MODELING CUSTOMER LOYALTY THROUGH LOYALTY PROGRAMS, PERCEIVED VALUE, AND CUSTOMER SATISFACTION: EVIDENCE FROM GREATER BANDUNG (BANDUNG RAYA)

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Abstract. This study aims to examine the influence of loyalty programs on customer loyalty by investigating the mediating roles of perceived value and customer satisfaction through an integrative framework that combines the Stimulus–Organism–Response (SOR) Theory, Perceived Value Theory, and Relationship Marketing Theory. Data were collected from 260 Generation Z respondents (aged 17–23) residing in the Greater Bandung area who have experience using loyalty programs. The data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS. The results reveal that loyalty programs have a positive and significant effect on both perceived value and customer satisfaction. Furthermore, perceived value and satisfaction were found to be strong predictors of customer loyalty. The IPMA results indicate that program has the highest importance in driving loyalty, highlighting the critical role of emotional and experiential factors in fostering long-term commitment. This study offers theoretical contributions by integrating three major consumer behavior frameworks and practical implications for businesses seeking to optimize their loyalty program strategies. Overall, the findings emphasize that enhancing perceived value and customer satisfaction is essential for strengthening customer loyalty, particularly among digital-native consumers such as Generation Z.

Keywords: loyalty program, perceived value, customer satisfaction, customer loyalty, PLS-SEM, SOR, relationship marketing

I. INTRODUCTION

The rapid development of digital technology has transformed consumption patterns and pushed companies to strengthen customer attachment through shopping experiences that are increasingly seamless, personalized, and emotionally valuable, rather than merely functional. In a marketing landscape that is becoming more relationship-oriented, loyalty programs have emerged as an important instrument for building long-term customer engagement (Verhoef, 2003). These programs no longer function solely as transactional incentives, but also as relational mechanisms that add customer value through perceived benefits and membership experiences (Secioria, 2019) The value customers perceive from loyalty programs strongly depends on the quality of their design and benefits including reward structures and how benefits are delivered which in turn shapes satisfaction, trust, and loyal customer behavior (Stathopoulou & Balabanis, 2016) Global cross-study meta-analytic evidence shows that loyalty programs consistently enhance customer loyalty, particularly behavioral loyalty, although the strength of this effect is largely determined by program design characteristics such as tier structures and the reward content provided (Belli et al., 2022)

Therefore, understanding how consumers evaluate and respond to the quality of loyalty programs is crucial for explaining the emotional and behavioral reactions that reinforce loyalty, while also offering important insights for business actors especially MSMEs in designing effective and competitive customer retention strategies in the digital era (Pereira et al., 2025) To understand how loyalty programs influence consumer behavior, this study integrates the Stimulus Organism Response (SOR) framework, Perceived Value Theory, and Relationship Marketing Theory into one comprehensive conceptual model. Based on SOR theory (Mehrabian et al., 1974) consumer behavior is the outcome of internal processes triggered by external stimuli, where loyalty programs act as stimuli that evoke psychological responses in the form of perceived value and satisfaction as part of the organism, which then lead to a final response in the form of behavioral loyalty (Jacoby, 2002). In line with this, Perceived Value Theory (Zeithaml et al., 1988)) emphasizes that customers' evaluations of perceived benefits and costs form the basis for satisfaction and

the intention to maintain a relationship with a firm (Sweeney & Soutar, 2001). Meanwhile, Relationship Marketing Theory (Morgan & Hunt, n.d.) highlights the importance of trust, commitment, and relationship quality in building long-term attachment between customers and companies (Berry, 1995). The integration of these three theories provides a holistic understanding that loyalty programs as relationship-based stimuli can shape perceived value as conceptualized in perceived value theory and customer satisfaction as organismic responses, and ultimately drive customer loyalty as the response particularly in the context of Indonesian MSMEs, where personal interaction and relational value are key factors for business sustainability. Thus, this integrative model not only broadens theoretical understanding of the psychological and relational dynamics behind customer loyalty formation, but also offers empirical contributions by explaining how fair, valuable, and relationship-oriented reward program designs can strengthen sustainable loyalty within competitive business ecosystems.

This study addresses existing theoretical and empirical gaps by developing a cognitive–behavioral loyalty program model that integrates the Stimulus Organism Response (SOR) perspective, Perceived Value Theory, and Relationship Marketing Theory to explain how loyalty programs shape consumers' psychological and behavioral responses. The model offers a novel perspective by tracing how loyalty program stimuli such as economic benefits, member exclusivity, and customer experiences trigger cognitive processes in the form of perceived value and affective reactions in the form of satisfaction, which ultimately lead to behavioral loyalty. The integration of Perceived Value Theory explains that customers evaluate the balance between benefits received and sacrifices incurred before deciding to sustain a relationship with a firm, while Relationship Marketing Theory stresses the role of trust, commitment, and relationship quality in reinforcing long-term loyalty. Studies linking cognitive–affective processes with relational dynamics through the SOR framework remain limited, especially in MSME contexts in developing countries. Therefore, this research is expected to extend conceptual understanding of how loyalty programs create psychological and emotional value for customers. Theoretically, this study enriches consumer behavior literature by confirming the relevance of these three theories in explaining the mechanism of customer loyalty formation. Practically, the findings can guide MSME practitioners in designing loyalty programs that are not only oriented toward economic incentives, but also toward creating value and building sustainable long-term customer relationships in the digital era.

II. RESEARCH METHODS

The study population comprises consumers of micro, small, and medium enterprises (MSMEs/UMKM) in the Greater Bandung area who have participated in loyalty reward programs. The sample was selected using purposive sampling, a non-probability technique in which respondents are intentionally chosen based on specific criteria, as they are considered most capable of providing information relevant to the research objectives (Palys, 2008) The inclusion criterion required that respondents have made at least one purchase from an MSME implementing a reward program. Consequently, all participants possess experience aligned with the research context and are able to provide the necessary data (Palys, 2008)

The minimum sample size was determined using the ten times rule recommended by (Barclay et al., 1995) which specifies a sample size at least ten times the number of indicators in the constructs used in the PLS-SEM model. With 23 indicators included in this study, the minimum required sample size is 230 respondents.

After distributing the questionnaire and screening responses to ensure data completeness and consistency, this study obtained 260 valid respondents with no missing values, according to the data validation results in SmartPLS (Data View). Thus, the sample size in this study exceeds the recommended minimum threshold and is considered adequate for PLS-SEM analysis (Hair et al., 2021)

The research instrument was a structured questionnaire developed to measure four latent constructs within the stimulus–organism–response (SOR) framework: loyalty program, perceived value, satisfaction, and loyalty. Indicators for the loyalty program construct were adapted from (Verhoef, 2003) and (Secioria, 2019) which emphasize the role of loyalty programs and reward cards in influencing customer behavior. The perceived value construct was measured using indicators based on Xu and Hu (2022), highlighting how perceived value is shaped through virtual community experiences and group purchasing patterns. The satisfaction construct was developed with reference to Anderson (1998), (Mittal et al., 2023) and (Cachero-Martínez & Vázquez-Casielles, n.d.) which link customer satisfaction to emotions and its effects on loyalty and word of mouth. Meanwhile, the consumer response construct (including repurchase intention, recommendation, and behavioral loyalty) was adapted from (Verhoef, 2003) (Mittal et al., 2023) and (Cachero-Martínez & Vázquez-Casielles, n.d.)

Overall, the questionnaire consisted of 23 items, each measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Prior to administration to the main sample, the questionnaire was pilot-tested on 30 respondents outside the main sample to ensure clarity of wording and instrument reliability; revisions were made based on their feedback. Content validity was established through expert review and a literature-based assessment, while reliability and construct validity were evaluated through internal consistency, convergent validity, and discriminant validity analyses during the data analysis stage.

The questionnaire data were analyzed using partial least squares structural equation modeling (PLS-SEM), which is considered appropriate for predictive models with multiple constructs and indicators due to its ability to handle complex models and non-normal data distributions (Hair et al., 2021) The analysis was conducted using SmartPLS and followed two main stages. The first stage evaluated the measurement model through tests of indicator reliability, internal consistency, convergent validity,

and discriminant validity to ensure that the questionnaire items accurately reflect the intended constructs. The second stage evaluated the structural model by estimating path coefficients, R^2 values, effect sizes (f^2), and collinearity diagnostics (VIF). The stimulus–organism–response (SOR) framework served as the theoretical foundation to examine how loyalty programs as a stimulus influence perceived value and customer satisfaction (organism), which in turn drive customer loyalty as the response (Mehrabian et al., 1974); (Jacoby, 2002) To ensure robust statistical inference, the significance of structural paths was assessed using bootstrapping with 500 resamples.

Operational Variabel Definition

Variabel	Definition and Indikators	Item Questions Sources	Item Quisionare Applied
X	Program (A program is a series of activities or initiatives offered by a company to provide additional benefits to customers, such as promotions, memberships, loyalty programs, or special services.	Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. Journal of Marketing, 67(4), 30-45. https://doi.org/10.1509/jmkg.67.4.30.18685 (Original work published 2003) **Secioria, R. (2019).** *The Mediating Roles of Satisfaction and Loyalty Card Program on the Relationship Between Customer Perceived Value and Brand Loyalty.* **Journal of Business on Entrepreneurship (JOBE), 7(2),** November 2019. Universitas Indonesia.	1. Saya senang berpartisipasi dalam program loyalitas. 2. Saya memiliki tujuan penghematan yang jelas ketika ikut program loyalitas. 3. Saya ikut program loyalitas karena takut melewatkan hadiah dan promo. 4. Kepemilikan kartu loyalitas membuat saya merasa seperti pelanggan tetap. 5. Saya menghargai mendapatkan diskon khusus untuk anggota. 6. Saya menghargai informasi produk yang diberikan khusus kepada anggota. 7. Saya menghargai undangan ke acara khusus yang diberikan hanya untuk anggota.
XA	Value (Value is the customer's perception of the benefits received relative to the costs or sacrifices incurred when using a product or service. Perceived Value reflects customers' benefit–sacrifice evaluation in using loyalty programs. The first two items represent general value orientation, while the rest capture value derived from the program experience.)	Anderson, E. W. (1998). Customer Satisfaction and Word of Mouth. Journal of Service Research, 1(1), 5-17. https://doi.org/10.1177/109467059800100102 (Original work published 1998) Mittal, V., Han, D., Frennea, C. M., Blut, M., Shaik, R., Bosukonda, A., & Sridhar, S. (2023). Customer satisfaction, loyalty behaviors, and firm financial performance: What 40 years of research tells us. Journal of the Academy of Marketing Science, 52(1), 163–196. https://doi.org/10.1007/s11747-023-00975-4 Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. Journal of Marketing, 67(4), 30-45. https://doi.org/10.1509/jmkg.67.4.30.18685 (Original work published 2003)	1. Saya selalu mencari produk dengan perbandingan harga dan kualitas terbaik. 2. Saya bersedia membayar lebih untuk produk dengan kualitas yang lebih tinggi. 3. Produk yang saya beli melalui program loyalitas memiliki kualitas yang baik. 4. Menggunakan program loyalitas memberi saya layanan tambahan bernilai. 5. Saya merasa senang saat berpartisipasi dalam program loyalitas. 6. Saya percaya program loyalitas memberikan nilai ekonomi yang tinggi.
XB	Satisfaction (Customer satisfaction is the level of pleasure or disappointment a person feels after comparing a product's or service's performance with their expectations. Satisfaction is conceptualized as an affective evaluation that can also manifest in behavioral consistency (Anderson, 1998; Mittal et al., 2023). Thus, the indicators capture both	Anderson, E. W. (1998). Customer Satisfaction and Word of Mouth. Journal of Service Research, 1(1), 5-17. https://doi.org/10.1177/109467059800100102 (Original work published 1998) Mittal, V., Han, D., Frennea, C. M., Blut, M., Shaik, R., Bosukonda, A., & Sridhar, S. (2023). Customer satisfaction, loyalty behaviors, and firm financial performance: What 40 years of research tells us. Journal of the Academy of Marketing Science, 52(1), 163–196. https://doi.org/10.1007/s11747-023-00975-4 Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts	1. Saya cenderung membeli merek yang sama setiap kali. 2. Saya jarang mengubah keputusan merek atau produk yang sudah saya pilih. 3. Saya merasa puas setelah menggunakan program loyalitas. 4. Saya menikmati berbelanja menggunakan program loyalitas.

Variabel	Definition and Indikators	Item Questions Sources	Item Quisionare Applied
	experiential satisfaction and its behavioral expression within the SOR mechanism.)	on Customer Retention and Customer Share Development. Journal of Marketing, 67(4), 30-45. https://doi.org/10.1509/jmkg.67.4.30.18685 (Original work published 2003)	
Y	Loyalty (Customer loyalty is a customer's commitment to continue using a particular product or service consistently in the future, even when competitors offer alternatives.)	Anderson, E. W. (1998). Customer Satisfaction and Word of Mouth. Journal of Service Research, 1(1), 5-17. https://doi.org/10.1177/109467059800100102 (Original work published 1998) Mittal, V., Han, D., Frennea, C. M., Blut, M., Shaik, R., Bosukonda, A., & Sridhar, S. (2023). Customer satisfaction, loyalty behaviors, and firm financial performance: What 40 years of research tells us. Journal of the Academy of Marketing Science, 52(1), 163–196. https://doi.org/10.1007/s11747-023-00975-4 Verhoef, P. C. (2003). Understanding the Effect of Customer Relationship Management Efforts on Customer Retention and Customer Share Development. Journal of Marketing, 67(4), 30-45. https://doi.org/10.1509/jmkg.67.4.30.18685 (Original work published 2003)	1. Saya kurang memperhatikan promo dari toko lain karena saya sudah ikut program loyalitas. 2. Karena ikut program loyalitas, kemungkinan saya tetap menjadi pelanggan lebih tinggi. 3. Saya berniat untuk terus menggunakan program loyalitas ini di masa depan. 4. Toko ini tetap menjadi pilihan utama saya ketika saya ingin berbelanja. 5. Saya akan merekomendasikan program loyalitas ini kepada teman atau kerabat. 6. Saya akan mendorong teman dan keluarga saya untuk berbelanja di toko ini.

III. RESULT AND DISCUSSION

MEASUREMENT MODEL

The measurement model evaluates the study's constructs in terms of validity and reliability, including convergent validity and discriminant validity (Hair et al., 2021) Convergent validity was assessed through outer loading values and AVE. The results show that the outer loadings of all indicators in this study are above the 0.708 cut-off value, with the loading ranges for each construct as follows: Loyalty (0.818–0.862), Program (0.701–0.826), Satisfaction (0.767–0.928), and Value (0.803–0.873). This indicates that all indicators function as reflective indicators of their respective constructs (Hair et al., 2021) In addition, the AVE values for all constructs exceed 0.50—namely Loyalty (0.716), Program (0.611), Satisfaction (0.860), and Value (0.705)—showing that each construct explains more than 50% of the variance of its indicators (Hair et al., 2021)

Next, construct reliability was measured using Composite Reliability (CR) and Cronbach's alpha. A construct is considered reliable if CR and Cronbach's alpha values are greater than 0.70 (Hair et al., 2021) As shown in Table A2, all CR and Cronbach's alpha values exceed this threshold, with CR values of Loyalty (0.903), Program (0.847), Satisfaction (0.837), and Value (0.863), and Cronbach's alpha values of Loyalty (0.901), Program (0.841), Satisfaction (0.837), and Value (0.860). Therefore, all indicators and constructs used in this study are deemed valid and reliable (see Table A2).

Discriminant validity in the measurement model was evaluated using the heterotrait–monotrait ratio (HTMT). HTMT approximates the correlation between two constructs when they are measured reflectively (Hair et al., 2021) If the HTMT value is greater than 0.90, discriminant validity is considered weak (Hair et al., 2021) Table A3 presents the HTMT results for each pair of constructs. All HTMT values are below 0.90: Program ↔ Loyalty (0.611), Satisfaction ↔ Loyalty (0.755), Satisfaction ↔ Program (0.824), Value ↔ Loyalty (0.738), Value ↔ Program (0.791), and Value ↔ Satisfaction (0.863). Hence, discriminant validity for this study's measurement model can be regarded as adequate (see Table A3).

Table A2. Convergent Validity and Reliability Construck

Construck	Outer Loading (Rentang)	AVE	Composite Reliability (CR)	Cronbach's Alpha
Loyalty	0.818 – 0.862	0.716	0.903	0.901
Program	0.701 – 0.826	0.611	0.847	0.841
Satisfaction	0.767 – 0.928	0.860	0.837	0.837
Value	0.803 – 0.873	0.705	0.863	0.860

Jurnal Manajemen Pendidikan
https://jmp-unpak.id/index.php/jmp

Volume 14, No. 01, 2026, halaman 212 – 222
e-SSN: 2614-3313 ; p-ISSN: 2302-0296
Penerbit: Sekolah Pascasarjana, Universitas Pakuan

Table A3. Heterotrait-Monotrait Ratio (HTMT)

Construct Relationship	HTMT	CI 5%	CI 95%
Program ↔ Loyalty	0.611	0.483	0.741
Satisfaction ↔ Loyalty	0.755	0.677	0.828
Satisfaction ↔ Program	0.824	0.753	0.902
Value ↔ Loyalty	0.738	0.641	0.833
Value ↔ Program	0.791	0.654	0.908
Value ↔ Satisfaction	0.863	0.798	0.927

STRUCTURAL MODEL

Collinearity evaluation was carried out before testing the structural relationships by examining the variance inflation factor (VIF) values. The recommended VIF value is < 3 (Hair et al., 2021). Based on the outer model VIF results, most indicators have values below 3.0, indicating no serious collinearity issues at the indicator level. However, two indicators in the Loyalty construct, Y5 (VIF = 3.400) and Y6 (VIF = 3.399) slightly exceed the recommended threshold. This should be noted, although the values are still considered moderate and do not indicate substantial problematic multicollinearity. Furthermore, in the inner model VIF results, all structural paths show VIF values ranging from 1.000 to 2.171. Thus, it can be concluded that there is no multicollinearity among constructs in the structural model.

Next, the structural model was evaluated using the coefficient of determination (R^2), effect size (f^2), and path coefficients (Hair et al., 2021) Based on the R^2 values, the Loyalty construct has an R^2 of 0.497, meaning that Satisfaction and Perceived Value explain 49.7% of the variance in Loyalty. In addition, the Satisfaction construct has an R^2 of 0.485, indicating that Program explains 48.5% of Satisfaction, while the Value construct has an R^2 of 0.458, showing that Program explains 45.8% of Value. These R^2 values suggest that the model's explanatory power falls within the moderate category.

Effect size (f^2) was used to assess how strongly exogenous constructs contribute to endogenous constructs. The results show that Program has a large effect size on Satisfaction ($f^2 = 0.944$) and Value ($f^2 = 0.846$). This finding indicates that Program is a very strong predictor in enhancing Satisfaction and Value. Meanwhile, the effect of Satisfaction on Loyalty ($f^2 = 0.138$) and Perceived Value on Loyalty ($f^2 = 0.125$) is categorized as small. In other words, although both constructs contribute significantly to Loyalty, their contribution strength is relatively smaller compared to the influence of Program on Satisfaction and Value.

Finally, based on hypothesis testing through bootstrapping, all structural paths are significant with p-values < 0.05. Program has a significant positive effect on Value ($\beta = 0.677$; t = 10.336; p = 0.000) and Satisfaction ($\beta = 0.697$; t = 19.172; p = 0.000). Moreover, Perceived Value ($\beta = 0.369$; t = 4.421; p = 0.000) and Satisfaction ($\beta = 0.388$; t = 5.371; p = 0.000) have significant positive effects on Loyalty. Therefore, all hypotheses in this research model are supported. Overall, these results confirm that Program serves as the primary factor strengthening Value and Satisfaction, and both of these constructs then act as key mechanisms in driving Loyalty.

Table *3 Hypotheses Result*

Hypotheses	Path	β	T-values	VIF	p-values	Supported
H1	Program → Satisfaction	0.697	19.172	1.000	0.000	Yes
H2	Program → Value	0.677	10.336	1.000	0.000	Yes
H3	Satisfaction → Loyalty	0.388	5.371	2.171	0.000	Yes
H4	Value → Loyalty	0.369	4.421	2.171	0.000	Yes

Table 4 F Square

Path	f² (Original Sample)	Category
Program → Satisfaction	0.944	Large
Program → Value	0.846	Large
Satisfaction → Loyalty	0.138	Small
Value → Loyalty	0.125	Small

PATH COEFFICIENTS

Next, the path coefficients were analyzed using a bootstrapping procedure with a 95% confidence level, 500 subsamples, and by ensuring that the t-statistics exceeded 1.96 as the significance threshold (Hair et al., 2021) The bootstrapping results show that all structural paths are sendificant, as they have p-values < 0.05 and t-values > 1.96. Therefore, all hypotheses in this model are supported. In detail, Program has a positive and significant effect on Satisfaction ($\beta = 0.697$; t = 19.172; p = 0.000), thus H1 is accepted. Program also has a positive and significant effect on Value ($\beta = 0.677$; t = 10.336; p = 0.000), thus H2 is accepted.

Furthermore, Satisfaction has a positive and significant effect on Loyalty (β = 0.388; t = 5.371; p = 0.000), supporting H3. Value likewise has a positive and significant effect on Loyalty (β = 0.369; t = 4.421; p = 0.000), so H4 is accepted.

Regarding the model's predictive ability, the structural evaluation was further examined using R² values along with bias-corrected confidence intervals. The R² value for Loyalty is 0.497 (95% BCa CI: 0.393–0.598), meaning that Satisfaction and Value explain 49.7% of the variance in Loyalty. This indicates that the model's explanatory power is in the moderate category. The R² value for Satisfaction is 0.485 (95% BCa CI: 0.398–0.563), which can be interpreted as Program explaining 48.5% of the variance in Satisfaction. Meanwhile, the R² value for Value is 0.458 (95% BCa CI: 0.302–0.583), indicating that Program explains 45.8% of the variance in Value. Overall, these findings confirm that the model has moderate predictive capability, and that Program serves as the main predictor strengthening Value and Satisfaction, which ultimately drives the development of Loyalty.

Table 5 R Square Bias Corrected

Endogenous Construct	R² (Original Sample)	Bias-Corrected CI 5%	Bias-Corrected CI 95%
Loyalty	0.497	0.393	0.598
Satisfaction	0.485	0.398	0.563
Value	0.458	0.302	0.583

IPMA

IPMA (Importance–Performance Map Analysis) was employed to identify which constructs have high importance but only moderate or relatively low performance (Hair et al., 2021) IPMA helps determine improvement priorities by comparing the total effect (importance) and the performance scores of constructs on the target construct. In this analysis, Loyalty was set as the target.

The IPMA results at the construct level show that Program has the highest importance for Loyalty, with an importance value of 0.520, followed by Satisfaction (0.388) and Value (0.369). Nevertheless, the performance of all three constructs is relatively good, namely 76.925 for Program, 70.766 for Satisfaction, and 77.292 for Value.

Although Value has the highest performance, its importance is lower than that of Program. Therefore, Program becomes the most critical construct to prioritize, because it exerts the strongest influence on Loyalty while its performance has not yet reached the highest level. Satisfaction can also be considered a secondary priority, given its moderate importance but the lowest performance among the three constructs.

Overall, the IPMA findings indicate that strengthening Program (for example, by improving program quality, the attractiveness of offerings, or ease of access) has the potential to generate the largest increase in Loyalty. In addition, enhancing Satisfaction is also relevant, as it makes an important contribution despite its relatively lower performance compared to the other constructs.

Table 6 IPMA Result

Construct	Importance (Total Effect)	Performance (Index Value)
Program	0.520	76.925
Satisfaction	0.388	70.766
Value	0.369	77.292

The integration of the Program, Value, Satisfaction, and Loyalty constructs in this study provides a clear framework for explaining the mechanism through which customer loyalty is formed. Based on the structural model results, Program is proven to be the primary trigger for the two mediating constructs, namely Value and Satisfaction. The effects of Program on Satisfaction (β = 0.697; t = 19.172; p = 0.000) and on Value (β = 0.677; t = 10.336; p = 0.000) are both positive and significant, indicating that the quality of program design, clarity of benefits, and the experiences offered by the loyalty program strongly enhance customers' perceived value and satisfaction. The strength of Program's role is further confirmed by the large effect sizes on both paths (f² Program → Satisfaction = 0.944; f² Program → Value = 0.846), positioning Program as the most dominant predictor in the model.

Furthermore, both Value and Satisfaction serve as subsequent pathways driving Loyalty. Satisfaction has a significant positive effect on Loyalty (β = 0.388; t = 5.371; p = 0.000), and Value also has a significant positive effect on Loyalty (β = 0.369; t = 4.421; p = 0.000). The relatively close coefficient values suggest that these two constructs are equally important in shaping loyalty, even though the magnitude of their contributions falls within the small category (f² Satisfaction → Loyalty = 0.138; f² Value → Loyalty = 0.125). In terms of explanatory power, Loyalty has an R² of 0.497, meaning that nearly half of the variance in customer loyalty is explained by Value and Satisfaction. This finding confirms that loyalty is not formed directly from Program alone, but through improvements in perceived value and customer satisfaction as key psychological mechanisms.

The IPMA results at the construct level reinforce this interpretation. Program has the highest importance for Loyalty (0.520), exceeding Satisfaction (0.388) and Value (0.369). Meanwhile, Program's performance score (76.925) is good but not the highest compared to Value (77.292). This condition positions Program as the most strategic area to prioritize, because improving Program's performance is likely to produce the greatest increase in Loyalty. Satisfaction shows fairly high importance but the lowest performance (70.766), making it the next priority for improvement to strengthen loyalty through a more satisfying customer experience.

At the indicator level, the IPMA map shows that not all indicators within Satisfaction and Program have reached optimal performance. Indicator XB3 has the highest importance for Loyalty (0.210) but the lowest performance (65.897), making it the most critical improvement point. Indicator XB4 also has high importance (0.208) with a more moderate performance level (75.673), and thus becomes a secondary priority. These indicator-level findings provide practical guidance that strengthening the aspects represented by XB3 and XB4 will be most effective in boosting customer loyalty.

Overall, this study deepens the understanding of loyalty formation dynamics by demonstrating that Program is the main foundation that strengthens Value and Satisfaction, and that both simultaneously drive Loyalty. Therefore, strategies to increase customer loyalty should focus on enhancing Program quality as the primary engine, while also elevating customer satisfaction, especially on indicators with high importance but still low performance, so that long-term attachment to the brand or program can be formed more strongly.
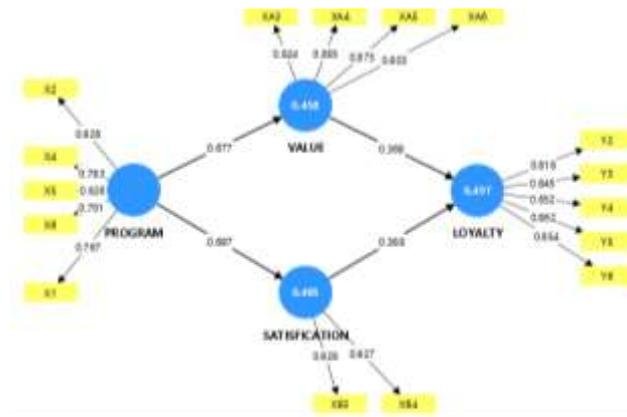

Figure 2 Result Model

Tabel X. IPMA of Loyalty

Constructs	Importance (Total Effects → Loyalty)	Performance (Index Value)
Program	0.520	76.925
Satisfaction	0.388	70.766
Value	0.369	77.292

Tabel Y. IPMA of Indicators (Loyalty)

Indicator	Importance (Total Effect)	Performance
X2	0.145	76.250
X4	0.137	73.269
X5	0.133	83.269
X6	0.107	80.288
XA3	0.103	77.115
XA4	0.107	78.269
XA5	0.119	76.635
XA6	0.110	77.212
XB3	0.210	65.897
XB4	0.208	75.673
X1	0.141	72.019

Jurnal Manajemen Pendidikan
https://jmp-unpak.id/index.php/jmp

Volume 14, No. 01, 2026, halaman 212 – 222
e-SSN: 2614-3313 ; p-ISSN: 2302-0296
Penerbit: Sekolah Pascasarjana, Universitas Pakuan
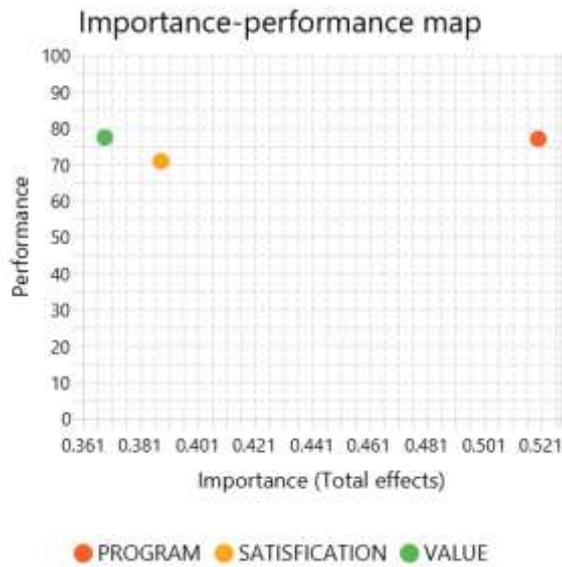
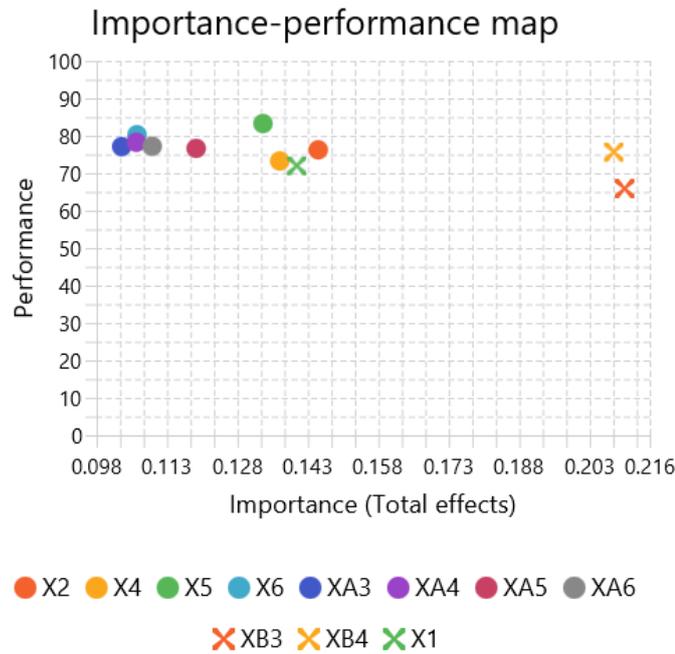Figure 3 Importance-performance map

Figure 4 Importance-Performance Map (Total Effects)

THEORETICAL IMPLICATIONS

This study confirms that integrating Stimulus–Organism–Response (SOR) theory, the Perceived Value framework, and central concepts from relationship marketing theory into a single unified model can comprehensively explain how the quality of loyalty programs influences the formation of value, satisfaction, and customer loyalty. The proposed model not only reinforces prior literature on the relationship between marketing stimuli and customer responses, but also enhances the explanatory power of value-based models commonly used in consumer behavior research. In this study, Program acts as the stimulus (S) that affects customers' internal processes, namely Value and Satisfaction as the organism (O) which ultimately drive Loyalty as the response (R). This integration provides a stronger theoretical foundation for understanding how loyalty program elements are translated into sustained behavioral responses.

Furthermore, the use of perceived value theory enriches the explanation of how customers evaluate the benefits and experiences they receive from a program. The finding that Program has a strong effect on Value supports the argument that perceived value is shaped by customers' cognitive evaluations of the benefits they obtain, aligning with previous studies in service

marketing. This research also shows that value is influenced not only by functional benefits but also by psychological perceptions that arise through satisfaction, thereby extending theoretical understanding of value formation mechanisms in the context of customer loyalty.

A theoretical contribution also emerges from strengthening relationship marketing theory, particularly regarding the role of satisfaction and value as key antecedents of loyalty. The results showing that Satisfaction and Value significantly affect Loyalty support classic relational models that position value and satisfaction as the foundation of long-term customer commitment. However, the IPMA results reveal differences in importance levels, where Program appears as the strongest predictor of Loyalty. Although Program has the highest importance overall, Satisfaction shows a substantial importance and the lowest performance, highlighting the critical role of emotional experience as a key improvement lever. Such findings enrich the relationship marketing literature by emphasizing the critical role of emotional experiences as primary drivers of loyalty in the era of digital programs.

In addition, this study provides a methodological contribution through the use of SmartPLS, which enables analysis of complex models with mediating variables and yields accurate estimates for relationships among reflective constructs. The PLS-SEM approach strengthens the robustness of the model by demonstrating strong reliability and validity for all constructs, and confirming that the relationships among variables are theoretically consistent with the SOR and perceived value frameworks. Moreover, the integration of IPMA adds further theoretical value by identifying the strategic role of each construct and offering a deeper understanding of the theoretical weight of each variable in shaping customer responses.

IV. CONCLUSION

The findings of this study provide empirical support for loyalty program managers and marketing practitioners in designing more effective strategies based on the IPMA results. Among all constructs analyzed, Program emerges as the construct with the highest importance in shaping Loyalty, followed by Satisfaction and Value. Therefore, companies need to maximize elements related to enhancing customer satisfaction, as satisfaction is proven to play a central role in driving long-term loyalty. Practitioners should ensure that the customer experience in using loyalty programs is designed to deliver comfort, convenience, and a sense of being valued through consistent service, personalized rewards, and transparent communication of benefits. From the perceived value perspective, strengthening customers' perceived benefits from loyalty programs is also a strategic priority. Program managers can enhance perceived value by offering relevant deals, high-value rewards, and program information that is easy to understand. In addition, effective communication of program benefits—through digital channels, app notifications, and social media based campaigns can improve awareness and reinforce customers' value perceptions. The IPMA findings showing that Program has the strongest influence on Value further confirm that program design quality must be optimized, including improving reward structures, expanding benefit options, and providing more flexible point redemption mechanisms. Furthermore, although the performance level of the Program construct is already in the "good" category, companies should continue improving the quality of features and services offered within loyalty programs. This includes simplifying registration systems, enhancing application stability, integrating technology that facilitates easier access, and providing responsive customer support centers. Such efforts have strong potential to increase perceived value and satisfaction simultaneously, thereby strengthening long-term customer loyalty. At the industry level, these findings highlight the importance of cross-functional collaboration in developing more competitive loyalty programs. Companies should involve marketing teams, customer service management, and technology development units to ensure that every program element contributes to strengthening value and customer satisfaction. In addition, firms may consider additional incentives such as exclusive offers, referral programs, and transaction-history based personalization to increase engagement and expand the base of loyal customers. Finally, to ensure more effective loyalty program implementation, management should build an ecosystem that supports program sustainability. This can be achieved through investment in digital infrastructure, the use of data analytics to better understand customer preferences, and regular evaluations of reward effectiveness. By ensuring that loyalty programs not only offer benefits but also deliver enjoyable experiences, companies can enhance customers' perceived value and build stronger, more sustainable loyalty. Based on these limitations, future research can be directed toward several areas. First, subsequent studies are recommended to complement the structural model evaluation by reporting Q^2 values, so that collinearity analysis and the model's predictive capability can be assessed more comprehensively in line with PLS-SEM recommendations. Second, given the moderate R^2 values and the small effect sizes on paths leading to Loyalty, future research could include additional relevant constructs, such as trust, engagement, switching cost, brand image, or perceived fairness, to improve the explanatory power of the customer loyalty model. This would allow researchers to understand loyalty mechanisms more broadly beyond perceived value and satisfaction. Third, future studies may test the mediating roles more explicitly, for example by examining whether Value and Satisfaction fully or partially mediate the relationship between Program and Loyalty. A deeper mediation test would help clarify the most dominant influence pathways in loyalty formation. Fourth, the IPMA findings showing importance–performance gaps in certain indicators (e.g., XB3 and XB4) open opportunities for future research to conduct qualitative or mixed-method analyses to explore specific reasons why these indicators are important yet perform poorly. Such results would enrich managerial recommendations with sharper, more actionable insights. Although all indicators were adapted from well-established studies and met the statistical criteria for convergent and discriminant validity, two items in the Satisfaction construct reflect behavioral consistency that is conceptually close to loyalty. This overlap is theoretically plausible within relationship marketing, where satisfaction and loyalty are tightly linked relational outcomes; however, future

studies may refine the measurement to further distinguish affective satisfaction from behavioral loyalty, for example by separating satisfaction into purely experiential indicators and testing a second-order structure. Finally, to enhance generalizability, future research could replicate the study in different industry contexts, with more diverse customer segments, or through longitudinal designs, enabling researchers to capture changes in customer perceptions of loyalty programs over time.

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