



The Effect of Product Quality, Layout, Service Quality, and Store Atmosphere on Customer Word of Mouth at Kalagyan Coffee

Rivan Dwiputra Lahendra

Universitas Sebelas Maret, Surakarta, Central Java, Indonesia

Subroto Rapih

Universitas Sebelas Maret, Surakarta, Central Java, Indonesia

ABSTRACT

Objective – To examine the partial and simultaneous effects of product quality, layout, service quality, and store atmosphere on customer word of mouth (WOM) at Kalagyan Coffee in Surakarta, Central Java, Indonesia.

Methodology – This study used a quantitative explanatory design with a cross-sectional survey. Data were collected from 100 customers selected by purposive sampling, using a closed-ended questionnaire measured on a four-point Likert scale. The data were analyzed with multiple linear regression in SPSS, using partial t-tests, a simultaneous F-test, the coefficient of determination (R^2), and relative contribution analysis.

Findings – Layout, service quality, and store atmosphere each have a significant positive partial effect on WOM, whereas product quality has no significant effect. Together, the four variables significantly influence WOM and explain 36.6% of its variance. Service quality makes the largest relative contribution (47%), followed by store atmosphere (30%), layout (19%), and product quality (4%).

Novelty – Prior servicescape studies have mostly examined restaurants and used satisfaction, loyalty, or revisit intention as outcomes. This study tests product, layout, service, and atmosphere together as predictors of WOM in a local Indonesian coffee shop. The results suggest that service and environmental elements matter more than the product itself for customer recommendations.

Keywords: *layout, product quality, quantitative survey, service quality, store atmosphere, word of mouth*

JEL Classification: M31, M30, L81

Article Info: Received 19 Aug 2026; Revised 30 Aug 2026; Accepted 6 Oct 2026

Article Correspondence: rivandwiputal@gmail.com

Recommended Citation: Lahendra, R. D., & Rapih, S. (2026). The Effect of Product Quality, Layout, Service Quality, and Store Atmosphere on Customer Word of Mouth at Kalagyan Coffee. *Journal of Business, Management, and Social Studies*, 6(3), 112–118. DOI: <https://doi.org/10.53748/jbms.v6i3.193>



I. INTRODUCTION

The development of modern lifestyle has placed coffee-drinking activities not merely as the fulfillment of physiological needs, but as part of a lifestyle and a means of social interaction. Coffee shops function as spaces of consumption, connection, and community, where people gather for social encounters beyond the purchase of a beverage (Ferreira et al., 2021). This phenomenon has triggered the expansion of the food and beverage sector, particularly coffee shops (cafes), which are proliferating across major cities in Indonesia. Business competition in this sector has become extremely fierce, with coffee businesses competing to attract and retain customers, and customer experience has become a central basis of that competition (Rancati et al., 2024). Today, rapid business growth and development necessitate enterprises to compete effectively during the commercialization of their products or services. The abundance of cafes featuring similar concepts obliges cafe owners to establish specific differentiations that better reflect target market preferences in order to survive and remain attractive to consumers. One key indicator of a cafe's success is the ability to attract new customers and also to encourage them to share positive recommendations about the cafe with others, since satisfying experiences with the dining environment are linked to customers' word-of-mouth behavior (To & Leung, 2023).

One of the most effective and credible forms of marketing communication is word of mouth (WOM). In the restaurant and cafe literature, WOM is treated as a behavioral outcome of customers' experience with the service environment and the quality of what they consume. Recent evidence shows that the physical and social servicescape favorably shape customer affection, which in turn drives WOM and revisit intentions (Ali et al., 2024). The overall servicescape has also been found to directly influence electronic WOM, partly through customer satisfaction (Ali et al., 2021). Likewise, the dining environment affects both customer satisfaction and WOM (To & Leung, 2023). In other words, the cafe's physical and service mix, such as product quality, layout, service quality, and store atmosphere, is a strategic lever for stimulating organic recommendations.

However, the existing studies have mostly been conducted in full-service restaurant settings and have examined servicescape as a composite construct, with satisfaction, loyalty, or revisit intention often serving as the main outcome (Ali et al., 2021; Ali et al., 2024; To & Leung, 2023). Evidence that tests product quality, layout, service quality, and store atmosphere simultaneously as predictors of WOM in a local Indonesian coffee shop remains limited. This is the research gap addressed here.

The gap is visible in practice at Kalagyan Coffee, which shows low recommendation activity and stagnant social media interaction despite operating in a highly competitive market. This calls for an in-depth evaluation of the components that form the cafe's physical and service mix. Accordingly, this study aims to analyze the effect of product quality, layout, service quality, and store atmosphere on customer word of mouth at Kalagyan Coffee, both partially and simultaneously. Theoretically, the study broadens the conceptual scope of culinary retail marketing management, and practically it serves as an evaluation reference for cafe managers in stimulating organic marketing.

II. LITERATURE REVIEW

The literature review in this study provides conceptual boundaries for each research variable. Word of mouth is understood as direct interpersonal interactions between buyer that spreads recommendations or experiences regarding product or service usage. Product quality is a consumer's evaluation of the excellence or uniqueness of a product, indicating its ability to satisfy or exceed consumer expectations. The layout



variable is defined as the physical arrangement of space and interior elements designed to enhance customer comfort, operational efficiency, and overall positive experience. Service quality is defined as ongoing endeavors to align operational offerings with customer demands and preferences, alongside the precision of delivery to match customer expectations. Lastly, store atmosphere refers to the creation of an ambient environment through visual elements, lighting, music, and scent that stimulate consumer perception and emotion.

Word of Mouth (WOM)

In the restaurant and cafe literature, WOM is commonly treated as a behavioral outcome, together with revisit intention, of customers' experience with a service setting. Studies of full-service restaurants show that the servicescape (the physical and social environment of the service) drives customer affection, which in turn shapes WOM and revisit intentions (Ali et al., 2024). The servicescape also directly influences electronic WOM, partly through customer satisfaction (Ali et al., 2021). Similarly, the dining environment affects both satisfaction and WOM (To & Leung, 2023). WOM intention is therefore the dependent variable of this study, and the cafe's product and servicescape elements are its antecedents.

Product Quality

Product quality, here the quality of the coffee, beverages, and food, is a core part of what a customer evaluates. In a restaurant model combining six service-quality dimensions, food quality sits alongside employee service, timeliness, aesthetics, facility comfort, and cleanliness, and the overall model explains customers' behavioral intentions (Tuncer et al., 2021). High product quality is therefore expected to increase customers' willingness to recommend the cafe.

Layout

Layout refers to the arrangement of furniture, seating, and space in the cafe. It is generally treated as part of the physical servicescape. Customers' experience of the physical servicescape has been shown to foster favorable affective responses that lead to WOM (Ali et al., 2024). A comfortable, well-organized layout is therefore expected to support recommendation behavior.

Service Quality

Service quality reflects how staff deliver the service, including responsiveness and timeliness. Service quality has a positive effect on customer satisfaction, and satisfaction and perceived value in turn influence behavioral intentions (Tuncer et al., 2021). The employee (social) servicescape has also been found to favorably affect customer affection, which leads to WOM (Ali et al., 2024).

Store Atmosphere

Store atmosphere covers the sensory and ambient impression of the cafe, such as design, lighting, music, and comfort. Coffee shops are valued as social spaces, not only as places to buy a drink (Ferreira et al., 2021), and customer experience is central to how coffee stores compete (Rancati et al., 2024). The dining environment, which is the closest equivalent to store atmosphere in the verified literature, influences satisfaction and WOM (To & Leung, 2023). A favorable atmosphere is therefore expected to increase customers' intention to recommend the cafe.



Hypotheses

Based on the discussion, the study proposes the following hypotheses:

H1: Product quality has a positive and significant effect on WOM intention.

H2: Layout has a positive and significant effect on WOM intention.

H3: Service quality has a positive and significant effect on WOM intention.

H4: Store atmosphere has a positive and significant effect on WOM intention.

H5: Product quality, layout, service quality, and store atmosphere simultaneously have a significant effect on WOM intention.

III. METHODOLOGY

This study used a quantitative explanatory (associative) design with a cross-sectional survey to test the effect of Product Quality (X1), Layout (X2), Service Quality (X3), and Store Atmosphere (X4) on Word of Mouth (Y). The research was conducted at Kalagyan Coffee, Jalan Slamet Riyadi No. 11, Kauman, Pasar Kliwon District, Surakarta City, Central Java, Indonesia, from September 2025 to April 2026.

The population consisted of all customers who had visited Kalagyan Coffee, and its exact size was unknown. The minimum sample size was determined with an a priori sample size calculator using five variables and 22 indicators, which gave a minimum of 88 respondents. The final sample was 100 respondents, selected by non-probability purposive sampling. The inclusion criteria were: (1) having visited Kalagyan Coffee at least twice in the past year, (2) being at least 17 years old, and (3) being willing to complete the questionnaire. All respondents participated voluntarily and gave informed consent.

Primary data were collected through a structured, closed-ended questionnaire. Items were developed from established indicators for each variable (Table 4) and measured on a four-point Likert scale (Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1). The scale has no neutral option, so respondents had to state a position. Each variable's score is the sum of its item scores. Instrument validity was tested with Pearson's product-moment correlation (an item is valid if r -count exceeds r -table at $\alpha = 0.05$), and reliability with Cronbach's alpha (reliable if $\alpha > 0.60$).

Data were analyzed with SPSS using multiple linear regression: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$. Before the regression, the classical assumptions were tested: normality of residuals (One-Sample Kolmogorov-Smirnov test), multicollinearity (Tolerance > 0.10 and VIF < 10), and heteroscedasticity (Glejser test and scatterplot). Hypotheses were then tested at $\alpha = 0.05$ using the partial t-test (H1–H4), with a critical value of 1.985 ($df = 95$), and the simultaneous F-test (H5), with a critical value of 2.47. The coefficient of determination (R^2) measured the joint explanatory power. The contribution of each variable was calculated as Effective Contribution ($EC = \text{standardized beta} \times \text{zero-order correlation} \times 100\%$) and Relative Contribution ($RC = EC \div R^2 \times 100\%$).

IV. RESULTS AND DISCUSSION

Results

Descriptive analysis of the 100 respondents produced mean scores of 35.33 for Product Quality, 28.03 for Layout, 35.58 for Service Quality, 35.39 for Store Atmosphere, and 31.56 for Word of Mouth. The residuals were normally distributed (Kolmogorov-Smirnov statistic = 0.054, Asymp. Sig. = 0.200). The model showed no multicollinearity (all Tolerance values > 0.10 ; VIF: Product Quality 1.518, Layout 1.138, Service Quality 1.766, Store Atmosphere 1.415) and no heteroscedasticity (Glejser significance for all



predictors > 0.05, with randomly scattered residuals in the scatterplot). The classical assumptions were therefore met.

The regression equation is $Y = 8.934 + 0.037X_1 + 0.222X_2 + 0.221X_3 + 0.204X_4$ (Table 1). With a critical t-value of 1.985 ($df = 95$, $\alpha = 0.05$), Layout ($t = 2.138$, $p = 0.035$), Service Quality ($t = 2.994$, $p = 0.004$), and Store Atmosphere ($t = 2.448$, $p = 0.016$) each have a significant positive partial effect on Word of Mouth. Product Quality does not ($t = 0.365$, $p = 0.716$). The simultaneous test gave $F = 13.736$ ($p < 0.001$), above the critical value of 2.47, and $R^2 = 0.366$, so the four predictors jointly explain 36.6% of the variance in Word of Mouth. The remaining 63.4% is explained by factors outside the model.

Table 1. Multiple Linear Regression Test Results

Model	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t	Sig.
1 (Constant)	8.934	-	2.360	-
Product Quality	0.037	0.037	0.365	0.716
Layout	0.222	0.190	2.138	0.035
Service Quality	0.221	0.325	2.994	0.004
Store Atmosphere	0.204	0.238	2.448	0.016

Service Quality has the largest share of the explained variance ($EC = 17.16\%$, $RC = 47\%$), followed by Store Atmosphere (11.19% , 30%), Layout (6.99% , 19%), and Product Quality (1.32% , 4%) (Table 2).

Table 2. Calculation Results of Effective Contribution (EC) and Relative Contribution (RC)

Variable	Effective Contribution (EC)	Relative Contribution (RC)
Product Quality (X1)	1.32%	4%
Layout (X2)	6.99%	19%
Service Quality (X3)	17.16%	47%
Store Atmosphere (X4)	11.19%	30%
Total	36.66%	100%

Discussions

H1: Product quality. Product quality did not significantly affect WOM. Its mean score (35.33) is close to those of Service Quality (35.58) and Store Atmosphere (35.39), so customers appear to rate the product favorably, yet this rating does not distinguish those who are willing to recommend the cafe from those who are not. This pattern is consistent with product quality acting as a baseline (hygiene) expectation that prevents dissatisfaction but does not by itself motivate recommendations (Herzberg et al., 1959). The result differs from Tuncer et al. (2021), who studied a restaurant model in which food quality was one of six quality dimensions and the outcome was behavioral intention. Differences in setting and in the outcome construct may explain the divergence. The hygiene interpretation and the low variability of product ratings were not tested here, so both remain explanations to be examined in future research.

H2: Layout. Layout had a positive effect on WOM, although its coefficient ($\beta = 0.190$) was the smallest of the three significant predictors. This agrees with evidence that the physical servicescape fosters favorable customer responses that lead to WOM (Ali et al., 2024) and with the recognition of spatial layout as a dimension of the restaurant physical environment (Han & Ryu, 2009; Bitner, 1992). A comfortable arrangement of seating and space appears to make the visit more pleasant, which supports recommendation behavior.



H3: Service quality. Service quality was the strongest predictor ($\beta = 0.325$; $RC = 47\%$). This is consistent with findings that employee-related servicescape elements affect customer affection, which leads to WOM (Ali et al., 2024), and that service quality raises satisfaction, which in turn shapes behavioral intentions (Tuncer et al., 2021). Frontline staff are the direct human touchpoint of a cafe, so friendly and responsive service is likely to give customers something worth telling others. Customer affect and satisfaction were not measured in this study, so this mechanism is an interpretation rather than a tested path.

H4: Store atmosphere. Store atmosphere had a positive effect on WOM ($\beta = 0.238$; $RC = 30\%$), in line with evidence that the dining environment influences satisfaction and WOM (To & Leung, 2023; Ali et al., 2021). It is also consistent with the view that environmental cues shape customers' emotional responses (Mehrabian & Russell, 1974) and with the observation that coffee shops are valued as social spaces and compete on customer experience (Ferreira et al., 2021; Rancati et al., 2024).

H5: Simultaneous effect. The four variables jointly influence WOM ($F = 13.736$; $p < 0.001$) and explain 36.6% of its variance, which is a moderate level. Service quality and store atmosphere together account for 77% of the explained variance, so the experiential and environmental elements of the cafe matter more for recommendations than the product itself. Variables such as price perception, satisfaction, and e-WOM channels, which could explain part of the remaining 63.4%, are left for future research.

Table 3. Hypothesis Testing Summary

Hypothesis	Statistic	Decision
H1: Product Quality $\rightarrow$ WOM	$t = 0.365$; $p = 0.716$	Not supported
H2: Layout $\rightarrow$ WOM	$t = 2.138$; $p = 0.035$	Supported
H3: Service Quality $\rightarrow$ WOM	$t = 2.994$; $p = 0.004$	Supported
H4: Store Atmosphere $\rightarrow$ WOM	$t = 2.448$; $p = 0.016$	Supported
H5: H1–H4 simultaneously $\rightarrow$ WOM	$F = 13.736$; $p < 0.001$; $R^2 = 0.366$	Supported

Table 3 summarizes the hypothesis tests. Four of the five hypotheses are supported. Layout (H2: $t = 2.138$, $p = 0.035$), Service Quality (H3: $t = 2.994$, $p = 0.004$), and Store Atmosphere (H4: $t = 2.448$, $p = 0.016$) each have a significant positive partial effect on WOM, because their t -values exceed the critical value of 1.985 and their significance values are below 0.05. Product Quality (H1) does not, so H1 is not supported ($t = 0.365$, $p = 0.716$). The four variables together significantly influence WOM (H5: $F = 13.736$, $p < 0.001$; $R^2 = 0.366$), so H5 is supported.

V. CONCLUSION

This study examined the effect of product quality, layout, service quality, and store atmosphere on customer word of mouth (WOM) at Kalagyan Coffee. Partially, layout, service quality, and store atmosphere have a significant positive effect on WOM, whereas product quality has no significant effect. Simultaneously, the four variables significantly influence WOM and explain 36.6% of its variance. Service quality makes the largest contribution ($RC = 47\%$), followed by store atmosphere (30%), layout (19%), and product quality (4%). These results support H2, H3, H4, and H5, and do not support H1. The findings suggest that, at Kalagyan Coffee, customers' willingness to recommend the cafe is shaped more by how they are served and by the setting of the visit than by the product itself.

For cafe managers, the results point to three priorities. First, invest in service excellence through continuous staff hospitality training, since service quality is the strongest predictor of WOM. Second, keep



the visual and sensory atmosphere attractive by updating it periodically. Third, maintain a flexible seating layout to avoid congestion at peak hours. Product quality should still be maintained at a consistently good level, because its non-significant effect does not mean it is unimportant. It may simply function as a baseline expectation, which this study did not test.

This study has limitations. It covers a single cafe, uses purposive sampling and a cross-sectional survey, and explains only 36.6% of the variance in WOM, so the results should not be generalized to other cafes and describe associations rather than causal effects. Future research is encouraged to sample several cafes or cities, to include other variables such as customer satisfaction, price perception, and electronic word of mouth (e-WOM), and to test directly why product quality does not drive recommendations, for example through customers' visit motivations or through a qualitative approach.

REFERENCES

- Ali, M. A., Ting, D. H., Abbasi, A. Z., & Waheed, A. (2024). Physical and social servicescape: Impact on customer affection and behavior at full-service restaurants. *Journal of Quality Assurance in Hospitality & Tourism*, 27(6). <https://doi.org/10.1080/1528008X.2024.2397408>
- Ali, M. A., Ting, D. H., Salim, L., & Ahmad-Ur-Rehman, M. (2021). Influence of servicescape on behavioural intentions through mediation and moderation effects: A study on Malaysia's full-service restaurants. *Cogent Business & Management*, 8(1). <https://doi.org/10.1080/23311975.2021.1924923>
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57–71. <https://doi.org/10.1177/002224299205600205>
- Ferreira, J., Ferreira, C., & Bos, E. (2021). Spaces of consumption, connection, and community: Exploring the role of the coffee shop in urban lives. *Geoforum*, 119, 21–29. <https://doi.org/10.1016/j.geoforum.2020.12.024>
- Han, H., & Ryu, K. (2009). The roles of the physical environment in restaurants. *Journal of Hospitality & Tourism Research*, 33(4), 487–510. <https://doi.org/10.1177/1096348009344212>
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). John Wiley & Sons.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.
- Rancati, G., Nguyen, T. T. T., Fowler, D., Mauri, M., & Schultz, C. D. (2024). Customer experience in coffee stores: A multidisciplinary neuromarketing approach. *Journal of Consumer Behaviour*, 23(1), 243–259. <https://doi.org/10.1002/cb.2184>
- To, W. M., & Leung, V. W. S. (2023). The effects of diningscape on customer satisfaction and word of mouth. *British Food Journal*, 125(9), 3334–3350. <https://doi.org/10.1108/BFJ-11-2022-0985>
- Tuncer, İ., Unusan, C., & Cobanoglu, C. (2021). Service quality, perceived value and customer satisfaction on behavioral intention in restaurants: An integrated structural model. *Journal of Quality Assurance in Hospitality & Tourism*, 22(4), 447–475. <https://doi.org/10.1080/1528008X.2020.1802390>