Analysis of Factors Influencing Consumers in using Loyalty Rewards Programs in Indonesian Convenience Stores using Binary Logistic Regression Method

Putri Syifa Humaira[1], Annisa Nurwanda Putri[2], Pratiwi[3], Jerry Heikal[4]
Master of Management, Faculty of Economics and Social Sciences, Bakrie University
E-mail: putrisyifahumairaa@gmail.com[1], annisanrwndap@gmail.com[2], pratiwi.2308@gmail.com[3], jerry.heikal@bakrie.ac.id[4]

Article History:
Received: 16 Februari 2025
Revised: 25 Maret 2025
Accepted: 02 April 2025

Keywords: *Loyalty Rewards, Minimarket Retail, Binary Logistic Regression, Consumer Behavior.*

Abstract: *This research aims to analyze the factors that influence consumers in using loyalty rewards programs at minimarket retailers in Indonesia. With the backdrop of intense competition in the retail sector, loyalty rewards programs have become one of the main strategies to enhance customer loyalty. This study adopts a quantitative approach using binary logistic regression method to evaluate the influence of the Product, Price, Promotion, and Process variables from the 7P marketing concept on consumer participation. Data were obtained through an online survey of 148 respondents who are consumers of minimarkets with access to the loyalty rewards program. The analysis results show that the Price variable (represented by psychological loyalty), Promotion (represented by product information), and Process (represented by user-friendliness and repeat purchase) have a significant influence on the use of the program. The resulting regression model shows an accuracy of 81.8%, with these variables being the main predictors. The conclusion of this research emphasizes the importance of developing strategies that strengthen the emotional value of the program, optimize promotions, and simplify the program usage process to enhance the effectiveness of the loyalty rewards program. Practical recommendations include exclusive offers for loyal customers, promotions using various digital channels, and integrating the Loyalty Rewards program with digital applications or payment systems to make it easier for consumers to monitor and redeem points, in order to create sustainable added value for both customers and the company.*

INTRODUCTION

In recent years, the retail industry in Indonesia has experienced rapid growth. This development is driven by factors such as urbanization, increased income levels, and changes in people's lifestyles. According to the Coordinating Ministry for Economic Affairs, the retail sector plays a crucial role in national economic growth, with businesses spread across all regions of Indonesia and optimal job creation. The retail sector can even boost the trade sector to contribute significantly to economic growth, accounting for up to 12.96% of the Gross Domestic Product (GDP). Among various modern retail formats, minimarkets have become one of the most dominant, with tens of thousands of outlets spread across Indonesia. Some well-known minimarket chains that dominated the retail market and had the most outlets by the end of 2023 are as follows.

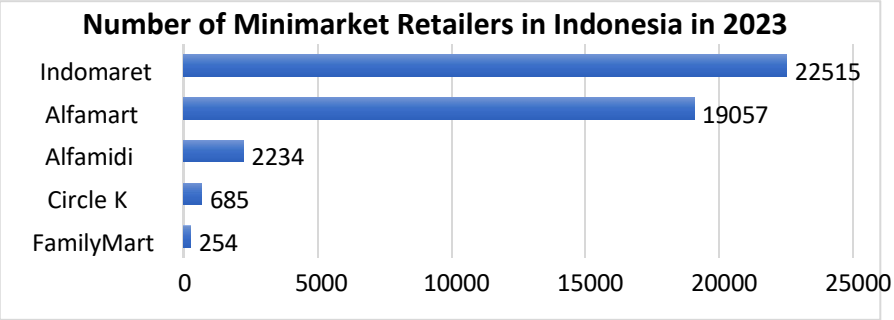

Figure 1. Number of Minimarket Retailers in Indonesia in 2023

The graph above indicates that by 2023, a total of 44,745 minimarket outlets were spread across Indonesia, with a strong dominance by Indomaret and Alfamart as the leading players. Indomaret operates 22,515 outlets, making it the largest minimarket chain in the country. In second place, Alfamart runs 19,057 outlets across various regions. Other than these two major retailers, Alfamidi operates 2,234 outlets, followed by Circle K with 685 outlets, and FamilyMart with 254 outlets. These figures demonstrate that Indomaret and Alfamart hold a significant advantage in terms of the number and scope of their networks compared to other competitors. This advantage provides both brands with a competitive edge, particularly in meeting consumers' daily needs through ease of access.

To improve their quality amidst increasingly intense competition, each minimarket strives to offer greater value compared to its competitors, some strategies are ease of access, affordable prices, and attractive promotions, to become the primary choice for consumers' daily needs. Many minimarkets implement innovative marketing strategies to attract and retain customers. One of the most popular strategies is the loyalty reward program, where customers are incentivized with points, discounts, or even gifts in recognition of their loyalty. In the context of marketing, loyalty reward programs are an essential part of minimarket competition strategies, closely tied to the integration of the 7P variables (Product, Price, Place, Promotion, People, Process, Physical Evidence). From the Product variable, the products offered by a minimarket play a crucial role in determining the attractiveness of a loyalty reward program. Consumers tend to be more loyal if the program relates to products that they use daily. For instance, a minimarket may offer additional points for purchasing essential goods. By ensuring that the products included in the program align with market needs, the loyalty reward program becomes more effective as it delivers value desired by customers. Regarding the Price variable, loyalty reward

programs often provide benefits such as discounts or point collection that can be redeemed for free products or discounts on certain items. This strategy is used to influence consumers' perceptions of more affordable pricing. Price-sensitive customers are more likely to choose minimarkets offering such deals. By understanding this consumer behaviors, minimarkets can optimize pricing strategies to encourage customer loyalty and increase transaction volume. From the perspective of Promotion, the success of a loyalty reward program depends on how effectively the minimarket or business promotes its benefits to consumers. Effective promotion can be conducted online via various social media platforms or offline through staff or direct announcements at outlets, or a combination of both methods. Using a persuasive and engaging approach to explain the rewards and benefits of the program can increase consumer participation. Lastly, the Process variable encompasses the ease of registration, point collection, and reward redemption in the loyalty reward program. If this process is designed to be efficient and easy to understand, consumers will feel more comfortable and motivated to participate. On the other hand, a complicated process that seems disproportionate to the benefits offered may discourage consumers from engaging in the program.

Furthermore, technological advancements have significantly contributed to the implementation of loyalty reward programs. Many retailers utilize mobile applications for loyalty rewards today, integrating them with digital payment systems to allow consumers' ease access to information related to exclusive promotional offers and the points they have accumulated. Minimarkets that leverage digital media to enhance the consumer experience are more likely to succeed in maintaining customer loyalty. Additionally, current technology enables personalized offers based on individual shopping patterns, increasing the program's relevance to consumers. With the convenience of transactions, including real-time point monitoring and redemption, as well as attractive offers, customers are more likely to remain loyal and continue using the programs provided.

Despite the implementation of various strategies, the effectiveness of loyalty reward programs in practice remains questionable. Not all consumers actively use these programs, even though they offer numerous benefits. Data from a Nielsen survey (2021) indicates that while 68% of Indonesian consumers expressed interest and registered for loyalty reward programs, only about 45% actively engaged with them. This highlights a gap between consumer interest and actual participation. A study by Kantar (2022) revealed that consumers who actively participate in loyalty reward programs have a 30% higher shopping frequency compared to those who do not participate. This participation gap may stem from several factors, such as perceptions of the program's benefits, ease of use, or the relevance of the products involved in the program.

Based on these issues, this study aims to analyze the factors influencing consumers in utilizing loyalty reward programs in minimarket retail in Indonesia, including identifying the factors that affect consumers' decisions to participate in such programs. This study will focus on examining the influence of the Product, Price, Promotion, and Process variables from the 7P marketing concept on consumer preferences for loyalty reward programs offered by minimarket retailers. To achieve these objectives, the study adopts the Binary Logistic Regression method to analyze the relationship between the dependent variable (consumer participation in loyalty reward programs) and the independent variables (product, price, promotion, and process). Hair et al. (2010) in Watugilang and Heikal (2024) state that Binary Logistic Regression is an appropriate technique for predicting the probability of an event occurring based on several predictor variables. The findings of this study will then be used to develop comprehensive value proposition marketing strategies for minimarket retailers to design loyalty reward programs that

are not only relevant but also provide sustainable added value for both consumers and businesses.

METHODS

This study is quantitative research that applies the Binary Logistic Regression method to examine the factors influencing consumers in utilizing loyalty reward programs in minimarket retail in Indonesia. Binary Logistic Regression is a statistical technique used to predict the likelihood of an event occurring based on predictor variables. This method is often applied in marketing research to analyze the relationship between factors such as price, promotion, and product quality and consumer decisions (Hair et al., 2010). This technique is particularly suitable for dichotomous dependent variables, such as the consumer's decision to participate or not in a loyalty reward program.

The regression model's accuracy formula is as follows:

$$Y = \frac{1}{1+EXP^{(-(c+B1X1)+(B2X2)+(B3X3)))}}$$

Where :
Y : Dependent Variable
X1, X2, X3 : Independent Variable

Data collection was conducted through a survey using questionnaires to evaluate the influence of independent variables on the dependent variable. The study population includes minimarket consumers in Indonesia who have access to loyalty reward programs. The sample was randomly selected using the convenience sampling technique. This research involved 148 respondents, with data collected through online questionnaire distribution using Google Forms.

The dependent variable in this study is the use of loyalty reward programs by consumers (binary: 1 = using loyalty rewards when shopping, 0 = not using loyalty rewards when shopping). The independent variables consist of (1) Product, which measures consumers' perceptions of the products offered in the loyalty reward program.; (2) Price, which reflects consumers' perceptions of the costs or value associated with the loyalty reward program.; (3) Promotion, which refers to consumers' perceptions of the promotional efforts supporting the loyalty reward program.; (4) Process, which evaluates consumers' perceptions of the mechanisms or integration processes within the loyalty reward program.

The collected data was analyzed using the binary logistic regression method to evaluate the influence of independent variables (Product, Price, Promotion, Process) on the dependent variable (Consumer Use of Loyalty Reward Programs). A cut-off score of 0.5 was used to interpret the probability of consumer participation in loyalty reward programs. If the probability exceeds 0.5, the consumer is considered to have loyalty to the use of the program. Data collection was conducted in December 2024. Data analysis was carried out using a statistical software (SPSS) to perform binary logistic regression and present the results in tables along with their interpretations. Through this research method, it is expected to provide a comprehensive understanding of the factors influencing consumers' use of loyalty reward programs in minimarket retail.

RESULT AND DISCUSSION

Data processing in this study utilized Microsoft Excel to convert questionnaire responses into numerical data. The numerical data was then analyzed using the SPSS Binary Logistic

Regression program to identify the factors influencing the Dependent Variable (Y), namely Consumer Use of Loyalty Reward Programs.

Table 1.
Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Product Suitability	.856	.908	.888	1	.346	2.353
	Product Variety	.207	.666	.097	1	.755	1.231
	Digital Value	.557	.952	.342	1	.558	1.745
	Customer Satisfaction	-.207	.839	.061	1	.805	.813
	Promotion Discount	.342	.972	.124	1	.725	1.408
	Price Competitive	.045	.690	.004	1	.949	1.046
	Price Transparency	-.739	.776	.908	1	.341	.477
	Psychological loyalty	1.260	.575	4.801	1	.028	3.524
	Product Information	1.670	.685	5.947	1	.015	5.312
	Promotion Effectiveness	.374	.603	.384	1	.536	1.453
	Special Offers	.025	.768	.001	1	.974	1.026
	Relevan Content	.755	.723	1.092	1	.296	2.129
	Intergrated Promotion System	-1.120	.911	1.511	1	.219	.326
	Ease fo use	2.154	.991	4.728	1	.030	8.616
	Repurchase	1.964	.538	13.325	1	<,001	7.130
	Constant	-4.878	1.334	13.361	1	<,001	.008

a. Variable(s) entered on step 1: Product Suitability, Product Variety, Digital Value, Customer Satisfaction, Promotion Discount, Price Competitive, Price Transparency, Psychological loyalty, Product Information, Promotion Effectiveness, Special Offers, Relevan Content, Intergrated Promotion System, Ease fo use, Repurchase.

Variables which have a significant influence on Consumer Use of Loyalty Reward Programs (Y) are identified by a significance value of <0.05. Based on Table 1, the following conclusions can be drawn:

1. The Price variable, represented by the psychological loyalty indicator, has a value of 0.028. The Promotion variable, represented by the product information indicator, has a value of 0.015. The Process variable, represented by the ease-of-use and repurchase indicators, with values of 0.030 and 0.0003 respectively, has a significant influence on Consumer Use of Loyalty Reward Programs (Y).
2. The Product variable, represented by several indicators with values >0.05, does not have a significant influence on Consumer Use of Loyalty Reward Programs (Y).

The four indicators representing the Price, Promotion, and Process variables mentioned above, which were derived from the initial analysis, were further processed using SPSS Binary Logistic Regression. Non-significant indicators were excluded from the covariate's column, leaving only the three significant indicators. The results from this second data analysis are as follows:

Table 2.
Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Psychological loyalty	1.207	.490	6.076	1	.014	3.344
	Product Information	1.515	.529	8.193	1	.004	4.550
	Ease fo use	1.596	.740	4.647	1	.031	4.934
	Repurchase	1.982	.486	16.608	1	<,001	7.257
	Constant	-3.445	.742	21.540	1	<,001	.032

a. Variable(s) entered on step 1: Psychological loyalty, Product Information, Ease fo use, Repurchase.

The indicators related to the clarity of information, online system integration, and shopping frequency with loyalty rewards programs have a significance value of <0.05. This indicates that these indicators can be used to predict the factors influencing Consumer Use of Loyalty Reward Programs.
The regression model's accuracy formula is as follows:

$$Y = \frac{1}{1+EXP^{(-(c+B1X1)+(B2X2)+(B3X3)))}}$$

Where :
Y : Dependent Variable: Consumer Use of Loyalty Reward Programs.
X1 : Independent variable representing psychological loyalty.
X2 : Independent variable representing product information.
X3 : Independent variable representing ease of use.
X4 : Independent variable representing repurchase behavior.

Table 3.
Classification Table[a]

			Predicted		
			Consumer use of loyalty rewards program		Percentage Correct
	Observed		0	1	
Step 1	Consumer use of loyalty rewards program	0	46	14	76.7
		1	13	75	85.2
	Overall Percentage				81.8

a. The cut value is .500

Based on the table above, it can be concluded that the potential of loyalty reward programs to influence consumer loyalty to minimarkets was predicted and observed for 89 consumers, while loyalty reward programs that did not influence consumer loyalty to minimarkets were predicted and observed for 59 consumers. The accuracy of the resulting regression model is 81.8%.

The research findings indicate that three main factors significantly influence consumer use

of Loyalty Reward Programs: Price, Promotion, and Process. The Price factor, represented by psychological loyalty, reveals that consumers are more attracted to programs offering emotional or psychological benefits. Next, the Promotion factor highlights the importance of clear and engaging product information in encouraging consumer participation. Additionally, the Process factor, related to ease of use and repurchase processes, emphasizes that a simple and practical user experience is a crucial aspect in enhancing consumer engagement.

There are several strategies that can be implemented by minimarket retailers. First, strengthen psychological loyalty by developing Loyalty Rewards programs that offer emotional value, such as exclusive offers for loyal customers or unique experiences that stand out from other places. Second, enhance promotions by maximizing promotional strategies that utilize various digital channels, such as social media, mobile apps, and instant messaging. The information conveyed should be engaging, relevant, and easy to understand to boost consumer interest. Finally, the strategy of simplifying processes can be achieved by integrating Loyalty Rewards programs with digital apps or payment systems to make it easier for consumers to monitor and redeem points. A user-friendly app interface can also provide a more comfortable experience for consumers. Additionally, regular evaluations of the program are necessary to ensure that the strategies remain aligned with consumer preferences and needs.

CONCLUSION

The binary logistic regression method can be utilized to predict the potential factors that influence consumers' use of loyalty reward programs at minimarket retailers based on predictor variables. The findings revealed that the potential of loyalty reward programs can influence consumer loyalty to minimarkets, with 89 consumers predicted and observed to be influenced, while 59 consumers were predicted and observed not to be influenced. The accuracy of the resulting regression model is 81.1%.

This study emphasizes that psychological loyalty, informative promotions, and ease of process are key elements in increasing consumer engagement with Loyalty Rewards programs. Therefore, minimarket retailers need to prioritize strategies that strengthen the emotional value of the program, optimize promotions, and simplify the program usage process. With this approach, Loyalty Rewards programs can become an effective tool for enhancing consumer loyalty while providing a competitive edge in the market. Continuous evaluation is also necessary to ensure that the program remains relevant in the face of changing consumer preferences and retail market dynamics.

REFERENCES

Armstrong, G., Kotler, P., & Opresnik, M. O. (2023). *Marketing: An Introduction* (15th ed.). Pearson.

Chaudhuri, A., & Holbrook, M. B. (2001). The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing*, 65(2), 81-93.

Data Indonesia. (2023). Data Jumlah Toko Retail di Indonesia Menurut Jenis 3 Tahun Terakhir Hingga2023. Data Indonesia. https://dataindonesia.id/industri-perdagangan/detail/data-jumlah-toko-retail-di-indonesia-menurut-jenis-3-tahun-terakhir-hingga-2023

Faisal, F., Sari, I. R., Saraswati, I., & Heikal, J. (2024). Analisis Pengaruh Karakteristik Produk terhadap Niat Beli Ulang Pelanggan Menggunakan Metode Regresi Logistik Biner. *AKADEMIK: Jurnal Mahasiswa Humanis*, *4*(3), 1182-1190.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Pearson.

Hendrawan, E., Zakaria, D., Salwa, E., & Heikal, J. (2024). Customer Renewal Prediction for Motor Vehicle Insurance Using Binary Logistic Regression in PT XYZ Insurance. *Innovative: Journal Of Social Science Research*, *4*(6), 2311-2320.

Hoyer, W. D., MacInnis, D. J., & Pieters, R. (2021). *Consumer Behavior* (8th ed.). Cengage Learning.

Isfan Ferli, Raden Maart Adi Waskita, Rama Rizqullah Fahrizal, & Jerry Heikal. (2024). Binary Logistic Regression Methodology to Determine the Factors that Influence the Decision to Open a Siginjai Savings Account at Bank XYZ. *Journal on Education, 07*(01), 2407-2416.

Kantar. (n.d.). Brand Buying Loyalty: What Makes Consumers Go Back Again and Again. *Kantar*. https://www.kantar.com/inspiration/consumer/brand-buying-loyalty-what-makes-consumers-go-back-again-and-again

Kementerian Koordinator Bidang Perekonomian. (2023). Miliki Kontribusi Signifikan bagi Perekonomian Nasional, Menko Airlangga Berharap Sektor Retail jadi Tulang Punggung. Kemenko Perekonomian Republik Indonesia. https://www.ekon.go.id/publikasi/detail/5715/miliki-kontribusi-signifikan-bagi-perekonomian-nasional-menko-airlangga-berharap-sektor-retail-jadi-tulang-punggung-

Kim, J., Steinhoff, L., & Palmatier, R. W. (2021). An Emerging Theory of Loyalty Program Dynamics. *Journal of the Academy of Marketing Science*, 49(1), 71-95. https://digital.lib.washington.edu/server/api/core/bitstreams/14ec58ef-4ee7-44bd-8523- 2ebe4282e68d/content

Kotler, P., & Keller, K. L. (2022). *Marketing Management* (16th ed.). Pearson Education. Kurniawan, H., Julian, A., Givianty, V. T., & Heikal, J. (2024). Analisis Faktor-Faktor yang Mempengaruhi Keputusan Take Home Credit Menggunakan Binary Logistic Regresi. *Journal of Economic, Bussines and Accounting (COSTING)*, *7*(6), 544-557.

Nagle, T. T., Hogan, J. E., & Zale, J. (2021). *The Strategy and Tactics of Pricing: A Guide to Growing More Profitably* (6th ed.). Routledge.

NielsenIQ. (2024). Unlocking Retail Success: Monetizing Customer Loyalty Program Data. *NielsenIQ*. https://nielseniq.com/global/en/insights/education/2024/unlocking-retail-success-monetizing-customer-loyalty-program-data/

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing*, 63(Special Issue), 33-44.

Pangestuti, I., & Heikal, J. (2024). Analisis Faktor-Faktor yang Mempengaruhi Keputusan Pembelian Kopi Tomoro dengan Menggunakan Regresi Biner Logistik untuk Menentukan Strategi Pemasaran yang Tepat. *Ranah Research: Journal of Multidisciplinary Research and Development, 6*(5), 2173-2181.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64(1), 12-40.

Reichheld, F. F. (2003). The One Number You Need to Grow. *Harvard Business Review*, 81(12), 46-54.

Riyani, S., Kristianto, F., Wulandari, R., & Heikal, J. (2024). Penerapan Metode Regresi Logistik Biner dengan Menggunakan Phyton untuk Menganalisa Pengguna Media Sosial terhadap Probabilitas Pembukaan Rekening Pada Bank X. *Scientific Journal of Reflection: Economic, Accounting, Management and Business*, *7*(2), 438-449.

Sharp, B., & Sharp, A. (1997). Loyalty Programs and Their Impact on Repeat-Purchase Loyalty Patterns. *International Journal of Research in Marketing*, 14(5), 473-486. https://www.academia.edu/12802020/Loyalty_Programs_and_their_Impact_on_Repeat_Purchase_Loyalty_Patterns_a_replication_and_extension

Suheni, S., & Heikal, J. (2024). Prediction Of Employee Disciplinary Punishment At The Departmen Of Agriculture Payakumbuh City Through Approach Binary Logistic Regression. *Journal of Business Economics and Management| E-ISSN: 3063-8968*, *1*(2), 133-138.

Watugilang, A., & Heikal, J. (2024). Pengaruh Kualitas Jasa Servis terhadap Kepuasan Pelanggan Perusahaan Servis Kalibrasi Alat Survey Geomatika di Jakarta dengan Binary Logistic Regression. *Indonesian Research Journal on Education*, *4*(4), 79-83.

Wisnu, Y. O. (n.d.). Profil FamilyMart, Minimarket asal Jepang. *IDN Times*. https://www.idntimes.com/business/economy/yogama-wisnu-oktyandito/profil-familymart-minimarket-asal-jepang#:~:text=Gerai%20pertama%20FamilyMart%20di%20Indonesia,yang%20tersebar%20di%20sejumlah%20daerah

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2020). *Services Marketing: Integrating Customer Focus Across the Firm* (7th ed.). McGraw-Hill Education.

Zulfahmi, M. R. Y., & Heikal, J. (2024). Analisis Prediksi financial Distress Perusahaan Industri Kimia Dasar. *Jurnal Mirai Management*, *9*(1), 488-505.