

Strategic Email Marketing for Customer Retention: A Study of E-Commerce Practices in Panai Hulu

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Abstract:

This study aims to examine the influence of email marketing on e-commerce customer retention within the Panai Hulu Subdistrict, Labuhanbatu Regency. In the current digital era, email marketing has emerged as a key strategy for building and maintaining long-term customer relationships. The research employed a quantitative approach with an associative design, using questionnaires distributed to respondents who are active users of e-commerce platforms. The collected data were analyzed using SPSS software to explore the relationship between email marketing and customer retention. The results reveal that email marketing plays a significant role in enhancing customer retention, indicating that effective and well-targeted email strategies can strengthen customer loyalty. These findings highlight the importance of personalization and timely communication in email campaigns, suggesting that e-commerce businesses should optimize their email marketing practices to foster sustainable customer relationships and long-term business growth.

Keywords: Email Marketing, Customer Retention, E-Commerce

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1. Introduction

In Indonesia, particularly in the Panai Hulu region, e-commerce growth shows a significant trend (Zakaria, 2024). People are increasingly shifting from traditional shopping to online platforms such as Shopee, Bukalapak, and Tokopedia, driven by ease of access and the variety of products offered (Irawati & Prasetyo, 2021; Kurniasih & Apriani, 2022). This shift has contributed to local economic development by opening broader market opportunities and increasing community income (Afandi, 2019; Putri & Marlien, 2022). However, along with this rapid growth, the challenge of retaining customers has become increasingly significant. Businesses often face difficulties in maintaining long-term relationships with customers, especially in

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competitive online markets where switching barriers are low and alternatives are abundant (Aji et al., 2023).

Customer retention refers to a company's ability to retain existing customers over time, ensuring that they continue to make repeat purchases and maintain loyalty to the brand (Suriansha, 2023). Retaining customers is critical because acquiring new customers typically requires higher costs than keeping existing ones (Daylami & Huda, 2025). Loyal customers not only generate repeat purchases but also act as advocates by recommending products and services to others, thereby enhancing profitability (Agustina & Indriyani, 2019; Dwi Cahya Ramadhani, 2018; Samosir, 2025). Gupta and Lehmann (2003) emphasized that customers should be viewed as assets whose lifetime value contributes significantly to a company's financial sustainability. Similarly, Reinartz and Kumar (2000) found that long-term customers are often more profitable, highlighting the strategic importance of effective customer retention programs.

One of the most effective tools to build and maintain customer relationships is email marketing. As part of digital marketing strategies, email marketing enables companies to communicate directly with customers, providing product updates, personalized offers, and relevant information that can strengthen engagement and loyalty (Baitulloh, 2024; Chaffey, 2022). Chiquitita et al. (2025) note that well-implemented email marketing campaigns can significantly improve customer loyalty. International research also supports this, as Wang et al. (2022) demonstrated that email engagement positively impacts company profitability, particularly in subscription-based services. Furthermore, Chaparro-Peláez et al. (2022) highlighted that the success of email marketing is strongly influenced by factors such as open rates, timing, and message relevance. However, Nobile and Cantoni (2023) argued that personalization does not always lead to better outcomes, suggesting that marketers must understand customer behavior deeply to design effective campaigns.

In the context of Panai Hulu, the local community has significant potential to leverage e-commerce for promoting local products such as handicrafts and traditional foods, expanding their reach to regional and even national markets (Eneng Wiliana & Purwaningsih, 2022; Aditya, 2023). The increasing penetration of smartphones and internet usage provides an excellent opportunity to implement cost-effective digital marketing strategies like email marketing to enhance customer retention (Priansa & Suryawardani, 2020). However, despite these opportunities, businesses in Panai Hulu still face challenges such as low email open and click-through rates, difficulties in segmenting customer databases, and limited knowledge about best practices for digital marketing (Chaparro-Peláez et al., 2022; Nobile & Cantoni, 2023). According to Kotler and Keller (2021), modern marketing must be adaptive, data-driven, and customer-focused to succeed in today's competitive landscape.

While previous studies have examined the role of digital marketing and social media in influencing consumer behavior and purchase decisions (Afandi, 2019; Kurniasih & Apriani, 2022; Priansa & Suryawardani, 2020; Putri & Marlien, 2022), research

specifically addressing the effectiveness of email marketing on customer retention, particularly in rural communities such as Panai Hulu, remains limited. Most international research on email marketing focuses on developed markets and large-scale e-commerce companies (Wang et al., 2022; Chaparro-Peláez et al., 2022; Nobile & Cantoni, 2023). This creates a significant research gap in understanding how email marketing strategies can be optimized to support small businesses in local Indonesian contexts, both in terms of improving customer retention and generating economic impact.

Therefore, this study aims to analyze the factors that influence the effectiveness of email marketing in increasing customer retention in e-commerce. By examining the Panai Hulu community, this research seeks to provide practical recommendations for local businesses and contribute to the academic literature on digital marketing strategies in developing regions. The findings are expected to help businesses develop effective email marketing strategies that foster customer loyalty, enhance profitability, and support sustainable growth in the regional digital economy.

2. Methodology

The research respondents were not limited by their location, as long as they met the criteria of being consumers of e-commerce applications. This means that anyone who had experience making purchases through e-commerce platforms could participate in this study. According to Sugiyono (2018), a sample is part of the population that represents the number and characteristics of the entire population. In this study, the sampling technique used was non-probability sampling, which is a method that does not provide equal opportunities for all members of the population to be selected as samples (Gunawan, 2015). The criteria for selecting respondents were that they must be residents of Panai Hulu, have made transactions through e-commerce applications, and be willing to participate as respondents. Since the population size was large and unknown, the sample size was determined using a formula provided by Sugiyono (2018). Based on the calculation using a 95% confidence level (Z = 1.96) and a margin of error of 10%, the required sample size was 96.04, which was then rounded up to 100 respondents for ease of data collection.

The data collected for this research consisted of primary data, which refers to data that has not previously been available and must be obtained directly by researchers through instruments such as questionnaires, interviews, and observations (Gunawan, 2015). In this study, a questionnaire was used as the main data collection instrument. The measurement of variables was conducted using a Likert scale, as it is widely used, easy to implement, and straightforward to interpret. The Likert scale measures attitudes, opinions, and perceptions of individuals or groups toward specific phenomena (Sugiyono, 2018). The questionnaire used a five-point scale with responses ranging from strongly agree (5), agree (4), neutral (3), disagree (2), to strongly disagree (1).

Before proceeding to data analysis, validity and reliability tests were carried out to ensure the quality of the instrument. The validity test was used to determine whether the questionnaire accurately measured what it was intended to measure. A valid instrument is essential to ensure that the research findings are meaningful and accurate (Siroj et al., 2024). The reliability test was then conducted to evaluate the consistency and stability of the questionnaire responses over time. Reliability focuses on the consistency of the measurements, while validity emphasizes accuracy (Kuncoro, 2016).

Data processing and analysis were carried out using the Statistical Package for the Social Sciences (SPSS) version 26 software. SPSS was chosen because it allows for accurate and efficient calculations, making the data easier to analyze and interpret. The data collected from respondents were systematically presented in tables to facilitate understanding and to enable the conversion of questionnaire responses into numerical scores for analysis. The analytical model used in this study was a simple linear regression, expressed in the following equation:

Y = a + b1X1 + eY = a + b1X1 + e

where Y represents e-commerce customer retention, X_1 represents email marketing, a is the constant, b_1 is the regression coefficient, and e is the error term. This model was used to determine the effect of email marketing on customer retention in the context of e-commerce.

3. Empirical Findings/Results

Instrument Requirement Test Results

Before data processing, the responses from all respondents were tested for validity and reliability to ensure that the measurement instrument was accurate and consistent. The validity test was carried out using SPSS version 20 to determine whether each statement in the questionnaire accurately measured the variables being studied. The test compared the calculated correlation value (r calculated) with the r table value at a significance level of 0.05. If r calculated > r table, the statement was considered valid (Siroj et al., 2024).

Table 1. Combined Validity Test Results for Marketing Email (X1) and E-Commerce Customer Retention (Y)

Variable / Statement	r Calculated	r Table	Conclusion
Marketing Email (X1)			
X1.1	0.4967	0.361	Valid
X1.2	0.6797	0.361	Valid
X1.3	0.8169	0.361	Valid
X1.4	0.7679	0.361	Valid
X1.5	0.8192	0.361	Valid
X1.6	0.8927	0.361	Valid
X1.7	0.8187	0.361	Valid

r Calculated	r Table	Conclusion
0.8793	0.361	Valid
0.8360	0.361	Valid
0.5952	0.361	Valid
0.4213	0.361	Valid
0.4940	0.361	Valid
0.4106	0.361	Valid
0.4725	0.361	Valid
0.4851	0.361	Valid
0.5282	0.361	Valid
0.5409	0.361	Valid
0.4766	0.361	Valid
0.6178	0.361	Valid
0.6088	0.361	Valid
	0.8793 0.8360 0.5952 0.4213 0.4940 0.4106 0.4725 0.4851 0.5282 0.5409 0.4766 0.6178	0.8793 0.361 0.8360 0.361 0.5952 0.361 0.4213 0.361 0.4940 0.361 0.4106 0.361 0.4725 0.361 0.4851 0.361 0.5282 0.361 0.5409 0.361 0.4766 0.361 0.6178 0.361

Source: Data processed, 2025

Explanation

Based on the results in Table 1, all items for the Marketing Email (X1) variable and the E-Commerce Customer Retention (Y) variable show that the r calculated values are greater than the r table value of 0.361. For the Marketing Email variable, the highest r calculated value was 0.8927, and the lowest was 0.4967. For the Customer Retention variable, the highest r calculated value was 0.6178, and the lowest was 0.4106. These results indicate that all questionnaire items for both variables are valid and can be used for further data analysis.

Reliability Test Results

After the validity test above, the tester will conduct a reliability test on each instrument variable X1 and instrument on variable Y using the Cronbach's Alpha formula with the help of the SPSS 20 program. The results of the reliability test, after consulting the list of r coefficient interpretations, can be seen in the following table:

Table 3. Reliability Test Results

Table 5. Reliability Test Results						
Variable	Cronbach's alpha	R Coefficient	Conclusion			
	coefficient	Conclusion				
Marketing Email	0.940337	0.8000 - 1.0000	Very High			
E-commerce	0.768516	0.8000 - 1.0000	Very High			
Customer						
Retention						

Source: data processed in 2025

Based on the reliability test results in Table 3, the Cronbach's alpha value for the marketing email variable (X1) is 0.9403 37 with a very high reliability level, and for the E-commerce Customer Retention variable (Y), the Cronbach's alpha value is 0.768516, which means that the reliability level is very high.

Table 4. Normality Test Results

Variable	Sig (2-tailed)	Alpha	Condition	Conclusion
Marketing	0.390	0.05	Sig>alpha	Normal
Email				
Customer	0.793	0.05	Sig>alpha	Normal
retention				
E-commerce				

Source: data processed in 2025

From the normality calculation results in Table 4 above, it can be interpreted that the sig (2-tailed) value of the marketing email variable (X1) of 0.390 is greater than 0.05, and the variable in e-commerce customer retention (Y) of 0.793 is greater than 0.05. Based on these results, it can be stated that the data used in this study is normally distributed.

Linearity Test Results

This linearity test aims to determine whether the two variables have a linear relationship or are not significant. Based on the linearity test results, the following results were obtained:

Table 5. Linearity Test Results

Variable	Sig	Alpha	Conclusion
Email Marketing on	0.932	0.05	Linear
E-commerce			
Customer Retention			

Source: data processed in 2025

From the linearity calculation results in Table 5 above, it can be interpreted that the significant value for the marketing email variable (X1) on customer retention and employee productivity (Y) is 0.932, which is greater than 0.05, meaning that Ho is accepted. Thus, sig > alpha, so Ho is accepted, stating that the regression model for the variable is linear.

Data Analysis Method Results

Simple Linear Regression Results Simple linear regression analysis aims to determine whether a regression equation produced is suitable for estimating the value of the dependent variable, which requires proof of the validity of the hypothesis.

Table 6. Simple Linear Regression Calculation Results

Model		Unstandardised Coefficients	Std. Error			Sig.
				Beta	 -	
1	(Constant)	15.03236	2.21567		6.7845	0.002
	MARKETING	0.500091	0.06674	0.605479	7.4928	0.001
	EMAIL					

Source: data processed in 2025

Dependent Variable: behaviour_Y The table above shows the results of multiple linear regression calculations, using SPSS 20.0 computer software, which yielded the following regression equation:

- Constant value: a = 15.03236

- Coefficient b = 0.500091

Therefore, the regression equation is: $Y = 15.03236 + 0.500091 X_1$

The constant value of 10.788 indicates that if there is no score for the marketing email variable (X=0), the score for consumer behaviour remains at 15. 03236 The regression coefficient of the marketing email variable (X) of 0.500091 indicates that for every one unit increase in marketing email, customer retention will increase by 0.500091. The determination value (R) is also obtained as shown in the summary table below:

Table 7. Coefficient of Determination (R)

Model	R	R Square	Adjusted R-Square	Standard Error of the Estimate	Change Statistics	Durbin- Watson
					R-Square Change	
1	0.605479	0.366605	0.360075	2.634283	0.366605	2.178669

Source: data processed in 2025

Based on Table 7, the R value of 0.605 indicates that the magnitude of the influence of marketing emails on customer retention in the Panai Hulu sub-district community is 60.5%, while the remaining 39.5% is explained by other causes or factors not included in this study.

Hypothesis Testing Results

Hypothesis testing was conducted using the t-test.

The t-test is used to determine the influence of independent variables on dependent variables individually or, in other words, to show the extent to which an independent variable partially influences the dependent variable. Compare the t-count and t-table with a confidence level of 95% and α =0.05. The hypothesis is as follows:

Ho: Marketing emails do not affect e-commerce customer retention among the community of Panai Hulu sub-district, Labuhanbatu district.

Ha: Marketing emails influence e-commerce customer retention among the community of Panai Hulu sub-district, Labuhanbatu regency.

Based on the results of calculations using simple linear regression analysis at table 6, the coefficient of the simple linear regression analysis shows that the t-value is 7.4928, while the t-table with α =0.05 and df:n-2 (100- 2=98) is 1.984 (see the t-table in the appendix). Based on these analysis results, it can be seen that the t-value is greater than the t-table value (7.492 > 1.984), so the proposed Ho is rejected and Ha is accepted, meaning that marketing emails have an effect on e-commerce customer retention among the community of Panai Hulu Subdistrict, Labuhanbatu Regency.

4. Discussion

The results of the partial hypothesis test reveal that the calculated t-value (7.492) is significantly higher than the t-table value (1.984) at a significance level of $\alpha = 0.05$ with 98 degrees of freedom (n-2). This indicates that H₀ is rejected and H_a is accepted, confirming that email marketing has a significant positive effect on e-commerce customer retention in the Panai Hulu Sub-district, Labuhanbatu Regency. This finding supports the research by Samosir (2025), who emphasizes that customer relationship management strategies, particularly through targeted email communication, are crucial for enhancing customer loyalty and retention in the digital era. Effective email marketing strategies, such as personalization, segmentation, communication, play an essential role in maintaining continuous engagement with customers. Wang et al. (2022) found that customer engagement via email directly contributes to higher profitability, especially in subscription-based retailing, by fostering stronger relationships and encouraging long-term retention. Similarly, Chaparro-Peláez et al. (2022) highlighted that the effectiveness of email marketing depends largely on factors such as subject lines, timing, and message structure, as these influence open rates and overall customer response.

In the context of Panai Hulu, where e-commerce adoption is expanding, the optimization of email marketing becomes vital. Chiquitita et al. (2025) demonstrated that structured and well-planned email marketing campaigns significantly increase customer loyalty by delivering relevant content and exclusive offers tailored to customer preferences. This aligns with the findings of Nobile and Cantoni (2023), who argue that personalization enhances engagement and conversion rates, while generic email campaigns tend to underperform. These insights are consistent with Kotler and Keller (2021), who state that personalized marketing builds stronger customer relationships by addressing individual preferences, leading to higher customer satisfaction and retention. From an economic standpoint, Gupta and Lehmann (2003) explain that retaining existing customers is more cost-effective than acquiring new ones, making retention a critical factor in sustainable business growth. Reinartz and Kumar (2000) further emphasize that loyal customers generate higher profitability over time, particularly in non-contractual settings such as e-commerce, where businesses must continuously engage customers to prevent churn. Zakaria (2024) also highlights the broader economic implications of e-commerce, noting its role in regional economic development through increased digital transactions and expanded market access.

These findings also reflect the broader impact of digital marketing on consumer behavior. Eneng and Nining (2022) found that digital marketing efforts, including influencer promotions and email campaigns, significantly influenced purchase decisions during the COVID-19 pandemic. Similarly, Priansa and Suryawardani (2020) showed that e-marketing and social media marketing directly affect consumers' online shopping behavior. Putri and Marlien (2022) reinforce this view by noting that well-executed digital marketing strategies foster trust and encourage repeat purchases, which are essential for retention. Furthermore, Baitulloh (2024)

emphasizes the importance of continuous evaluation of email marketing strategies through SWOT analysis to identify strengths, weaknesses, opportunities, and threats, thereby enhancing the effectiveness of campaigns. The role of customer experience also cannot be overlooked. Suriansha (2023) highlights that positive digital experiences are a key determinant of customer loyalty and retention, especially in the retail sector. Similarly, Dwi Cahya Ramadhani (2018) identifies customer satisfaction, trust, and switching barriers as significant factors influencing retention, where satisfied customers are less likely to move to competitors.

The increasing influence of digital platforms has also brought significant changes to consumer behavior. Afandi (2019) and Kurniasih and Apriani (2022) note that the digitalization of commerce and communication has transformed how communities engage in buying and selling. Aditya (2023) further supports this by showing that technological advancements have reshaped consumer purchasing patterns, making digital marketing, including email campaigns, a necessity for businesses. Irawati and Prasetyo (2021) emphasize that e-commerce platforms play a vital role in supporting businesses, especially during challenging times such as the pandemic, by providing a sustainable channel for sales and customer interaction.

In practical terms, businesses in Panai Hulu should adopt a comprehensive email marketing strategy that includes segmentation and personalization to deliver tailored messages (Nobile & Cantoni, 2023), data-driven decision-making to optimize timing and content (Wang et al., 2022), integration with other digital channels such as social media and marketplaces (Priansa & Suryawardani, 2020; Irawati & Prasetyo, 2021), and continuous evaluation through SWOT analysis (Baitulloh, 2024). By implementing these strategies, e-commerce businesses can strengthen customer relationships, increase retention, and contribute to the growth of the regional digital economy. In conclusion, this study confirms that effective email marketing is a crucial tool for improving customer retention, thereby supporting long-term business sustainability and fostering regional economic development.

5. Conclusions

The findings of this study demonstrate that email marketing has a significant positive effect on customer retention in e-commerce within the Panai Hulu Subdistrict, Labuhanbatu Regency. The results highlight that well-designed and effectively executed email marketing strategies play a crucial role in fostering long-term relationships and enhancing customer loyalty. Personalized and relevant email content that provides value to customers—such as special promotions, product updates, and purchase reminders—can increase engagement and encourage repeat purchases. This underscores the importance for e-commerce businesses to leverage customer data and insights to create tailored messages that resonate with individual preferences. By doing so, businesses can build stronger connections with their customers, ultimately driving sustainable growth and competitiveness in the digital marketplace. Future studies could expand the scope of this research by exploring the role of other digital marketing channels, such as social media marketing, influencer marketing, or

mobile marketing, in relation to customer retention. Comparative studies across different regions or demographic segments could provide deeper insights into how cultural, economic, and technological factors influence the effectiveness of email marketing. Additionally, future research could adopt a longitudinal approach to examine the long-term impact of email marketing strategies on customer loyalty and lifetime value. Incorporating qualitative methods, such as interviews or focus groups, may also offer a richer understanding of customer perceptions and motivations behind engagement with email marketing campaigns.

References:

- Aditya, A. R. (2023). The effectiveness of social media and information technology on people's behaviour in online buying and selling transactions. *Journal of Information Systems and Management*, 2(3), 65–70. https://jisma.org/index.php/jisma/article/view/385
- Afandi, Y. (2019). The impact of social media on social change in a community. *Fidei: Journal of Systematic and Practical Theology*, 1(2), 270–283. https://doi.org/10.34081/270033
- Agustina, R., & Indriyani, S. (2019). On consumer retention at Giant. *Journal of Marketing Research*, 20–36.
- Aji Ahadun Rojab, & Trihudiyatmanto, H. P. (2023). The influence of price perception, switching barriers, and consumer retention on consumer loyalty to Le Minerale bottled water. *Journal of Marketing Research*, 3, 8–20.
- Baitulloh, S. (2024). Analysis of strengths, weaknesses, opportunities, and email marketing strategies in marketing. *Journal of Marketing Strategy*, 2(12), 506–521.
- Chaffey, D. E. C. (2022). *Chaffey: Digital marketing* (8th ed.). Pearson Education Limited.
- Chaparro-Peláez, J., Hernández-García, Á., & Lorente-Páramo, Á. J. (2022). May I have your attention, please? An investigation on opening effectiveness in email marketing. *Review of Managerial Science*, 16(7), 2261–2284. https://doi.org/10.1007/s11846-022-00517-9
- Chiquitita, T. C., Wolor, C. W., & Utari, E. D. (2025). Analysis of email marketing strategy implementation in increasing loyalty to Company B. *Journal of Marketing Strategy*, 4(2), 11–25.
- Daylami, I., & Huda, N. (2025). The implications of mergers and acquisitions on efforts to improve company financial performance. *Cakrawala Repositori IMWI*, 8(1).
- Dwi Cahya Ramadhani, I. H. (2018). Analysis of the effect of customer satisfaction, customer trust, and barriers to change on customer retention. *Journal of Consumer Behavior*, 10(2), 45–60.
- Eneng Wiliana, & Nining Purwaningsih. (2022). The influence of digital marketing and influencers on the purchase decisions of culinary MSMEs in Tangerang City during COVID-19. *MAMEN: Journal of Management, 1*(3), 242–251. https://doi.org/10.55123/mamen.v1i3.641

- Gunawan, I. (2015). *Qualitative research methods* (1st ed., 3rd printing). Bumi Aksara.
- Gupta, S., & Lehmann, D. R. (2003). Customers as assets. *Journal of Interactive Marketing*, 17(1), 9–24. https://doi.org/10.1002/dir.10045
- Irawati, R., & Prasetyo, I. B. (2021). Utilisation of e-commerce platforms through marketplaces as an effort to increase sales and maintain business during the pandemic (A study of food and beverage MSMEs in Malang). *Journal of Applied Management Research (PENATARAN)*, 6(2), 114–133.
- Kotler, P., & Keller, K. L. (2021). Marketing management (16th ed.). Pearson.
- Kurniasih, E., & Apriani, D. (2022). The influence of the digitalisation era in social media on people's behaviour. *Kodifikasi*, 13, 47–54. http://www.ejournal.uniks.ac.id/index.php/KODIFIKASI/article/view/253
- Nobile, T. H., & Cantoni, L. (2023). Personalisation (in)effectiveness in email marketing. *Digital Business*, 3(2), Article 100058. https://doi.org/10.1016/j.digbus.2023.100058
- Priansa, D. J., & Suryawardani, B. (2020). Effects of e-marketing and social media marketing on e-commerce shopping decisions. *Indonesian Management Journal*, 20, 1–12.
- Putri, P. M., & Marlien, R. (2022). The influence of digital marketing on online purchasing decisions. *Jesya (Journal of Economics & Sharia Economics)*, 5(1), 25–36. https://doi.org/10.36778/jesya.v5i1.510
- Reinartz, W. J., & Kumar, V. (2000). On the profitability of long-life customers in a noncontractual setting: An empirical investigation and implications for marketing. *Journal of Marketing*, 64(4), 17–35. https://doi.org/10.1509/jmkg.64.4.17.18077
- Samosir, C. A. (2025). Customer relationship management strategies to improve customer retention in the digital age. *Repeater: Information Technology and Network Publication*, 3(1), 160–170.
- Siroj, R. A., Afgani, W., Septaria, D., Zahira, G., Kuantitatif, P., Ilmiah, P., & Data, A. (2024). Quantitative research methods: A scientific approach to data analysis. *Journal of Quantitative Research*, 7, 11279–11289.
- Sugiyono. (2018). Statistics for research. Alfabeta.
- Suriansha, R. (2023). The influence of customer experience in the digital age on customer retention in the retail industry. *Journal of Economics and Business UBS*, 12(4), 2270–2277. https://doi.org/10.52644/joeb.v12i4.269
- Wang, Y., Lu, L. X., & Shi, P. (2022). Does customer email engagement improve profitability? Evidence from a field experiment in subscription service retailing. *Manufacturing & Service Operations Management*, 24(5), 2703–2721. https://doi.org/10.1287/msom.2022.1122
- Zakaria, J. (2024). The role of e-commerce in regional economic development in Indonesia. *Journal of Development Economics STIE Muhammadiyah Palopo*, 10(1), 142–150. https://doi.org/10.35906/jep.v10i1.192