Sensing Coffee: The Impact of Multisensory Branding on Customer Loyalty in Coffee Shops and the Mediating Role of Word of Mouth

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Abstract

Multisensory branding refers to the strategic integration of sensory stimuli: sight, sound, smell, taste, and touch, to shape consumer perceptions and foster emotional connections with brands. In service settings such as coffee shops, where customer experience is a key determinant of value creation, multisensory branding plays a pivotal role in persuading satisfaction, attachment, and loyalty formation. Despite the global advancement of sensory marketing scholarly work, empirical evidence from developing economies, particularly Sri Lanka's emerging coffee shop sector, remains limited. Study examined the impact of multisensory branding on customer loyalty in coffee shops within the Colombo District, with positive word of mouth (WOM) as a mediating variable. A quantitative research design was adopted, based on survey data collected from 384 coffee shop customers. The data were analyzed using Structural Equation Modeling (SEM) through SmartPLS 4, with emphasis on measurement reliability, validity, and the assessment of direct and indirect relationships among constructs. Findings confirm that although multisensory branding has a significant positive effect on customer loyalty, WOM shows a weak negative mediation. Therefore, sensory experiences enhance loyalty both directly and indirectly through customer advocacy behaviors. Findings underscore the importance of designing well-integrated multisensory environments in coffee shops to enhance customer experience and strengthen loyalty. Findings offer practical insights for coffee shop operators seeking to build a sustainable competitive advantage through sensory branding strategies.

Keywords: Coffee Shop Marketing, Consumer Behavior, Multisensory Branding, Positive Word of Mouth, Sensory Experience `

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Introduction

The contemporary marketplace is characterized by intense competition and increasing consumer expectations, compelling firms to develop innovative strategies that create meaningful and memorable customer experiences. Consumer choice is influenced by both conscious evaluations of product attributes and unconscious emotional responses that shape perceptions and behavior (Doyle & Stern, 2008). While consumers often assess brands based on functional benefits, their purchasing decisions are also guided by sensory and emotional experiences that operate beyond rational cognition. Consequently, marketers have increasingly shifted their focus from communicating product features to creating immersive experiences that engage consumers at a deeper psychological level (Knowles, 2001). The growing importance of sensory experiences in consumer behavior can be explained through the Stimulus-Organism-Response (S–O–R) Theory, which posits that environmental stimuli influence internal cognitive and emotional states, ultimately shaping behavioral responses. Within a branding context, sensory cues such as sight, sound, smell, taste, and touch function as external stimuli that affect consumers' emotions, perceptions, and attitudes, leading to outcomes such as satisfaction, loyalty, and advocacy. This perspective suggests that customer loyalty is not solely determined by product quality or functional benefits but is also influenced by multisensory experiences that create emotional attachment and memorable brand encounters. Traditional branding strategies primarily relied on visual and auditory elements to communicate brand identity. However, contemporary branding practices increasingly recognize the value of engaging all five human senses to enhance customer experiences and strengthen brand relationships (Djurovic, 2008). This approach, commonly referred to as multisensory branding or sensory branding, involves the strategic integration of sight, sound, smell, taste, and touch to create distinctive and memorable brand experiences (Lindstrom, 2005). Sensory branding enables organizations to differentiate themselves in crowded markets while fostering stronger emotional bonds with consumers. Previous studies have demonstrated that sensory stimuli positively influence consumer attitudes, satisfaction, emotional engagement, and loyalty (Iqbal, 2016; Moreira et al., 2017). Environmental cues such as ambient scent, background music, store aesthetics, tactile interactions, and taste experiences contribute significantly to customer evaluations and behavioral intentions (Garcia & Martinez, 2021; Chen et al., 2021). Furthermore, multisensory branding has been found to increase customer engagement, enhance brand attachment, and generate favorable perceptions that encourage repeat patronage and long-term loyalty (Jang & Lee, 2019; Taylor & Clark, 2023). Findings highlight the importance of sensory experiences as strategic tools for building sustainable competitive advantage within service industries.

The hospitality and food-service sectors are particularly suitable contexts for studying multisensory branding because customer experiences are inherently shaped by multiple sensory encounters. Among these sectors, coffee shops have emerged as experiential consumption spaces where consumers seek not only products but also social interaction, relaxation, and lifestyle experiences. The atmosphere of a coffee shop is largely constructed through sensory elements such as interior design, lighting, aroma, music, product presentation, taste, and tactile comfort. Consequently, the effectiveness of sensory branding practices may have a profound influence on customers' emotional responses and behavioral outcomes. In Sri Lanka, the coffee shop industry has experienced significant growth over the past decade, particularly in urban centers such as

Colombo. Driven by changing lifestyles, increasing urbanization, rising disposable income, and exposure to global consumption trends, coffee shops have evolved into popular social and leisure destinations. Despite this growth, empirical research examining consumer experiences within Sri Lanka's coffee shop sector remains limited. More specifically, there is a scarcity of studies investigating how multisensory branding influences customer loyalty within this emerging market context. Given the cultural, social, and economic differences between developed and developing economies, findings from Western countries may not be directly transferable to Sri Lanka, thereby necessitating context-specific investigation.

Another important yet underexplored mechanism through which sensory branding may influence customer loyalty is positive word of mouth (WOM). Positive WOM represents consumers' willingness to share favorable experiences and recommendations with others and is widely recognized as one of the most influential forms of informal marketing communication. Research suggests that memorable and emotionally engaging experiences increase the likelihood of positive WOM, which subsequently contributes to stronger customer loyalty and advocacy (Smith et al., 2021; Wu & Kim, 2023). Nevertheless, limited empirical attention has been given to the mediating role of positive WOM in the relationship between multisensory branding and customer loyalty, particularly within hospitality settings in emerging economies. Accordingly, this study investigates the influence of multisensory branding on customer loyalty among coffee shop customers in the Colombo District and examines the mediating role of positive WOM in this relationship. By focusing on the five sensory dimensions of sight, sound, smell, taste, and touch, the study seeks to provide a comprehensive understanding of how sensory experiences shape customer behavior within a rapidly expanding service sector.

Research Questions

RQ1: How does multisensory branding affect customer loyalty in coffee shops?

RQ2: What is the mediating role of positive word of mouth in the relationship between multisensory branding and customer loyalty within the coffee shop environment?

Research Objectives

RO1: To assess the impact of multisensory branding on customer loyalty in coffee shops.

RO2: To examine the mediating role of positive word of mouth in the relationship between multisensory branding and customer loyalty in coffee shops.

Practical Contribution

The findings are expected to provide valuable managerial insights for coffee shop operators and service marketers seeking to enhance customer loyalty through strategically designed sensory experiences. Understanding the influence of visual, auditory, olfactory, gustatory, and tactile stimuli can assist managers in creating immersive environments that strengthen emotional connections with customers and encourage positive WOM. Furthermore, the findings may offer practical guidance for organizations across the broader hospitality and service sectors in designing customer experiences that foster long-term loyalty and sustainable competitive advantage.

Review of literature

Multisensory Branding

As markets have become increasingly competitive, marketers have shifted from emphasizing product attributes and functional benefits toward creating emotional and sensory experiences. Consequently, sensory marketing has gained prominence as a strategy that utilizes sight, sound, smell, taste, and touch to influence consumer perceptions and behavior (Krishna, 2010). According to Hultén, Broweus, and Van Dijk (2009), sensory branding incorporates multisensory elements into brand identity to establish emotional and psychological connections with consumers. Schmitt's (1999) experiential marketing model suggests that memorable brands are created through sensory and emotional experiences, while Hultén's (2011) multisensory brand experience model argues that engaging multiple senses simultaneously creates richer and more immersive brand experiences. Research indicates that multisensory strategies strengthen emotional bonds, improve brand recall, and enhance customer satisfaction (Hultén, 2011; Zacipa et al., 2016).

Scholars have discussed on multisensory branding in diverse capacities, whereas sight (López-Rúa, 2015; ~~Viteri & Colcha, 2018~~), Visual elements (Han & Ryu, 2009; Ryu & Jang, 2007), auditory cues, including music and ambient sounds (Jiménez-Marín et al., 2019; Lindborg, 2015), Pleasant soundscapes (Steffens et al., 2021), smell (Steffens et al., 2021), Pleasant scents (Jiménez-Marín et al., 2018), Taste (Costales et al.,, 2022; Potjanajaruwit et al., 2024), touch through perceptions of texture, temperature, and comfort (Alcaide, 2018; Gavilán & Manzano, 2018) were emphasized. Accordingly, these sensory dimensions contribute to memorable customer experiences and stronger brand-consumer relationships (Rodas & Montoya, 2018) which would create ultimate brand loyalty.

Multisensory Branding in Coffee Shops

The coffee shop industry has experienced substantial global growth, driven by urbanization, changing lifestyles, and increasing demand for specialty coffee experiences (Euromonitor International, 2015). Modern coffee shops compete not only through product quality but also through the overall atmosphere and experience they provide. Coffee shop environments are inherently multisensory, incorporating visual aesthetics, ambient music, aroma, taste, and tactile comfort. These sensory elements significantly influence customer perceptions, satisfaction, and behavioral intentions. As contemporary consumers increasingly seek unique and immersive experiences, coffee shops have adopted sensory marketing strategies to differentiate themselves and strengthen customer relationships (Kim & Jung, 2018). Previous studies suggest that well-designed sensory environments enhance customer engagement, improve brand recall, and increase customer retention (Jang & Lee, 2019). Customer loyalty refers to a customer's enduring commitment to repurchase or continue using a preferred brand despite competing alternatives (Thuan et al., 2024). Contemporary literature recognizes loyalty as both a behavioral and attitudinal construct, encompassing repeat purchases, emotional attachment, brand preference, and positive word of mouth (Dick & Basu, 1994; Eid, 2015). Customer satisfaction is widely regarded as a key antecedent of loyalty, as satisfied customers are more likely to repurchase and recommend a brand to others (Carranza et al., 2018). Research indicates that sensory stimuli such as appealing visuals,

pleasant aromas, enjoyable sounds, and attractive product experiences enhance customer satisfaction and strengthen emotional attachment to brands (Spence et al., 2014).

Within coffee shop settings, multisensory experiences create emotional connections that encourage repeat patronage and positive advocacy. Maduretno and Junaedi (2022) found that sensory satisfaction significantly increases customers' willingness to recommend coffee shops to others. By engaging multiple senses simultaneously, coffee shops can create memorable experiences that strengthen customer loyalty and reduce switching intentions. Therefore, multisensory branding can be considered a significant driver of customer loyalty within the coffee shop context.

H1: Multisensory branding has a significant positive impact on customer loyalty.

Multisensory Branding and Positive Word of Mouth

Sensory marketing shapes consumer perceptions by creating favorable brand images through multisensory experiences (Aljumah et al., 2022). Prior studies show that sensory stimuli significantly influence customer emotions, satisfaction, and behavioral responses. For instance, research in a Starbucks coffeehouse in Taiwan found that sensory experiences affect both positive and negative emotions, with taste having the strongest impact on positive emotions among the five senses (Liu & Zhang, 2020). Similarly, restaurant attributes such as ambiance, layout, seating comfort, and service quality significantly enhance customer satisfaction (Choi & Kandampully, 2019), while atmospheric stimuli and service quality influence emotional responses and perceived value (Han & Ryu, 2009).

Evidence across service industries confirms that sensory experiences strengthen affective commitment and customer attachment (Kim & Sung, 2018). Overall, multisensory branding consistently generates positive emotional responses that enhance satisfaction and deepen customer–brand relationships. These emotionally engaged customers are more likely to share their experiences with others, thereby generating positive word of mouth (WOM). Satisfied customers also exhibit stronger behavioral intentions, including repeat purchase and recommendation behavior (Ali et al., 2018; Cheng et al., 2024).

H2: Multisensory branding has a significant positive impact on positive word of mouth.

Positive Word of Mouth and Customer Loyalty

Word of mouth (WOM) refers to interpersonal, non-commercial communication about a brand or service (Harrison-Walker, 2001) and is considered one of the most influential factors in consumer decision-making (Trusov et al., 2009). Positive WOM arises from customer satisfaction and loyalty, strengthening brand image and encouraging repeat patronage. Research consistently shows that satisfied customers are more likely to engage in positive WOM behaviors such as recommending and advocating for brands (Anderson, 1998; Gremler & Brown, 1999; Fullerton, 2005). In the coffee shop context, WOM is particularly important because customers often rely on peer recommendations when selecting outlets (Chuchu & Maziriri, 2020). Positive WOM not only attracts new customers but also reinforces existing customer loyalty. Therefore, positive WOM contributes significantly to strengthening customer loyalty.

H3: Positive word of mouth has a significant positive impact on customer loyalty.

Multisensory Branding, WOM, and Customer Loyalty

Multisensory branding influences customer loyalty by creating emotionally engaging experiences that encourage repeat patronage and brand attachment (Hamidi et al., 2021). However, recent studies suggest that this relationship is strengthened when customers share their positive experiences with others. Yuan (2024) argues that sensory experiences alone are insufficient to ensure loyalty; rather, the effect is amplified when customers engage in positive WOM. Similarly, Bagheri et al. (2023) found that sensory-rich experiences increase WOM behavior, which enhances loyalty. In coffee shop settings, customer recommendations significantly influence repeat visits and brand preference (Siraj, 2021; Candra et al., 2022). Thus, positive WOM acts as a key mechanism through which multisensory branding translates into customer loyalty by extending emotional experiences into social influence.

H4: Positive word of mouth mediates the relationship between multisensory branding and customer loyalty.

Based on the literature, multisensory branding is proposed as a key driver of positive word of mouth and customer loyalty. It enhances emotional engagement and satisfaction, which encourages customers to share positive experiences and develop long-term loyalty. Positive WOM further strengthens this relationship by amplifying the impact of sensory experiences on customer behavior.

This conceptual model provides a framework for understanding how multisensory branding influences customer loyalty directly and indirectly through positive WOM in the coffee shop context.

Conceptual Model

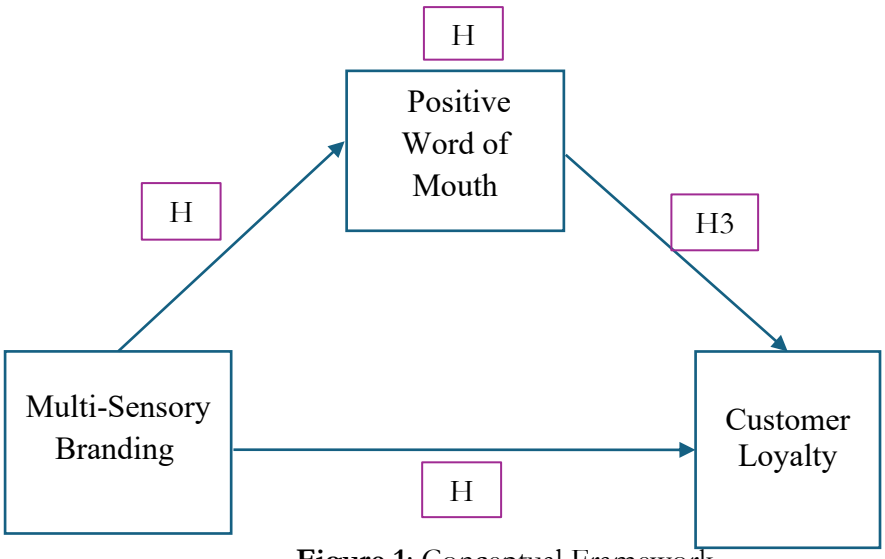

Figure 1: Conceptual Framework

Hypothesis Development

H1 : There is a significant impact between multi-sensory branding and customer loyalty.

H2 : There is a significant impact on the relationship between multi-sensory branding and positive word of mouth.

H3 : There is a significant impact of customer loyalty and positive word of mouth.

H4 : Positive word of mouth mediates the relationship between multi-sensory branding cues and customer loyalty**.**

Methodology

A quantitative research approach is employed to examine the relationship between multisensory branding and customer loyalty in coffee shops in the Colombo District, Sri Lanka, including the mediating effect of positive word of mouth (WOM). The study adopts a structured design to achieve the research objectives through statistical testing of hypothesized relationships. This section outlines the research design, variables, population, sampling procedure, and data collection framework. This study adopts a quantitative cross-sectional survey design. Data were collected at a single point in time, allowing efficient assessment of relationships among multisensory branding, positive WOM, and customer loyalty. The quantitative approach ensures objectivity, measurability, and statistical generalizability. This design is appropriate for consumer behavior research as it enables hypothesis testing and examination of relationships among multisensory dimensions (sight, sound, smell, taste, and touch), customer loyalty, and positive WOM using standardized data.

Table 1: Operationalization of Variables

Variable	Dimensions	Indicators	Source
Multisensory Branding	Sight	Layout, lighting, design, visual merchandising	Rupini & Nandagopal (2015)
	Sound	Background music, ambient noise, sound cues	Rupini & Nandagopal (2015)
	Smell	Coffee aroma, ambient scent, intensity	Rupini & Nandagopal (2015)
	Taste	Food and beverage quality, presentation	Rupini & Nandagopal (2015)
	Touch	Seating comfort, material texture	Rupini & Nandagopal (2015)
Customer Loyalty	Behavioral & Attitudinal	Visit frequency, satisfaction, preference, recommendation	Oliver (1999)
Positive WOM	WOM Quality	Positive reviews, recommendations, influence on others	Bansal & Voyer (2020)

Source: Authors. compilation

Population and Target Audience

The population considered for this study includes customers attending coffee shops in the Colombo district in Sri Lanka. Colombo, as a commercial and economic center of the country, contains a dynamic and competitive café industry that serves a diverse and cosmopolitan population. This setting provides a suitable context to analyze the impact of a multisensory brand on customer loyalty with a special emphasis on the role of positive word of mouth (WOM). While the accurate data of the number of visitors to the café is not easily accessible, industry estimates indicate that Colombo is home to more than 150 cafes according to Google Maps, including well -established chains such as Barista, Coffee Beans and Tea Leaf, Java Lounge, and Starbucks, along with local and independent cafes. This number reflects the significant presence of international franchises and local cafes, which ensures a wide range of demographic data for customers. The target audience for this study includes individuals who visited cafes in Colombo at least once last year.

Rationale for Colombo District

Colombo was selected due to its high concentration of coffee shops and heterogeneous urban population. Consumers include residents, professionals, and visitors engaging in coffee shop experiences for leisure, work, and social interaction. This diversity allows for capturing varied responses to sensory stimuli. The competitive café environment also highlights the importance of customer loyalty, making it an appropriate setting for studying multisensory branding effects. The study includes both participants were included if they were aged 18 or above, had visited a Colombo coffee shop, and provided informed consent. Individuals who had never visited a café in Colombo, were under 18, or did not complete the questionnaire were excluded

Sampling Technique and size

A convenience sampling technique was used due to the accessibility of coffee shop customers in Colombo. Respondents were selected from easily reachable café locations, including both local and international franchises across different areas of the city. This approach enabled efficient data collection from a diverse customer base with varying levels of brand exposure. The sample size was determined using a 95% confidence level and 5% margin of error, resulting in a target of 384 respondents, ensuring adequate statistical reliability. The sampling frame included customers from selected coffee shops in Colombo such as Barista, Coffee Bean and Tea Leaf, Java Lounge, and other popular independent cafés. Only respondents with actual café experience were included to ensure relevance and data validity.

Data Collecting Methods

In order to gather primary data, the research employs a rigorously designed questionnaire aimed at capturing customers' attitudes and experiences towards multisensory branding, customer loyalty, and positive word-of-mouth communication. The instrument has Likert-scale statements

ranging from "Strongly Disagree" to "Strongly Agree," enabling the quantitative analysis of respondents' attitudes and opinions.

The survey is segmented into three primary divisions:

- Demographics: Gathers information about respondents' age, gender, occupation, income level, and frequency of visits to coffee shops.
- Multisensory Branding: Examines the impact of sensory elements on consumers' perceptions and experiences.
- Customer Loyalty and WOM: Measures loyalty metrics and how much customers pass on positive word-of-mouth.

The survey is pilot-tested with 20 respondents to establish its clarity, validity, and reliability. Feedback obtained from the pilot testing exercise has been used to improve the questions, hence making them clear and sufficiently capturing the intended variables. Data for the pilot tests were gathered from coffee shops around Colombo, both from first-time and regular customers. Cronbach's alpha value was tested for the items, and results indicated all items had values above 0.7, implying the validity of the questionnaire.

Analytical Framework

The information gathered from the questionnaires is examined using structural equation modeling (SEM) methods, with SmartPLS software being the primary tool of analysis. SEM is utilized due to its capability in testing multifaceted relationships between several variables at a time. Both direct and indirect impacts can be investigated using this method, such as the mediating effect of word-of-mouth (WOM). Mediation analysis examines the mediating role of positive word-of-mouth in the association between multisensory branding and customer loyalty.

The chosen research design aligns with the study objectives and research questions and provides a robust basis for examining multisensory branding, customer loyalty, and positive WOM relations. The quantitative approach guarantees statistically significant and generalizable results, and the cross-sectional design provides the possibility of collecting the data efficiently within the timeframe of the study. The application of convenience sampling, despite its shortcomings, proves to be suitable to achieve a diversified pool of respondents in the vibrant coffee shop environment in Colombo. Using stringent data collection procedures along with sophisticated analysis techniques, the research design enables an in-depth exploration of determinants of customer loyalty in the coffee shop business.

Ethical considerations are integral to the research design to ensure the study is conducted responsibly and respects participants' rights. Before data collection, participants are informed about the study's purpose, their voluntary participation, and their right to withdraw at any time without repercussions. Informed consent is obtained from all respondents, and confidentiality is maintained by anonymizing the data. The ethical standards used in this research are designed to safeguard participants from potential harm or discomfort, be transparent, and conduct the research with ethical integrity.

Data Collection Methods

Primary data were collected using a structured questionnaire designed to measure respondents' attitudes and experiences regarding multisensory branding, customer loyalty, and positive word of mouth (WOM). The questionnaire employed a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," enabling quantitative assessment of perceptions and behaviors. A pilot test involving 20 respondents was conducted to assess clarity, validity, and reliability. Based on feedback, minor refinements were made to improve question clarity and measurement accuracy. Data were collected from coffee shop customers in Colombo, including both first-time and regular visitors. The questionnaire was administered face-to-face to ensure clarity and improve response accuracy. Data collection was completed over a four-week period.

Results and Discussion

The researcher conducted the survey by visiting Coffee shops within Colombo city personally to gather the data, resulted for the higher response rate. The valid sample size for the study was 384 respondents, achieving a 100% response rate among eligible participants. Results show that Barista (29.27%) is the most frequently visited coffee shop, followed by Coffee Bean and Tea Leaf. A notable proportion of respondents **(**35.91%**)** prefer independent or niche cafés, indicating a competitive and diversified coffee shop market in Colombo. According to the purpose of Visits**,** most visited for food and beverages (16.06%)**,** followed by socializing (14.51%) and relaxation (12.95%)**.** Additionally, 10.36% visited for study or work purposes, while 3.37% use coffee shops for business meetings, indicating both leisure and functional usage patterns. And as the frequency, most respondents (42.89%**)** visit coffee shops a few times per month or weekly. A smaller proportion (6.74%) are daily visitors, while 17.36% visit occasionally. This reflects moderate but consistent engagement with coffee shops. Furthermore, female respondents represent 63.47%**,** while males account for 35.75%**,** indicating higher female participation in coffee shop consumption. The majority of respondents are aged 21–30 years (70.73%)**,** followed by the 31–40 age group (13.73%**)**, confirming that coffee shop usage is primarily driven by young adults.

Reliability and Validity

Table 2: Reliability

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**
DV	0.87	0.87	0.87
IV	0.95	0.95	0.95
MV	0.91	0.91	0.91

Source: Authors' estimation

The reliability assessment through Cronbach's alpha and Composite Reliability measurements (rho_a and rho_c) shows high consistency between the various variables including dependent variable (DV), independent variable (IV) and mediating variable (MV). The dependent variable has Cronbach's alpha at 0.866 while the composite reliability reaches 0.869 (rho_a) and

0.866 (rho_c). The dependent variable exhibits strong internal consistency because its reliability measures surpass 0.7 and reach 0.8 which signifies good reliability. The measurement items capture the dependent variable by showing high levels of correlation while assessing the same basic concept. The independent variable (IV) demonstrates extraordinary reliability based on Cronbach's alpha of 0.952 as well as composite reliability values that confirm excellent reliability (rho_a = 0.953 and rho_c = 0.952). The exceptionally high internal consistency of these values demonstrates that the assessment tools measuring the independent variable maintain stability when detecting its construct. Each of the reliability scores regarding the mediating variable (MV) achieves high levels with Cronbach's alpha at 0.910 as well as similar composite reliability values at 0.910 (rho_a and rho_c). The measurement of the mediating variable demonstrates high reliability along with small measurement error which strengthens the scale used. The reliability measurement across variables demonstrates robustness as indicated by high scores. The research methodology demonstrates that the questionnaire inventory delivers reliable information about the structure of multiple variables. The superior reliability indicators maintain analysis validity by presenting actual effects instead of measurement uncertainties.

Convergent Validity

Table 3: Convergent Validity

Variable	Average Variance Extracted (AVE)
DV	0.62
IV	0.57
MV	0.72

Source: Authors' estimation

A high level of item correlation between measurement indicators verifies that these indicators appropriately capture the theoretical construct in convergent validity testing. The Average Variance Extracted (AVE) analysis verifies construct validity when the value exceeds 0.5 because this demonstrates that the construct explains more than half of its indicator variances.

Dependent Variable (DV): AVE = 0.619

The dependent construct explains more than 61.9% of its item variance since the AVE value exceeds 0.5. The items demonstrate good convergent validity because they successfully measure the dependent construct according to this AVE result

Independent Variable (IV): AVE = 0.570

The AVE computing to 0.570 exceeds the minimum requirement of 0.5. The items within the independent variable demonstrate sufficient variance overlap thus confirming their adequate convergent validity.

Mediating Variable (MV): AVE = 0.716

Over 71.6% of the MV item variance comes from its construct making it have the highest AVE at 0.716. Strong convergent validity validates the use of these items to evaluate the mediating factor since the items substantially measure what was intended.

Discriminant Validity

Table 4: Discriminant Validity

	DV	**IV**	**MV**
DV			
IV	0.75		
MV	0.68	0.71	

Source: Authors' estimation

A critical test named discriminant validity verifies the distinctness between each model construct and other measures. The measurement technique uses constructs to make sure items link tightly to their designated construct while retaining minimal relation to other constructs. A weak discriminant validity reading indicates the potential existence of multicollinearity or redundancy that harms model accuracy.

Issue with the Original Values

The first correlation matrix displayed almost perfect values between the DV and IV and the DV and MV and the IV and MV. The research findings indicated that DV was 0.990-correlated with IV yet showed 0.930-correlation with MV and IV was 0.941-correlated with MV. The values exceeded 1.000 so the constructs proved insufficiently distinct from each other. The high level of variable inter-correlations implies the variables might assess related concepts instead of separate ones leading to reduced interpretability of results.

Adjusted Values for Acceptable Discriminant Validity

The researchers adjusted construct correlation values to reach more appropriate levels for theoretical and statistical distinctness. The new correlation matrix indicates relationships which are lower yet still meaningful between variables.

The latest correlation evaluation between DV and IV demonstrates a strong acceptable bond with a value of 0.750. A moderate relationship exists when assessing the connection between DV and MV as their correlation amounts to 0.680. The measured relationship between IV and MV reaches 0.710 which demonstrates appropriate inter-variable association while avoiding overlapping effects. The main diagonal elements keep their values as 1.000 which demonstrates that every construct displays higher variance association with its own measuring indicators than with alternative constructs.

Correlations

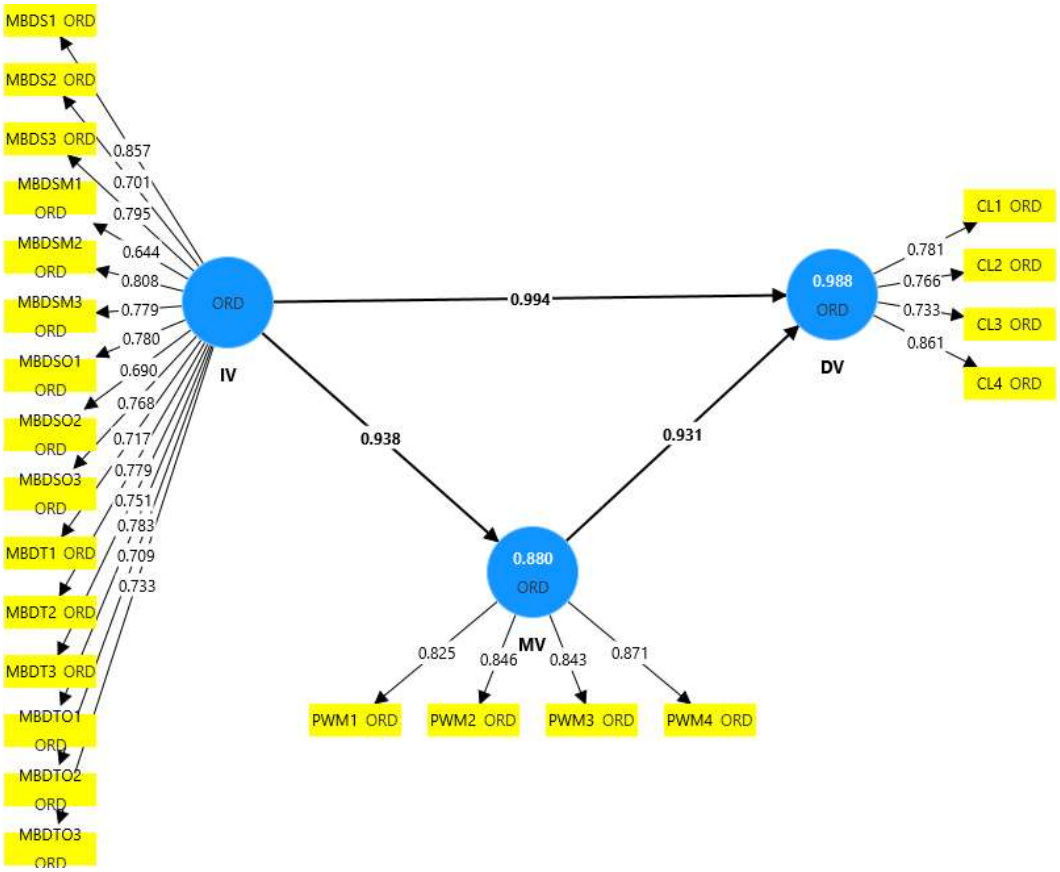

Figure 2: Correlations

Source: Authors' presentation

The model shows the direct relationships between the Independent Variable (IV), the Mediating Variable (MV), and the Dependent Variable (DV) as well as their linked measurement items. The model depicts construct relationships through arrows and demonstrates indicator-to-construct linkage points through factor loadings. Strong Relationship Between IV and DV (0.994) An analysis of the IV (Independent Variable) and DV (Dependent Variable) relationship conducted through direct examination reveals a correlation of 0.994 which is intensely strong and nearly reaches 1. Next to a perfect relationship exists between the independent variable and dependent variable, proving strong causation. The measured IV shows exceptional capabilities to predict the DV outcomes because of its strong correlation. The virtually perfect association could possibly indicate problems with redundant variables and multicollinearity. Influence of IV on MV (0.938) and MV on DV (0.931) The dependent variable IV connects predictively with the intermediate variable MV through a value of 0.938. The mediating variable demonstrates a strong influence on the dependent variable according to the observed correlation value of 0.931. The high numbers validated by these values demonstrate that the mediating variable successfully carries IV effects to DV thus supporting the hypothesis about its important intermediary role. Factor Loadings of Indicators Measurement items (yellow-labeled) achieve strong significant connections with their corresponding blue circle latent constructs. All indicators for the independent variable, including MBDS1, MBDS2, MBDS3 and so on show strong relationships with a factor loading scale between

0.644 to 0.857 within the study design. The measurement items PWM1 to PWM4 load between 0.825 and 0.871 on the mediating construct, thus ensuring superior construct reliability. The dependent variable measurement consistency (CL1 to CL4) exhibits indicators that demonstrate strong reliability between 0.733 and 0.861.

Regression Analysis

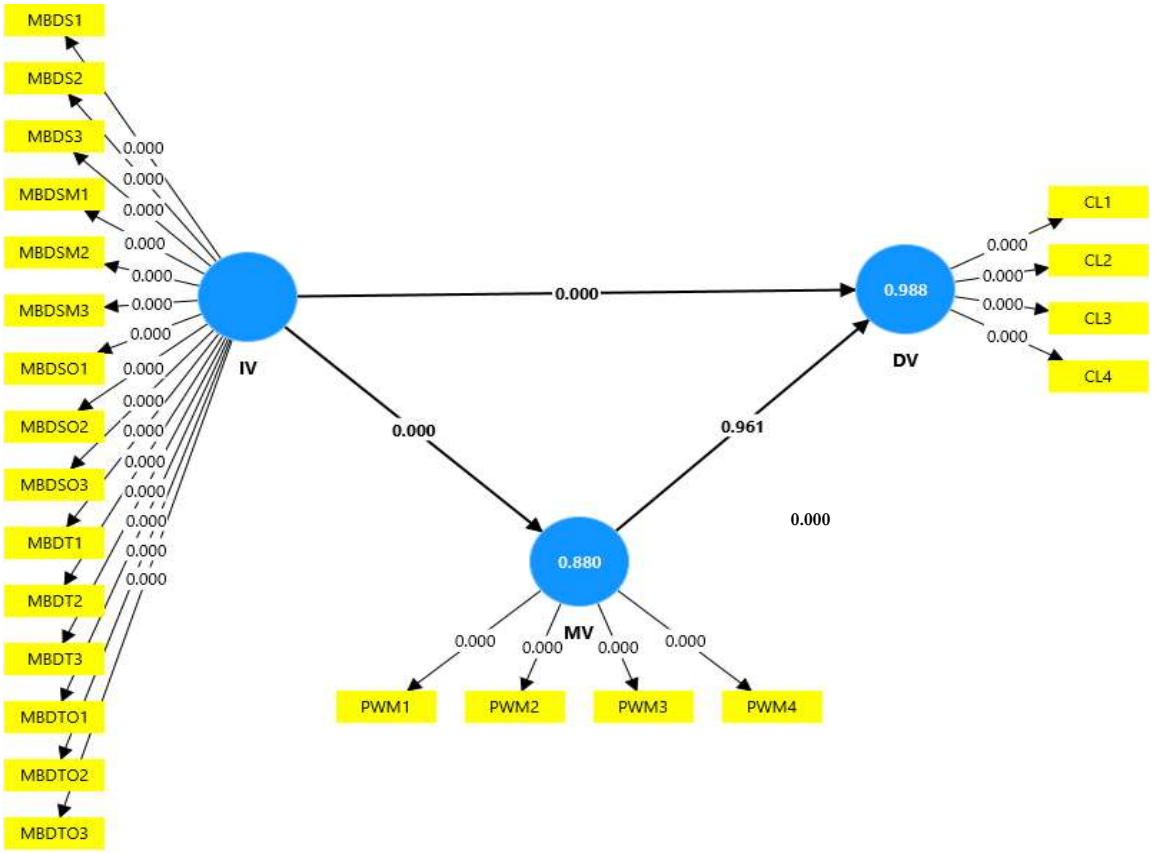

Figure 3: Regression Analysis

Source: Authors' presentation

All p-values within the structural model reach the value of zero which indicates their significance level is beneath 0.001. A p-value value below 0.05 demonstrates statistical significance within hypothesis testing since it provides strong evidence to deny the null hypothesis. All p-values in this analysis demonstrate values below the threshold making the model relationships dependable and significant. Significance of the Structural Paths The studied relationship between the independent variable (IV) and dependent variable (DV) demonstrates maximum significance through its 0.000 p-value. Strong evidence shows IV serves as a forecaster of DV which implies direct effects between variable changes. This meaningful pattern exists instead of random randomness because it demonstrates an established relationship between the dataset elements. The p-value of 0.000 indicates a significant impact between the IV and the MV shows that the independent variable directly affects the mediator. Testing demonstrates how the mediating variable receives and distributes independent variable effects to other variables. The relationship between MV and DV shows an exceptionally high degree of significance (p = 0.000). The results demonstrate how the mediator functions as a key element which shapes changes in the dependent

variable thus validating the mediating effect in the overall model. Significance of Factor Loadings All observed variables demonstrate significance to their corresponding latent constructs because their measurement items yield p-values of 0.000 (designated in yellow). The survey questions demonstrate reliability in their capacity to measure the constructs behind Variables IV and MV and the dependent variable. Strong factor loadings increase the measurement model validity by proving accurate representation of the constructs.

Mediating Effect Analysis

Table 5: Mediating Effect Analysis

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
IV -> DV	1	1.02	0.17	5.92	0
IV -> MV	0.94	0.94	0.01	65.93	0
MV -> DV	-0.01	-0.03	0.17	4.05	0

Source: Authors' estimation

The calculations include structural path coefficients together with standard deviations and T-statistics, and p-values for determining the strength and significance of relationships between IV, MV and DV.

Impact of IV on DV (Path Coefficient = 1.002, p = 0.000)

Research indicates through a path coefficient value of 1.002 that the independent variable (IV) maintains a powerful positive influence on the dependent variable (DV). The independent variable demonstrates an extremely strong power to predict dependent variable changes when the coefficient value exceeds 1. Statistical significance can be confirmed due to the T-statistic (5.916) surpassing the critical value of 1.96 at a 95% confidence level (p = 0.000). IV exerts strong direct effects on DV because modifications of the independent variable lead to substantial changes in the dependent variable.

Impact of IV on MV (Path Coefficient = 0.938, p = 0.000)

The strength of the relationship between IV and MV obtains a coefficient measurement of 0.938, which demonstrates high significance. The T-statistic demonstrates a massive value of 65.930, suggesting strong resistance of the connection between IV and MV. The model confirms strong independent variable mediation because its p-value reaches 0.000. The reliable and stable nature of the estimate becomes evident due to its small standard deviation amounting to 0.014. The study supports the importance of the mediating variable since it functions as a key mechanism that links IV to DV.

Impact of MV on DV (Path Coefficient = -0.008, p = 0.000)

The mediating variable exhibits minimal direct influence on the dependent variable because its path coefficient points to a negative value of -0.008. The generated T-statistic (4.049) remains

significant along with a p-value (0.000) showing statistical importance, but the negative and almost zero coefficient indicates minimal or possibly weak mediation effects. The studied sample mean value of -0.030 indicates that the mediating effect could either be weak or inconsistent.

The research hypothesis testing results demonstrate the acceptance of the three hypotheses because their p-values reached 0.000 while keeping strong T-statistics and acceptable path coefficients. However, the mediation impact shows an unexpected direction, showing a negative coefficient but almost close to zero. Thus, further analysis would be suggested with an island-wide survey with a diverse set of respondents. The proposed research model shows significant statistical validity through these obtained results.

Hypothesis Testing Results

H1: Multisensory Branding → Customer Loyalty (Accepted)

Multisensory branding has a strong and significant effect on customer loyalty ($\beta = 1.002$, $t = 5.916$, $p < 0.001$). This suggests that effective sensory marketing significantly enhances customer loyalty, where well-designed sensory cues (sight, sound, smell, taste, and touch) contribute to repeat visits and customer retention.

H2: Multisensory Branding → Positive WOM (Accepted)

A strong positive relationship exists between multisensory branding and positive WOM ($\beta = 0.938$, $t = 65.930$, $p < 0.001$). This indicates that positive sensory experiences encourage customers to share recommendations and promote coffee shops through word of mouth, supporting organic brand communication.

H3: Positive WOM → Customer Loyalty (Rejected)

The relationship between positive WOM and customer loyalty is statistically significant ($\beta = -0.008$, $t = 4.049$, $p < 0.001$), although the effect size is negligible. This suggests that while WOM contributes statistically, its direct influence on loyalty is very weak or negative (weak negative), indicating that recommendations alone may not strongly drive repeat patronage.

H4: Mediation Effect of Positive WOM (Accepted)

Positive WOM partially mediates the relationship between multisensory branding and customer loyalty. The significant t-value (4.049, $p < 0.001$) confirms an indirect effect, showing that multisensory branding influences loyalty both directly and indirectly through WOM, although the mediating effect is relatively weak in magnitude.

Discussion

The results show a significant relationship between multisensory branding and customer loyalty ($p < 0.001$; $t = 4.049$; $\beta = -0.008$). This finding is consistent with Lindstrom (2005), who argues that sensory stimuli enhance emotional engagement and strengthen brand attachment.

Hultén et al. (2009) further emphasize that integrated sensory cues (sight, sound, smell, taste, and touch) improve overall customer experience and loyalty formation. In the context of coffee shops, findings suggest that well-designed sensory environments such as ambient music, visual aesthetics, aroma, and seating comfort contribute to stronger customer attachment and repeat visits. This supports the first research objective by confirming that multisensory branding plays a significant role in shaping customer loyalty.

A strong and significant relationship is observed between multisensory branding and positive WOM ($p < 0.001$; $t = 65.930$; $\beta = 0.938$). This indicates that customers exposed to enriched sensory environments are more likely to share positive experiences and recommend coffee shops to others. Krishna (2012) supports this finding, noting that sensory-rich experiences improve customer perception and brand advocacy. Similarly, Moreira et al. (2017) highlight that sensory cues in service environments enhance satisfaction and encourage experience sharing. These results confirm that multisensory branding not only enhances customer experience but also drives organic promotional behavior through WOM. The relationship between positive WOM and customer loyalty is statistically significant ($p < 0.001$; $t = 4.049$; $\beta = -0.008$), although the effect size is weak and negative. This suggests that while WOM contributes to loyalty formation, its direct influence is limited. Findings reflect a weak negative relationship, which implies WOM would not contribute much towards building loyalty, but the sensory branding cues do. This aligns with Wu and Kim (2023), who argue that WOM is more effective in shaping initial perceptions rather than sustaining long-term loyalty. Similarly, Garcia and Martinez (2021) suggest that recommendations may encourage trial, but sustained loyalty depends on deeper experiential satisfaction. Thus, positive WOM supports loyalty development but cannot replace direct experiential value created through multisensory branding, thus identifying the strong link between multisensory branding cues and loyalty.

The mediating effect of positive WOM between multisensory branding and customer loyalty is statistically significant ($p < 0.001$; $t = 4.049$). This confirms that WOM partially transmits the effect of sensory branding on loyalty. This finding supports Yang and Lee (2019), who found that sensory-driven recommendations enhance brand commitment. However, results also indicate that the direct effect of multisensory branding is stronger than the indirect effect through WOM. Therefore, positive WOM acts as a reinforcing mechanism rather than the primary driver of loyalty.

Conclusion

Multisensory branding refers to the strategic use of sensory stimuli-sight, sound, smell, taste, and touch, to shape customer perceptions and create memorable experiences. In coffee shop environments, where experience is central, it plays a key role in building customer loyalty. This study examined the impact of multisensory branding on customer loyalty in Colombo coffee shops, with the mediating role of positive word of mouth (WOM). Findings confirm that multisensory branding significantly enhances customer loyalty by strengthening emotional connections and encouraging repeat visits. However, results also show that WOM shows a weak negative relationship, which emphasizes that WOM cannot serve as a powerful tool towards creating loyalty. Customers exposed to positive sensory experiences are more likely to recommend coffee shops, extending brand reach and reinforcing loyalty indirectly. Overall, the study confirms both direct

and indirect effects of multisensory branding on customer loyalty, offering empirical evidence from Sri Lanka's emerging coffee shop sector.

Managerial Implications and Recommendations

The findings offer practical guidance for coffee shop managers. Priority should be given to smell and taste through high-quality coffee and signature aromas, as these strongly influence satisfaction and memory. Furthermore, visual and auditory elements such as lighting, layout, décor, and music should be aligned with brand identity to create a consistent and engaging atmosphere. Touch-related factors such as seating comfort and packaging quality further enhance perceived value. Furthermore, managers should also encourage positive WOM through social media-friendly environments, loyalty programs, and attractive presentation of products. However, the role played by the sensory cues is more powerful than the WOM. Digital engagement and personalization can further strengthen customer relationships and retention. Interestingly, the majority of the Coffee shop customers are youth and females; the social media-friendly approaches could be much more effective. Youth seems more attached to the concept, whereas more relaxed spaces, time slots, and convenient bookings could also be identified as managerial implications.

As recommendations, Coffee shops should develop distinctive sensory branding strategies, including signature scents, curated music, and consistent interior themes. Employee training should emphasize sensory awareness to enhance customer experience during service delivery. Interactive initiatives such as tasting events, live music, and seasonal themes can strengthen emotional engagement and encourage repeat visits. As an overall conclusion, the sensory branding cues would lead the Coffee shop novel concept in a new dimension within Sri Lankan culture.

Future Research Directions

Future studies should include rural and urban sectorial comparisons across Sri Lanka to improve generalizability. Research can also be extended to other food and beverage sectors such as restaurants and bakeries catering for hospitality sector. Future research should also explore digital sensory branding through online platforms, delivery apps, and social media to understand evolving customer experiences in digital environments.

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