



Journal of Advanced Research in Marketing and Management

Journal homepage:
<https://karyailham.com.my/index.php/jar/mm/index>
ISSN: 3083-9653



The Influence of Perceived Servicescape on Consumer Purchasing Behaviour in Langkawi Supermarkets

Viknesvara Pillai A/L Krishnan¹, Alisha Ismail^{1,*}

¹ Department of International Business, School of International Studies, Universiti Utara Malaysia, Sintok Kedah, Malaysia

ARTICLE INFO

Article history:

Received 29 August 2025
Received in revised form 29 September 2025
Accepted 4 October 2025
Available online 7 October 2025

Keywords:

Perceived servicescape; consumer purchasing behaviour; supermarket; retail industry; Langkawi

ABSTRACT

This study investigates the influence of perceived servicescape, specifically ambient conditions, space/ function, and signs, symbols, and artifacts on consumer purchasing behaviour in Langkawi supermarkets. Adopting a quantitative research approach, data was collected via questionnaire surveys distributed to local consumers in Langkawi. The SPSS statistical tool was employed to analyse the data and evaluate the postulated hypotheses. Findings reveal that perceived servicescape significantly influences the purchasing behaviour of local consumers in Langkawi supermarkets. These findings hold practical implications for the service industry, highlighting the importance of optimising physical facilities and aesthetic appeal in supermarkets. By enhancing servicescape design, supermarkets can encourage consumers to prolong their visits, return frequently, and increase purchasing activity. Although this study focuses on supermarkets within the retail sector, smaller retail businesses could also benefit by implementing key elements of servicescape, particularly ambient conditions such as music, which can soothe consumers' emotions and enhance their in-store experience. This study contributes to existing literature on consumer behaviour and offers actionable insights for retailers seeking to leverage environmental psychology in competitive markets.

1. Introduction

The servicescape, a concept first introduced by Bitner [4], refers to the physical environment in which services are delivered and experienced. It encompasses layout, décor, ambient conditions, and interactive elements that shape how consumers perceive and engage with a service setting [1]. Over the years, extensive research has demonstrated that the servicescape is not merely an aesthetic backdrop but a critical determinant of consumer behaviour. Its design and functionality influence customer satisfaction, perceived value, and loyalty. A well-crafted servicescape has been shown to evoke favourable emotional responses that encourage longer visits, repeat patronage, and purchasing decisions [3,16,19].

Existing literature identifies three central dimensions of the servicescape namely ambient conditions, spatial layout and functionality, and signs, symbols, and artifacts. Each plays a distinct

* Corresponding author.

E-mail address: alisha@uum.edu.my

role in shaping consumer responses. Ambient factors such as lighting, temperature, music, and scent affect customer mood and willingness to spend time in-store [2,12]. Functional aspects of space, including navigability and interior design, determine ease of movement and product accessibility, thereby reinforcing consumer trust and satisfaction [1,15]. Visual cues such as signs, symbols, and artifacts guide navigation, communicate brand identity, and enhance convenience, further contributing to positive evaluations of service quality [6,10]. Collectively, these dimensions operate through psychological and behavioural pathways to shape purchasing outcomes.

In Malaysia, the relevance of servicescape has become increasingly pronounced. Cultural nuances shape local consumer expectations, while a growing focus on sustainability and health-conscious consumption underscores the importance of creating service environments that align with evolving values [2,9,17]. Studies show that incorporating culturally resonant or eco-friendly design elements not only strengthens emotional connections but also influences purchasing intentions. In addition, the rapid diffusion of digital communication has magnified the role of consumer experience, as positive or negative encounters are easily amplified through social media [1,9].

Despite this evidence, supermarkets in Langkawi continue to prioritise promotions and advertising over investment in the physical environment of their stores. This oversight is particularly evident in three dimensions of the servicescape. First, space and functionality remain problematic. Even flagship locations such as Langkawi Fair Shopping Mall, the island's largest retail complex, offer fewer than 200 parking spaces despite their scale [23]. During peak tourist seasons or rainy periods, customers face significant inconvenience in securing parking and transporting goods, a challenge that is further compounded by no-plastic-bag policies. Such barriers discourage families, elderly shoppers, and tourists alike, sometimes leading to abandoned shopping trips and lost revenue.

Second, ambient conditions often fail to meet consumer expectations. In a tropical climate where heat and humidity are constant, inadequate air conditioning and ventilation make shopping physically uncomfortable. Shoppers frequently cut visits short, limiting browsing and impulse buying, while poor ventilation diminishes product presentation and store image. These environmental deficiencies not only reduce immediate purchasing behaviour but also erode long-term customer satisfaction.

Finally, signs, symbols, and artifacts are often underdeveloped in local supermarkets. In many outlets, signage directing shoppers to essential facilities such as washrooms or product categories is either unclear or poorly positioned. Customers waste time navigating the store, while families with young children experience added stress. The absence of clear visual communication undermines convenience, reduces trust, and deters repeat visits.

Taken together, the evidence suggests that while Langkawi supermarkets are proficient in implementing traditional marketing mix strategies, they have consistently undervalued the critical role of servicescape in shaping consumer experience. The neglect of spatial design, ambient comfort, and effective signage undermines consumer purchasing behaviour, loyalty, and long-term satisfaction. Addressing these shortcomings requires moving beyond conventional promotional activities to a more strategic focus on redesigning the physical environment. Drawing on Bitner's [4] Servicescape Framework and the Stimulus-Organism-Response model [18], this study aims to examine how perceived servicescape dimensions influence purchasing behaviour in Langkawi supermarkets. By doing so, it contributes to the literature on consumer behaviour in emerging markets while also offering practical insights for supermarket operators seeking to improve customer experience, foster loyalty, and strengthen their competitive positioning within Malaysia's retail sector.

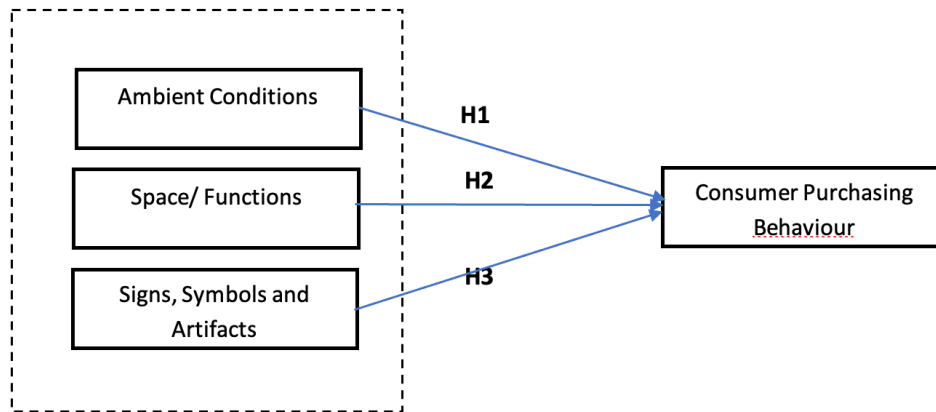


Fig. 1. Framework of perceived servicescape and consumer purchasing behaviour

2. Methodology

This study adopted a quantitative, correlational research design to investigate how dimensions of the perceived servicescape namely ambient conditions, spatial layout and functionality, and signs, symbols, and artifacts influence consumer purchasing behaviour in Langkawi supermarkets. A correlational approach was most appropriate since it enabled the researcher to examine associations between independent and dependent variables without manipulation, while also assessing the strength and direction of these relationships.

The population for this research consisted of supermarket consumers residing in Langkawi, a population recorded at 94,138 in 2020 by the Department of Statistics Malaysia. To determine an adequate sample size, the widely recognized Krejcie and Morgan [11] table was consulted, which suggested a minimum of 383 respondents. Given the practical challenges of reaching a dispersed consumer base, a non-probability convenience sampling method was used, allowing data to be collected efficiently from accessible participants. This aspect of research design is vital, as a larger sample size enhances the credibility of the findings and allows for a more nuanced understanding of consumer attitudes and behaviors toward the servicescape [20].

Data were obtained through a self-administered online questionnaire, distributed primarily via social media platforms such as WhatsApp and Facebook. A QR code linked to the survey was also circulated to maximize accessibility. The data collection process spanned approximately one month, ensuring adequate time for responses. The questionnaire comprised three sections. Section A gathered demographic information including gender, age, employment status, income, and supermarket visitation frequency. Section B captured perceptions of the servicescape, divided into three constructs: ambient conditions (e.g., lighting, music, colour schemes, and noise levels), spatial layout and functionality (e.g., ease of movement, store organization, and interior design), and signs, symbols, and artifacts (e.g., directional signage and other visual cues). Section C focused on consumer purchasing behaviour, addressing cognitive, emotional, and behavioural responses to the supermarket environment. All items were adapted from established scales [5] and measured using a five-point Likert scale ranging from strongly disagree to strongly agree.

Data analysis was conducted using SPSS software. Preliminary checks included reliability tests (Cronbach's alpha), assessments of validity, and normality testing using the Kolmogorov–Smirnov test. To address the study objectives, Spearman's rank correlation was applied to evaluate the strength of associations between servicescape dimensions and purchasing behaviour. Multiple regression analysis was subsequently used to identify the relative contribution of each servicescape factor in predicting consumer behaviour. Key outputs such as regression coefficients, significance

tests, and the coefficient of determination (R^2) provided insights into the explanatory power of the model and the dimensions most strongly linked to purchasing behaviour.

3. Results

3.1 Respond Rate

A total of 383 valid responses were collected for this study. The demographic profile revealed a fairly balanced gender distribution, with 53.5% male and 46.5% female respondents. Most participants were between 30 and 39 years old (44.1%), followed by those aged 40 to 49 (26.4%), while only 8.9% were above 49. The majority were employed full time (76%), reflecting an economically active sample, with income levels distributed across lower to higher brackets, though the largest group earned between RM 3001 and RM 4000. Shopping frequency varied, with half of the respondents visiting supermarkets monthly and about one-third weekly, indicating regular but not daily shopping patterns.

3.2 Reliability Statistics

Reliability testing confirmed acceptable to strong internal consistency across the study constructs. Cronbach's alpha values ranged from 0.675 for consumer purchasing behaviour (moderate but acceptable for exploratory research) to above 0.80 for space/ function and signs, symbols, and artifacts, indicating high reliability. Descriptive statistics showed mean values across all constructs ranged from 3.37 to 3.54 on a five-point scale, suggesting generally positive perceptions of supermarket environments. Space and functionality scored the highest, highlighting its salience in shaping consumer evaluations.

Table 1
Reliability statistics

Reliability Statistics		
Variables	Cronbach's Alpha	N of Items
Consumer Purchasing Behaviour	0.675	5
Ambient conditions	0.741	11
Space/Function	0.807	7
Sign, Symbols & Artifacts	0.858	5

3.3 Correlation Analysis

Correlation results indicated significant positive relationships between all servicescape dimensions and consumer purchasing behaviour. The strongest correlation was found for space/function ($r = 0.609$, $p < 0.01$), followed by ambient conditions ($r = 0.569$, $p < 0.01$), while signs, symbols, and artifacts showed a moderate yet significant relationship ($r = 0.474$, $p < 0.01$). Intercorrelations among the independent variables were also significant but remained below the multicollinearity threshold, allowing them to be included in regression models.

Table 2
Correlations analysis

		Correlations			
		DV	IV1	IV2	IV3
Consumer Purchasing Behaviour (DV)	Pearson Correlation	1	.569**	.609**	.474**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	383	383	383	383
Ambient conditions (IV1)	Pearson Correlation	.569**	1	.640**	.502**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	383	383	383	383
Space/Function (IV2)	Pearson Correlation	.609**	.640**	1	.592**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	383	383	383	383
Signs, Symbols & Artifacts (IV3)	Pearson Correlation	.474**	.502**	.592**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	383	383	383	383

** . Correlation is significant at the 0.01 level (2-tailed).

3.4 Regression Analysis

Multiple regression analysis demonstrated that the three servicescape dimensions jointly explained 43.5% of the variance in consumer purchasing behaviour ($R^2 = 0.435$).

Table 3
Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.659 ^a	0.435	0.430	0.42111

a. Predictors: (Constant), IV3, IV1, IV2

All predictors were statistically significant. Space/function emerged as the most influential factor ($\beta = 0.359$, $p < 0.001$), followed by ambient conditions ($\beta = 0.278$, $p < 0.001$). Signs, symbols, and artifacts also contributed, though with a smaller effect ($\beta = 0.122$, $p = 0.013$). These results confirm that while all dimensions of servicescape matter, the spatial design and functional aspects of supermarkets exert the greatest influence on consumer behaviour.

Table 4
Coefficients statistics

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.568	0.177		3.209	0.001
1 IV1	0.369	0.068	0.278	5.428	0.000
IV2	0.346	0.053	0.359	6.519	0.000
IV3	0.102	0.041	0.122	2.495	0.013

a. Dependent Variable: DV

3.5 Summary of Hypotheses

All three hypotheses were supported, affirming that ambient conditions, space/function, and signs, symbols, and artifacts significantly shape consumer purchasing behaviour in Langkawi supermarkets. These findings emphasize that consumers' shopping experiences are not only influenced by aesthetic and symbolic cues but are especially sensitive to the practical and functional aspects of the retail environment.

Table 5
Hypothesis results

	Hypothesis	Result
H1	The ambience conditions of the Langkawi supermarkets influence the consumers purchasing behaviour.	Supported
H2	The space/ functions of the Langkawi supermarkets influence the consumers purchasing behaviour.	Supported
H3	The sign, symbols and artifacts of the Langkawi supermarkets significantly influence the consumers purchasing behaviour.	Supported

4. Conclusions

The study on the role of perceived servicescape in influencing consumer purchasing behavior in Langkawi supermarkets establishes the importance of various dimensions of servicescape, highlighting how they critically shape shopping experiences beyond mere price or product availability. Research indicates that servicescape, defined as the aesthetic and functional attributes of a retail environment, significantly affects consumer purchasing behavior. Soegoto and Karamoy [22] argue that servicescape represents the physical environment that influences consumers' experiences and decisions at minimarkets, asserting its positive impact on purchasing decisions. This aligns with the findings of the current study, where spatial layout and functionality were identified as the most pivotal contributors to consumer behavior.

Moreover, emotional responses elicited in a well-designed servicescape bolster positive shopping experiences. Avan *et al.*, [3] elucidate that atmospheric components, which include ambient conditions and layout, significantly shape overall consumer impressions, reinforcing the idea that these environmental factors positively influence emotions that lead to purchasing decisions. The collective variance of over 40% explained by servicescape dimensions in the study corroborates earlier works emphasizing the multifactorial impact on consumer behavior, suggesting that both planned and unplanned purchases are stimulated by an appealing physical environment [2].

Spatial layouts, ambient conditions, and signage indeed play critical roles in fostering trust and customer satisfaction. Research by Griffiths and Gilly [8] supports the contention that customers are more likely to experience positive emotions and longer shopping duration in well-designed servicescapes, where elements like clear signage facilitate navigation and enhance shopping convenience. Conversely, deficiencies such as overcrowded aisles and poor ventilation can aggravate consumer frustration, jeopardizing loyalty and satisfaction [7,21]. This is particularly crucial in the context of Langkawi as a tourism-driven destination; thus, supermarkets must go beyond basic pricing strategies to cultivate an environment that meets the expectations of both locals and tourists alike. This view is reinforced by Liang *et al.*, [14], who assess the relationship between aesthetic servicescapes and customer satisfaction across various sectors.

Furthermore, the broader implications of integrating servicescape considerations into retail strategy highlight opportunities for supermarkets in other Malaysian tourist destinations such as

Labuan or Cameron Highlands. Retailers can enhance consumer satisfaction and loyalty through strategic investments in the layout and ambience reflective of local expectations. By focusing on these servicescape elements, supermarkets can create competitive advantages in a dynamic retail landscape, aligning with findings from multiple studies which advocate the significance of a harmonized servicescape in influencing consumer trust and repeat patronage [13,22].

In conclusion, the importance of servicescape within retail environments cannot be overstated. The synthesis of these findings emphasizes that a well-considered servicescape not only elevates consumer experiences but also contributes to the sustainability of the retail industry as a whole.

References

- [1] Asghar Ali, Muhammad, Ding Hooi Ting, Lina Salim, and Muhammad Ahmad-Ur-Rehman. "Influence of servicescape on behavioural intentions through mediation and moderation effects: A study on Malaysia's full-service restaurants." *Cogent Business & Management* 8, no. 1 (2021): 1924923. <https://doi.org/10.1080/23311975.2021.1924923>
- [2] Asghar, Awes, Ruba Asif, and Naeem Akhtar. "Servicescapes and social servicescapes: impact on perceived usefulness, choice satisfaction and behavior at fast-food restaurants." *Journal of Hospitality and Tourism Insights* 7, no. 4 (2024): 2121-2143. <https://doi.org/10.1108/jhti-03-2023-0125>
- [3] Avan, Ali, Ahmet Uyar, Özcan Zorlu, and Alparslan Özmen. "The effects of servicescape on the emotional states and behavioural responses of hotel guests." *Anatolia* 30, no. 3 (2019): 303-315. <https://doi.org/10.1080/13032917.2019.1575885>
- [4] Bitner, Mary Jo. "Servicescapes: The impact of physical surroundings on customers and employees." *Journal of marketing* 56, no. 2 (1992): 57-71. <https://doi.org/10.2307/1252042>
- [5] Ciceñaite, Egle, and Maria Maciejewska. "The role of the perceived servicescape in a supermarket." *Unpublished master's thesis*. Jönköping International Business School Jönköping University (2012). <https://www.diva-portal.org/smash/get/diva2:535481/FULLTEXT01.pdf>
- [6] Conti, Emanuela, Massimiliano Vesci, Paola Castellani, and Chiara Rossato. "The role of the museumscape on positive word of mouth: examining Italian museums." *The TQM Journal* 36, no. 7 (2024): 1823-1844. <https://doi.org/10.1108/tqm-12-2019-0306>
- [7] Dewi, Putu Surya Triana, Ardina Susanti, and I. Wayan Yogik Adnyana Putra. "Relationship between Coffee to Go's Serviscape with Brand Loyalty Perceptions of Z gens." In *ICON ARCADE 2021: The 2nd International Conference on Art, Craft, Culture and Design (ICON-ARCADE 2021)*, pp. 379-386. Atlantis Press, 2021. <https://doi.org/10.2991/assehr.k.211126.048>
- [8] Griffiths, Merlyn A., and Mary C. Gilly. "Dibs! Customer territorial behaviors." *Journal of Service Research* 15, no. 2 (2012): 131-149. <https://doi.org/10.1177/1094670511430530>
- [9] Kandampully, Jay, Tingting Zhang, and Anil Bilgihan. "The Role of the Servicescape in the Franchise Business Model." *Journal of Service Theory and Practice* 32, no. 6 (2022): 1–19. <https://doi.org/10.1108/JSTP-09-2021-0195>
- [10] Kim, Min Gyung, Hyunjo Yang, and Anna S. Mattila. "Effects of visual cues and social density on beverage consumption: A field experiment in a bar." *Cornell Hospitality Quarterly* 63, no. 2 (2022): 182-194.. <https://doi.org/10.1177/1938965520985498>
- [11] Krejcie, Robert V., and Daryle W. Morgan. 1970. "Determining Sample Size for Research Activities." *Educational and Psychological Measurement* 30 (3): 607–610. <https://doi.org/10.1177/001316447003000308>
- [12] Krisjanous, Jayne, Janet Davey, Bec Heyward, and Billie Bradford. "Servicescape insights in place of birth: from restorative servicescapes to co-curated transformative places." *Journal of Services Marketing* 37, no. 6 (2023): 746-761. <https://doi.org/10.1108/jsm-05-2022-0157>
- [13] Higgins, Leighanne, and Kathy Hamilton. "Therapeutic servicescapes and market-mediated performances of emotional suffering." *Journal of Consumer Research* 45, no. 6 (2019): 1230-1253. <https://doi.org/10.1093/jcr/ucy046>
- [14] Liang, Jianping, Suying Wang, Ben Haobin Ye, Vincent Wing Sun Tung, Ruixia Li, and Leilei Guo. "Hotel inspiration: how the substantive servicescape inspires customer satisfaction." *Journal of Hospitality & Tourism Research* 48, no. 8 (2024): 1554-1571. <https://doi.org/10.1177/10963480231220270>
- [15] Line, Nathaniel Discepoli, and Lydia Hanks. "A holistic model of the servicescape in fast casual dining." *International Journal of Contemporary Hospitality Management* 32, no. 1 (2020): 288-306. <https://doi.org/10.1108/ijchm-04-2019-0360>
- [16] Luhita, Tiladela. "The roles of servicescape in the retail business." *Jurnal Akuntansi, Manajemen dan Ekonomi* 20, no. 1 (2018): 11-15. <http://doi.org/10.32424/1.jame.2018.20.1.1255>

- [17] Shiratina, Aldina, Adnan Rajak, Yanto Ramli, and Nuri Putria Nirba Nirwana. "Servicescape and Service Quality in Creating Customer Loyalty." *Ilomata International Journal of Management* 2, no. 4 (2021): 274-281. <https://doi.org/10.1080/0965254X.2021.1894188>.
- [18] Mehrabian, Albert, and James A. Russell. *An approach to environmental psychology*. the MIT Press, 1974. <https://doi.org/10.1604/9780262130905>
- [19] Nair, K. Unnikrishnan, Deepak S. Kumar, and Keyoor Purani. "How well designed is your servicescape?." *Marketing Intelligence & Planning* 40, no. 3 (2022): 388-407. <https://doi.org/10.1108/mip-04-2021-0129>
- [20] Nuralam, Inggang Perwangsa. "Consumer environment stimulation: Are consumers aware of manipulation?." *Journal of Innovation in Business and Economics* 7, no. 01 (2023): 1-18. <https://doi.org/10.22219/jibe.v7i01.23137>
- [21] Shiratina, Aldina, Adnan Rajak, Yanto Ramli, and Nuri Putria Nirba Nirwana. "Servicescape and Service Quality in Creating Customer Loyalty." *Ilomata International Journal of Management* 2, no. 4 (2021): 274-281. <https://doi.org/10.52728/ijim.v2i4.273>
- [22] Soegoto, Agus Supandi, and Herman Karamoy. "Competitive Strategy Analysis to Increase Consumer Purchasing Decisions on Minimarket Business." *ETIKONOMI* 19, no. 1 (2020): 119-130. <https://doi.org/10.15408/etk.v19i1.14337>
- [23] Symphonylife. 2025. "Project." Accessed September 28, 2025. <https://www.symphonylife.my/project/langkawi-fair/>