8 \leq AGFI \leq 0.9$ (marginal fit)	0.907	Good Fit
RFI	$RFI \geq 0.9$ (good fit), $0.8 \geq RFI \leq 0.9$ (marginal fit)	0.971	Good Fit

CFI	CFI ≥ 0.9 (good fit), 0.8 ≤ CFI ≤ 0.9 (marginal fit)	0.989	Good Fit
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Based on Table 8, it can be seen that the overall model shows a good level of conformity. There is one criterion that does not fit, namely chi-square. Thus, the results of the goodness of fit test on the standard model used in this study indicate that the observed data is in accordance with the theory or model.

On the other side, R-Square value of IB is 0.784, this shows that all independent/free variables simultaneously have an effect of 78.4% on impulse buying (dependent/bound variable). While the remaining 21.6% is influenced by other variables not tested in the study. On the other hand, the R-Square value is categorized as strong because it produces a value above 0.67, as stated by (Wynne w. Chin, 1998), that the R-Square value is categorized as strong if it is more than 0.67, moderate if it is more than 0.33 but lower than 0.67, and weak if it is more than 0.19 but lower than 0.33.

Finally, the data analysis in this study was demonstrated by testing hypotheses which could later be used as answers to the questions posed in this study (shown in Table 9).

Tabel 9: Hypothesis Testing on Direct Effect

Hypothesis	Construct	Coefficient	T-Statistics	T-Table	Result
H1	Impulse buying tendency has a positive and significant impact on impulse buying	.156	4.643	1,96	Supported
H2	Shopping enjoyment tendency has a positive and significant impact on impulse buying	.196	5.876	1,96	Supported
H3	Materialism has a positive and significant impact on impulse buying	.171	5.100	1,96	Supported
H4	Person’s situation has a positive and significant impact on impulse buying	.144	4.273	1,96	Supported
H5	Website Quality has a positive and significant impact on impulse buying	.148	4.426	1,96	Supported
H6	Motivational activities by retailers has a positive and significant impact on impulse buying	.143	4.197	1,96	Supported
H7	Product Attributes has a positive and significant impact on impulse buying	.156	4.193	1,96	Supported

Table 9 shows the results of hypothesis testing by bringing up the path coefficient values and t statistics. It can also be seen that the t-statistical value of the seven variables has a value greater than the existing t-table value of 1.96, according to a significance of 5%. So it can be said that the seven hypotheses (H1, H2, H3, H4, H5, H6 and H7) in this study are supported, or in other words, have a positive and significant influence on impulse buying on their direct effect. Another discussion regarding the indirect effect on the moderating variable shows that the seven hypotheses are supported, both on the test results for both men and women. the resulting t-statistics value exceeds the t-table number that has been set at 1.96.

Tabel 10 Hypothesis Testing on Indirect Effect (Moderating impacts)

Hypothesis	Constructs	Men		Woman		T-Table	Result
		Coefficient	T-Statistics	Coefficient	T-Statistics		
H8	Gender has a positive and significant impact in moderates the relationship between Impulse buying tendency and impulse buying	.149	3.032	.164	3.600	1,96	Supported
H9	Gender has a positive and significant impact in moderates the relationship between shopping enjoyment tendency and impulse buying	.198	4.034	.186	4.147	1,96	Supported
H10	Gender has a positive and significant impact in moderates the relationship between materialism and impulse buying	.146	3.143	.201	4.123	1,96	Supported
H11	Gender has a positive and significant impact in moderates the relationship between person’s situation and impulse buying	.148	2.885	.137	3.088	1,96	Supported
H12	Gender has a positive and significant impact in moderates the relationship between website quality and impulse buying	.157	3.053	.136	3.136	1,96	Supported
H13	Gender has a positive and significant impact in moderates the relationship between motivational activities by retailers and impulse	.155	2.955	.132	3.013	1,96	Supported

	buying						
H14	Gender has a positive and significant impact in moderates the relationship between product attributes and impulse buying	.121	2.612	.152	3.301	1,96	Supported

1.4 Findings and Interpretation

The results of this study are not much different from the research conducted by (Atulkar & Kesari, 2018). This study shows that consumer traits and situational factors such as impulse buying tendency, shopping enjoyment tendency, materialism, person's situation, motivational activities by retailers, and product attributes have a positive and significant effect on impulse buying. In addition, in an indirect relationship, gender also has a positive and significant influence in moderating the relationship between consumer traits and situational factors with impulse buying behavior.

The findings of this study indicate that from a quantitative perspective, the shopping enjoyment tendency variable has the greatest influence in encouraging e-commerce users to make impulse purchases. In this case, when the pandemic was hitting Indonesia, most of the community's activities were hampered due to restrictions on activities outside the home and visiting public places that could potentially spread the Covid-19 virus, making e-commerce online shopping sites chosen by the public as a medium for communicating. reduce boredom, improve mood, and feel pleasure in shopping. Engel et al., (2005) found that shopping can be used as a positive distraction, escape, pleasure, a medium to increase one's self-esteem, active activities, and social connections. In other words, the better the shopping enjoyment tendency felt by consumers, the higher the impulse buying behavior of consumers when shopping in e-commerce during the pandemic. It can be seen that, another reason that is considered a driving factor for a consumer who manages to feel the convenience of shopping online, namely when they can find the products they need and like during the pandemic is in the e-commerce of their choice and another reason is because of the existence of payment services through wallets. digital, COD systems, m-banking transfers and so on that have been provided by e-commerce to make it easier for users. This is in line with research conducted by (Atulkar & Kesari, 2018), (Putra & Adam, 2020), (Kharisma & Ardani, 2018), but is not supported by research conducted by (Febrilia & Warokka, 2021).

Materialism is the second most important variable influencing e-commerce users to make impulse purchases during the pandemic. This value shows that materialism does not always have a negative impact, because it is the most critical factor that can influence e-commerce users to make impulse buying. That means that the higher the materialistic nature of a person, the higher the impulse buying behavior. The nature of materialism is defined as a trait that attaches importance to the ownership of an item, where ownership is felt to indicate its status and will make him feel happy. In this case, most of the e-commerce users in Indonesia during the pandemic have a natural materialism, which makes it difficult for them to control themselves from buying something they want and attract their attention, with the excuse of fulfilling their lifestyle. In addition, consumers who have materialism long before the pandemic, will have more potential to make impulse buying because they assume that during the pandemic only online shopping is considered to be able to create hedonic needs, even though it has an impact on reducing income or pocket money significantly. fun can motivate them to buy more of the things they like. This is also confirmed by (Richins & Dawson, 1992; Schiffman et al., 2014), where the nature of materialism assumes that an item acts as a determinant of success, the number of items determines success, ownership of an item will impress others, the use of money for items that are not needed, the role of goods in showing self-identity, the existence of an item that is felt to be able to create its own satisfaction, buying goods makes you happier, requires a lot of things to make you happy, and feels restless if you don't have all the things you want. When consumers have these traits, in the end the desire to have a product is getting bigger, so that consumers will be more impulsive to buy it. A thorough understanding of consumer behavior, which sometimes includes the nature of materialism, is used by marketers in marketing their products and increasing their sales volume. These results are in accordance with research conducted by (Atulkar & Kesari, 2018), (Sen & Nayak, 2021), and (Podoshen & Andrzejewski, 2012), and (Pradhan et al., 2018).

Third, impulse buying tendency has a positive and significant influence on impulse buying, which indicates that the majority of respondents in this study have a high tendency to make impulse purchases in e-commerce, both Shopee, Tokopedia, Blibli, Bukalapak, and Lazada during the pandemic. Someone with a high level of impulse buying tendency will mostly do in-store browsing more often than those who have a low level of impulse buying tendency. This is because most of their purchases are not planned in advance, so they have to look for the product or brand they want when shopping in the store. In addition, this tendency can make a person lack self-control and can encourage consumptive nature, because they have strong feelings and are happy if they can buy a product or service they want in e-commerce. This impulsive buying tendency is considered a general trait of consumers, which may be more suitable for certain product categories in the market (Altukar & Kesari, 2018). These results are in line with research conducted by (Atulkar & Kesari, 2018), (Mohan et al., 2013), (Febrilia & Warokka, 2021), (Newman & Patel, 2004), and (Dawson & Kim, 2009).

Fourth, positive and significant influence between website quality and impulse buying gives the meaning that the quality of an e-commerce website, has a significant influence in influencing users to make impulse purchases. The better the quality of an e-commerce in displaying its performance, the more users are interested in shopping on the site. It is known that this study observes the behavior of some groups of people in Indonesia who use e-commerce to make impulse purchases online, which makes e-commerce a trend and necessity during the Covid-19 pandemic. The better the quality of the web, the higher the probability of impulse buying (Jones & Leonard, 2008). These results are in line with the research conducted by (Febrilia & Warokka, 2021), (Hayu et al., 2020), (Akram et al., 2018), and (Hoa, 2021), but are not supported by the research conducted by (Wells et al., 2011), (Turkyilmaz et al., 2015) and (Wiranata & Hananto, 2020).

Fifth, there is a positive and significant influence between the person's situation and impulse buying, this indicates that a consumer has different situations, perhaps in feelings/moods, time, money, place, and other factors to be able to access online shopping applications during a pandemic in the hope of being stimulated to make impulse purchases. A person's situation related to money, time, family, credit card use, in-store situations such as sales promotions, store environment, friendly store employees and in-store music can influence impulse buying. Everything related to a person's situation when making a purchase, for example the time spent shopping also has an effect on impulsive buying behavior. the longer the consumer stays in the store, the greater the chance of making an impulse purchase. These results are in line with research conducted by (Luo, 2005), (Khan et al., 2015), (Husnain et al., 2019), and (Foroughi et al., 2012).

Sixth, there is a positive and significant influence between motivational activities by retailers and impulse buying, indicates that the seller's friendly behavior and their support in the buying process can reduce consumers' negative emotions and encourage them to make impulse purchases. Motivational activities, such as events, offers for regular consumers, promotional schemes, and support from sales staff, increase consumers' confidence in their spending (Richins & Richins, 2016). The reasons consumers choose to shop online are because of attractive promos during PSBB, cheaper prices, more free time to access online shops in e-commerce, to avoiding virus contact, so these reasons can potentially trigger impulse buying behavior. Sellers who are active in making sales strategies tend to be in high demand by consumers compared to passive ones. In addition, the fluctuating spread of the corona virus has the potential to encourage them to shop more than once, so they really need convenience and attractive offers from e-commerce parties and store sellers in order to get additional benefits from promotional offers. These results are in line with research conducted by (Miao et al., 2020), (Febrilia & Warokka, 2021), and (Atulkar & Kesari, 2018).

Seventh, there is a positive and significant influence between product attributes and impulse buying, indicates that product attributes, such as product price, product features, and product quality, are the main driving factors in impulse buying, which retailers can use when offering products to consumers (Nsairi, 2012). As e-commerce users, Indonesians like products with cheap/economical/affordable prices which encourage them to buy in larger quantities. An e-commerce user when encountering a product with a low price and good quality, is more easily stimulated to buy it spontaneously, compared to those who encounter a product with a high price and low quality, in addition to a store that can list the completeness of the product properly. through store ratings that have been reviewed by other consumers, clear product descriptions, complete image catalogs, and so on, will encourage someone who initially only visited to make a spontaneous and sudden purchase. The appearance of an attractive product with its characteristics always attracts attention and creates a desire to buy the product offered (Kacen et al., 2012). This is also done to build consumer trust and avoid feeling disappointed with the product to be purchased that does not meet expectations. These results are in line with research conducted by (Atulkar & Kesari, 2018) and (Park et al., 2012).

Furthermore, this study shows that gender has a positive and significant effect in moderating the relationship between consumer traits (impulsive buying tendencies, shopping enjoyment tendencies, materialism), situational factors (person's situation, website quality, motivational activity, and product attributes) and impulse buying. This shows that men and women e-commerce users during the pandemic have significant differences in impulse buying. This difference is not only seen from the quantitative but also qualitative results, which means that both men and women have differences not only in terms of the frequency of impulse buying or the level of impulse buying tendency, but also in terms of shopping behavior style.

In this study, it appears that women are more likely to make impulse purchases, because before the restrictions imposed during the pandemic, women tend to have a preference for shopping, so when they feel bored because of these restrictions, e-commerce is one of the media chosen to visit/ accessed. in reducing boredom. it is different with mn, they tend to be able to refrain from accessing/visiting e-commerce which has the potential to encourage them to make impulse purchases. But in general, e-commerce can easily influence users to buy impulsively, because during the pandemic, consumers are connected to the internet almost every day. In a study conducted by Verplanken & Herabadi (2001) they investigated the assumption that impulse buying tendencies are rooted in personality, and thus may be a variable of individual differences. If this is the case, then impulse buying propensity is most likely correlated with individual personality-related differences.

Impulsive buying tendencies, as constructs confined to the area of consumer behavior, can be an expression of broader personality patterns. For example, someone who has a pre-thinking style of communicating with others may also adopt that style when shopping.

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