

Research Article

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Mobile Legends: The World of Money-Making Games-What Drives Gamers to Buy Virtual Items in Online Games?

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Abstract: *Research Objectives to determine how sales promotion and macro influencers affect purchasing decisions for virtual items in mobile legends online games with consumer satisfaction as a media variable. Research Methods Quantitative analysis, the population in this study were Mobile Legends players at the match held in Kabanjahe with the sample size being 100 people. This research analysis uses SEM-PLS with instrument tests to test validity and reliability and associative tests to test the influence between variables. The results of the study Sales Promotion (X1) have a significant and dominant influence on purchasing decisions. A good promotional strategy has proven effective in encouraging consumers to make purchases. Macro Influencer (X2) does not have a significant impact on buying decisions. This shows that the existence of macro influencers does not necessarily directly influence consumer decisions to buy. Consumer Satisfaction (Z) plays a very important role in influencing purchasing decisions. Customer satisfaction is proven to be a key factor that significantly determines purchasing decisions. Overall, the research model has excellent predictive ability, with an R-squared value of 0.826, which means that 82.6% of the variance in purchasing decisions can be explained by the variables in the model. Moderation Variables, the interaction between sales promotion variables or macro influencers with customer satisfaction does not have a significant moderating effect on purchasing decisions.*

Keywords: *Macro influencer, Purchase Decision, Sales Promotion.*

Introduction

In today's digital era, people's lives cannot be separated from technology. Technology will continue to develop rapidly, especially the development of technology in the field of entertainment, one of which is games. Games that can only be played alone can now be connected with other players out there. This kind of thing cannot be separated from the internet network which makes it easy for gamers to play games anywhere and anytime, as long as they have an internet connection and a supporting device (Wahyudi, 2022).

The most popular *online game* in Indonesia is Mobile Legends. "*Mobile Legends is a Multiplayer Online Battle Arena game released by Moonton. This game can be played on Android and IOS phones. In Mobile Legends games, the main objective of the game is to eliminate the enemy base, the game is closed when the base of one group is destroyed*" (Kumparan, 2021). According to Sutjipto (2020), *Mobile Legends* has reached 1 billion downloads since its first release in 2016 to date, the most downloads came from Indonesia, amounting to 100.1 million downloads or 36% of the total downloads.

In Indonesia, there are many *online games* that can be played by gamers, including games in the genre of FPS (*First Person Shooter*), strategy, *Action Adventure*, RPG (*Role Playing Game*), Sports, and the most popular today is MOBA (*Multiplayer Online Battle Arena*), one of the most popular MOBA games today is Mobile Legends. The *online game-themed Multiplayer Online Battle Arena* game that is very popular in Indonesia is *Mobile Legends* (Arifin, 2023).

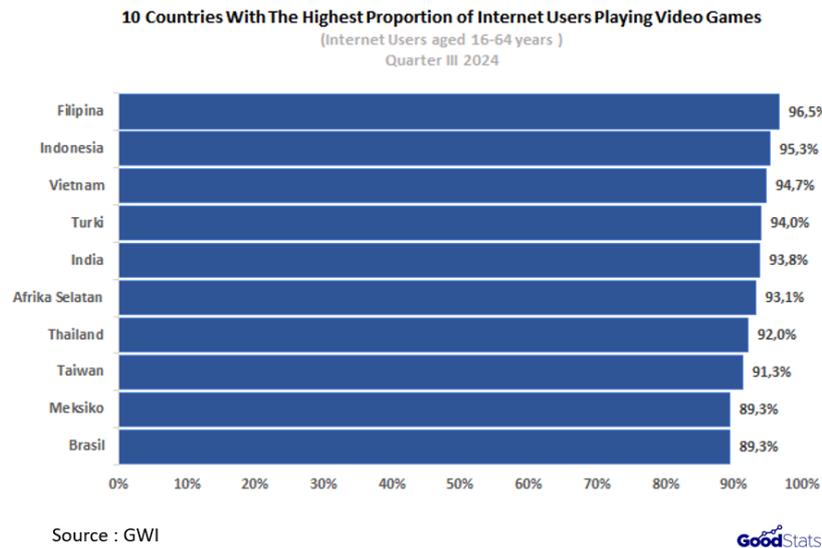


Figure 1: Indonesian Internet Users Playing Video Games

According to good stats.id (2024), 96.5% of Filipino internet users aged 16-64 play *video games* regularly. This proportion is slightly higher than in Indonesia. With 95.3% of its internet users playing *video games*, Indonesia is ranked second globally. This high number shows the massive market for *video games* in the country, which if properly utilized can be a promising business opportunity.

Promotion is one way for companies to market their products or services and also to convince consumers of the goods or services provided. According to Tjiptono (2015), promotion is one of the elements of the marketing mix that focuses on informing, inviting, and recalling company products to consumers. Attractive advertisements can make consumers curious about the products or services we offer and will foster interest in buying the products or services offered by choosing the right promotional media, it is hoped that all information conveyed to consumers about new products and additional benefits for consumers is expected to be well received which can convince and influence consumers to make decisions to buy these products (Devy and Sinulingga, 2018). One source of income for *online game* developers is buying and selling virtual products. Virtual products are non-physical goods or money that are obtained by buying these items using real money, and then the money or non-physical goods can be used in *online games* (Karunia & Lunardy, 2016).

According to Elida and Raharjo (2019), promotion is an effort made by producers that aims to provide information, influence, and establish better relationships with consumers. According to Nancy (2014) and Oktavania (2019) found that sales promotions affect purchasing decisions. Therefore, the promotions offered by the *mobile legends* game developer will be able to influence the player's purchasing decision to buy diamonds in the *mobile legends* game. In contrast to the studies presented above, Onigbinde (2015) and Rohmah (2018) state that sales promotions do not affect consumer purchasing decisions.

In addition to sales promotion, there are *macro* influencers that can influence purchasing decisions. For social media users, following social media accounts of *influencers* or celebrities is a very popular activity, as it can create the key to success used in the form of sales promotion for *influencers* and has proven to be a powerful method to promote a product (Zhu & Chen, 2024). Therefore, the reason for choosing the subject in this research is *macro influencers*. To attract the attention of the public, it is not uncommon for the promotion of a product to carry out its sales promotion by inviting cooperation with *influencers*. Then, the influencer packages the product *endorsement* video using various attractive forms of

promotion to influence and attract the attention of his followers, so that in every making of a product advertisement, various themes, and packaging topics are needed so that the advertising video about the product produced has good quality and by the wishes of the product owner. A *macro influencer* is someone who has a strong influence or a content creator who shares their various life activities on social media with a specific purpose.

Mobile Legends: Bang Bang has experienced rapid development, known from the data obtained from the official *Mobile Legends website*: *Bang Bang*, the number of downloads of this game reached 1 billion downloads worldwide. Even MLBB has beaten its competitor game, *Honor of Kings*, which in the same year only had 902 million downloads. In addition, from 2019 to this year *Mobile Legends: Bang Bang* still occupies the top 5 best-selling games in Indonesia, which even in 2020 is ranked as the first *top-grossing game* on the Android platform (Sensor Tower, 2020).

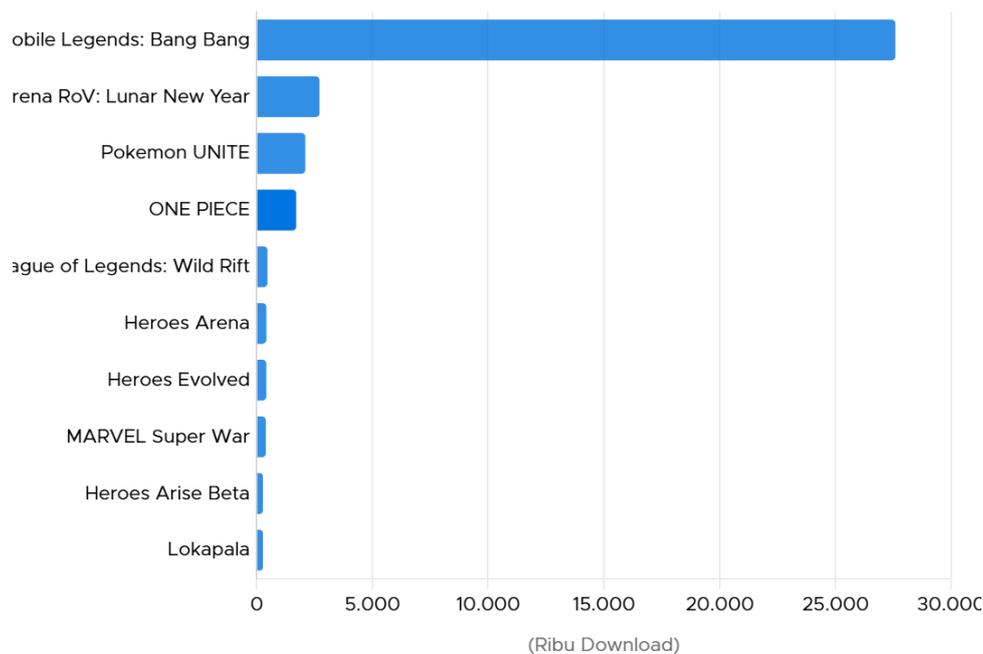


Figure 2. 10 Most Selling MOBA Games in Indonesia by 2023

Despite having reached the *top-grossing game* and several other advantages over other games, MLBB is still unable to compete with its competitor game, *Honor of Kings* in terms of *gross revenue*. In statistics written by Sensor Tower and *gameindustry.biz*, the *gross revenue* earned by *Honor of Kings* in 2019 reached USD 1.5 billion, while the *gross revenue* earned by MLBB only reached USD 214 million. Judging from this comparison, *Honor of Kings* (HOK) far outperformed MLBB to reach 7 times the revenue obtained by *Mobile Legends: Bang Bang*. So researchers argue that sales promotion and *macro influencers* are factors that have an important role in influencing consumer purchasing decisions.

Based on the above review, the results of research on the effect of sales promotion and *macro influencers* on research decisions are still contradictory. The existence of gaps in the results of previous studies underlies researchers to re-examine sales promotions and *macro influencers* on purchasing decisions for virtual items in mobile legends *online games*.

Literature Review

The Effect of Promotion on Purchasing Decisions for Virtual Items in the Mobile Legends *Online Game*

According to Kotler and Keller (2018), promotion is a form of marketing communication that aims to disseminate information, influence, and remind the target market or consumers of the company and its products. Promotions can influence consumers' perceptions of products and influence their purchasing decisions. According to Tjiptono (2010), promotion is a company's way to create awareness, share information, and influence buyers either directly or indirectly on the products or services offered. Effective promotion can create consumer desire and interest in buying the product or service. According to Shimp and Andrews (2013), promotion is a powerful marketing tool to influence consumer purchasing decisions. Through promotion, companies can communicate the benefits, advantages, and value of products to consumers, to influence their decision to buy.

The influence of *Macro influencers* on Virtual Item Purchasing Decisions in the Mobile Legends *online game*

Macro influencers have an impact on purchasing decisions, according to Abdullah, et al. (2020). This explains that the greater the affinity of *influencers* to communicate messages and information to social media users, the more effective it is to influence the purchase intention of social media users. Furthermore, the content of messages and information in marketing content generated by social *media influencers* on sites such as Instagram, Facebook, YouTube, and TikTok is more reliable and trustworthy than sponsored advertisements. The same results were stated by Afandi, et al. (2021), Radwan et al. (2021), and Zak and Hasprova (2020) who state that *influencers* have a large and positive influence on purchasing decisions significantly.

The Effect of Consumer Satisfaction on Purchasing Decisions for Virtual Items in the Mobile Legends *Online Game*

Customer satisfaction is the level of consumer feelings after comparing what is received and their expectations (Haryoko et al. 2020). In that regard, the *customer satisfaction* factor is an important element in providing or adding value to customers. Simanjuntak et al. (2020) in their research show that partially customer satisfaction has a positive and significant effect on purchasing decisions. Sista's research (2017) shows that customer satisfaction has a positive effect on purchasing decisions. Meanwhile, in Sibarani et al. (2020) the consumer satisfaction variable has no positive and insignificant effect on purchasing decisions. Then Mailensun and Bangun (2019) show that partially or simultaneously the consumer satisfaction variable has a positive and significant effect on purchasing decisions.

Method

This method is used to test hypotheses and relationships between the data collected, as well as to conduct quantitative analysis (Malhotra, 2009). The information data used is primary data through questionnaires. Secondary data is obtained from literature studies, *internet research*, and Mobile Legends Games profiles. The population in this study are Mobile Legends players whose numbers are unknown so that they are *infinite*. The sampling technique uses *non-probability sampling*, where this technique according to Sugiyono (2015) data is selected as a sample based on certain criteria. The criteria for respondents in this study are men and women who have purchased Mobile Legends online virtual game

items at least once, have seen Mobile Legends advertisements on Instagram, have seen *influencer* content on YouTube, and are aged 16 to 34 years. Thus the researcher used 20 indicators, to determine the number of samples as follows, $20 \times 5 = 100$ respondents who participated in *online game* competitions in Karo Regency. In this study, the number of samples was 100 people. This research analysis uses SEM-PLS to test between variables and SPSS with instrument tests to test validity and reliability where all questionnaire items have been tested for reliability and associative tests to test the influence between variables. The associative test is a formulation of a research problem that asks about the relationship between two or more variables (Sugiyono, 2015). The research associative test uses a comparison of the count value with the critical value found in the t-distribution table. If the count value is greater than the critical value, the independent variable influences the dependent variable (Ghozali, 2018).

Table 1. Definition of Variable Operationalization

No.	Variables	Dimensions	Indicator	Researcher
1.	Purchase Decision (Y)	1) Steadiness in a product. 2) Habits in buying products. 3) Make repeat purchases. 4) Giving recommendations to others.	1. The extent to which consumers are satisfied and trust the product they choose 2. Consumers view brands in terms of reputation and trust. 3. How often do consumers buy the product in a certain period? 4. Measures how likely consumers are to recommend the product to others. 5. The average time it takes for consumers to make a repeat purchase after the first purchase. 6. How well consumers respond to discount offers.	(Kotler & Hermawan, 2019)
2.	Sales Promotion (X1)	1. Promotion quality. 2. Promotion quantity. 3. Appropriateness of promotion targets. 4. Frequency of promotion. 5. Promotion time.	1. Compatibility of promotional content with the needs and preferences of the target market. 2. Online channels used for promotion (soda shop, Unipin, and Uniplay) 3. How well the promotion is directed to the right market segment.	(Kotler & Keller, 2012)

No.	Variables	Dimensions	Indicator	Researcher
			4. Specific time plan for promotion implementation. 5. Conformity of promotion implementation time with certain moments or events. 6. Consistency level	
3.	<i>Macro influencers (X2)</i>	1) <i>Engagement</i> 2) <i>Reach</i> 3) <i>Impression</i>	1. How often the audience interacts with the content, such as website visits, comments, and likes. 2. The percentage of the audience that responds to communications, such as emails or surveys. 3. The number of desired actions, such as purchase or registration, compared to the total interactions. 4. Total unique users who viewed the content in a given period. 5. Total Viewers 6. Total Followers of the content. 7. Total Purchases in a given month. 8. Increased Sales every day	(Solis, 2012)
4.	Consumer Satisfaction (Z)	1. <i>Reliability</i> 2. <i>Responsiveness</i> 3. <i>Confidence</i> 4. <i>Empathy (Empathy)</i>	1. Ability to provide services promptly, accurately, consistently and satisfactorily. 2. The ability of employees to provide services quickly and responsively. 3. Quality related to the company's ability and employee behavior to instill trust and confidence in consumers. 4. Willingness of employees to establish relationships, good	(Tjiptono and Chandra, 2015)

No.	Variables	Dimensions	Indicator	Researcher
			communication, personal attention, and understanding of the individual needs of consumers.	
		5. <i>Tangible</i>	5. Physical appearance, equipment 6. A variety of visible materials that can be rated as good	

Table 2. Descriptive Analysis of Respondents

Characteristics	Criteria	Number of Respondents	Percentage (%)
Gender	Male	60	60%
	Female	40	40%
Age	15-20 years	30	30%
	21-25 years old	50	50%
	26-30 years old	15	15%
	>30 years	5	5%
Reason for Desire to Buy	Item Quality	40	40%
	Aesthetics/character appearance	35	35%
	Play experience	15	15%
	Discounts/promotions	10	10%
Macro influencer spot	Codaplay	45	45%
	Uniplay	25	25%
	Unipin	30	30%

Table 3. Descriptive Analysis of Variables

No.	Variables	Dimensions	Indicator	Average
1.	Purchase Decision (Y)	1) Steadiness in a product. 2) Habits in buying products. 3) Make repeat purchases.	1. The extent to which consumers are satisfied and trust the products they choose	0.650138
			2. Consumers view brands in terms of reputation and trust.	0.596064

No.	Variables	Dimensions	Indicator	Average
		4) Giving recommendations to others.	3. How often do consumers buy the product in a certain period?	0.593555
			4. Measures how likely consumers are to recommend the product to others.	0.555771
			5. The average time it takes for consumers to make a repeat purchase after the first purchase.	0.649641
			6. How well consumers respond to discount offers.	0.593555
2.	Sales Promotion (X1)	1. Promotion quality. 2. Promotion quantity. 3. Appropriateness of promotion target. Frequency of promotion. 5. Promotion time.	1. Compatibility of promotional content with the needs and preferences of the target market.	0.734809
			2. Channels (social media, TV, radio, etc.) used for promotion.	0.834546
			3. How well the promotion is directed to the right market segment.	0.494867
			4. Specific time plan for promotion implementation.	0.572963
			5. Conformity of promotion implementation time with certain moments or events.	0.734809

No.	Variables	Dimensions	Indicator	Average
			6. The level of consistency and continuity in conducting promotions.	0.834546
3.	<i>Macro influencers (X2)</i>	1) Engagement 2) Reach 3) Impression	1. How often the audience interacts with the content, such as website visits, comments, and likes.	0.682113
			2. The percentage of the audience that responds to communications, such as emails or surveys.	0.734401
			3. The number of desired actions, such as purchase or registration, compared to the total interactions.	0.600633
			4. Total unique users who viewed the content in a given period.	0.640885
			5. Total viewers who saw the product	0.682265
			6. Total Followers of the content.	0.623829
			7. Total Purchases in a given month.	0.66004
			8. Increased Sales	0.668885
			4.	Consumer Satisfaction
2. <i>Responsiveness</i>	The ability of employees to provide services quickly and responsively.	0.643829		

No.	Variables	Dimensions	Indicator	Average
		3. <i>Confidence</i>	Quality is related to the company's ability and employee behavior to instill trust and confidence in consumers.	0.69004
		4. <i>Empathy (Empathy)</i>	The willingness of employees to establish relationships, good communication, personal attention, and understanding of the individual needs of consumers.	0.834546
		5. <i>Tangible</i>	Physical appearance, equipment.	0.723829
			A variety of visible materials that can be assessed either	0.823829

Results and Discussion

Convergent Validity Test Results

Table 4. Convergent Validity Test Results

	Consumer Satisfaction (Z)	Purchase Decision (Y)	Macro Influencer (X2)	Sales Promotion (X1)	X1*Z	X2*Z
X2*Z						0.978
X1*Z					0.858	
X1.1				0.907		
X1.2				0.915		
X1.4				0.875		
X1.5				0.918		
X1.6				0.900		
X2.1			0.834			
X2.2			0.837			
X2.3			0.767			
X2.4			0.835			
Y.1		0.720				
Y.4		0.703				
Y.5		0.819				
Y.6		0.931				
Z.1	0.777					
Z.2	0.869					

Z.4	0.778					
Z.5	0.869					
Z.6	0.790					

Source: Data processed (2024)

Based on the table above shows the results of convergent validity analysis for four latent variables, sales promotion (X_1), macro influencers (X_2), purchase decisions (Y), and customer satisfaction (Z). The indicators for variable X_1 have *loading factor* values between 0.875-0.918, indicating good validity. Indicators on variable X_2 are mostly valid with values of 0.767-0.837. Y indicators have validity values ranging from 0.703-0.931, indicating good reliability. The Z indicator has a value between 0.777-0.869, indicating good reliability. The interaction values of $X_1 * Z$ (0.858) and $X_2 * Z$ (0.978) indicate a strong influence on the model. Overall, this table shows that most indicators have good convergent validity.

Discriminant Validity Test Results

Table 5. Discriminant Validity Test Results

	Consumer Satisfaction (Z)	Purchase Decision (Y)	Macro Influencer (X2)	Sales Promotion (X1)	X1*Z	X2*Z
Consumer Satisfaction (Z)	0.818					
Purchase Decision (Y)	0.730	0.798				
Macro Influencer (X2)	0.956	0.779	0.797			
Sales Promotion (X1)	0.903	0.428	0.788	0.903		
X1*Z	-0.273	-0.112	-0.236	-0.309	1.000	
X2*Z	-0.103	0.060	-0.056	-0.207	0.838	1.000

Source: Data processed (2024)

Based on the table above, displays the results of the discriminant validity analysis, which tests the extent to which latent variables differ from each other. The diagonal value shows the AVE (*Average Variance Extracted*) root of each latent variable Consumer Satisfaction (Z) = 0.818, Purchase Decision (Y) = 0.798, *Macro Influencer* (X_2) = 0.797, and Sales Promotion (X_1) = 0.903. These root AVE values are greater than the correlations between variables, such as between Z and Y (0.730), X_2 (0.956), and X_1 (0.903), indicating discriminant validity is met. The relationship between interaction variables ($X_1 * Z$ and $X_2 * Z$) and other variables is low or negative, such as $X_1 * Z$ with Z (-0.273) and X_2 (-0.236), and $X_2 * Z$ with Z (-0.103), which supports the existence of differences between latent constructs. Overall, these results indicate that each construct is well differentiated in the model, with discriminant validity being met.

Validity and Reliability Test Results

Table 6. Validity and Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Z	0.893	1.048	0.910	0.669

Y	0.807	0.881	0.874	0.637
X2	0.835	1.028	0.873	0.635
X1	0.943	0.945	0.957	0.815
X1*Z	1.000	1.000	1.000	1.000
X2*Z	1.000	1.000	1.000	1.000

Source: Data processed (2024)

Based on the table above, *Cronbach's Alpha* values for all the main variables (Z, Y, X₂, X₁) are above 0.7, indicating that the indicators in these variables have good internal consistency. *Composite Reliability* for all variables is also above 0.7, which reinforces the reliability of the data. Validity testing using *Average Variance Extracted (AVE)*, shows that the variables Z (0.669), Y (0.637), X₂ (0.635), and X₁ (0.815) have AVE values above 0.5, so it can be concluded that each variable has fairly good convergent validity. The interaction variables X₁ *Z and X₂ *Z have perfect values (1.000) for all indicators, which could be due to data processing resulting in absolute values or interaction models with fully controlled effects. Overall, this indicates that the research instruments have sufficient reliability and validity to be used in further analysis.

R-Squared Test Results

Table 7. R-Squared Test

	R Square	R Square Adjusted
Purchase Decision (Y)	0.826	0.817

Source: Data processed (2024)

Based on the *R-squared* table above, shows the results of the determination analysis for the dependent variable Purchasing Decision (Y). The *R Square* value of 0.826 indicates that 82.6% of the variance in purchasing decisions can be explained by the independent variables in the research model. Meanwhile, the *Adjusted R Square* value of 0.817 shows the determination results that have been adjusted for the number of variables in the model, thus indicating that after considering the complexity of the model, the independent variables are still able to explain 81.7% of the variance in purchasing decisions. This value indicates that the model has excellent predictive ability. The remaining 17.4% is influenced by other variables not included in the model.

F-Square Test Result

Table 8. R-Squared Result

	Purchase Decision (Y)
Consumer Satisfaction (Z)	0.735
Purchase Decision (Y)	
Macro Influencer (X2)	0.019
Sales Promotion (X1)	1.191
X1*Z	0.006
X2*Z	0.006

Source: Data processed (2024)

Based on the table above, shows the *F-Square* value for each variable that influences the Purchasing Decision (Y) in the study. *F-Square* measures the contribution of individual predictors to the *R-Square*

Based on the picture above, which is a representation of the research model using *path analysis* to measure the effect of independent and moderating variables on Purchasing Decisions (Y). The diagram shows the three main variables of Sales Promotion (X_1), *Macro Influencers* (X_2), and Consumer Satisfaction (Z). The following is the explanation:

1. Sales Promotion (X_1) has a significant direct effect on Purchasing Decisions (Y) with a T Statistic value of 4.485. This shows that effective promotion is a major factor in influencing consumer purchasing decisions.
2. *Macro Influencers* (X_2) have an insignificant direct influence on Purchasing Decisions (Y), as seen from the low T Statistic value (0.933). This indicates that the involvement of *macro* influencers has less influence on purchasing decisions directly.
3. Customer Satisfaction (Z) has a significant direct effect on Purchasing Decisions (Y) with a T Statistic value of 4.619, which indicates customer satisfaction plays a key role.
4. The interaction between the moderating variables ($X_1 * Z$ and $X_2 * Z$) and Purchase Decision (Y) has T Statistics of 0.798 and 0.783 respectively, which indicates the moderating effect is not significant. In other words, the role of Consumer Satisfaction as moderation on the relationship between Sales Promotion or *Macro Influencers* and Purchasing Decisions does not have a significant effect.

The results revealed complex dynamics between sales promotion, *macro influencers*, customer satisfaction, and purchasing decisions. Sales promotion (X_1) is proven to have a highly significant influence on purchasing decisions, with a T Statistic value of 4.485 and a P-value of 0.000. This finding shows that an effective promotion strategy is a key factor in encouraging consumers to make purchases. The sales promotion indicators in this study have very good validity, with *loading factors* ranging from 0.875-0.918, which indicates that each promotional aspect measured makes a strong contribution to influencing consumer purchasing decisions.

The role of *macro influencers* (X_2) in influencing purchasing decisions is not significant, with a T Statistic value of only 0.933 and a P-value of 0.351. However, the *macro influencer* variable still has good validity with a *loading factor* between 0.767-0.837. This suggests that although *macro* influencers do not directly influence purchasing decisions, they still have potential in marketing communications. Most likely, the effectiveness of *macro influencers* depends on the specific context, implementation strategy, and fit with the target market.

Customer satisfaction (Z) plays an important role in this study, with a significant influence on purchasing decisions, as evidenced by the T Statistic value of 4.619 and P Value of 0.000. The results of the analysis show that customer satisfaction makes a substantial contribution in determining purchasing decisions, with an *F-Square* of 0.735. Interestingly, the moderation variables involving the interaction between sales promotion or *macro influencers* with customer satisfaction ($X_1 * Z$ and $X_2 * Z$) did not show a significant effect.

Conclusion

Based on the results of the analysis and discussion, the following conclusions can be drawn:

1. Sales Promotion (X_1) has a significant and dominant influence on purchasing decisions. A good promotional strategy has proven effective in encouraging consumers to make purchases.
2. *Macro Influencers* (X_2) do not have a significant influence on purchasing decisions. This shows that the presence of *macro influencers* does not necessarily directly influence consumer decisions to buy.

3. Consumer Satisfaction (Z) plays a very important role in influencing purchasing decisions. Customer satisfaction is proven to be a key factor that significantly determines purchasing decisions.
4. Overall, the research model has very good predictive ability, with an *R-Square* value of 0.826, which means that 82.6% of the variance in purchasing decisions can be explained by the variables in the model.
5. Moderation Variables, the interaction between sales promotion variables or *macro influencers* with customer satisfaction does not have a significant moderating effect on purchasing decisions.

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