Impact of operational activities on customer satisfaction in cafes and restaurants: A mediating role of infrastructural elements

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IMPACT OF OPERATIONAL ACTIVITIES ON CUSTOMER SATISFACTION IN CAFES AND RESTAURANTS: A MEDIATING ROLE OF INFRASTRUCTURAL ELEMENTS

Abstract

After restrictions on community activities caused by the COVID-19 pandemic were lifted, numerous businesses, including restaurants and cafes, have already resumed normal operations. Competition is also unavoidable. Thus, companies should motivate their managers to develop various operational strategies to increase customer satisfaction. This study aims to analyze the relationship between customer satisfaction and operational management activities, including layout, decoration, location, and cleanliness. In addition, it examines human resource management, food quality, and atmosphere as mediating variables. Data were obtained using an online questionnaire conducted between June and December 2021. A total of 1,068 clients of cafes and restaurants were selected as the participants using purposive random sampling. Data were evaluated using variance-based structural equation modeling. The results showed that operational management activities promote cafes and restaurants (p-value = 0.000). Furthermore, this study indicates the role of infrastructure elements, specifically human resource management, atmosphere, and food quality, as moderating variables on customer satisfaction (p-value = 0.000). Overall, the findings of this empirical study provide a theoretical contribution by emphasizing cafe and restaurant operational strategies that enhance customer satisfaction.

Keywords satisfaction, hospitality, operations, strategy, customer, service

JEL Classification M10, L21, M30

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INTRODUCTION

After the COVID-19 pandemic-imposed restrictions on community activities, the number of cafe and restaurant patrons increased significantly. As a result, the food industry is becoming increasingly popular. This is evidenced by the growing number of new cafes and restaurants. Some are even championed by celebrities. Meanwhile, existing cafes and restaurants are expanding their operations in various locations. Not only are physical stores expanding, but online stores selling food and beverages are also becoming more common. The performance of the food and beverage industry (including cafes and restaurants) grew by 4.41 percent in the second quarter of 2022. This positive growth continued in 2021, although the performance in 2020 fell quite deep due to the policy of restrictions on community activities to prevent the spread of COVID-19 (BPS, 2022).

Managers must think more creatively to have the right strategy for meeting sales volume targets and customer satisfaction. The intense competition between cafe and restaurant businesses necessitates those

managers to make managerial decisions to determine the optimal strategy for the future development of the company's competitive advantage. The operational strategy in terms of management activities such as layout, decoration, location, and cleanliness is one of the strategies available to managers. These industries increase by 15 to 20% yearly, amounting to over 10,000 (APKRINDO, 2022). Lestari et al. (2021) and Riadi et al. (2022) indicated that COVID-19 reduces the income of small businesses in society. This causes entrepreneurs to implement a professional management strategy for cafes and restaurants to increase customer satisfaction.

Moreover, due to the intensifying competition in every industry, businesses must have a plan for executing their operational activities. The operational strategy is a business strategy for achieving company objectives. According to Torlak et al. (2019), this strategy consists of structural and infrastructure elements of management strategies. Infrastructure comprises human resource management, food quality, and atmosphere, while structure consists of layout, decoration, location, and cleanliness. The infrastructure element promotes customer satisfaction in the industry using operational activities. Therefore, structural and infrastructure elements of operations management strategies need to investigate the relationship with customer satisfaction, particularly in cafes and restaurants.

1. LITERATURE REVIEW AND HYPOTHESES

Every year, industries become sophisticated and customer-focused because their products and services always experience intense competition. According to Martinaityte et al. (2019), customer satisfaction is a key differentiator that leads to a competitive advantage in society. Understanding consumers' requirements became the first step in increasing their loyalty, retention, and long-term relationships with the industry (Wang et al., 2014). An improper understanding of these needs tends to reduce customers due to the perception that they are dissatisfied (Cheng et al., 2019). Mittal (2016) emphasized that dissatisfied consumers tend to become sever ties with the industry.

Consequently, customer satisfaction levels are used as a metric to evaluate the overall quality of a business sector. According to Nguyen et al. (2018), customer satisfaction has become essential and needs to be considered, specifically in the cafe industry. This is because consumers' feelings and pleasure promote them to recommend good restaurants to others. The result showed that positive evaluation generates customer loyalty to the industry during service usage.

Operations management helps with resource organization and productivity, but it may also be a source of long-term competitive advantage; thus, it must be incorporated into firms' strategic processes. Operations strategy is defined by Hayes and Wheelwright (1984) as a continuous pattern of decision-making concerning operational functioning that is connected to the company strategy. Several studies have investigated the role of the operations function in gaining a competitive advantage (Prajogo & Goh, 2007; Kim & Lee, 1993; Ritchie & Riley, 2004; Williams et al., 1995). The use of an operational strategy is critical in long-term organizational planning because it provides cost advantages, differentiation, and responsiveness (Heizer et al., 2017).

Kumar et al. (2011) emphasized that this professional management activity promotes customer satisfaction (STS). Therefore, strategic decision-making must be divided into infrastructural and structural elements (Torlak et al., 2019). The infrastructural element includes human resource management (HRM), food quality (FOQ), and atmosphere (ATM), while the structural element consists of layout (LAY), decoration (DEO), location (LOC), and cleanliness (CLE). Li et al. (2002) state that the structural element is a long-term facility and service option activity. Fan et al. (2017) explained that structural decisions involve allocating physical and tangible resources that provide maximum convenience in service delivery. This type of decision is dependent because it assists managers in adapting to the demands of various operational activities (Li et al., 2002; Roth & Van Dierdonck, 1995).

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1.1. Structural elements

Operational management is crucial because it manages all aspects of the company's operations, including cafe and restaurant entrepreneurs. Operational management is optimizing the utilization of existing resources in a transformation process such that the resulting outputs provide greater value than before. The effect of structural and infrastructural operational strategy decisions on organizational performance in the manufacturing industry has been investigated (Espino-Rodriguez & Gil-Padilla, 2015). According to Jones and Lockwood (1998), structural and infrastructural considerations are just as significant in the hospitality business as in any other industry. Therefore, they should be the subject of equal attention. Significant expenditure is required for structural choices, which have long-term effects. In cafes and restaurants, structural elements of operations management techniques apply to layout, decorating, location, and cleanliness.

The layout is one of the structural elements of operations management strategies. A good layout is a well-designed workplace that provides appropriate services (Ivanov et al., 2021). Therefore, the organizational layout becomes a critical and strategic decision area because it affects the long-term efficiency of operational activities. According to Heizer and Render (2011), an "effective" layout promotes employee performance by assisting industries in achieving differentiation strategies. In addition, Zerella et al. (2017) emphasized that a well-organized layout promotes employee performance and satisfaction in the workplace. Pullman and Rodgers (2010) showed a link between strategic physical capacity and human resource management (HRM).

Meanwhile, Torlak et al. (2019) explained that a good layout affects customer ratings in the cafe. An efficient layout is vital because it increases employee productivity and maintains food safety in the kitchen. According to Wanniarachchi et al. (2016), cafes that consider layout crucial from the outset of their planning tend to provide high-quality food. Heung and Gu (2012) indicated that a well-organized layout positively influences the restaurant atmosphere because it fosters an excellent customer dining experience. Furthermore, a good layout affects the cafe area by making it more comfortable and organized for consumers.

Design plays a role in supporting the infrastructure elements of operations management. Designing a restaurant tends to promote customer perceptions of food quality and evaluate positive experiences (Han & Ryu, 2009). A successful design is considered through the color, shape, and architectural aspects of a facility's beauty and comfort (Demir, 2019). However, the customer's perception influences high-quality food that increases their appetite. According to Torlak et al. (2019), restaurant decoration, construction, and operation positively affect food quality. Siu et al. (2012) indicated that the design or decoration positively influences customers while developing their first impression of the cafe atmosphere.

Furthermore, decoration attracts consumers to the physical environment of the industry. It enables customers to consciously and unconsciously evaluate the pleasing appearance of the restaurant as well as the quality of the materials used in construction and artwork. According to Bitner (1990), interior design creates a happy atmosphere because it promotes employee performance. El-Zeiny (2012) and Abouelela (2022) showed a positive relationship between interior decoration and employee performance in the workplace.

The location boosted a company's competitive edge by attracting more consumers and influenced the restaurant selection of customers. Demir (2019) explained that location enables customers to easily reach the cafes with minimal traffic and time consumption. However, consumers tend to feel positive if the restaurant is easily identified. These emotions affect customers' eating habits and perceptions of their food quality (Torlak et al., 2019; Thornton et al., 2016). This is similar to Castro et al. (1990) that location directly affects food quality. According to Torlak et al. (2019), Turley and Milliman (2000), and Bitner (1990), accessibility, transportation, and enjoyment positively affect the restaurant atmosphere because they increase customers' happiness and mood. Meanwhile, location not only attracts consumers but also helps the employees to provide the best service. Wheatley (2021) and Bacolod et al. (2022) indicated that there is a link between workplace location and employee performance.

Hygiene relates to the cleanliness of equipment and utensils, while ambient factors and the practices of the restaurant's food-service staff influence consumers' restaurant selection. The sanitation of the cafe premises, cooking utensils, and toilets are examples of hygiene. Customers classified cleanliness as a source of satisfaction because it ensures they receive high-quality food during production and distribution (Torlak et al., 2019; Walker et al., 2003). Djekic et al. (2014) indicated that there is a link between hygiene and food quality. According to Torlak et al. (2019), maintaining cleanliness ensures the cafe atmosphere appears more comfortable. Furthermore, cleanliness affects employees who provide services to customers. Horrevorts et al. (2018) and van der Voordt (2014) showed a positive relationship between employee perceptions and job satisfaction and productivity.

1.2. Infrastructure elements

Although some service companies pay little attention to infrastructure elements, they have a significant impact on customer satisfaction. Human resource management practices, food quality, and the atmosphere are infrastructure elements of operations management strategies. Human resource management practices, food quality, and the atmosphere in service organizations play an essential role in affecting the industry performance (Torlak et al., 2019; Diaz-Garrido et al., 2007; Krajewski & Ritzman, 2001). This infrastructure element mitigates the influence of operational activities on customer satisfaction.

Subsequently, professional, knowledgeable, well-dressed, friendly, polite, caring, enthusiastic, analytical, and an adequate number of personnel in cafes tend to promote satisfaction and mood. This shows that good human resource management increase employee attitudes and behaviors, as well as customer satisfaction (Yang, 2006; Koys, 2003; Kusluvan et al., 2010; Torlak et al., 2019). Meanwhile, food quality represented by the visual appeal, taste, health, temperature, freshness of food, and good consumer service (Kuo et al., 2018) tends to moderate customers' moods and feelings. This is because it encourages them to return and recommend the cafe to others (Torlak et al., 2019).

According to Ha and Jang (2012), this food aspect is a value proposition influencing satisfaction. Additionally, the atmosphere, as the third infrastructure element, enables visitors to feel comfortable not only with the served food and drinks but also with the music, lighting, color, and appearance of the cafe. Therefore, a good atmosphere unwittingly stimulates customers' emotions (Heung & Gu, 2012; Torlak et al., 2019). This is similar to Sassenberg et al. (2022) that live music, natural environment, and social interaction positively affect consumers' emotions.

1.3. Aim and hypotheses

The purpose of this study is to determine the influence of structural elements of operations management strategies through infrastructure elements of management strategies on customer satisfaction at cafes and restaurants in Indonesia.

Based on this literature review, the conceptual model relating the structural elements of operations management strategies (layout, decoration, location, and cleanliness), infrastructure elements of management strategies (human resource management, food quality, and atmosphere), and customer satisfaction is shown in Figure 1. Therefore, the following hypotheses were developed:

H1: Structural elements positively affect human resource management.

H2: Structural elements positively affect food quality.

H3: Structural elements positively affect atmosphere.

H4: Human resource management positively affects customer satisfaction.

H5: Food quality positively affects customer satisfaction.

H6: Atmosphere positively affects customer satisfaction.

H7: Human resource management mediates the influence of structural elements on customer satisfaction.

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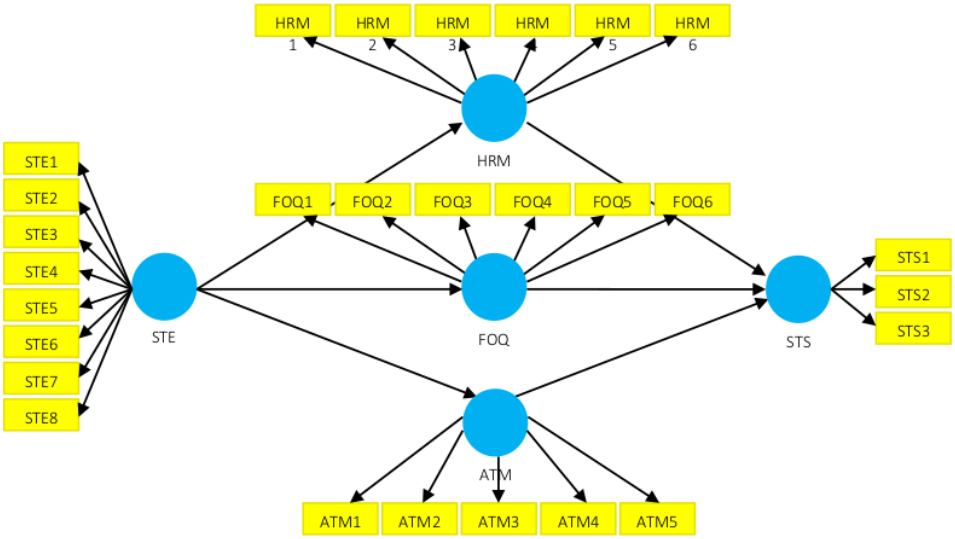

Figure 1. Conceptual framework

H8: Food quality mediates the influence of structural elements on customer satisfaction.

H9: Atmosphere mediates the influence of structural elements on customer satisfaction.

2. METHODOLOGY

This study used the dependent, independent, and mediating variables, including customers satisfaction (STS), structural (STE), and infrastructure elements, respectively. STS is measured using a three-item scale developed by Oliver (2010), Carranza et al. (2018), Liang and Zhang (2012), and Li et al. (2020). However, structural elements consist of four variables, including layout (LAY), decoration (DEO), location (LOC), and cleanliness (CLE). According to Torlak et al. (2019), LAY and LOC were measured using a two-item scale, while DEO and CLE were also measured using a two-item scale. The infrastructural elements as the mediating variable in this study are divided into human resource management (HRM), food quality (FOQ), and atmosphere (ATM). HRM was measured using a six-item scale developed by Torlak et al. (2019), Díaz-Garrido et al. (2007), and Krajewski and Ritzman (2001). In addition, FOQ was measured using a six-item scale to indicate specific visuals, taste, and food health (Kuo et al., 2018; Torlak et al., 2019). Finally, ATM was measured using a four-item scale developed by Heung and Gu (2012) and Torlak et al. (2019). All variables were measured using a 5-point Likert scale, ranging from strongly disagree to strongly agree.

A total of 1,068 consumers were selected in Indonesia between June and December 2021 as the participants using purposive random sampling. In addition, preliminary processing was performed to check if the respondent entries were incorrect or insufficient. Finally, a questionnaire divided into two sections was uploaded and distributed to participants using Google Forms. The first section consists of profile information, including gender, age, income, and occupation, while the second contains all variables' values.

Data were evaluated using a variance-based analysis method using Structure Equation Modeling (SEM), specifically Partial Least Squares (PLS). The PLS is an analytical technique that overcomes restrictions because it does not require a significant number of assumptions during the evaluation and theoretical underpinning (Hair et al., 2016). Data were analyzed using the outer and the inner models. The first outer model evaluates the reliability and validity variables. This model is evaluated using multiple criteria, including convergent and discriminant validity, as well as composite relia-

bility. Next, the inner or structural method is tested to discover the relationship between the study concept, significant value, and R-square.

3. RESULTS

Table 1 shows that 1,068 consumers in cafes and restaurants comprise men and women, with 523 or 49% and 545 or 51% respectively selected as the study participants. Also, a total of 439 or 41.1%, 366 or 34.3%, 222 or 20.8%, and 41 or 2.8% participants were at the age of 17 - <20, 20 - <25, 25 - <30, and > 30 years respectively. The majority of the respondents are college students who do not have a fixed income. A total of 291 or 27.2%, 345 or 32.3%, 233 or 21.8%, and 199 or 18.6% of the participants have an income 0 - <1, 1 - <3, 3 - <5, and > 5 million IDR respectively. Furthermore, 623 or 58.3%, 51 or 4.8%, 97 or 9.1%, and 297 or 27.8% of the respondents are college students, entrepreneurs, government, and private employees.

Table 1. Sample demographic

Characteristics	Group	Frequency	Percentage
Gender	Male	523	49
	Female	545	51
Age	17 - <20	439	41.1
	20 - <25	366	34.3
	25 - <30	222	20.8
	> 30	41	3.8
Income	0 - <1 million IDR	291	27.2
	1 - <3 million IDR	345	32.3
	3 - <5 million IDR	233	21.8
	> 5 million IDR	199	18.6
Job	College students	623	58.3
	Government employees	97	9.1
	Private employees	297	27.8
	Entrepreneur	51	4.8

Note: n = 1068.

Table 2. Validity and reliability result

Variables	Item	Item Loadings	Cronbach's Alpha	Composite Reliability	AVE
Structural Elements (STE)	STE1	0.725	0.910	0.927	0.615
	STE2	0.820			
	STE3	0.769			
	STE4	0.821			
	STE5	0.792			
	STE6	0.759			
	STE7	0.777			
	STE8	0.805			
Human Resource Management (HRM)	HRM1	0.878	0.940	0.952	0.769
	HRM2	0.873			
	HRM3	0.880			
	HRM4	0.893			
	HRM5	0.869			
	HRM6	0.866			
Food Quality (FOQ)	FOQ1	0.847	0.918	0.936	0.710
	FOQ2	0.826			
	FOQ3	0.753			
	FOQ4	0.869			
	FOQ5	0.884			
	FOQ6	0.868			
Atmosphere (ATM)	ATM1	0.835	0.902	0.927	0.718
	ATM2	0.819			
	ATM3	0.849			
	ATM4	0.870			
Customer Satisfaction (STS)	STS1	0.921	0.897	0.936	0.829
	STS2	0.902			
	STS3	0.908			

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Table 2 shows the authenticity and reliability of the data. The outer model analysis indicates the relationship between latent variables and indicators by assessing the constructs' validity and reliability. Construct validity is evaluated based on the convergent and discriminant values, while the reliability is assessed based on the composite reliability and Average Variance Extracted (AVE). In the reflective indicator measurement model, convergent validity examines the relationship between the item and variable scores based on the loading factor. The indicator tends to be legitimate if the loading factor is more than 0.70. This shows that all variables' indicators have a high level of convergent validity with a loading value > 0.70.

The construct reliability was examined using Cronbach's alpha and composite reliability. The results showed that the structural elements of operations management strategies (STE) have a Cronbach's alpha of 0.910 > 0.70, composite reliability of 0.927, and AVE of 0.615. The following are the validity and reliability results for infrastructure elements as a mediating variable. Human resource management (HRM), food quality (FOQ), and atmosphere (ATM) have Cronbach's alpha of 0.940, 0.918, and 0.902 > 0.70, composite reliability of 0.952, 0.936, and 0.927, as well as AVE of 0.769, 0.710, and 0.718 > 0.50 respectively. Furthermore, customer satisfaction (STS) has Cronbach's alpha of 0.897 > 0.70, composite reliability = 0.936, and AVE of 0.829 > 0.50.

Table 3 shows the R-square results that examined the relationship between constructs and the significance value. These estimations indicated HRM, FOQ, and ATM have R-square values of 0.431 or 43.1%, 0.408 or 40.8%, and 0.408 or 40.8%, with the remaining 56.9%, 59.2%, and 59.2% explained by other variables outside the study model. This indicates that HRM, FOQ, and ATM tend to be influenced by the structural elements of operations management strategies (STE). Meanwhile, STS has an R-square value of 0.442 or 44.2%, with the remaining 60% explained by other variables. This shows that STS is influenced by HRM, FOQ, and ATM. The results indicated that the inner model is evaluated using the R-square dependent variable in conjunction with the Q-Square test size and the structural path coefficient's magnitude. This Q-Square measures a structural element with PLS. For instance, Q-Square 1-(1-0.431) (1-0.408) (1-0.408) (1-0.442) = 0.889. The model is accurate because it shows 88.9% of the STS with the remaining 11.1%, which is explained by other variables.

Table 4 shows the summary of path coefficient values. The results indicated that the structural elements of operations management strategies (STE) positively affect the infrastructure elements. STE affect HRM, FOQ, and ATM of 0.657, 0.638, and 0.639 with T-Statistic of 27.196, 22.719, and 27.591 > 1.96 respectively. In other words, positive results indicate that the infrastructure elements of operations management strategies are strengthened by the structural elements of operations management strategies (STE), which consist of four variables: layout

Table 3. R-square

Structural Model	Dependent Variable	R Square
1	Human Resource Management (HRM)	0.431
2	Food Quality (FOQ)	0.408
3	Atmosphere (ATM)	0.408
4	Customer Satisfaction (STS)	0.442

Table 4. Path coefficient

Hypothesis	Path coefficient	T-Statistic	P-Value	Result
H1: STE → HRM	0.657	27.196	0.000	Supported
H2: STE → FOQ	0.638	22.719	0.000	Supported
H3: STE → ATM	0.639	27.591	0.000	Supported
H4: HRM → STS	0.319	7.343	0.000	Supported
H5: FOQ → STS	0.220	5.434	0.000	Supported
H6: ATM → STS	0.265	8.050	0.000	Supported

Table 5. Summary of mediation effects

Hypothesis	Path coefficient	T-Statistic	P-Value	Result
H7: STE → HRM → STS	0.169	7.453	0.000	Supported
H8: STE → FOQ → STS	0.141	5.132	0.000	Supported
H9: STE → ATM → STS	0.210	6.924	0.000	Supported

(LAY), decoration (DEO), location (LOC), and cleanliness (CLE). This reveals that H1, H2, and H3 are accepted because STE positively influences the infrastructure elements. Meanwhile, the infrastructural variable consists of three variables: human resource management (HRM), food quality (FOQ), and atmosphere (ATM) have a positive impact on customer satisfaction. HRM affects STS of 0.319 with a T-Statistic of 7.343 > 1.96. This indicates that H4 is supported because human resource management success significantly influences customer satisfaction. Similarly, CLE also shows a positive and significant impact on customer satisfaction with a coefficient of 0.220 and a T-Statistics of 5.434. This implies that H5 is supported because there was a significant influence on customer satisfaction. Finally, ATM affects STS by 0.265 with a T-Statistics of 8.050 > 1.96. This signifies that H6 is accepted because the infrastructure element of the atmosphere is significantly related to customer satisfaction.

A PLS 3 and 5,000 bootstrapped subsamples were used to assess the mediating function of the infrastructure elements variables. Table 5 shows that HRM partially moderates the influence of structural elements on customer satisfaction. HRM mediates the effect of the structural elements of operations management strategies (STE) on customer satisfaction (STS) with a coefficient of 0.169 and a T-Statistics of 7.453 > 1.96. This implies that H7 is accepted. In addition, the results indicated that FOQ partially mediates the effect of structural elements of operations management strategies (STE) on customer satisfaction. FOQ partially mediates the influence of STE on STS with a coefficient of 0.141 and a T-Statistic of 5.132 > 1.96. This signifies that H8 is accepted. ATM also supports mediating the effect of structural elements on customer satisfaction. ATM moderates the influence of STE on STS with a coefficient of 0.210 and a T-Statistic of 6.924 < 1.96, respectively. This implies that H9 is supported.

4. DISCUSSION

The results showed that the structural elements of operations management strategies (layout, decoration, location, and cleanliness) positively affect human resource management, food quality, and atmosphere. These outcomes correspond to hypotheses 1-3. This indicates that the structural elements play an important role in developing employees' services, food quality, and the atmosphere of cafes and restaurants. The results are consistent with Zerella et al. (2017), Pullman and Rodgers (2010), Torlak et al. (2019), Heung and Gu (2012), El-Zeiny (2012), Abouelela (2022), Thornton et al. (2016), Castro et al. (1990), Wheatley (2021), Bacolod et al. (2022), Djekic et al. (2014), Walker et al. (2003), Horrevorts et al. (2018), and van der Voordt (2014).

Layout, decorating, location, and cleanliness are the structural elements of an operations management approach. The findings indicate that these factors influence the infrastructural parts of operations management methods, such as human resource management, food quality, and atmosphere. An intelligent layout, for example, influences the surroundings of cafes and restaurants by making them more comfortable and orderly for customers. Developing imaginative cafes and restaurants that increase customer perceptions of food quality and evaluate pleasant experiences also contributes to consumer pleasure. Furthermore, the findings show that interior design fosters a cheerful environment by encouraging staff performance. Furthermore, location improves a company's competitiveness by drawing more consumers and influencing customer restaurant selections. Finally, hygiene refers to the cleanliness of equipment and supplies, whereas environmental elements and staff practices influence restaurant client choice.

Furthermore, the structural elements are essential in promoting customer satisfaction, indicating that H7, H8, and H9 are accepted. This shows

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that the spatial layout, strategic locations, and cafe cleanliness help to satisfy consumers. The results are consistent with Torlak et al. (2019), Diaz-Garrido et al. (2007), Ha and Jang (2012), and Heung and Gu (2013). Furthermore, the operating strategy, including the infrastructure and structural elements, ensures customer satisfaction. It indicated that infrastructure has a substantial bearing on consumer happiness. Infrastructure components of an operations management approach include strategies for managing human resources, food quality, and ambiance.

According to the findings, this infrastructure component mitigates the impact of operational operations on customer satisfaction. Effective human resource management enhances staff attitudes, conduct, and customer satisfaction. In the meantime, food quality exemplified by aesthetic appeal, taste, health, temperature, and freshness of food, along with excellent customer service, tends to calm customers' moods and emotions. This is because it encourages customers to return and suggest restaurants and cafes to others. In addition, the atmosphere as the third infrastructure piece allows customers to feel at ease not only with the food and beverages served but also with the music, lighting, colors, and overall appearance of a cafe. Therefore, customers' emotions are stirred unconsciously by a pleasant ambiance. The results indicate that infrastructure features increase customer satisfaction in Indonesian cafes and restaurants.

CONCLUSION

This study aims to analyze the relationship between customer satisfaction and operational management activities, including layout, decoration, location, and cleanliness. In addition, it examines human resource management, food quality, and atmosphere as moderating variables. The results showed that the structural elements of operational management strategies promote the infrastructure elements. This study shows the role of infrastructure elements, specifically human resource management, and food quality, as a mediating variable, on customer satisfaction. Overall, the results of this empirical study provide a theoretical contribution to emphasizing cafe and restaurant operational strategies to boost customer satisfaction. Managers should highlight the importance of reinforcement in implementing their operations strategy.

The study is not without limitations. First, although the sample size is large, the majority of respondents are college students who visited cafes and restaurants around campus/university. Further study needs to focus on non-college undergraduates as the participants. Second, future studies may consider using respondents from other service industry companies. Last but not least, future studies may consider a mixed approach to explore the structural and elements infrastructure of operations management strategies on customer satisfaction.

AUTHOR CONTRIBUTIONS

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Formal analysis: Dwi Martiyanti, Gusti Noorlitaria Achmad.
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Project administration: Dwi Martiyanti, Gusti Noorlitaria Achmad.
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Software: Dwi Martiyanti, Dadang Lesmana.
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Writing – original draft: Dwi Martiyanti, Dadang Lesmana.
Writing – review & editing: Saida Zainurossalami, Rizky Yudaruddin.

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