IMPACT OF EIGHT DIMENSIONS ON THE BUSINESS OF SPECIALTY COFFEE SHOPS

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ABSTRACT

Purpose: The impacts of eight dimensions, including customer communication, customer relationship management, customer satisfaction, customer loyalty, strategy management, customer trust, and service quality, on the business of specialty coffee shops were investigated.

Methodology: A questionnaire was designed to collect the data from 197 valid respondents; Structural Equation Modeling (SEM) was utilized to analyze the data, and finally, Smart PLS was employed to validate the structural model.

Findings: Nine of the eleven hypothesized relationships were confirmed and supported, while two were not supported.

Conclusion: Results of this study can provide business owners of specialty coffee shops with valuable information and management implications.

Keywords: Brand image, strategy, customer relationship management, communication, customer loyalty, trust, service quality, customer satisfaction, specialty coffee shop.

JEL Codes: C39, C61

1. INTRODUCTION

Coffee is one of the most popular beverages around the world, and is the second largest valuable traded commodity after petroleum (Murthy & Naidu, 2012). A lot of unique and specialty coffee shops have been opened in both rural and urban areas in Taiwan, and because of stiff competition, coffee shops have to perfect their service and quality to survive. Coffee business is dramatically growing globally, and statistics show that casual drink markets remain dominated by coffee shops. An overview of the recent decades on the global coffee sector reveals the largest growth (Kablan et al., 2017), and the figures show that the world coffee import data is increasing yearly, and that more people are enjoying specialty coffee globally (Han et al., 2018). Recently, specialty coffee shops have rapidly increased in various countries. In 2017, there was a 39.8% increase in the United Kingdom, 46% in America, 50% in Korea, and an astonishing growth of 61% in Taiwan. There is a projected 100% growth by 2020 (The Statistics Portal, 2018). Consequently, the competition in coffee shops promotes modernization of the coffee industry (Samoggia & Riedel, 2018).
Specialty coffee is quality coffee based beverages characterized by unique quality, incisive taste and personality to attractive customers. According to Shan et al. (2017), consumers greatly enjoy each coffee’s exclusive aroma and flavor (Zapata et al., 2018), and are willing to pay for high quality (Kang et al., 2012). Additionally, coffee has been recognized as a beverage with positive effects on human health (Kim, 2016). Previous research has also discovered that coffee improves social and personal well-being within emotionally taxing occupations (Stroebæk, 2013). Furthermore, products offering customer value help promote the economy, enhance health and increase happiness (Chen & Hu, 2010).

Based on the abovementioned background about specialty coffee industries, this study intends to explore the effects of eight dimensions on the business of specialty coffee shops, including customer communication, customer relationship management, customer satisfaction, customer loyalty, strategy management, customer trust, and service quality. This paper is composed of the following sections, the introduction, literature review, research method, research results and conclusion.

2. LITERATURE REVIEW

Coffee has enormous impact on globally lucrative beverage industries. Eight influential dimensions affecting the specialty coffee industry have been identified in different studies, including customer communication, customer relationship management, customer satisfaction, customer loyalty, strategy management, customer trust, service quality, and brand image.

Customer communication is regarded as a complex construct that includes numerous apparatuses (Nadhar et al., 2017). Customer relationship marketing is helpful in eliciting customer value emanating from different origins, and thus contributes to successful strategic management (Lian & Yoong, 2017). Managers need to connect with and maintain relationships with their current and future customers to adequately fulfill the roles of communication and promotion (Kotler, 2000). The issue is usually not whether to communicate, but rather when, where and how to communicate to drive brand value (Hsieh et al., 2018). Customer Relationship Management (CRM) has changed the approaches of coffee shop interactions with current or potential consumers and influenced purchase behaviors by using customers’ historical data to improve business relationships with customers (Trainor et al., 2014). CRM programs intertwine script actions in communication pathways rather than promoting rich communication and facilitating emanating responses (Mitussis et al., 2006). It influences corporate culture, corporate identity, and employee’s needs (Triznova et al., 2015). It delivers superior customer value and satisfaction with the goal of improving business relationships with customers (Soltani & Navimipour, 2016). CRM mediates the relationship between service quality and customer satisfaction (Setiawan & Sayuti, 2017). Customer satisfaction can be categorized into two types: transaction-specific satisfaction and cumulative satisfaction (Kim, 2016). While customer satisfaction influences repurchase intentions and behaviors, however, Setiawan and Sayuti (2017) stated that satisfied customers cannot always be expected to return or to spread positive word-of-mouth because they may have actually been looking for something different (Qu et al., 2012). Lian and Yoong (2017) further showed that it is impossible to measure customer satisfaction measured without considering fulfillment. Customer loyalty is the aptitude of buyers to purchase specific products, services, and brands inside coffee shops (Han et al., 2018). Customer satisfaction and loyalty are concerned with the importance of a purchaser’s return, making of referrals, and provision of verbal advertisement (Verhoef, 2003). It points out customer satisfaction levels on customer loyalty (Tarak et al., 2014).

Strategic processes happen between businesses and their customers (Payne & Frow, 2005). These processes affect all interactions and create long-term value with customers (Bull, 2003). This concept also distinguishes between customers seeking economy and those holding onto expectations (Terho, 2015). Trust involves having customer needs or wants met. Trust emanates from the honesty and reliability of the opposite party in question (Verhoef, 2003). It remains fundamental, and affects customer confidence in the coffee shop (Young & Chiu, 2017). Service quality entails an assessment of expectations concerning service preference (Parasurman et al., 1985). Tangible service or satisfaction performance, a feeling that one party gives to the other, often results in actual ownership emotions (Setiawan & Sayuti, 2017). This kind of service influences the customer satisfaction perceived in coffee shops, customers’ loyalty and trust (Heri, 2017). Brand image is one of the important antecedents of buyer satisfaction and loyalty (Cailleba & Casteran, 2009; Ring et al., 2015). Discussing the positive relationship between branding and satisfaction Chin and Newsted (1999) stated that when buyers favor the brand image, colors, name, logo, personality styles, interesting design of the store, they will develop loyalty. Terho et al. (2015) emphasized the influence of brand image on customer loyalty. Branding increases satisfaction and loyalty in coffee industries (King, 2017). Founded upon the relationship of theory and purpose, researchers have shown that the above eight dimensions’ directly affect customers’ thoughts.
3. RESEARCH METHOD

Based on the literature review, we used an empirical study to explore the effects of brand image on various factors by analyzing the survey data to verify research hypotheses. To increase the validity of the research results of this study, a questionnaire was designed, pre-tested and modified. Structural equation modeling (SEM) was adopted for data analysis, and the validation of the structural model was achieved using Smart Partial Least Squares (Smart PLS) software.

The data collection was conducted for three months from January 1st to March 31st, 2018, in specialty coffee shops including “Professor Coffee Shop”, “Izzy Café”, and “Specially tailored Coffee Shop” in Taiwan. During the survey period, 220 completed questionnaires were collected, and after removing 23 incomplete questionnaires, a total sample of 197 valid responses was obtained. Among the valid responses, 97 of them were from males and the other 100 were from females. The age of participant was diverse, from younger than 18 to older than 65 years old, and the percentages were 2.8% for younger than 18, 15.2% for 18-24, 27.8% for 25-34, 27.0% for 35-44, 14.8% for 55-64, and 12.4% for above 65. As for educational background, 5.5% of respondents had not finished high school, 30.5% were high school graduates, 47.5% had college degrees and 16.5% had master’s or PhD degrees.

The questionnaire used the Likert 5-point scale from "1: strongly disagree" to "5: strongly agree", and Smart PLS was utilized to analyze the collected data. Smart PLS is a statistical technique of Structural Equation Model (SEM) using blocks, constructs and items to iteratively estimate factor loadings and path coefficients. Figure 1 illustrates the details.

![Figure 1: Partial Least Square Model](image)

The factor loading denotes the correlation between item and construct, while the path coefficient implies the level of influence between two constructs. PLS uses two stages to validate the research model, the first stage is to examine the outer model, including convergent validity and discriminant validity, in other words, to validate if the questionnaire can support the proposed construct. The second stage is to examine the inner model to validate if the proposed hypotheses can be accepted, and discover the degree of accuracy of the interpretation of the construct. The implementation of PLS can be described as below in Figure 3.

![Figure 2: Example of PLS](image)
Step 1: iteratively estimate the latent construct scores

A construct must be measured by several items, therefore, PLS uses the following methods to assign a number to the construct.

1.1 Apply the regression method to estimate the latent construct scores for constructs Y1, Y2 and Y3.

1.2 Use the above scores to estimate the path coefficients $p_1$ and $p_2$, using various scheme such as centroid scheme, factorial scheme, structural or path weighting scheme, and this study used path weighting scheme.

1.3 Use latent construct scores obtained in Step 1.1 and path coefficients obtained in Step 1.2 to adjust latent construct scores.

1.4 Re-estimate factor loading $w_1$ to $w_7$.

Step 2: Utilize ordinary least square method to finalize the estimation of factor loading and path coefficients; in other words, to converge the estimate to a certain value.

The results of PLS can be verified using two values, the composite reliability and R square. The value of composite reliability must be greater than 0.7 (Hair et al. 2010), and the value of R square must be larger than 0.33 for average significance and 0.67 for substantial significance (Chin 1998), denoting the degree that the independent variable can explain the dependent variables. A value of 1 implies 100% and 0 implies 0%.

Based on the research objective and research method, this study developed the following hypotheses to be validated:

$H_1$: Communication positively influences customer relationship management.

$H_2$: Communication positively influences customer satisfaction.

$H_3$: Customer loyalty positively influences brand image.

$H_4$: Customer relationship management positively influences customer loyalty.

$H_5$: Customer relationship management positively influences customer satisfaction.

$H_6$: Customer relationship management positively influences strategy.

$H_7$: Customer satisfaction positively influences customer loyalty.

$H_8$: Customer satisfaction positively influences customer trust.

$H_9$: Service quality positively influences customer satisfaction.

$H_{10}$: Strategy positively influences brand image.

$H_{11}$: Customer trust positively influences customer loyalty.

4. RESEARCH RESULTS

This section describes the results of this study, and the effects of brand image on the business of specialty coffee shops are discussed by validating the hypotheses related to the eight dimensions. Table 1 lists the results, and the composite reliability indexes obtained were 0.952 for brand image, 0.944 for communication, 0.936 for customer loyalty, 0.957 for customer relationship management, 0.921 for customer satisfaction, 0.942 for service quality, 0.957 for strategy management, and 0.969 for customer trust respectively. The composite reliability must be greater than 0.8; therefore, it can be seen from the values that all of them are reliable (Hair et al., 2014).

The average variance extracted (AVE) for each factor are shown in Table 1. It is obvious that all values are far above 0.5 and were found to have convergent validity. The values of R square for each factor obtained were 0.665 for brand image, 0.664 for communication, 0.667 for customer loyalty, 0.573 for customer relationship management, 0.641 for customer satisfaction, 0.664 for service quality, 1.000 for strategy, and 0.521 for trust. It is apparent that all values are larger than the average level of 0.33, and slightly below the substantial level of 0.67. The above data indicated that the convergent validity and discriminant validity of the results were confirmed. Furthermore, the internal consistency or composite reliability can be verified using the composite alpha value, and it is obvious that all alpha values in Table 1 are more than 0.7 (Hair et al. 1998), indicating that a high degree of internal consistency was found in this study.
Table 1: Reliability and Validity

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>R Square</th>
<th>R Square Adjusted</th>
<th>α</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Image</td>
<td>0.665</td>
<td>0.661</td>
<td>0.940</td>
<td>0.952</td>
<td>0.768</td>
</tr>
<tr>
<td>Communication</td>
<td>0.664</td>
<td>0.660</td>
<td>0.925</td>
<td>0.944</td>
<td>0.770</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.667</td>
<td>0.662</td>
<td>0.908</td>
<td>0.936</td>
<td>0.784</td>
</tr>
<tr>
<td>Customer Relationship Management</td>
<td>0.573</td>
<td>0.570</td>
<td>0.940</td>
<td>0.957</td>
<td>0.848</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.641</td>
<td>0.636</td>
<td>0.893</td>
<td>0.921</td>
<td>0.700</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.664</td>
<td>0.660</td>
<td>0.922</td>
<td>0.942</td>
<td>0.764</td>
</tr>
<tr>
<td>Strategy</td>
<td>1.000</td>
<td>1.000</td>
<td>0.940</td>
<td>0.957</td>
<td>0.848</td>
</tr>
<tr>
<td>Trust</td>
<td>0.521</td>
<td>0.518</td>
<td>0.961</td>
<td>0.969</td>
<td>0.864</td>
</tr>
</tbody>
</table>

4.1 Pearson’s Correlation Coefficients

The Pearson’s correlation coefficient is used to measure the statistical relationship between dimensions. It is a well-known method for measuring the correlation between variables of interest because it is based on the method of covariance. It provides information about the magnitude of the correlation and the direction of the relationship. Two variables are perfectly correlated when the Pearson’s correlation coefficient is 1; highly correlated variables fall between 0.7 and 0.99; moderately correlated variables range between 0.4 and 0.69; modestly correlated variables fall between 0.1 and 0.39; weakly correlated variables are between 0.01 and 0.09; and 0 indicates no correlation at all. It can be seen from Table 2 that brand image is highly correlated with communication, customer loyalty, CRM, service quality, strategy and trust, because values of correlation coefficients are all greater than 0.7; similarly, communication is highly correlated with brand image, CRM, customer satisfaction, service quality, strategy and trust; customer loyalty is highly correlated with brand image, CRM, strategy and trust; CRM is highly correlated with brand image, communication, customer loyalty, service quality, strategy and trust; customer satisfaction is highly correlated with communication, service quality and trust; service quality is highly correlated with brand image, communication, CRM, customer satisfaction, strategy and trust; strategy is highly correlated with brand image, communication, customer loyalty, CRM, customer satisfaction, service quality and strategy. Furthermore, strategy is perfectly correlated with CRM. Table 2 lists the details.

Table 2: Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>BI</th>
<th>CO</th>
<th>CL</th>
<th>CRM</th>
<th>CS</th>
<th>SQ</th>
<th>S</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand image</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>0.717</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>0.778</td>
<td>0.666</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRM</td>
<td>0.772</td>
<td>0.757</td>
<td>0.807</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.679</td>
<td>0.776</td>
<td>0.631</td>
<td>0.699</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service quality</td>
<td>0.727</td>
<td>0.875</td>
<td>0.661</td>
<td>0.762</td>
<td>0.751</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy</td>
<td>0.772</td>
<td>0.756</td>
<td>0.807</td>
<td>1.000</td>
<td>0.698</td>
<td>0.762</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.719</td>
<td>0.764</td>
<td>0.747</td>
<td>0.856</td>
<td>0.722</td>
<td>0.813</td>
<td>0.856</td>
<td>1.000</td>
</tr>
</tbody>
</table>
4.2. Structural Model

A structural model is utilized to capture the linear regression effects of endogenous constructs upon one another, and it has the ability to specify the pattern of relationships among the constructs (Hair et al., 1998; Leohlin, 2998). A structural model was evaluated using three criteria: (1) path coefficients ($\beta$ value), (2) path significant ($p$ value), and (3) variance explain ($R^2$ value). The bootstrap re-sampling method was used to test the statistical significance of each path coefficient. 500 iterations using randomly selected sub-samples were performed to estimate the hypothesized relationships. Figure 4 illustrates the structural model. All statistical tests were assessed at a 5% level of significance using two-tailed $t$-tests.

Figure 3: Structural Model

The results of the full model indicate that 57.3% of the variance in customer relationship management was explained by the model; 66.4% of the variance in communication was explained by the model; 64.4% of the variance in service quality was explained by the model; 64.1% of the variance in customer satisfaction was explained by the model; 64.1% of the variance in service quality was explained by the model; 100.0% of the variance in strategy was explained by the model; 66.7% of the variance in customer loyalty was explained by the model; 100.0% of the variance in brand image was explained by the model. The evaluation criteria for validating the hypothesis was the use of $t$-values for each path loading, and the cut-off criteria was a $t$-value larger or equal to 1.645 for an alpha value of 0.05 (Hair et al. 2006).

Hypothesis H1 states that communication positively influences customer relationship management. Figure 4 shows that the hypothesized path for H1 was positive and significant ($\beta=0.757, p<0.05$), thus hypothesis H1 was supported.

Hypothesis H2 states that communication positively influences customer satisfaction. The hypothesized path for H2 was positive and significant ($\beta=0.427, p<0.05$), thus hypothesis H2 was supported.

Hypothesis H3 states that customer loyalty positively influences brand image. The hypothesized path for H3 was positive and significant ($\beta=0.442, p<0.05$), thus hypothesis H3 was supported.

Hypothesis H4 states that customer relationship management positively influences customer loyalty. The hypothesized path for H4 was positive and significant ($\beta=0.601, p<0.05$), thus hypothesis H4 was supported.
Hypothesis H5 states that customer relationship management positively influences customer satisfaction. The hypothesized path for H5 was positive and significant ($\beta=0.210, p<0.05$), thus hypothesis H5 was supported.

Hypothesis H6 states that customer relationship management positively influences strategy. The hypothesized path for H6 was positive and significant ($\beta=1.000, p<0.05$), thus hypothesis H6 was supported.

Hypothesis H7 states that customer satisfaction positively influences customer loyalty. The hypothesized path for H7 was not significant ($\beta=0.089, p>0.1$), thus hypothesis H7 was not supported.

Hypothesis H8 states that customer satisfaction positively influences customer trust. The hypothesized path for H8 was positive and significant ($\beta=0.217, p<0.05$), thus hypothesis H8 was supported.

Hypothesis H9 states that service quality positively influences customer satisfaction. The hypothesized path for H9 was positive and significant ($\beta=0.722, p<0.05$), thus hypothesis H9 was supported.

Hypothesis H10 states that strategy positively influences brand image. The hypothesized path for H10 was positive and significant ($\beta=0.415, p<0.05$), thus hypothesis H10 was supported.

Hypothesis H11 states that customer trust positively influences customer loyalty. The hypothesized path for H11 was not significant ($\beta=0.168, p>0.1$), thus hypothesis H11 was not supported.

5. CONCLUSION

This study explored the effects of eight dimensions on the business of specialty coffee shops, including customer communication, customer relationship management, customer satisfaction, customer loyalty, strategy management, customer trust, and service quality. An empirical study was applied to collect data using a questionnaire survey conducted in Taiwan, and structural equation modeling was adopted to analyze data, while Smart PLS was used to validate the structural model. Results of the research indicated that the all of the Cronbach’s alpha values tracking the internal consistency of the scale exceeded 0.7; all factor loadings are far above the acceptable level of 0.5; all composite reliability values for each construct are greater than 0.7; all values of average variance extracted for each construct are also larger than 0.5. Therefore, convergent validity and discriminative validity of this study were confirmed. Nine of the eleven hypothesized relationships were supported, except for the relationships between customer trust and customer loyalty, and between customer satisfaction and customer loyalty. This may be attributed to the fact that customer trust is just the prerequisite for visiting a specialty coffee shop, and not enough to induce customer loyalty. On the other hand, the reason that customer satisfaction did not contribute to customer loyalty may be due to the fact that customers visiting a specialty coffee shop may easily be attracted to other coffee shops providing new flavors and fashionable atmospheres. This would conform to the research results from previous studies. However, the conclusion of this study could be further explored using individual in-depth interviews to dive into the internal cognition of customers.

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