

A STIMULUS-RESPONSE PERSPECTIVE ON THE EFFECT OF STORE ATMOSPHERE AND VISUAL MERCHANDISING ON IMPULSE BUYING IN MINIMARKET RETAIL: EVIDENCE FROM CIREBON REGENCY

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Abstract

This study aims to analyze the influence of Store Atmosphere and Visual Merchandising on Impulse Buying behavior among Alfamart consumers in Cirebon Regency, both partially and simultaneously, using the Stimulus-Response (S-R) theory as the analytical framework. A quantitative approach with an associative design was employed, involving a sample of 120 respondents selected through purposive sampling. Respondents were consumers who had purchased products at Alfamart in Cirebon Regency at least once during the specified three-month period and were at least 17 years old. Data were collected through questionnaires and analyzed using multiple linear regression with SPSS. The results show that Store Atmosphere has a positive and significant effect on Impulse Buying ($t = 2.738$; $sig. = 0.007$), and Visual Merchandising also has a positive and significant effect ($t = 4.784$; $sig. = 0.000$), with a stronger effect than Store Atmosphere. Simultaneously, both variables have a positive and significant effect on Impulse Buying ($F = 66.532$; $sig. = 0.000$), jointly explaining 52.4% of the variation in Impulse Buying. These findings imply that Alfamart management should optimize store atmosphere and visual product arrangement, particularly checkout-point displays, as an integrated strategy to encourage consumers' unplanned purchases

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INTRODUCTION

Changes in consumer behavior and the ever-shifting dynamics of the retail market require business actors to increasingly understand the factors that influence purchasing decisions, including the store environment, shopping experience, and evolving consumer preferences (Khan et al., 2023). Population growth has also driven increasing societal needs for retail goods, particularly basic necessities such as food, clothing, and other household needs (Miladinov, 2023), prompting modern retail businesses to continuously expand their store networks across various regions. Most retail stores today implement a self-service shopping system, in which consumers are free to select their own merchandise without direct assistance from store staff. This direct interaction between consumers and products throughout the shopping process can influence emotions and encourage spontaneous purchasing, or impulse buying. A well-organized store environment has been shown to increase the tendency toward impulsive purchasing through consumers' positive emotional responses (Shi & Joo, 2023). Store environment, sensory stimuli, and promotions have been identified as key triggers of impulse buying (Rodrigues et al., 2021), and situational cues have likewise

been shown to raise impulse buying in other shopping settings (Xue et al., 2024).

Alfamart, as one of Indonesia's largest minimarket chains, has recorded consistent store growth in Cirebon Regency, expanding from 78 stores in 2020 to 118 stores in 2023. Increasingly intense retail competition requires store management to continuously present effective marketing strategies, including through the optimization of Store Atmosphere and Visual Merchandising, in order to attract and retain customers amid increasingly selective and critical consumers (Grewal et al., 2023). This pressure is particularly relevant for convenience stores, which have faced declining customer visits in the digital age, making the in-store customer experience central to attracting and retaining shoppers (Gibson et al., 2022). In Indonesia, impulse buying also shapes how consumers respond to retail promotions (Leksono & He, 2025). Store Atmosphere that is poorly managed, such as cramped shelf spacing, dim lighting, or an unappealing store layout, can reduce consumer comfort and shorten the time spent browsing, thereby lowering the likelihood of unplanned purchases. Likewise, Visual Merchandising that fails to highlight products effectively can cause potential impulse purchases to go unnoticed by consumers.

Studies on the influence of Store Atmosphere and Visual Merchandising on Impulse Buying have been widely conducted, yet they show inconsistent results. On one hand, research by (Arianty et al., 2024) and (Purwati & Fauziah, 2025) found that Store Atmosphere significantly influences Impulse Buying. On the other hand, research by (Dewanti & Nirawati, 2023) and (Saputri & Jalari, 2023) found that Store Atmosphere partially has no significant effect on Impulse Buying in different retail contexts, while Visual Merchandising in the same studies was proven to have a significant effect. This inconsistency in findings indicates that the strength of influence of these two variables is contextual, depending on the type of retail, product characteristics, and consumer segments studied, thereby leaving a research gap regarding how this pattern of influence occurs specifically in the context of daily minimarkets such as Alfamart, particularly in the Cirebon Regency area that has not been widely studied.

Although the expanded Stimulus-Organism-Response (S-O-R) framework is widely recognized in environmental psychology (Reina Paz & Jiménez Delgado, 2020), the theoretical novelty of this study lies in explicitly testing a baseline, direct Stimulus-Response (S-R) model within the fast-paced convenience minimarket context. Prior empirical literature has relied heavily on organismic mediation, including studies in minimarkets (Arianty et al., 2024) and online retail (Gao et al., 2022) that model emotion as a mediator between environmental cues and impulse buying, often overlooking whether physical in-store stimuli can directly trigger immediate purchase responses in micro-retail formats. Convenience minimarket shopping is typically characterized by high transaction frequency, low financial risk, and brief dwell times, which makes it plausible that purchasing behavior in this format operates largely as a rapid response to physical cues rather than extended emotional processing. By intentionally omitting internal Organism (O) states, such as emotional pleasure or arousal, this study establishes a necessary empirical benchmark regarding the direct predictive power of physical store architecture (X1, X2) on impulse buying (Y) in local minimarket environments, providing a foundational baseline before integrating organismic mediators in future frameworks.

Based on the description above, this study is important to conduct in order to understand more deeply how Store Atmosphere and Visual Merchandising affect Impulse Buying behavior among Alfamart consumers in Cirebon Regency, both partially

and simultaneously. The results of this study are expected to provide strategic recommendations for Alfamart management in optimizing store environmental elements to encourage consumer purchasing decisions. Based on the emerging phenomena and previous research that the researcher has described, the researcher is interested in examining the extent to which Store Atmosphere and Visual Merchandising influence Impulse Buying among Alfamart Consumers in Cirebon Regency.

LITERATURE REVIEW

Stimulus-Response Theory

Stimulus-Response Theory was first proposed by (Mehrabian & Russell, 1974), who explain that stimuli or cues from the environment can directly influence individuals' behavioral responses without the involvement of an internal mediating process. In the context of consumer behavior, environmental elements encountered by a person while shopping are captured through the senses and translated directly into a behavioral reaction, such as approach or avoidance behavior toward a product. Furthermore, (Sangadji, 2022) defines Stimulus-Response Theory as an approach used to explain consumer behavior, in which environmental stimuli encountered by consumers during shopping directly shape their purchasing responses, including unplanned purchasing decisions. Subsequent research on sales atmospherics extended the Mehrabian–Russell framework into the Stimulus-Organism-Response model and from physical stores to digital environments (Carrión-Bósquez et al., 2026).

According to (Mehrabian & Russell, 1974), research has shown that store environmental stimuli, such as lighting, layout, color, and visual displays, are captured directly by consumers' senses without requiring extensive cognitive processing. This direct stimulus-response mechanism explains why consumers can make purchasing decisions within seconds of encountering a product display. Based on the explanation above, it can be concluded that Stimulus-Response Theory provides a parsimonious framework for understanding how store environmental elements can trigger immediate purchasing behavior, making it particularly relevant for studying impulse buying in fast-paced retail settings such as minimarkets.

Store Atmosphere (X1)

(Novita, 2024) defines store environment that does not merely function as a place of transaction, but also has the capacity to influence customers' perceptions, feelings, and responses toward a product. Store Atmosphere aims to create a shopping environment that shapes customers' emotional experiences, thereby influencing their purchasing decisions. Furthermore, Utami in (Efendi et al., 2023) defines Store Atmosphere as an effort to manage the overall store area by utilizing various elements, such as lighting, color, visual communication, music, and scent, aimed at influencing customers' perceptions and emotional responses.

According to (Novita, 2024), research has shown that store atmosphere is a key factor supporting a retailer's ability to differentiate itself in a competitive market. This is because store atmosphere is a crucial aspect determining customer comfort and willingness to spend more time browsing. Retailers who are able to design an appealing and comfortable store environment will create a positive shopping experience, so customers feel encouraged to explore products beyond their original shopping list. Based on the explanation above, it can be concluded that store

atmosphere is one of the factors that influence unplanned purchasing behavior. Store atmosphere, when well managed by retailers, will also increase the likelihood of impulse buying among consumers. Nevertheless, the strength of store-environment cues varies by context. In luxury stores, music, scent, and employee interaction significantly shaped emotions, while lighting, design, and layout did not (Yang et al., 2022), indicating that different atmospheric cues may carry different weight depending on the retail format.

Visual Merchandising

Visual Merchandising, according to (Irnawati & Saputra, 2025), is defined as an important approach in creating store appeal through visual display, which not only functions as aesthetics but also as a means of communication capable of influencing consumer perception and behavior. Furthermore, Kaur Jain in (Nurudin, 2020) defines Visual Merchandising as all displays that can be seen by customers, both inside and outside the store, which companies use to create a positive image, attract customer attention, and foster interest in buying.

According to (Irnawati & Saputra, 2025), research has shown that visual merchandising is a strategic tool that retailers can use to communicate product value without relying on direct sales assistance. This is because visual merchandising is a crucial aspect determining whether a product catches a customer's attention within the limited time they spend in a store. The interaction between well-designed product displays and customer attention can lead to increased product recall and purchase intention, resulting in a higher likelihood of both planned and unplanned purchases. Elements such as product arrangement, exterior lighting, and window displays have been linked to shoppers' purchase decisions (Florea et al., 2025), and shoppers' visual attention and arousal differ across store fixtures (Kim & Lee, 2021). Based on the explanation above, it can be concluded that visual merchandising is one of the factors that influence impulse buying. Visual merchandising, as a strategic marketing tool, if implemented effectively by retailers, will also increase customer purchase interest.

Impulse Buying

Impulse Buying, according to Rook in (Fitriana & Usman, 2024), is defined as purchasing behavior that occurs without prior planning and is caused by a sudden, strong urge that is difficult to resist, occurring when customers are immediately attracted to a product followed by feelings of pleasure and enthusiasm. Furthermore, Kollat and Willet in (Nurcahyo & Rosyada, 2023) define Impulse Buying as a purchasing decision made by consumers while inside a store without any prior planning or need recognition for a particular product before entering the store.

According to Rook in (Fitriana & Usman, 2024), research has shown that impulse buying is often triggered by an individual's emotional state rather than rational deliberation, meaning that consumers who experience positive emotions while shopping are more susceptible to spontaneous purchasing. This is because impulse buying is a crucial aspect determining a retailer's incremental revenue beyond what customers originally planned to spend. The interaction between store environmental stimuli and a consumer's emotional state can lead to the creation of a purchasing moment that is unplanned yet satisfying for the consumer. Based on the explanation above, it can be concluded that impulse buying is a behavioral outcome shaped by both external stimuli and internal consumer states. Impulse buying, as a

phenomenon widely observed in retail settings, is therefore an important behavior for retailers to understand and strategically encourage.

RESEARCH METHODS

This type of research falls into the associative or quantitative research category, aiming to uncover the relationships and influences between variables, namely Store Atmosphere (X1) and Visual Merchandising (X2) on Impulse Buying (Y) (Sugiyono, 2019). This research not only aims to explain the existing relationships but also to determine how strong the influence of store environmental stimuli is on unplanned purchasing behavior among Alfamart consumers. Thus, the results of this study can be used to develop retail marketing strategies and support better managerial decision-making in practice.

This study was conducted in the Cirebon Regency area, with the research object being consumers who had shopped at Alfamart stores in that area. The population in this study consisted of all Alfamart consumers in Cirebon Regency, the exact population size of which was unknown. The sampling technique used in this study was purposive sampling, and the sample consisted of 120 respondents who met the predetermined criteria: (1) having shopped at Alfamart stores in the Cirebon Regency area at least once during the April–June 2026 period, and (2) being at least 17 years old.

The sample size was determined based on the guideline proposed by (Hair et al., 2013) which suggests considering the number of indicators when determining an adequate sample size for multivariate analysis. The present study consists of 12 indicators across the three research variables. Following the 5-to-10 observations-per-indicator guideline, the recommended sample size ranges from 60 respondents (12×5) to 120 respondents (12×10). To provide an adequate number of observations for the multivariate analysis, this study used 120 respondents, representing the upper end of the recommended range. The 120 respondents were subsequently analyzed using multiple linear regression to examine the effects of Store Atmosphere (X₁) and Visual Merchandising (X₂) on Impulse Buying (Y).

This study employs three variables. Store Atmosphere (X1) is operationally defined as consumers' perception of the physical and sensory conditions of Alfamart stores, measured through four indicators: Outside, General Interior, Store Layout, and Interior Display. Visual Merchandising (X2) is defined as consumers' perception of the visual arrangement of products within the store, measured through four indicators: Window Display, In-Store Display, Checkout Counter Display, and Promotional Display. Impulse Buying (Y) is defined as consumers' tendency toward unplanned purchasing behavior, measured through four indicators: Pure Impulse Buying, Reminder Impulse Buying, Suggestion Impulse Buying, and Planned Impulse Buying. Each indicator was translated into two questionnaire items, resulting in a total of 24 statement items.

Table 1. Operationalization of Variables

Variable	Operational Definition	Indicators	Items	Scale	Reference
Store Atmosphere (X1)	Consumers' perception of the physical and sensory conditions of Alfamart stores.	1.Outside	X1.1	Likert (1–5) (Sugiyono, 2019)	(Turley & Milliman, 2000)
		2.General Interior	X1.2		
		3. Store Layout	X1.3		
		4.Interior Display	X1.4		
			X1.5		
			X1.6		
			X1.7		
			X1.8		

Variable	Operational Definition	Indicators	Items	Scale	Reference
Visual Merchandising (X2)	Consumers' perception of the visual arrangement of products within the store.	1.Window Display 2.In-Store Display 3.Checkout Counter Display 4.Promotional Display	X2.1 X2.2 X2.3 X2.4 X2.5 X2.6 X2.7 X2.8	Likert (1-5) (Sugiyono, 2019)	(Pegler & Kong, 2018)
Impulse Buying (Y)	Consumers' tendency toward unplanned purchasing behavior.	1. Pure Impulse Buying 2.Reminder Impulse Buying 3. Suggestion Impulse Buying 4. Planned Impulse Buying	Y.1 Y.2 Y.3 Y.4 Y.5 Y.6 Y.7 Y.8	Likert (1-5) (Sugiyono, 2019)	(Stern, 1962)

The data collection procedure was carried out by distributing questionnaires directly, by providing a link or QR code to respondents encountered at Alfamart stores, as well as online, through social media and messaging applications, in order to reach the population spread across various areas of Cirebon Regency. To minimize control bias and ensure that online respondents genuinely met the inclusion criteria, the online questionnaire began with two mandatory screening questions: (1) "Have you shopped at an Alfamart store in Cirebon Regency at least once within the last three months?" and (2) "Are you at least 17 years old?". Respondents who answered "No" to either question were automatically directed to the end of the form and excluded from further participation, ensuring that only eligible respondents proceeded to the main questionnaire items. The measurement scale used in this study was a 1–5 Likert scale, with a gradient from Strongly Disagree to Strongly Agree. Validity testing was carried out to determine whether the questionnaire items used were able to measure what was intended, while reliability testing assessed the internal consistency of the instrument.

The data analysis technique used in this study was multiple linear regression analysis, which aims to determine the effect of Store Atmosphere and Visual Merchandising on Impulse Buying, both partially and simultaneously. Prior to hypothesis testing, classical assumption tests were conducted, including the normality test (Kolmogorov-Smirnov with the Monte Carlo approach), the multicollinearity test (Tolerance and VIF values), and the heteroscedasticity test (Glejser test), to ensure the regression model met the requirements of BLUE (Best Linear Unbiased Estimator). Data processing was carried out using SPSS software.

Hypothesis

Based on previous research, the hypotheses in this study can be described as follows:

1. There is a positive and significant influence of Store Atmosphere on Impulse Buying among Alfamart consumers in Cirebon Regency.
2. There is a positive and significant influence of Visual Merchandising on Impulse Buying among Alfamart consumers in Cirebon Regency.
3. There is a positive and significant simultaneous influence of Store Atmosphere

and Visual Merchandising on Impulse Buying among Alfamart consumers in Cirebon Regency.

RESULTS AND DISCUSSION

Descriptive Analysis

The descriptive analysis was conducted to determine the general characteristics of the respondents' perceptions of Store Atmosphere, Visual Merchandising, and Impulse Buying. The results are presented in Table 2.

Table 2. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Category
Store Atmosphere (X ₁)	120	2.50	5.00	4.12	0.54	High
Visual Merchandising (X ₂)	120	2.38	5.00	4.00	0.58	High
Impulse Buying (Y)	120	2.25	5.00	3.93	0.61	High

Based on Table 2, all three research variables were categorized as high. Store Atmosphere (X₁) obtained the highest mean score of 4.12 with a standard deviation of 0.54, indicating that respondents generally had favorable perceptions of the physical and sensory conditions of Alfamart stores. Visual Merchandising (X₂) obtained a mean score of 4.00 with a standard deviation of 0.58, indicating that respondents generally perceived the visual arrangement and product displays positively. Meanwhile, Impulse Buying (Y) obtained a mean score of 3.93 with a standard deviation of 0.61, indicating a relatively high tendency among respondents to make unplanned purchases.

Overall, the descriptive findings indicate that respondents perceived the Store Atmosphere and Visual Merchandising of Alfamart positively, while also exhibiting a relatively high tendency toward Impulse Buying. These findings provide a general description of the three research variables before examining their relationships through inferential analysis.

Instrument Test Results

Validity Test

Table 3. Validity Test Results

Variable	Statement Item	r table	r calculated	Description
<i>Store Atmosphere (X₁)</i>	X1.1	0.1793	0.671	Valid
	X1.2	0.1793	0.587	Valid
	X1.3	0.1793	0.686	Valid
	X1.4	0.1793	0.692	Valid
	X1.5	0.1793	0.657	Valid
	X1.6	0.1793	0.613	Valid
	X1.7	0.1793	0.676	Valid
	X1.8	0.1793	0.638	Valid
<i>Visual Merchandising (X₂)</i>	X.2.1	0.1793	0.720	Valid
	X.2.2	0.1793	0.679	Valid
	X.2.3	0.1793	0.636	Valid
	X.2.4	0.1793	0.654	Valid
	X.2.5	0.1793	0.713	Valid
	X.2.6	0.1793	0.623	Valid
	X.2.7	0.1793	0.799	Valid

	X.2.8	0.1793	0.665	Valid
	Y.1	0.1793	0.690	Valid
	Y.2	0.1793	0.697	Valid
	Y.3	0.1793	0.574	Valid
<i>Impulse Buying (Y)</i>	Y.4	0.1793	0.678	Valid
	Y.5	0.1793	0.628	Valid
	Y.6	0.1793	0.635	Valid
	Y.7	0.1793	0.659	Valid
	Y.8	0.1793	0.707	Valid

The validity test was conducted by comparing the calculated r-value of each questionnaire item with the r-table value at a significance level of 5% (r-table = 0.1793 for n = 120). As shown in the table above, all 24 statement items across the three variables produced calculated r-values greater than the r-table value, indicating that every item was valid. The r-value for Store Atmosphere ranged from 0.587 to 0.692, Visual Merchandising ranged from 0.623 to 0.799, and Impulse Buying ranged from 0.574 to 0.707, confirming that each item was capable of accurately measuring its intended construct.

Reliability Test

Table 4. Reliability Test Results

No	Variable	Cronbach's Alpha	Description
1	Store Atmosphere	0.806	Reliable
2	Visual Merchandising	0.839	Reliable
3	Impulse Buying	0.813	Reliable

Table 4 shows that all three variables produced a Cronbach's Alpha coefficient above 0.60, confirming that the research instrument was reliable and internally consistent, and therefore appropriate for use in further data analysis.

Classical Assumption Test Results

Normality Test

Table 5. Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			120
Normal Parameters ^{a,b}	Mean	0,0000000	
	Std. Deviation	3,66692600	
Most Extreme Differences	Absolute	0,107	
	Positive	0,087	
	Negative	-0,107	
Test Statistic			0,107
Asymp. Sig. (2-tailed)			.002 ^c
Monte Carlo Sig. (2-tailed)	Sig.	.121 ^d	
	99% Confidence Interval	Lower Bound	0,113
		Upper Bound	0,129

As shown in Table 5, the normality test using the Kolmogorov-Smirnov test produced an Asymptotic Sig. value of 0.002, indicating non-normal distribution. However, the asymptotic approach is known to be sensitive to tied data, which commonly occurs in Likert-scale questionnaires with a limited number of response categories (Mehta &

Patel, 2011). This condition is relevant to the data in this study, given that the research instrument used a five-category Likert scale, which naturally produces many identical response values among respondents. Therefore, this study employed the Monte Carlo approach as the basis for decision-making, which produced a Sig. value of 0.121 (> 0.05), confirming that the residual data were normally distributed.

Multicollinearity Test

Table 6. Multicollinearity Test Results

Model	Coefficients ^a						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	3,202	2,659		1,204	0,231		
X1	0,354	0,129	0,280	2,738	0,007	0,383	2,611
X2	0,520	0,109	0,489	4,784	0,000	0,383	2,611

As shown in Table 6, both independent variables produced a Tolerance value of 0.383 and a VIF value of 2.611, well within the acceptable thresholds (Tolerance > 0.10; VIF < 10.00), indicating no multicollinearity between Store Atmosphere and Visual Merchandising, despite both variables conceptually representing physical elements of the store environment that frequently co-occur in consumers' shopping experience.

Heteroscedasticity Test

Table 7. Heteroscedasticity Test Results (Glejser Test)

Model	Coefficients ^a			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
1 (Constant)	6,591	1,681		3,921	0,000
X1	-0,037	0,082	-0,066	-0,456	0,649
X2	-0,081	0,069	-0,171	-1,177	0,241

The heteroscedasticity test using the Glejser test produced significance values of 0.649 for Store Atmosphere and 0.241 for Visual Merchandising, both above 0.05, confirming the absence of heteroscedasticity in the regression model. This indicates that the error variance in the model was constant and not influenced by the level of respondents' assessment of either independent variable, so the regression model is appropriate for use with a diverse group of respondents.

Multiple Linear Regression Results

Table 8. Multiple Linear Regression Results

Model	Coefficients ^a			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
1 (Constant)	3,202	2,659		1,204	0,231
X1	0,354	0,129	0,280	2,738	0,007
X2	0,520	0,109	0,489	4,784	0,000

Based on Table 8, the multiple linear regression equation obtained is: $Y = 3.202 + 0.354X_1 + 0.520X_2 + e$. The constant value of 3.202 indicates that when Store

Atmosphere and Visual Merchandising are held at zero, Impulse Buying remains at 3.202, reflecting a baseline tendency toward unplanned purchasing driven by factors outside the research model. The regression coefficient of 0.354 for Store Atmosphere indicates that every one-unit increase in consumers' perception of store atmosphere increases Impulse Buying by 0.354, assuming Visual Merchandising remains constant. Similarly, the regression coefficient of 0.520 for Visual Merchandising indicates that every one-unit increase in consumers' perception of visual merchandising increases Impulse Buying by 0.520, assuming Store Atmosphere remains constant.

Hypothesis Testing

t-Test (Partial Test)

Table 9. t-Test (Partial Test) Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,202	2,659		1,204	0,231
	X1	0,354	0,129	0,280	2,738	0,007
	X2	0,520	0,109	0,489	4,784	0,000

Based on Table 9, the t-test results show that Store Atmosphere (X1) has a calculated t-value of 2.738, which is greater than the t-table value of 1.980, with a significance value of 0.007 (< 0.05). This indicates that Store Atmosphere has a positive and significant effect on Impulse Buying, thus H1 is accepted. Visual Merchandising (X2) has a calculated t-value of 4.784, which is greater than the t-table value of 1.980, with a significance value of 0.000 (< 0.05). This indicates that Visual Merchandising has a positive and significant effect on Impulse Buying, thus H2 is accepted. The multiple linear regression equation obtained is: $Y = 3.202 + 0.354X1 + 0.520X2 + e$.

F-Test (Simultaneous Test)

Table 10. F-Test Results (ANOVA)

		ANOVA ^a				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1819,810	2	909,905	66,532	.000 ^b
	Residual	1600,115	117	13,676		
	Total	3419,925	119			

As shown in Table 10, the F-test produced an F-value of 66.532 with a significance value of 0.000. Since the significance value (0.000) is less than 0.05, it can be concluded that the regression model in this study is appropriate, and Store Atmosphere (X1) and Visual Merchandising (X2) simultaneously have a significant effect on Impulse Buying (Y). This result confirms that H3, which states that Store Atmosphere and Visual Merchandising simultaneously have a significant effect on Impulse Buying, is accepted.

Coefficient of Determination

Table 11. Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729 ^a	0,532	0,524	3,69813

As shown in Table 11, the Adjusted R Square value of 0.524 indicates that Store Atmosphere and Visual Merchandising jointly explain 52.4% of the variation in Impulse Buying, while the remaining 47.6% is explained by other factors outside this research model.

DISCUSSION

The Influence of Store Atmosphere on Impulse Buying

The results indicate that Store Atmosphere has a positive and significant effect on Impulse Buying among Alfamart consumers in Cirebon Regency (Table 9), so H1 is accepted. Within the Stimulus-Response theoretical framework, store comfort, such as well-organized shelf layouts and clear lighting, serves as a stimulus that shapes a response in the form of a desire to linger longer in the store, thereby increasing the likelihood that consumers will discover products outside their original shopping plans. This finding is consistent with (Arianty et al., 2024) and (Purwati & Fauziah, 2025), who found that store atmosphere significantly encourages unplanned purchasing behavior among retail consumers.

Furthermore, (Trivedi & Joshi, 2025) revealed that store atmosphere elements such as ambiance and store design are significant drivers of impulse buying behavior in retail settings. Furthermore, research by (Novita, 2024) showed that consumers who feel comfortable in a store environment tend to spend more time browsing, which increases their exposure to products they had not originally intended to purchase. This extended browsing time makes consumers more susceptible to spontaneous purchasing decisions.

From a managerial perspective, the significant effect of Store Atmosphere can be translated into two concrete interventions. The first concerns lighting layout. Evidence suggests that lighting works in combination with other cues rather than alone: in fast-fashion retail, light intensity influenced purchase intention only alongside arrangement clarity, tonal harmony, and window appeal (Morgan, 2015). Brighter is therefore not automatically better. Alfamart stores should maintain even ambient lighting along the main aisle toward the checkout, replace dim or flickering fixtures, use accent lighting on promotional gondola ends and impulse-product zones, and avoid glare on glossy packaging. Entrance and exterior lighting should also remain bright to support the Outside indicator. The second concerns aisle spacing between shelves. Merchandise layout was a significant driver of customer satisfaction in both hedonic and utilitarian shopping, whereas store crowding was not significant (Calvo-Porrall & Lévy-Mangin, 2021). Layout legibility therefore matters more than empty space alone, and high arrangement clarity paired with low display density has been associated with stronger purchase intention (Zhang & Huang, 2024). Accordingly, aisles should be kept clear of stacked cartons and temporary promotional pallets, restocking should be limited during peak hours, and shelf height and spacing should allow shoppers to browse and pass one another comfortably, so that the cramped shelf spacing noted in the Introduction does not shorten browsing time. Because this study did not directly measure lighting intensity or aisle width, these recommendations are practical implications derived from the General Interior and Store Layout indicators and the cited evidence, and should be tested with field measurements in future research.

The Influence of Visual Merchandising on Impulse Buying

Based on the data processing results, it was found that Visual Merchandising has a positive and significant effect on Impulse Buying among Alfamart consumers in

Cirebon Regency, with a coefficient value of 0.520, a t-statistic of $4.784 > 1.980$, and a significance value of $0.000 < 0.05$. The Beta coefficient of Visual Merchandising (0.489) was greater than that of Store Atmosphere (0.280), indicating that visual merchandising has a stronger influence on spontaneous purchasing than the store's general atmosphere.

Research by (Srinivasan, 2025) indicates that visual merchandising, particularly product arrangement and promotional signage, plays a significant role in encouraging impulse purchases. Through prominent product arrangement, clearly visible price labels, and display placement at strategic points such as the checkout area, visual merchandising functions as a visual stimulus that consumers respond to more quickly than general store ambiance. Similarly, (Aires et al., 2024) found that in-store promotions and store ambiance increased impulse buying among Generation Z shoppers in supermarkets, which supports the role of visual cues at the point of display. Furthermore, research by (Ramaiska et al., 2020) confirmed that well-designed product displays can evoke positive consumer emotions, which subsequently drive unplanned purchasing decisions.

Based on these findings, strengthening strategic and consistent visual merchandising must be a priority for Alfamart management in today's competitive retail era, particularly by optimizing checkout-point displays given their direct link to the moment of purchase decision.

The Simultaneous Influence of Store Atmosphere and Visual Merchandising on Impulse Buying

Based on the data analysis, Store Atmosphere and Visual Merchandising simultaneously play a significant role in influencing Impulse Buying among Alfamart consumers in Cirebon Regency, with an F-statistic of $66.532 > 3.07$ and a significance value of $0.000 < 0.05$. These findings indicate that Store Atmosphere and Visual Merchandising work together within the Stimulus-Response framework, with Store Atmosphere shaping consumers' overall psychological comfort and Visual Merchandising directing their attention toward specific products.

(Tampi, 2025) demonstrated that the simultaneous influence of store atmosphere and visual merchandising on impulse buying can vary across different retail formats. Their study, conducted on KKV store consumers, found that while visual merchandising did not have a significant partial effect, both variables remained significant when tested simultaneously, highlighting that the strength of influence of these two variables is contextual, depending on the type of retail, product variety, and consumer segment being studied.

The Adjusted R Square value of 0.524 indicates that Store Atmosphere and Visual Merchandising jointly explain 52.4% of the variation in Impulse Buying, while the remaining 47.6% is explained by other factors outside this research model, such as situational promotions and discounts (Fitriana & Usman, 2024), hedonic shopping motivation (Mamuaya, 2018), and consumers' emotional conditions while shopping (Lee et al., 2023). The managerial implications of these findings emphasize that Alfamart management must integrate store atmosphere and visual merchandising strategies rather than treating them as separate initiatives, with store layout and ambiance improvements going hand in hand with strategic display placement, particularly at high-traffic points such as the checkout area.

CONCLUSION

This study examined the effect of Store Atmosphere and Visual Merchandising on impulse buying among minimarket consumers in Cirebon Regency through a direct Stimulus-Response perspective. The findings show that both Store Atmosphere and Visual Merchandising have a positive and significant partial effect on impulse buying, and that together they significantly explain impulse buying, with the two variables accounting for a little over half of its variation. Visual Merchandising exerts a stronger influence than Store Atmosphere, indicating that visual cues at the point of display are responded to more quickly than the general ambience of the store. These results support the view that physical in-store stimuli can directly trigger unplanned purchasing responses in the convenience retail context, even without modeling internal emotional states.

Managerial Implications

Retail management should integrate store layout and visual merchandising into a unified operational strategy rather than treating them as separate initiatives. Priority should be given to high-contrast promotional displays and impulse items at strategic high-traffic points, particularly the checkout counter area, supported by even lighting and uncluttered aisles that make products easier to notice and reach.

Limitations and Future Research

This research is geographically limited to minimarket consumers in Cirebon Regency, which restricts generalizability to larger retail formats or other regions. Future studies are encouraged to integrate psychological mediators, such as consumer emotions, shopping enjoyment, or perceived value, within a Stimulus-Organism-Response framework to capture internal decision-making processes more fully.

Statement on the Use of Artificial Intelligence.

AI was used in the preparation of this manuscript. The authors used artificial intelligence tools solely to assist with language improvement, grammar checking, and editing for clarity and readability during the revision process. The authors remain fully responsible for the accuracy, originality, integrity, and academic content of the manuscript. All AI-assisted content was reviewed and verified by the authors before submission.

Conflicts of interest

The authors declare no conflict of interest.

Author contributions

Conceptualization, A.N., S., and F.F.; methodology, A.N., S., and F.F.; data collection, A.N.; data validation, A.N., S., and F.F.; formal analysis, A.N.; writing-original draft preparation, A.N.; writing-review and editing, A.N., S., and F.F.; supervision, S. and F.F. All authors have read and approved the final version of the manuscript.

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