The Effect of a Restaurant’s Physical Environment on Customer Repurchase Behaviour: A Case Study of An Upscale Restaurant

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Abstract: With the increasing number of restaurants being opened annually, restauranteurs can not only pay attention to the food and service, but also to the restaurant’s physical atmosphere. This study focuses on DINESCAPE as the theory for physical environment. It aims to find whether or not the factors of DINESCAPE affect customer repurchase behavior in an upscale restaurant. This is a quantitative descriptive research and uses questionnaires to obtain its data. 132 data from questionnaires are obtained from customers that have dined at Restaurant X. Restaurant X is an upscale restaurant located in the heart of Jakarta. Multiple linear regression is used to analyze the data and obtained the result. Result shows a strong relationship of 67.9% from physical environment towards customer repurchase behavior. Each hypothesis regarding the factors of DINESCAPE are accepted and shows that each factor of DINESCAPE affect customer repurchase behavior. Based on the findings, recommendations for Restaurant X include, but not limited to, improving the restaurant facility aesthetics such as lighting and themed decorations to stimulate repurchase behaviours.

Keywords: Guidelines, formatting instructions, conference publications

1. Introduction

The culinary industry continues to grow rapidly especially in Indonesia. Based on the data from Badan Pusat Statistik Indonesia, 38.57% of all culinary establishments in Indonesia were created after 2009 (Statistik, 2015). In 2013, there has been 5.78% economic growth compared to the year before (Suryowati, 2014). The hotel and restaurant industry is the third largest contributing factor of Gross Domestic Product (GDP) for Indonesia with a contribution of 1.07% out of 5.78% (Fahwani & Thom, 2014; Suryowati, 2014). And in 2015, the restaurant industry in Indonesia continued to grow with an increase of 3.89% compared to the year before (Fahwani & Thom, 2016). Based on the data from BEKRAF 2016 or also known as The Creative Economy Agency, Indonesia’s economy is dominated by 3 sub-sectors; culinary (41.69%), fashion (18.15%) and, creative (15.70%) from Indonesia’s total GDP (BEKRAF, 2017). It is also revealed that sub-sector culinary contributed 30% of the total revenue of the tourism sector and the creative economy (BEKRAF, n.d.).

One of the things we can see to know whether a business is successful is to look at the customers. As stated by (Sabir, Irfan, Akhtar, Pervez, & Rehman, 2014), customers are the judges for determining the success of a product/service. In the hospitality industry, it is important to know and understand what the customers want in order to survive the fierce competition (Lu, Berchoux, Marek, & Chen, 2015). By understanding what customers want, it can lead to satisfied customers which can lead to repeat sales in the future, known as customer retention (Ryu, Han, & Jang, 2010). According to BusinessEncyclopedia.com, customer retention means the ability of a business to retain/keep their customers (Shopify, n.d.). It is also believed that retaining customers cost the company less than gaining new customers (Rosenberg & Czepiel, 1992). Other than that, customer retention also paves the way for future research and development of the product/company (Singh & Khan, 2012).
Sabherwal (2011) believes that customer deserves proper treatment for what they pay by showing them that besides good food and service, the restaurant atmosphere may invite them to come back, cited from (Malhotra, 2015). A restaurant’s atmosphere has a great impact on its restaurant’s image, which can act positively or negatively towards customer perception of the restaurant image. According to Kotler (1973) atmosphere is always present as a quality of the surrounding space and sometimes is considered more important than the food (Heide & Grynhaug, 2009; Kotler, 1973). Eating out is more than just going to a restaurant to eat. People may be seeking new experience, and atmosphere plays a critical part in creating those experiences (Ryu & Han, 2011). Choy, Lam, and Lee (2012) stated that things such as atmosphere, food quality and service quality contribute greatly to the success of restaurants (Petzer & Mackay, 2014). In addition to food and service, physical surrounding is an important aspect in creating image and influencing customers’ behavior in the restaurant industry. A restaurant atmosphere / physical environment is the first thing that customers come into contact with upon entering the restaurant (Tuzunkan & Albayrak, 2016). It is believed that the physical settings of a restaurant might influence human behavior and also be a determinant factor in affecting customer satisfaction that may lead to customer retention (Bitner, 1992; Ryu & Han, 2010; Zakaria et al., 2014).

The usage of social media increases in a time where restaurants are struggling with competitors and declining number in visitors. To cater to these changes, establishments are changing their atmosphere to create an aesthetic “Instagram”-able moments (Garcia, 2017). As a result, more establishment is taking advantage of the restaurant atmosphere and social media to retain customers as acquiring new customers is five times more expensive for the company than it is to satisfy and retain customers (Kotler & Keller, 2009).

2. Literature Review

2.1. Marketing Mix

According to Kinnear & Bernheerd (2002), marketing mix describe the strategic position of a product in the marketplace cited from (Al Badi, 2015). The traditional marketing mix originally consist of 4P’s; Price, Product, Place, and Promotion. However, Lovelock and Wirtz (2007) developed and added 3 new P’s that are appropriate for the service industry (Process, People, and Physical Environment).

2.1.1. Physical Environment / Atmospherics

The term atmospherics can be used to describe the controllable characteristics of a physical environment which may enhance and influence certain behaviour from customers that will lead to purchase probability (Bitner, 1992; Kotler, 1973). Atmospherics is assumed to be more important to customers of upscale restaurant. The consumption of hedonic activities is mainly driven by emotional motives where pleasure is sought. It is driven more by emotions rather than its usefulness. Because of this hedonic character, customers of an upscale restaurant will likely be more sensitive and pay attention to its physical surrounding (Wakefield & Blodgett, 1994). Customers of upscale restaurant also spend few hours dining and will consciously and unconsciously observe their physical surrounding (Wakefield & Blodgett, 1996). It is widely believed that the quality of food and the professionalism of the service personnel may be an important aspect to customers of an upscale restaurant. However, it is also recognised that the physical environment of the restaurant is also very important as they can determine customer’s intention to re-visit (Wakefield & Blodgett, 1996). No matter how tasty the food is, customer’s reaction towards a meal is always going to be influenced by their surrounding physical environment (Spence & Piqueras-Fiszman, 2014). And, based on Kotler (1973) research results, some restaurant concludes that atmosphere is believed to be the main factor in making a successful restaurant and sometimes is considered more important than the product itself (Kotler, 1973). A well-designed restaurant won’t distract from the food, and especially not from the conversation. Instead, it will subtly contribute to one of those memorable evenings when everything clicks: the meal, the service and the warm vibes (Dapkevičius & Melnikas, 2009; Judkis, 2015).

This research will use theory by Ryu & Jang, (2008) called DINESCAPE, which is a measuring scale that focuses only on the dining areas of the restaurant. DINESCAPE is the man-made physical
environment and humans surrounding dining areas of restaurant. It does not deal with external environment like parking lot and non–dining environment like restroom. DINESCAPE includes six dimensions, which are: facility aesthetics, lighting, ambience, layout, table settings, and service staff (Ryu & Shawn Jang, 2008).

2.1.1.1. Facility Aesthetics
Facility aesthetics are the interior designs and decoration of the restaurant, which add to the attractiveness of the restaurant. A lot of restaurants use facility aesthetics to create restaurant themes (Tuzunkan & Albayrak, 2016). Attractive interior décor will create more interesting customers’ experience while dull colored wall may appear boring (Wakefield & Blodgett, 1994).

2.1.1.2. Ambience
Ambience can be another word to explain the non–visual, intangible background conditions in the environment. It includes background characteristics like music, temperature and scent (Milliman, 1982; Ryu & Han, 2011).

2.1.1.3. Layout
Layout refers to how the objects inside the restaurant are placed and arranged as they are believed to affect customer’s comfort (Ryu & Han, 2011; Wakefield & Blodgett, 1994). Layout may create confined feeling to customers which will affect their excitement levels, quality perception, and their desire to re-visit (Wakefield & Blodgett, 1994). According to Ching (1996) cited in (Lin, 2004), the positions of furniture may act as a wall to create visible and invisible boundaries. The height of ceilings may also be associated with certain feelings because high ceilings shows spaciousness while low ceilings are often linked to intimacy taken from Ching (1996) cited by (Lin, 2004).

2.1.1.4. Table Settings
Upscale restaurants must show off a prestigious and a high–class impression. Setting up the table with high–quality china, flatware, glassware, table decorations and linen can enhance the elegant image and influence customer’s perception of the restaurant (Ryu & Han, 2011). Utensils used by the customers can affect the taste of the food and make the food taste better or worse (Michel, Velasco, & Spence, 2015). Candles can be placed on the tables to create intense atmosphere. The shadows created by the flickering flames creates dramatic shadow patterns while the flames enhance people’s appearances and make the food look more appetizing (Quinn, 1981).

2.1.1.5. Lighting
Lighting is believed to be an important factor in interior design as it increases the aesthetic appeal and influences the mood and atmosphere of the restaurant (Malhotra, 2015). Lighting can also be used to draw the attention away from certain areas or to attract and highlight a certain area of the restaurant (Petzer & Mackay, 2014). Appropriate lighting can make dull plain walls and ceiling looks more interesting (Quinn, 1981). It has the ability to arouse individuals and is an important determinant of its surrounding because “brightly lit rooms are more arousing than dimly lit ones”. Also, individuals prefer illumination levels that produce appropriate levels of arousal said Mehrabian, (1976) cited in (Areni & Kim, 1994).

2.1.1.6. Service Staff
Service staff is represented by the employees that work in the restaurant. It includes the appearance of the employees and the number of employees (Ryu & Han, 2011). The uniforms worn by the employees can contribute to the color and theme of the restaurant (Quinn, 1981).

2.2. Customer Repurchase Behaviour
Consumer behaviour is define as someone’s decision and activities of selecting, purchasing and consuming goods and services for the satisfaction of their wants (Ramya & Ali, 2016; Sandhusen, 2000). A purchase decision is the results of a lot of factors such as shopping habits, purchase behaviour, brands, etc. (Ramya & Ali, 2016).
The “black box model” above shows the nature of consumer behaviour, focusing on when, why, how, and where people do or do not buy their products (Sandhusen, 2000). The stimuli enter customer’s “black box” and interact with customer’s characteristics and decision process which lead to a series of output in the form of purchase decision (Ramya & Ali, 2016).

Stimuli
There are two types of stimuli; marketing stimuli and other stimuli. Marketing stimuli, which could be control by management, includes 4 P’s. While other stimuli are beyond the management control and includes political, social, economic, and technological aspects (Ramya & Ali, 2016; Sandhusen, 2000).

Buyer’s Characteristics
There are 4 factors that will influence a customer behaviour; cultural, social, psychological, and personal. Psychological and personal are internal characteristics that determine customer’s behaviour. While cultural and social are external characteristic determine by our surrounding (Ramya & Ali, 2016).

2.2.1. Consumer Buying Decision
There are 5 steps included in a customer’s buying decision process; recognition, product awareness, evaluation, intention, and post – purchase behaviour.
- Recognition: customer recognise their need to buy a product
- Product awareness: an attempt is made to gain knowledge about the product
- Evaluation: The product chosen to fulfil customer’s needs are evaluated in terms of pros and cons
- Purchase Decision: Consumer acts and will purchase the product. In this step, it could happen to new customer or repeat customers. This study will focus on repeat customers.
- Post – purchase behaviour: how a customer feel after using / consuming the product (Khan, 2006a, 2006b).

2.2.1.1 Customer Repurchase Behavior
Traditional market approach used to believe that company can be successful by gaining new customers and increasing market share. However, things are different now. Obtaining new customers, keeping existing customers and maintaining a good relationship with them, and increasing revenue is the Customer Relationship Marketing (CRM) approach of the modern days (Ahmad & Buttle, 2002; Sarvari, Ustundag, & Takci, 2016). Repurchase can also be known as customer retention, in this study the author will use the term repurchase behavior (Curtis, Abratt, & Rhoades, 2011; Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004; Thurau & Klee, 1997). Repurchase behavior itself means the ability
of customer to purchase product or service to the same establishment in more than one occasion (Curtis, Abratt, & Rhoades, 2011).

Many believed that satisfaction can lead to behavioural intention like repurchase and positive word–of–mouth (Jalil, Fikry, & Zainuddin, 2016). Customer satisfaction may act as an indicator for repurchase and satisfied customer are more likely to continue purchasing and maintain the relationship compare to those that feel dissatisfied (Curtis, Abratt, Dion, et al., 2011; Jing-bo, Zhe, & Long, 2008). When a customer is satisfied, their psychology manifestation is satisfaction and their behavioural is customer retention (Jing-bo et al., 2008). However, other research also says that it is possible for customers to repeat purchase and not feel satisfied and to feel satisfied and not repeat purchase (Shankar, Smith, & Rangaswamy, 2003).

Research done by Aspinall, Nancarrow, and Stone (2001) showed that retaining customer is more important than acquiring new customers (Aspinall, Nancarrow, & Stone, 2001). Acquiring new customers costs the company five times more than satisfying and retaining them (Kotler & Keller, 2009). Just like products, customers are acquired, retained and their value can grow over time (Ang & Buttle, 2006). Reichheld (1996) said that even a 5% increase in customer retention will result in a 75% increase in net present value (Eliwa, 2006). Retained customers may pay higher than new customers and are less likely to pay discounted prices meant to acquire new customers (Ang & Buttle, 2006).

3. Methodology
3.1. Sample and Procedure
This research will focus on customers of Restaurant X, an upscale restaurant in the center of Jakarta. The population would consist of customers of Restaurant X that have returned at least once therefore it is unknown. Sample is the subgroup of the population chosen for participation in the study (Uma Sekaran, 2003; Surbhi, 2016). The purposive judgemental sampling from non–probability sampling method is chosen for this study. The purposive judgement sampling method choses participants from a specific target groups or those with certain characteristics, attitudes, or experiences (Sekaran and Bougie, 2013; Cooper and Schindler, 2014). In this case, those that have dine at restaurant X.

3.2. Measurements
The operating variables consist of question adopted from previous study from Wakefield & Blodgett (1996), Ryu & Jang (2008), Idris (2013) and Hussain & Ali (2015). It comprises of 34 questions in total, which includes 1 screening question and 3 questions about respondent profile. Pre – test are done to 30 respondents and shows that all 30 questions are valid and reliable.

4. Results and Discussions
The result shows data gathered from 132 respondents of customers from Restaurant X, which consist of 84 male customers, and 48 female customers. Majority of the respondents aged between 21 – 30 and have an income of between IDR 2.000.001 – 6.500.000.

The final result shows that there is indeed relationship between physical environment and customer repurchase behavior. Data collected shows that physical environment affects customer repurchase behavior as much as 67.9% and the remaining 32.1% is affected by other factors not included in the study.

4.1. Inferential Statistic Analysis
Model Summary
A value of R above 0.80 means that the relationship between dependent and independent variable is very strong (Sugiyono, 2014). From the model summary table above, the value of R is 0.833, which means that there is a strong relationship between the independent variables (facility aesthetics, ambience, layout, table settings, lighting, and service staff) and the dependent variable (customer repurchase behaviour). The value or Adjusted R Square is 0.679 or 67.9% percent. This means that the
independent variable as a whole contribute 67.9% in affecting the dependent variable while the rest (100% - 67.9% = 32.1%) is contributed by other factors that are not included in the model.

### Table 2. Model Summary Result

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.833</td>
<td>.693</td>
<td>.679</td>
<td>2.37648</td>
</tr>
</tbody>
</table>

**F-test Result**

### Table 3: ANOVAAa (F-test Result)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1597.101</td>
<td>6</td>
<td>266.184</td>
<td>47.132</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>705.960</td>
<td>125</td>
<td>5.648</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2303.061</td>
<td>131</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The value of Sig. is below 0.10 and F is above 1.822 which means there is a significant effect between the independent variables as a whole towards the dependent variable. Also means that the model is feasible for future research and test.

**Hypothesis Testing using T-test**

In this study alpha of 0.10 and T table of 1.656 will be used. This shows that all the hypotheses are accepted.

### Table 4. Hypothesis Testing Result

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.118</td>
<td>1.664</td>
<td>.071</td>
<td>.944</td>
</tr>
<tr>
<td>Facility Aesthetics</td>
<td>.227</td>
<td>.099</td>
<td>.140</td>
<td></td>
</tr>
<tr>
<td>Ambience</td>
<td>.175</td>
<td>.062</td>
<td>.171</td>
<td></td>
</tr>
<tr>
<td>Layout</td>
<td>.397</td>
<td>.106</td>
<td>.226</td>
<td></td>
</tr>
<tr>
<td>Table Setting</td>
<td>.360</td>
<td>.139</td>
<td>.169</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>.349</td>
<td>.105</td>
<td>.224</td>
<td></td>
</tr>
<tr>
<td>Service Staff</td>
<td>.425</td>
<td>.119</td>
<td>.216</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis Analysis and Discussion

The result above shows that 6 hypothesis proposed in the beginning are all accepted.

H\textsubscript{1.1}: Facility Aesthetics has an effect towards customer repurchase behaviour

H\textsubscript{2.1}: Ambience has an effect towards customer repurchase behavior

H\textsubscript{3.1}: Layout has an effect towards customer repurchase behavior
H₄.₁: Table Setting has an effect towards customer repurchase behavior
H₅.₁: Lighting has an effect towards customer repurchase behavior
H₆.₁: Service staffs has an effect towards customer repurchase behavior

This shows that the dimension of physical environment has an impact towards customer repurchase behaviour. The result is shown through F – Test on table 3 and the correlation between the independent and dependent variables are shown in T – Test on table 4. With the result from T – test we can conclude that layout shows the highest dimension that affects customer repurchase behaviour as much as 22.6% followed by lighting (22.4%), service staff (21.6%), ambience (17.1%), table settings (16.9%) and last but not least facility aesthetics (14%). Layout being the dimension that is most significant towards customer repurchase behaviour is supported by previous study from Ryu & Jang (2008) in which it was found out that layout is the key factor in restaurant (Ryu & Shawn Jang, 2008). Layout in a restaurant may affect customer’s excitement levels, quality perception, and their desire to re-visit (Wakefield & Blodgett, 1994; Yekanialibeiglou, 2015). It has the ability to create a private space for customers and puts boundary between one customers to the others (Lin, 2004; Wakefield & Blodgett, 1994).

5. Conclusions and Recommendations

5.1. Conclusions

This research wishes to find out the effect of each of restaurant physical environment towards customer repurchase behavior with a case study of Restaurant X. This research uses DINESCAPE as the theory for physical environment. It includes 6 factors, which are facility aesthetics, ambience, layout, table settings, lighting, and service staff.

This study gathers questionnaires from previous study to be distributed to respondents and a total of 132 data are obtained and was used to find the results presented in chapter 4. Multiple linear regressions were used to analyze the data gathered. Following the data gathered and presented in chapter 4, the following conclusions can be made:

1. All six hypotheses regarding facility aesthetics, ambience, layout, table settings, lighting, and service staff are accepted as they all have a significant effect towards customer repurchase behavior. Layout has the highest value in affecting customer repurchase behavior as much as 22.6% while the lowest was facility aesthetics affecting customer repurchase behavior as much as 14%.
2. There is a strong relationship between the factors of physical environment as a whole towards customer repurchase behavior. The independent variable as a whole contribute 67.9% in affecting customer repurchase

5.2. Recommendations

5.2.1. Managerial Implications

Customers are now looking for an “Instagram”-able photo-worthy experience therefore; physical environment of a restaurant plays an important part these days. This research would recommend implications that could create a new fresh physical environment. This research would like to recommend the following things:

1. The restaurant’s ambiance and decorations can be updated periodically to keep a ‘fresh’ look and therefore, giving reason for customers to re-visit and capture the variety of themes. The themes can go beyond the traditional festive seasons; to include themes related to the season (tropical summer), pop culture trends (movie-related theme), lifestyle (healthy life theme), etc.
2. The problem with facility aesthetics is related to the lighting. Some areas of the restaurant where painting, pictures or ornaments are displayed are not highlighted hence customers don’t really pay attention to them. Different lighting effects, such as spotlight could be used to compliment painting, picture or ornaments on wall so that it will be noticeable by customers.
3. Monitoring the ambience of the restaurant will be important especially during busy hours to maintain the temperature of the restaurant. Based on a previous study by Kotta (2015), the recommended neutral temperature is 24°C with a comfort range between 22.5°C - 26°C (Kotta, 2008). The right selection of music affects customers’ non – visual perception; therefore, partnering with a music director is important to select the right background music to achieve the desired ambiance and theme.

5.2.2. Further Study / Future Research

This research has several limitations that allows for further recommendation for future research. Firstly, conducting an interview and interviewing the managers of the restaurant to know first-hand information can improve the research. It then can be combined with the quantitative data in order to have a more in-depth results. Remaining factors that affect customer repurchase behavior could also be researched. Next, the study can also look at another perspective and test the DINESCAPE factors towards a different dependent variable such as customer’s loyalty, customer purchase intention etc. Lastly, study could be done on a different restaurant and different type of restaurant to find out if DINESCAPE factors also affect customers from other types of restaurant or only apply to those of upscale restaurant.

References


