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ENHANCING CUSTOMER REFERRAL VALUES: HOW CONTROL BASED CONTRIBUTIONS AMONG MOBILE LEGENDS PLAYERS IN JAKARTA

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ABSTRACT

This study investigates the impact of various contributions - Control Based Contributions, Collaborative Contributions, Individual Contributions, and Calculated Contributions - alongside Customer Learning/Knowledge Values, Customer Influences Values, and Customer Referral Values on Customer Loyalty among Mobile Legends players in Jakarta. With the rising popularity of online mobile games, particularly Mobile Legends, understanding these dynamics is crucial for game developers aiming to foster loyalty and enhance user engagement. This research addresses significant gaps in the literature regarding the effects of gamification and customer involvement in online gaming, providing insights that could inform marketing strategies and loyalty programs within the gaming industry.

Keyword: *Control Base Contributions, Collaborative Contributions, Individual Contributions, Calculated Contributions, Customer Learning/Knowledge Values, Customer Influences Values, Customer Referral Values, Customer Loyalty*

INTRODUCTION

Online gaming has rapidly grown in popularity, becoming a significant form of entertainment as smartphone technology and internet access have advanced. This trend appeals to a diverse clientele, including children, teenagers, and adults who frequently want a break from their everyday routines (Deterding et al., 2011)

One well-known example of gamification in marketing is the employment of engaging techniques like leaderboards and incentive systems, which have proven beneficial in gaining consumer interest. According to (Rangga et al., 2022), gamification became a popular marketing approach in 2019 for increasing

brand awareness via digital channels. These techniques not only help businesses keep existing consumers, but also attract new ones, highlighting the importance of interactive involvement in modern marketing efforts.

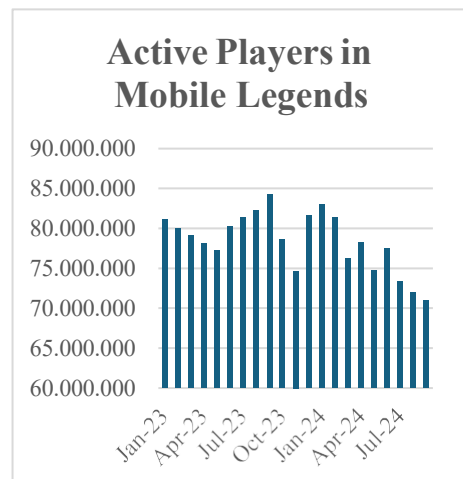


Figure 1. Active Players in Mobile Legends (2023-2024)

Source: ActivePlayer.io 2024

Among the many mobile games available in Indonesia, Mobile Legends has emerged as a top title, with a large player base. According to Martinus Manurung, Head of Marketing & Business Development for Moonton Indonesia, Mobile Legends attracts over 90 million active players each month, with Southeast Asia accounting for roughly 70 million, half of them from Indonesia (Pratnyawan et al., 2021). This game's distinct position in the Multiplayer Online Battle Arena (MOBA) genre, particularly as a mobile application, distinguishes it from traditional PC-based games, allowing it to reach a larger audience.

As Mobile Legends' popularity grows, understanding the variables that promote player engagement and loyalty becomes increasingly important. According to research, in-game purchases, particularly virtual things such as skins, have a major impact on the gaming experience and player pleasure. The impulsive purchasing behavior common among players, particularly newbies, shows the psychological factors that drive these decisions (Mubarok, 2021). As a result, the purpose of this study is to look at the impact of various contributions—such as collaborative and individual efforts—on customer loyalty within the Jakarta Mobile Legends community, in order to gain insight into the dynamics of player engagement and retention.

LITERATURE REVIEW

2.1 Control base Contributions

Control-based contributions in user loyalty programs for gamification drive the development of customer influence values, because control includes not only directing one's own activities related to the gamified loyalty program, but also influencing the

activities of others, as noted by Kelley and Thibaut (1959) regarding partner control. (Hollebeek et al., 2021). The Control-Based Contributions are measured in this study using the following metrics (Hollebeek et al., 2021). Theoretical work has provided normative justifications for the need for many control systems, as well as how the outputs of these various controllers can be merged (Mate Lengyel and Peter Dayan, 2007).

H1: Control-Based Contributions have a positive influence on Customer Learning/Knowledge Values.

H2: Control Based Contributions have a positive influence on Customer Influences Values

2.2 Collaborative Contributions

The findings show that (1) the majority of developers are white; (2) the distribution of contributions among homogeneous and heterogeneous collaborative groups differs significantly in terms of race and ethnicity, with heterogeneous groups having a higher median number of contributions; and (3) racial and ethnic diversity within collaborative groups is statistically significant related to contribution frequency. This shows that diversity may play an important role in increasing collaborative contributions within OSS, prompting additional research to investigate how different racial and ethnic compositions can lead to higher group contribution levels (Gema Rodriguez, 2023). As a result, this study will examine the extent to which individuals successfully collaborate inside the organizations they join. In this study, Collaborative Contributions were measured using the following indicators: 1) Playing Mobile Legends increases the number of new friends, 2) Enjoying helping friends reach levels, 3) Finding enjoyment in the necessity of teamwork while playing Mobile Legends, 4) Enjoying playing Mobile Legends in a team setting, and 5) Contributing to the team's success (Hollebeek et al., 2021).

H3: Collaborative Contributions have a positive influence on Customer Influences Values

H4: Collaborative Contributions have a positive influence on Customer Referral Values

2.3 Individual Contributions

The framework of cooperation highlights an individual's contributions to a common objective, encouraging personal accountability for achievement, especially in competitive situations (Chan & Briers, 2019; Johnson & Johnson, 2005). This dynamic blurs the line between competition and cooperation in inspiring efforts for achievement. In contrast, clear presentations of individual achievements in competitive contexts emphasize failures more prominently than in cooperative environments. As a result, the distinctions between rivalry and collaboration in the pursuit of success may be less obvious than those in the fear of failure. To measure Individual Contributions in this research, the following metrics are used: 1) Belief that individual contributions are valued in Mobile Legends, 2) Ability to practice independently to improve skills in Mobile Legends, 3) Pleasure derived from recognition of individual contributions, 4) Playing Mobile Legends solo every day, and 5) Pride in mentoring novice players (Hollebeek et al., 2021).

H5: Individual Contributions have a positive influence on Customer Influences Values

H6: Individual Contributions have a positive influence on Customer Referral Values

2.4 Calculated Contributions

Calculated contributions in the context of Mobile Legends are measured from the moment players log into the app and begin playing, whether individually or in groups. Integrating spectrum data to compute quantities such as tristimulus values may appear simple at first glance, as it makes use of photometer spectral responses or light

source spectral distributions. However, quantifying the measurement error of these integrated numbers proves to be rather difficult. When computing integral photometric quantities, several types of uncertainty might have an impact on the final outcomes of spectral data transfer; certain uncertainties may cancel each other out, while others may average or contribute weight based on correlation. Typically, spectral quantities are believed to be uncorrelated during integration, which is frequently a false assumption. In this study, the indicators used to measure Calculated Contributions include: 1) Consistently receiving rewards after completing a game round, 2) Receiving recognition for achieved levels, 3) Being motivated to learn more about Mobile Legends, 4) Mobile Legends effectively recording contributions, and 5) Detailed feedback on contributions that improve gameplay skills (Hollebeek et al., 2021).

H7: Calculated Contributions have a positive influence on Customer Learning/Knowledge Values

2.5 Customer Learning/Knowledge Values

Given the difficulties of exploration, our goal is to understand how the generation and application of consumer knowledge influence enterprises' exploratory new product development efforts. Client knowledge includes an awareness of existing client wants, future new goods, and overall business operations (Li & Calantone, 1998). While our major focus is on market demand, customer information is inextricably linked with competitive knowledge and cannot be completely separated empirically. In contrast, identifying competitors is dependent on customer information, as competition is frequently understood as the fulfilment of overlapping consumer wants (Bergen & Peteraf, 2002). Furthermore, competitive knowledge is critical for understanding consumer decision-making processes and building a company's capacity to provide higher value to customers (Narver & Slater,

1990). This is consistent with Kohli and Jaworski's statement that "customer orientation consists of obtaining information from customers about their needs and preferences," while also take into account "exogenous market factors (e.g., competition, regulation)" (Kohli & Jaworski, 1990, p. 3). In this study, the indicators used to measure Customer Learning/Knowledge Value are: 1) Diverse knowledge of Mobile Legends improves gameplay skills, 2) Playing experience improves teamwork abilities, 3) Valuable information encourages recommendations for Mobile Legends, 4) Loyalty to Mobile Legends increases with experience and knowledge, and 5) Easy-to-understand features and guides enhance loyalty (Hollebeek et al., 2021).

H8: Customer Learning/Knowledge Values have a positive influence on Customer Loyalty

2.6 Customer Influences Values

In terms of perceived value, all elements except perceived access flexibility have a substantial impact on game loyalty. This research suggests that players' feelings of well-being have a favorable effect on their loyalty to the game, implying that they are engaged and driven to continue playing. Furthermore, recent research by (Hsiao & Chen, 2016) revealed fun as the most important element influencing mobile game loyalty. Social connectedness was also discovered to have a beneficial effect; players who frequently communicate with others are more likely to be loyal to the game. Additionally, players who love engaging with other gamers are more likely to continue playing. Perceived benefits also have a big impact on game loyalty, with awards won within the game leading to increased engagement and commitment among players. Furthermore, the perception of the right price has a major impact on loyalty, implying that players who believe their monetary commitment is justified are more likely to stick with the game. These findings are consistent with earlier studies on game loyalty.

In this study, the indicators used to measure Customer Influencers Value are as follows: 1) Beginning to play Mobile Legends because a favorite influencer also plays, 2) Trust among team members enhancing enjoyment in Mobile Legends, 3) Beginning to play Mobile Legends due to invitations from peers, 4) Positive support from others increasing enjoyment in Mobile Legends, and 5) Playing Mobile Legends due to the influence of those around them (Hollebeek et al., 2021).

H9: Customer Influences Values have a positive influence on Customer Loyalty

2.7 Customer Referral Values

Customer referral programs have three different elements. First, the organization purposefully initiates, actively manages, and regularly monitors these initiatives, which is sometimes difficult to accomplish through organic word-of-mouth activities such as impromptu discussions or consumer blogging. Second, the main idea is to use existing customers' social connections with non-customers to convert them into new consumers. Third, to ease the transition, businesses reward existing customers for effectively obtaining new ones. Although referral programs are not the only ones that use social relationships to obtain new clients, they do have three traits that set them apart from other types of network-based marketing. Unlike other forms of buzz and viral marketing, social influence comes from existing customers rather than anyone familiar with the brand or event. Furthermore, existing customers are only rewarded for bringing in new customers without engaging in additional sales functions, avoiding the stigma associated with abusing social ties for commercial gain, which is common in multi-level marketing (Groß & Vriens, 2019). This study employed the following indicators to measure Customer Referral Value: 1) Mobile Legends referral programs improve loyalty, 2) Referral rewards foster loyalty, 3) Perceived tangible benefits (e.g., increased level points) increase commitment to Mobile Legends, 4) Loyalty

grows as referral rewards grow, and 5) Referral program rewards encourage continued gameplay in Mobile Legends (Hollebeek et al., 2021).

H10: Customer Referral Values have a positive influence on Customer Loyalty

2.8 Customer Loyalty

Customer loyalty is an important aspect in a company's performance, as it indicates profitability through constant retention rates and higher revenues (Camilleri & Filieri, 2023). (Thakur, 2016) defines customer loyalty as a willingness to repurchase from the same firm, usually as a result of great customer experiences that pique interest in future purchases. This loyalty serves as an intangible asset for businesses, enabling them to handle fierce competition by attaching clients to their products (Al-Khaija et al., 2018). According to Haeruddin and Haeruddin (2020), customer loyalty is shown in positive responses, which occur when customers choose to repurchase despite competing offerings. (Pratondo, 2021) say that great service fosters loyalty by continually giving added value, whereas Monferrer et al. (2019) argue that engagement improves loyalty by cultivating long-term relationships with clients. In highly competitive marketplaces, the capacity to nurture client loyalty acts as a barrier to competitors (Boonlervanich, 2018), making it an important goal for organizations looking to retain or increase sales. In this study, Customer Loyalty was measured using the following indicators: 1) Willingness to continue playing Mobile Legends, 2) Recommendations of Mobile Legends to peers, 3) Resistance to negative news about Mobile Legends, 4) Willingness to share experiences playing Mobile Legends on social media, and 5) Reluctance to switch to other games (Suharto et al., 2022).

METHODOLOGY

3.1 Research Issues

This study adopts a quantitative research approach based on snowball sampling approaches, beginning with the distribution of questionnaires to Mobile Legends users in Jakarta. The goal is to show that control-based contributions, collaborative contributions, individual contributions, calculated contributions, customer learning/knowledge values, customer influence values, and customer referral values all have an impact on customer loyalty. The sample for this study consists of 200 participants.

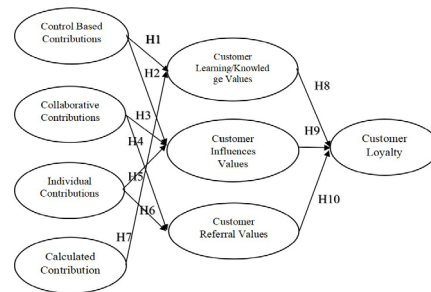


Figure 3. Research Model

3.2 Research Methodology

In this study, respondents are those who understand the information of the research object as actors or other people who understand the object of research (Bungin, 2011: 78). The selection of respondents uses purposive techniques, namely the retrieval or selection of respondents using certain considerations that are in accordance with the specific characteristics of the author (Panudju, 2024). The sample technique used in this investigation was non-probability sampling. The snowball sampling approach was utilized, allowing the author to select respondents who would fill out the questionnaire in order to obtain data. The respondents in this survey had the following characteristics:

1. Respondents have the Mobile Legends application

2. Respondents play Mobile Legends
3. Respondents in the age range of 18-60 years
4. Respondents live in the city of Jakarta

The data was analyzed using the basic regression and multiple linear regression data processing models from the SPSS 30.0 software package. The study's model and hypothesis were first tested using a simple regression technique, which allowed researchers to test both the direct effects of the intervening variable on the dependent variable and the direct effects of the intervening variable on the dependent variable created from multiple indicators.

Second, multiple regression techniques were utilized to evaluate the individual effects of each independent variable on the dependent variable, which consisted of many indicators, as well as the combined influence of the independent and dependent variables. Before data processing, validity and reliability checks, as well as standard assumption tests, were performed.

The validity testing method used in this work is bivariate Pearson (Pearson Product Moment Correlation). A bivariate Pearson analysis compares each item's score to the overall score. The data is considered legitimate when the r_{count} exceeds the r_{table} and has a positive value (Sunyoto, 2011).

(Cheung et al., 2024) define a reliability test as an examination of the consistency of different measurements of a variable. Cronbach's alpha is one method for evaluating the reliability of a thought in research. (Cheung et al., 2024) found that the lowest Cronbach's alpha value was 0.6.

RESULTS

A. Figures and Tables

This empirical quantitative study makes use of survey data collected from questionnaires distributed online during August and September 2024. The data

utilized was entered by respondents who met the standards and analyzed using SPSS 30.0. The questionnaire was produced and distributed using Google Forms, and the questionnaire link was provided to respondents who play Mobile Legends and live in Jakarta. The results of distributing questionnaires revealed 200 respondents who satisfied the standards and could be used as samples in this study.

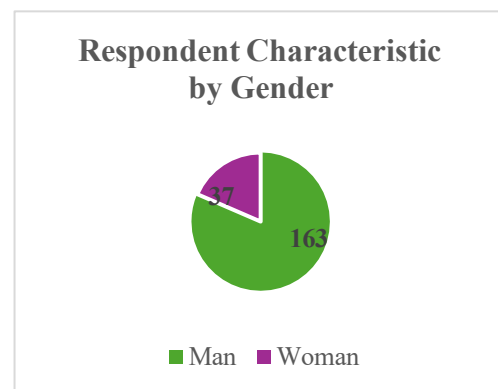


Figure 4. Respondent Characteristic by Gender
Source: Own Calculation

The findings in Figure 5 reveal that respondents are predominantly aged between 18 and 27 years, with 102 respondents falling within this age bracket, followed by 94 respondents in the 28-43 age group, and 4 respondents in the 44-60 age group. This suggests that the majority of responders belong to the age segments of Generation Y and Z.

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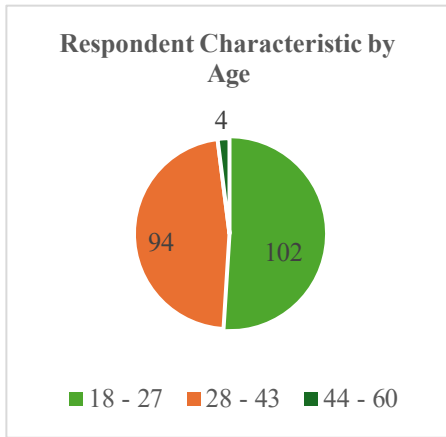


Figure 5. Respondent Characteristic by Age

Source: Own Calculation

Validity test

Data validity, indicating that all indicators used to measure each variable are valid, as each item's factor loading value is above the threshold level of 0.1388.

Indicator	FL	Indicator	FL	Indicator	FL	Indicator	FL	Indicator	FL	Indicator	FL	Indicator	FL	Indicator	FL
Control based Contributions		Collaborative Contributions		Individual Contributions		Calculated Contributions		Customer Learning /Knowledge Values		Customer Influence s Values		Customer Referral Values		Customer Loyalty	
X1 .1	0 .8 2 0	X2 .1	0 .8 1 8	X3 .1	0 .6 6 8	X4 .1	0 .8 4 1	Y1 .1	0 .8 3 8	Y2 .1	0 .7 1 0	Y3 .1	0 .8 7 5	Z1	0 .8 3 2
X1 .2	0 .9 0 1	X2 .2	0 .8 5 4	X3 .2	0 .7 7 5	X4 .2	0 .8 8 1	Y1 .2	0 .7 8 9	Y2 .2	0 .7 3 7	Y3 .2	0 .8 9	Z2	0 .8 5 2
X1 .3	0 .8 9 9	X2 .3	0 .8 3 1	X3 .3	0 .7 7 1	X4 .3	0 .8 4 1	Y1 .3	0 .8 5 9	Y2 .3	0 .7 6 9	Y3 .3	0 .7 9 8	Z3	0 .7 5 5
X1 .4	0 .8	X2 .4	0 .8	X3 .4	0 .7	X4 .4	0 .8	Y1 .4	0 .8	Y2 .4	0 .7	Y3 .4	0 .8	Z4	0 .8

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	8 1		1 7		2 0		3 6		5 4		4 9		3 2		0 9
X1 .5	0 .6 8 5	X2 .5	0 .6 9 6	X3 .5	0 .7 2 2	X4 .5	0 .8 3 2	Y1 .5	0 .8 3 9	Y2 .5	0 .7 7 4	Y3 .5	0 .8 4 0	Z5	0 .8 1 7

Tabel 1. Validity Test
Source: own calculation

Reliability Test

The reliability test's outcomes are as follows:

Variable	Cronbach's Alpha Based on Standardized Items
Control Based Contributions	0.889
Collaborative Contributions	0.863
Individual Contributions	0.776
Calculated Contributions	0.899
Customer Learning/Knowledge Values	0.892
Customer Influences Values	0.796
Customer Referral Values	0.902
Customer Loyalty	0.870

Tabel 2. Reliability Test
Source: own calculation

As shown in Table 2, all of the Cronbach alpha regression values in this study are higher than 0.60. This indicates that the statements used to create these variables are consistent and dependable and can be used for additional analysis.

Results of Multiple Regression (*Control Base Contributions, Collaborative Contributions, Individual Contributions, Calculated Contributions, Customer Learning/Knowledge Values, Customer Influences Values, Customer Referral Values, Customer Loyalty* of Mobile Legends player.)

The multiple regression findings are as follows:

Correlations Coefficient (R)

Correlations Coefficient (R)

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		Customer Learning/Knowledge Values	Customer Influences Values	Customer Referral Values	Customer Loyalty
Pearson Correlation	Control Based Contributions	0.793	0.562	-	-
	Collaborative Contributions	-	0.584	0.545	-
	Individual Contributions	-	0.511	0.519	-
	Calculated Contributions	0.812	-	-	-
	Customer Learning/Knowledge Values	-	-	-	0.717
	Customer Influences Values	-	-	-	0.562
	Customer Referral Values	-	-	-	0.654

Table 3. Correlation Coefficient (R)

Source: own calculation

Based on table 3 his coefficient shows how much relationship occurs between independent variables simultaneously. The R value ranges from zero to one, with the explanation that if the value is closer to one, it means that the relationship is stronger, and if it is closer to zero, it is weaker. According to Sugiyono in Priyatno (2010), the guidelines for interpreting the correlation coefficient can be explained as follows:

0.00 - 0.199 = Very Low

0.20 - 0.399 = Low

0.40 - 0.599 = Medium

0.60 - 0.799 = Strong

0.80 - 1.00 = Very Strong

Coefficient of Determination (R²)

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.868 ^a	0,754	0,751	1,92444	0,754	301,335	2	197	0,000

a. Predictors: (Constant), Calculated Contributions, Control Based Contributions

b. Dependent Variable: Customer Learning/Knowledge Values

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Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.635 ^a	0,403	0,394	3,15507	0,403	44,138	3	196	0,000
a. Predictors: (Constant), Individual Contributions, Collaborative Contributions, Control Based Contributions									
b. Dependent Variable: Customer Influences Values									

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.596 ^a	0,356	0,349	3,68022	0,356	54,382	2	197	0,000
a. Predictors: (Constant), Individual Contributions, Collaborative Contributions									
b. Dependent Variable: Customer Referral Values									

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.780 ^a	.609	.603	268.560	.609	101.779	3	196	<,001
a Predictors: (Constant), Customer Referral Values, Customer Learning/Knowledge Values, Customer Influences Values									
b Dependent Variable: Customer Loyalty									

Table 4. Coefficient of Determination (R²)
Source: own calculations

The analysis of the coefficient of determination (R²) is employed to assess the extent to which independent variables influence the dependent variable, expressed as a percentage. The values of the coefficient of determination range from 0 to 1. A higher R² value for an independent variable indicates a more dominant influence on the dependent variable.

F-test

The calculations using SPSS reveal that the significance of the F-test value in the model is 0.000, which demonstrates that the independent variables have a substantial combined effect on the dependent variable.

Results of F-test					
		Sig.			
		Customer Learning/Knowledge Values	Customer Influences Values	Customer Referral Values	Customer Loyalty
Regression	Control Based Contributions	<,000 ^b	<,000 ^b	-	-
	Collaborative Contributions	-	<,000 ^b	<,000 ^b	-

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Individual Contributions	-	<,000 ^b	<,000 ^b	-
Calculated Contributions	<,000 ^b	-	-	-
Customer Learning/Knowledge Values	-	-	-	<,000 ^b
Customer Influences Values	-	-	-	<,000 ^b
Customer Referral Values	-	-	-	<,000 ^b

Table 5. F-test
Source: own calculations

According to Santoso (2009), if the comparison of profitability values with the error level criterion (α) is ≤ 0.05 , then the null hypothesis (H_0) is accepted, indicating a positive influence.

DISCUSSION

Based on the available data, normality was assessed using the Kolmogorov-Smirnov test, where a significance value greater than 0.05 is indicative of a normal distribution. The SPSS analysis revealed that only two variables were normally distributed: Individual Contributions to Customer Referral Value and Customer Influencers Value to Customer Loyalty. The researchers noted that the failure to achieve normal distribution in other variables could be attributed to the large sample size of 200.

The multicollinearity test indicated that no multicollinearity was present among the independent variables concerning the dependent variable, as all tests exhibited Tolerance values greater than 0.01 or VIF values less than 10. (Ghozali Imam_2011_Aplikasi_Analisis_Mult, n.d.). The linearity test results indicated a linear relationship for the following pairs: Control Based Contribution to Customer Learning/Knowledge Value, Control Based Contributions to Customer Influencers Value, Collaborative Contributions to Customer Influencers Value, Collaborative Contributions to Customer Referral Value,

Individual Contributions to Customer Influencers Value, Customer Learning/Knowledge Value to Customer Loyalty, and Customer Referral Value to Customer Loyalty. Conversely, no linear relationships were found for Customer Influencers Value to Customer Loyalty, Calculated Contributions to Customer Learning/Knowledge Value, and Individual Contributions to Customer Referral Value. The highest linearity value recorded was 0.912 for the variable Collaborative Contributions to Customer Influencers Value.

Utilizing SPSS 30.0 for correlation coefficient analysis, the strongest correlation was identified between Control Based Contributions and Customer Learning/Knowledge Values at 0.793 (strong), while Calculated Contributions to Customer Learning/Knowledge Values exhibited a very strong correlation of 0.812. In contrast, the lowest coefficients were found for Individual Contributions to Customer Referral Values at 0.519 (moderate) and Individual Contributions to Customer Influencers Values at 0.511.

According to Santoso (2009), when comparing profitability values against a

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significance level (α) of 0.05, the decision rule for the F-test is that if $F \leq 0.05$, the hypothesis can be accepted, demonstrating that predictor variables exert a positive influence on the dependent variable.

The results of the F-test indicated that all independent variables had a positive effect on the dependent variable.

In the T-test, a significance value (Sig.) less than the probability threshold of 0.05 indicates a significant effect of the independent variables on the dependent variable, thereby accepting the hypothesis. The data processed in SPSS confirmed that all hypotheses were accepted and validated.

CONCLUSION

1. Effect of Contributions on Customer Loyalty: The study found that among Jakarta Mobile Legends players, control-based, collaborative, individual, and calculated contributions all have a major impact on customer loyalty.
2. Strongest connections: The contributions that were calculated and control-based showed the strongest connections with customer learning/knowledge values, suggesting that they are essential for improving customer loyalty and understanding.
3. Linear correlations: The study found that there are linear correlations between the number of variable pairs, including collaborative contributions to customer influencers' values and control-based contributions to customer learning/knowledge values. These links are essential for fostering customer loyalty.
4. Demographic Insights: Most respondents (ages 18–27) believe that the results are especially applicable to younger gaming demographics, emphasizing the necessity of focused marketing campaigns.
5. Measurement Reliability: All Cronbach's alpha values were above the permissible threshold, guaranteeing the robustness of the findings, and the study validated the validity and reliability of the measurement tools utilized.
6. Significance of the F-Test: The results of the F-test showed that the independent variables'

combined effect on customer loyalty is statistically significant, confirming the idea that these factors have a positive effect on loyalty.

7. Additional Research Directions: Although the study offers insightful information, more investigation may be necessary to examine the long-term impacts of these contributions on patron loyalty and behavior across various gaming platforms or demographics.
8. Practical Implications: According to the results, game creators should concentrate on improving cooperative and control-based contributions in order to cultivate client loyalty and guarantee ongoing engagement and profitability.

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