Trying out New Cafes in Town: Assessing the Impact of Physical Environment on Visit Intention

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Abstract
In the face of substantial investments in café physical environment set-up, café’s owners and managers are giving little indication concerning their expensive set-up of a café’s overall effectiveness in driving consumer visit intention. This study hypothesized the new customers’ visit intention to a newly set-up café could be predicted by four physical environment factors: facility aesthetics, ambience, lighting, and spatial arrangement. Online survey questionnaires were distributed to 200 respondents using convenience purposive sampling approach, and Structural Equation Modelling (SEM) was implemented to examine the hypothesized relationships. While facility aesthetics and lighting in their current form do offer some “pull-factor” building benefits, their effect on visit intention is significantly stronger than ambience and spatial arrangement within a café. Thus, the investment of café physical environment does deliver some advantage, but conceivably not in the way the owners and managers desires. The café owners and managers should consider the importance of facility aesthetics and lighting in café layout and engineering design rather than overly focus on ambience creation and space arrangement.

Keywords:
Cafés; restaurant design; restaurant ambiance; visit intention; physical environment

1 Introduction
The number of café outlets at standalone locations in Malaysia had increased steadily from 2,435 in 2009 to 2,878 in 2016, showing that cafés/bars are currently ranked fourth regarding unit growth (Euromonitor International, 2016a). Moreover,
these cafés/bars are ranked third in terms of transaction growth at 26.2% over the five years (Euromonitor International, 2016a). As for the cafés/bars patronized through retail, their quantities also increased by 275 units, which displayed an increase of 21.4% in unit growth throughout five years with transaction growth of 26.5% (Euromonitor International, 2016a). Despite these investments, several academics have called the efforts of building physical environment of a newly set-up café into question by suggesting that they may be “burdensome” to the owners that heavily invested them (Bhakar, Bhakar, & Dubey, 2015) and even label them “cost ineffective” (Cheng et al., 2014).

To analyze the impact of the physical environment on intentional behaviour, researchers have begun to explore the revolving dimensions comprehend the concept of the physical environment of the restaurant. Baker et al. (2002), Ryu and Jang (2007), Teng, Wu and Liu (2012), and Njite et al. (2015) for instance, verified that physical environment factors such as design, facility aesthetics, ambiance and music; food quality; and employee factors do play some significant role in determining behavioural intentions such as emotions, willingness to pay and visit intentions. Moreover, researchers (Gueguen & Petr, 2006; Ryu & Han, 2011; Basera, Mutsikiwa & Dhliwayo, 2013; Odeh & As’ad, 2014) have investigated the relationship between the same physical environmental factors by considering the effects of length of time spent by customers, perceived disconfirmation, customer satisfaction, and loyalty. Despite substantial attention, our understanding of how and whether the physical environment of a newly established café can influence customer visit intention remains unsubstantiated (Heung & Gu, 2012; Rajic & Dado, 2013).

The critical issue involves how the physical environment that a café offer customers interacts with visit intention, even as café owners and hospitality managers use physical environment to pursue their strategic marketing goals, little is known about the relationship that physical environment with the “cornerstone” of marketing (Berry, 2000), the firm’s brand equity. Based on the reviews of the past researches, three research gaps were identified. Firstly, the context gap was established as most studies were explicitly focused on fast food outlets, restaurants, and shopping malls rather than café settings. In addition to that, the target respondents of the past researches were mostly diners and patrons of the food and beverage outlet or the customers who already had prior consumption experience before taking part in the surveys conducted. Secondly, past researches, DINESCAPE was one of the most common concepts used to explain the influence of physical environment apart from SERVICESCAPE.

However, DINESCAPE differs from SERVICESCAPE as the former did not include the external physical environment of the food and beverage outlets such as parking space and external building design; and non-dining areas such as toilets and waiting area whilst it included the human factor (service employee factor) when measuring the impacts of physical environment (Ryu and Jang, 2008). Lastly, the area of focus gap needs to be addressed as most of the past researches are heavily focused on customer’s dining
experiences, customer satisfaction, loyalty and revisit intentions rather than visit intentions.

As a result, little is known about how the consistent and stable café physical environment can influence consumer choice behaviour, most notably, the customers’ trial behaviour. Given that the aim of this physical environment is to attract new customers, this study examines the inter-section between perceived attractiveness and trial intention by examining how the physical environment of a café such as their aesthetics design, ambience, lighting, and spatial arrangement may influence the effectiveness of consumers’ visit intention.

2 Literature Review

For any development of the restaurant’s physical environment to be effective at increasing customer visit intention, customers will value that physical environment with symbolic understanding or representation (Reimer and Kuehn, 2004). By this belief, customers will perceive value towards the physical environment (Zeithaml 1988) for them to choose to participate in it. This notion is consistent with the cue utilization theory by Camillo (2015), where consumer choice behaviour is guided by identifiable intrinsic and extrinsic cues where it exerts influence on an individual’s information search process that can subsequently influence the perception and evaluation of a customer’s service options. According to Cox (1967), as cited in Reimer and Kuehn (2004), cue utilization theory stated that products or services comprise an array of cues, which act as surrogate indicators of the particular product’s quality in the form of intrinsic or extrinsic cues. In the case of cafés, cue utilization theory identifies café product-related characteristics that exist in the form of physical composition like shape, size and colour as intrinsic cues while its non-product-related characteristics that are not consumable but can be altered without changing the product’s nature such as brand name, packaging and price are identified as extrinsic cues.

Facility aesthetics play a role in influencing the customer’s traffic to a restaurant while having an impact on the restaurant’s revenue (Ryu and Han, 2010). For instance, having windows in the café could be attractive to certain customers. This is supported by Heung and Gu (2012) who pointed out that having a good view from the restaurant window could potentially be a selling point as the availability of a window table could influence a customer’s seating choice. Furthermore, researches showed that facility aesthetics such as artwork, wall décor, furniture, colour, and flora is a significant physical environment factor that can elicit responses of emotional pleasure and perceived disconfirmation in customers, which could enhance their behavioural intentions such as visit intention and word-of-mouth (Ryu & Jang, 2007; Ryu & Han, 2010). This suggested the impacts of facility aesthetics of a service setting on the formation of customer’s expectations or impressions, which can influence their visit intention. Therefore, we expect the following:
Hypothesis 1 (H1): Facility aesthetics of a café has a positive influence on the customer’s visit intention.

Other than interior design, the music played in a service setting contributes to image building, attracting attention and controlling the store’s traffic (Basera, Mutsikiwa & Dhlhiwayo, 2013). Ryu and Jang (2007) further discussed how restaurateurs could manipulate background music by altering volume level, music genre, and song tempo accordingly to induce a pleasant feeling in customers. By eliciting positive emotional responses such as pleasure and arousal within the customers, it helps to improve the customers’ behavioural intentions, which will ultimately influence their re-patronage intention, word-of-mouth recommendation, length of stay and so on (Ryu & Jang, 2007).

Petzer and Mackay (2014) define these intangible characteristics of a café’s environment as ambience. In a service environment, ambience motivates customers to consume service, which eventually drives their behaviours towards the service provider (Nguyen & Leblanc, 2002). For instance, the high noise level may trigger physical discomfort while the temperature of a venue may induce shiver or perspiration in people, which will have an impact on the customer’s choice to visit and enjoy the environment (Bitner, 1992). Also, Bitner (1992) also mentioned how service providers could utilize environmental cues such as wafting fragrance from freshly baked products to attract customers to enter cinnamon roll bakeries.

For instance, the positive influences of classical and popular music on the customer’s buying intention are higher than easy listening, and no music played (North and Hargreaves [1998] as cited in Wilson (2003) whereas playing high volume music do not attract customers to visit the shopping center (Ramlee & Said, 2014). As for the scent, past researches showed that it has a favourable influence on customer’s behaviour (Gueguen & Petr, 2006; Ryu & Jang, 2007; Basera et al., 2013). Similarly, Odeh and As’ad’s (2014) research highlighted the way a pleasant scent plays a major role in motivating customers to purchase a product. Thus, we anticipate the following:

Hypothesis 2 (H2): Ambience of a café has a positive influence on the customer’s visit intention.

Other than that, past studies also showed that lighting could influence the frequency of customers’ visit to retail brands by attracting them to patronize the shops (Basera et al., 2013). For example, shops can set lighting to create a sense of excitement by using bright lighting to induce positive customer’s behaviour towards the business (Basera et al., 2013). Odeh and As’ad (2014) further pointed out the impact of lighting on the amount of money and time spent by the shoppers in a shopping mall, unplanned purchase and their satisfaction. This highlights the importance of having a sufficient range of lighting to influence the perceptions of the customers towards the service quality portrayed by the business managers (Rajic & Dado, 2013).

In upscale restaurants, lighting is identified as one of the most noteworthy physical stimuli where subdued, warm and comfortable lighting reflects full service and relatively high prices while bright lighting denotes fast service and more affordable prices (Ryu &
This shows that lighting plays a major role in creating the desired atmosphere such as a comfortable and warm atmosphere or romantic and intimate atmosphere in a dining outlet. Hence, we hypothesize the following:

**Hypothesis 3 (H₃):** Lighting of a café has a positive influence on the customer's visit intention.

Ryu and Jang (2008) identified spatial arrangement as a separate dimension from facility aesthetics because the essence of spatial arrangement centers around the psychological and physical attributes within the dining space such as crowdedness and ease of movement, unlike facility aesthetics which focuses on aesthetic elements that create an aesthetic image or environment such as pictures, wall decorations, and flowers. Spatial layout is a significant determinant that can influence the perceived disconfirmation of repeat visitors, i.e. seating comfort and dining privacy (Ryu & Han, 2010). Heung and Gu (2012) further discussed the implication of using an appropriate number of seats in a restaurant design to provide better dining privacy and a higher level of comfort to the customers, which will serve as a competitive advantage in such an intense industry. Spatial arrangement, also known as spatial layout, was defined by Nguyen and Leblanc (2002) as the arrangement of buildings, furniture, and equipment in a service set based on the needs of service delivery process. It emphasizes the seating arrangement and psychological properties of spatial layout such as perceived crowdedness (Heung & Gu, 2012). For instance, a table and seating arrangement are essential to the restaurant customers because adequate space is needed for moving around and comfortable seating (Han & Ryu, 2009).

Baraban and Durocher (2001) stated that the spatial arrangement in a restaurant should be orderly at all times and have the ability to guide customers and staff in a logical progression from space to space, exterior to the entrance to the dining area, from back-of-the-house to front-of-the-house. Having a range of restaurant dining space allows customers to have more options and it engenders a more complicated space that makes it more desirable (Yu, 2009). In other words, having various seating layout and sufficient seating space between tables in the dining area would encourage customers to visit the outlet. Hence, we hypothesize the following:

**Hypothesis 4 (H₄):** Spatial arrangement of a café has a positive influence on the customer's visit intention.

Based on the above arguments and propositions, four hypotheses were developed. Figure 1 below displays the conceptual framework of environmental factors affecting visit intention.
3 Methodology

This research requires prompting of photo stimuli a sampled café before the respondents could answer the questionnaire. The essence of incorporating photo stimuli into the research is to create conditions that are as close to the reality as possible, particularly for researches that focus on object perception, context processing and viewpoints (Brodeur et al., 2010). At the same time, it acts as a ‘trigger’ to gather more projective data based on the respondents’ feedback and emotions (Margolis & Pauwels, 2011). The main purpose is to contextualize the respondents’ thinking and responses to the physical environment of cafés, which will contribute to a better understanding of the topic before they proceed to answer the related questions.

Therefore, a total of four images of a selected café were chosen: the first image mainly illustrated the café’s exterior design; the second and third image portrayed different angles of the café’s interior that includes design, tables and chairs, décor, ambience, lighting as well as spatial arrangement; while the final image showcased a high-angle shot of the café’s interior to provide a wider overall view of the design, tables and chairs, décor, ambience, lighting, and spatial arrangement. The respondents were the “café-goers,” which refers to the persons who go to a café regularly and are above 18 years old. The sample size was estimated to be 129 respondents based on the sample size calculation from G*Power Version 3.1.9.2, a statistical software package developed by Faul et al. (2007).

A total of 200 valid responses were gathered. The sample was made out of 30% men and 70% women, and the average age group was 18-35 years old. The respondents were preponderantly young working adults (64%), university students (28%), with small percentages of baby boomers and retiree. The sample was generally Malaysian (88%) and the rest is non-Malaysian. The median monthly income range was RM3,500 to RM4,500.
The multiple-item construct was incorporated addressing facility aesthetics and ambience with four items, and lighting and spatial arrangement with three items respectively. Hence, a part of this survey is a standardized instrument, which was adopted based on the measurement items from Ryu and Han (2010) and Heung and Gu (2012). All variables were measured using 5-point Likert-type scales (as shown in the appendix). A measurement model containing all variables was estimated, where all items were forced to load on their respective factors. The measurement model fit the data well, $\chi^2(df = 60) = 450.36$, normed fit index (NFI) = 0.76, standardized root means square residual (SRMR) = 0.08. Convergent validity was established, as an analysis of the $t$ values shown that all items loaded highly and significantly on their proposed variable and the average variance extracted for each multi-item construct exceeded 0.50 (Fornell and Larcker 1981). The square root of the average variance extracted for each construct also surpasses the correlation with all other constructs in the research model, indicating discriminant validity (Fornell & Larcker 1981).

Table 1: Scale Statistics and Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
<th>AVE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ambience</td>
<td>4.04</td>
<td>0.60</td>
<td>0.89</td>
<td>0.67</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Facility Aesthetic</td>
<td>3.74</td>
<td>0.59</td>
<td>0.87</td>
<td>0.63</td>
<td>0.36</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Lighting</td>
<td>3.85</td>
<td>0.57</td>
<td>0.86</td>
<td>0.68</td>
<td>0.53</td>
<td>0.40</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Spatial Arrangement</td>
<td>3.87</td>
<td>0.73</td>
<td>0.90</td>
<td>0.76</td>
<td>0.63</td>
<td>0.34</td>
<td>0.45</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>5. Visit Intention</td>
<td>3.33</td>
<td>0.58</td>
<td>0.92</td>
<td>0.80</td>
<td>0.32</td>
<td>0.50</td>
<td>0.40</td>
<td>0.24</td>
<td>0.89</td>
</tr>
</tbody>
</table>

*Note. The square root of the AVEs are provided on the diagonal in bold italics. CR = construct reliability; AVE = average variance extracted. * $p < .05$.

4 Findings

4.1 Hypothesis Testing Results

A structural equation model was assessed to examine H1, H2, H3, and H4. H1 and H3 were supported, but H2 and H4 were rejected. The structural equation model provided good fit to the data, $\chi^2(df = 200) = 449.71$, NFI = 0.76, SRMR = 0.08. Both facility aesthetic ($\beta = .41$) and lighting ($\beta = .21$) significantly affected visit intention ($p < .05$), hence H1 and H2 were supported. However, ambience ($\beta = .11$, $p > .05$) and spatial arrangement ($\beta = -.06$, $p > .05$) show insignificant causation to visit intention, hence both hypotheses were rejected. In all, the predictor variables explained 31 percent of the variance in visit intention.
Table 2: Results of Hypothesis Testing (H1-H4)

<table>
<thead>
<tr>
<th>Hypothesized Paths</th>
<th>CS</th>
<th>$R^2$</th>
<th>Hypothesis Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Facility Aesthetic → Visit Intention</td>
<td>0.41**</td>
<td>0.31</td>
<td>Supported</td>
</tr>
<tr>
<td>H2: Ambience → Visit Intention</td>
<td>0.11</td>
<td></td>
<td>Rejected</td>
</tr>
<tr>
<td>H3: Lighting → Visit Intention</td>
<td>0.20*</td>
<td></td>
<td>Supported</td>
</tr>
<tr>
<td>H4: Spatial Arrangement → Visit Intention</td>
<td>-0.06</td>
<td></td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Note: CS = completely standardized coefficient; *p < .05, **p < .01.

The results provide a better understanding of the interaction between the physical environment and visit intention. For this sampled café’s physical environment, the study demonstrates that its perceived attractiveness in physical environment enhances consumer visit intention however restrictive to facility aesthetics and lighting. This finding provides evidence that showcasing consumers an attractive facility aesthetics and lighting can benefit a café especially when it was newly established. This finding concurs with past researches of Ryu and Jang (2007), Ryu and Han (2010), Heung and Gu (2012) and Moslehpour, Aulia and Masarie (2015), which highlighted the link between facility aesthetics and visit intention. Consequently, this study concludes that a café physical environment in specific to facility aesthetics and lighting in their current form are fundamentally effective at driving consumer intention to visit.

However, café ambience and its spatial arrangement do not show a predisposition to trigger consumers’ intention to visit. This finding disagrees with past researches of Gueguen and Petr (2006), Ryu and Jang (2007), Basera, Mutsikiwa and Dhliwayo (2013) and Odeh and As’ad (2014). This disagreement can be explained by the cultural differences between the past researches and this study. Malaysia is identified as a collectivistic society with a self-image of “We” rather than “I” (Noordin, 2009; Geert Hofstede, 2016). As such, it implies that the respondents of this research who are mostly Malaysians, are more likely to prioritize the social values and belonging needs rather than the ambience (i.e., music, scent, and the overall atmosphere) and spatial arrangement which deter the motives of collectiveness. Sociability is the main commodity offered by cafés (Grafe & Bollerey, 2007; Jolliffe, 2010).

4.2 Theoretical Implications

This study is the first that we have seen that examine the physical environment and visit intention in specific to café. Although Ryu and Jang (2007) outlined the possibility of how physical environment can influence guest satisfaction, there have been few if any direct tests of the effects of physical environment on behavioural consequences in explicit to new comers’ visit intention. Having examined the matter of perceived attractiveness, this research validates the need for research not only on the impact of the physical environment and visit intention but also on consumer attitudes towards newly opened café. Future research can build on this work to empirically identify how owners and managers can increase consumers’ positive perceptions towards newly opened café.
established café and the impression of such initiatives on a broader collection of attitudinal assessments of the café.

More generally, this study expresses directly to the call by Heung and Gu (2012); and Rajic and Dado (2013) for more examination on café visit intention, a subject they have deliberated in extensive depth. Most research on the physical environment has examined models that link the aesthetics design, layout, ambience and lighting on customers’ satisfaction and brand loyalty (notably, Baker et al., 2002; Ryu and Jang, 2007; Teng, Wu and Liu, 2015; and Njite et al., 2015). This research extends findings from these initial models by indicating the corresponding role of the perceived attractiveness on the physical environment in predicting customers’ visit intentions given the novelty of a café. Future studies can build on these results to test whether further investment in renovating café is worth the cost. Given our results, it is quite possible that improved physical environment for older cafés may able to provide enough of an increase in new customers to justify their expense when other marketing efforts may be more successful at generating enduring customer loyalty.

4.3 Managerial Implications

Conceivably the most significant implication of this study is the prominence of linking the physical environment investment decision with the brand positioning effectiveness. Café owners and managers need to accurately level the strength of a brand image developed given the physical environment, given that customers’ perceptions of café interior and exterior outlook have a direct influence on their visit intention especially in the area of facility aesthetics and lighting. We now recognize that more appealing outlook of a café stands to increase more potential visitors than less appealing café given the context of novelty in the market. By implication, this seems to suggest that Facility Aesthetics such as the exterior and interior designs, tables and chairs and décor of a café have a collective effect towards Visit Intention. Other than that, the lighting system of a café that encompasses features such as the brightness and comfort level are equally important in café design decision making.

Due to the significance of physical environment in affecting visit intention, café owners and managers should uphold an emphasis on up keeping with art works and design related to interior and exterior facilities in ensuring that the café offers tangible value as part of the reflection of service quality. This study suggests that the provision of a highly valued physical evidence of a café can increase the intention of visits. For new cafés, physical evidence not only influence consumer visit intention under certain conditions but can also strengthen consumer interpretation toward the brand. As such, the results suggest two approaches. Newly set-up cafés need to focus on distinguishing their physical environment especially artworks design and lighting from their competitors and similarly on aggregate the perceived emotional and social value provided by their physical environment. One way to upgrade perceived emotional and social value is to position their café design as being a relevant and up-to-date fashion. Café owners and managers must also work to deliver expressive and personalized taste
of aesthetics, social and emotional reflection that match their intended market segments. These simple changes can lead to increases in both consumer visit intention and referral behaviour (Kivetz and Simonson 2003).

Irrespective of a café’s marketing strategies, their impact on consumer visit intention will differ conferring to the consumers’ characteristics (Meyer-Waarden 2008). In specific, physical attractiveness is particularly ineffective at increasing pursuing consumers who are inclined to be faithful to long established café brands rather than new ones. Nevertheless, enhancements in the perceived attractiveness of a café will potentially attract the café switchers, subsequent in increases in walk-in among a café’s least desirable customers, who are just shopping around. Therefore, when an upgraded physical environment seems to be drawing in more new customers, a café is unlikely to convert these customers into loyalists unless the café continues its effort in value creation. That appears improbable given the competitive nature of the café industry in Malaysia. Though that condition appears discouraging, the result of this study highlights the importance of better consumer research and segmentation towards the effectiveness physical environment investment among new cafés set-up.

The push toward aesthetics facilities and proper lighting reasons for a requirement for better distinction of café attributes to ensure that new customers recognize the uniqueness that represented through their outlook comparative to the competition. Just as a restaurant would certainly not introduce a new dish without enough differentiation from their competitors, the physical environment needs to be placed alongside the competitive options. Design elements that might realize this comprise differential corner with theme decorations for specific interest group of customers, artworks and lighting effects that are hard to duplicate.

5 Conclusion

In conclusion, as this research examined the effectiveness of physical environment in the context of newly established café, future studies are required to determine whether the outcomes of this study too applicable in the context of new franchised café. If café goers may be more willing to visit a new café that has to tie up with the international franchise. Given that consumers have a greater inclination for franchised café, it would be interesting to explore whether a new local café can gain instant recognition by joining hands with well-established brands with moderate spending on the physical environment.

6 About the author

Dr. Daniel Chong served as a Food & Beverage operation manager, F&B consultant, and training manager in various multinational hotel groups, hospitality consulting firm, and multinational franchised restaurants before joining the education line. Besides from teaching, he also actively involves in research and published research articles about the hospitality challenges and opportunities faced in Asia. Nestle Professional has awarded
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7 References


