

Assessment of Service Quality Using Weighted SERVPERF Approach: A Case Study on the Coffee Cupping Training at Indonesian Coffee and Cocoa Research Institute

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Abstract

Service quality is an important aspect that has a direct impact on company. In addition, it is to be one of the consumer's judgement in purchasing a product or service. Tight business competition and high consumers' interest in training services encourage companies to enhance their service quality. The aims of this research are (1) to assess the service quality of coffee cupping training using weighted SERVPERF; (2) to analyze consumers' response to the service quality provided by management; and (3) to analyze the effect of service quality on word of mouth in which customer satisfaction as a moderator variable. This research was conducted in Indonesian Coffee and Cocoa Research Institute. Survey method was applied to collect primary data by using questionnaire. Judgement sampling was used to select 102 respondents. The data were analyzed by descriptive method and statistical analysis. Moderator regression analysis was applied to predict the effect of service quality on word of mouth in which customer satisfaction as a moderating variable. The research found that the perceived service quality of coffee cupping training was 3.736 which categorized in relatively good on providing services. There were 3 attributes of service quality that must be immediately improved, among others (i) conformity of materials, visual practices and information provided by instructors to consumers' needs; (ii) understandable and up to date training materials; and (iii) duration of the training is matching with the consumers' demand. The result of moderator regression analysis showed that interaction between service quality and customer satisfaction was not significant to word of mouth. Thus, customer satisfaction could not act to moderate in providing a better understanding of relationship between service quality and word of mouth than each variable on the model. There are expected external factors beyond the existing models that influences on word of mouth.

Keyword: Service quality, customer satisfaction, word of mouth, service performance, coffee, cupping training

INTRODUCTION

In marketing research, service quality, perceived value and customer satisfaction have been important aspects for companies or marketers in setting up their position on the competitive market (Tam, 2000; Poliakov, 2010; Fragoso & Espinoza, 2017;

Gulc, 2017). They should pay much attention to those aspects in order to increase their market share both goods and services sectors (Jain & Gupta, 2004). In addition, those variables also become a crucial factor in determining consumer's decision, particularly in purchase intentions. Thus, it could be used as defensive marketing strategies

in creating loyal customer (Tsoukatos & Rand, 2006 *cit.* Kassim & Abdullah, 2010). Indeed, consumer loyalty is the main target of marketing activities to increase business value within the context of profitability, to keep going a business consistency and to encourage new customers. The importance role of consumers' loyalty on business is eventually intended to shape the long-term retention of consumers, so they will do repurchase and give recommendation through a positive word of mouth (WOM) (Kassim & Abdullah, 2010). These consumers' behavior meaningfully associated with behavioral intention. It is supported by some of relevant studies which revealed that determinant of customers' behavioral intentions have been influenced by these three variables (Caruana, 2002; Soderlund, 2002).

Caruana (2002) stated that service quality theoretically is to be an antecedent variable of customer satisfaction. It is necessary to understand the consumers' perception of service quality in relation to what they expected and what they perceived. The comparison of that, in term of assessing the gap, will construct satisfaction or dissatisfaction through customer responses after its consumption (Baker & Crompton, 2000). This conceptualisation reflects that service quality has a significant role in service marketing, primarily to enhance competitive advantage for service companies (Cronin *et al.*, 2000). Another impact of service quality is companies' image that is intangible aspect affecting future intentions of customers. Service quality can be considered as marketing tools to evaluate the point of quality problems in which of delivering the services and subsequently draw up its improvement program (Seth *et al.*, 2005). According to Tam (2000), service quality could be an instrument in differentiating a firm from its competitors. Hence, in order to be a leading company, the provision of superior service quality is crucial to be undertaken by service

companies in facing high business competition. The low of service quality can trigger customer dissatisfaction. Further, it will impact on consumers behavior, particularly repurchase decision and negative WOM.

Majority of marketing literatures suggested that service quality is closely related to customer satisfaction, thereby its contribution in explaining post-purchase behavior of consumers. In general, satisfaction or dissatisfaction will arise after the provided service quality is evaluated by consumers (Taylor & Baker, 1994). Eventually, this evaluation will influence consumer behavioral intentions that leads to purchase decision and consumer loyalty (Cronin *et al.*, 2000; Milner & Furnham, 2017). It indicates that its consumers' intentions are contributing to market share and maximizing companies' profit. In other words, customer satisfaction could be the key in enhancing business reputation and assuring business sustainability arising from high loyalty to services offered. Obviously, all of service companies should realize the importance of service quality and customer satisfaction for increasing the competitiveness.

In recent times, the wave of coffee business has been hot happening in new business innovation as reflected in increasing coffee consumption among the community. The increase of leisure consumption also bring positive impact on encouraging entrepreneur's interest to running coffee business mainly cafe, culinary and tourism. Thus, it brings up many 'coffeepreneurs' who started in coffee business. Running a coffee business is certainly different from doing other business. Coffeepreneurs should be acquainted to the coffee flavor profile in accordance with consumers' preference. They are required to comply consumer preference which probably changes over time. In this cases, coffeepreneur and companies' quality control require training continuously in order to preserve their sensitivity on coffee flavor profile. This training is

manifested in coffee cup taste which is intended to maintain sensory skill relating to coffee flavor. It is required to maintain former consumers and aim for new target market.

As one of the service companies, Indonesian Coffee and Cocoa Research Institute (ICCRI) has provided training related to coffee and cocoa business sector. Coffee cupping training has become one of the most enthusiastic training attended by entrepreneurs and industries. High interest of them in coffee cupping training has prompted several training centers to organizing the similar training. Hence, ICCRI should provide a better service quality of the training compared to its competitors. Offering superior quality is expected to create consumer loyalty and attract new potential customers. For management understanding in achieving the service quality of training, this paper will attempt to (1) assess the service quality using weighted SERVPERF; (2) analyze consumers' response to the service quality provided by management; and (3) analyze the effect of service quality on word of mouth in which customer satisfaction as a moderator variable.

MATERIALS AND METHODS

This study was carried out at Indonesian Coffee and Cocoa Research Institute (ICCRI) from February to November 2017. ICCRI was selected as a research site as it is one of the training centers that is in high demand by consumers who are interesting in coffee business. In addition, this institution provides coffee cupping training that has owned loyal customers.

Data set of this study was conducted by distributing questionnaires to the trainees of coffee cupping training. Thus, the main research data was primary data which was directly collected from each respondents. The questionnaire contains a list of ques-

tions using 5 dimensions of service quality that refers to SERVQUAL concept developed by Parasuraman *et al.* (1988). These dimensions including tangible, reliability, responsiveness, assurance and empathy. Besides of that, questionnaire also consist of question items related to customer satisfaction and word of mouth. The item statements of service quality, customer satisfaction and word of mouth are presented in Table 1.

In order to gaining primary data, respondents were selected by using non-probability sampling, particularly judgement or purposive sampling. This method was used in this research considering that the respondent is a participant who attended coffee cupping training, thereby it is appropriate to the research objectives. Selected respondents were 102 participants who attended coffee cupping training during 2017. All of them were essentially the actors who engaged in the coffee sector.

Specifically, measuring service quality is calculated by multiplying weighting factor by performance. This construct model was proposed by Cronin & Taylor (1992). The equation of that is described as follows (Jain & Gupta, 2004; Rasyida *et al.*, 2016):

$$SQ_i = \sum_{j=1}^k Wf_{ij} (P_{ij})$$

where SQ_i is perceived service quality of individual 'i'; k is the number of attributes or item statements; Wf_{ij} is the weighting factor (calculated from importance of attribute 'j' to an individual 'i'); P_{ij} is perception of individual 'i' in respect to service performance of a firm on attribute 'j'. In calculating weighting factor, it referred to Rasyida *et al.* (2016) in which can be expressed in the equation as follows:

$$Wf_{ij} = \frac{I_{ij} - Min}{Max - Min}$$

where I_{ij} is importance score of attribute 'j' to an individual 'i'; Min is the minimum score of importance scales; Max is the maximum score of importance scales.

Table 1. Item of statements listed in the questionnaire

Dimensions	No.	Statements / Questions
Tangible	Q1	Adequate training venues and its facilities
	Q2	Adequate training cost
	Q3	Exhaustive training kits
	Q4	Sophisticated/modern physical tools (materials and visuals)
Reliability	Q5	Appearance and neatness of employee/instructor
	Q6	Instructors' competence in delivering the material
	Q7	Timely presence of instructors during the training
	Q8	Capability of the organizing committee and instructors to fulfill consumers' needs
	Q9	Conformity of materials, visual practices and information provided by instructors to consumers' needs
Responsiveness	Q10	Timeliness of teaching and pertinence of schedule preparation
	Q11	Suitability of food menu and its variant
	Q12	Promptness of the organizing committee in serving training registration
	Q13	Willingness of the organizing committee in assisting and responding to consumers' needs
	Q14	Certainty of time and information regarding the organizing of training
Assurance	Q15	Quickness of the organizing committee in serving consumers' needs during the training
	Q16	Willingness and swiftness of the organizing committee in response to consumers' complaint
	Q17	Competency of instructors in delivering materials and practices
	Q18	Understandable and up to date training materials
	Q19	Practical learning is much more than the theory
Empathy	Q20	Duration of the training is matching to consumers' needs
	Q21	Gaining additional knowledge after the training
	Q22	Hospitality and courtesy of the organizing committee and instructors in providing services
	Q23	The committee/instructors is hospitable in giving personal attention to consumers
	Q24	Willingness of instructors discuss about training materials to consumers
Customer Satisfaction	Q25	The committee takes consumers' needs seriously
	Q26	The committee/instructors understand consumers' needs and feel disposed to overcome consumers' problems
	Q27	Comfortable environment at the office during the training
	Q28	Participants were satisfied with coffee cupping training held by ICCRI
	Q29	Service and organizing of coffee cupping training have meet consumers' expectations
Word of Mouth	Q30	Participants believe that attending coffee cupping training in ICCRI is a wise choice
	Q31	Participants were satisfied with the services provided by the committee and instructors
	Q32	Participants give recommendation to their friends to attend this training
	Q33	Participants are willing to invite their friends or the others to attend this training
	Q34	Participants provide information and positive things regarding this training to their friends or the others

To analyze the objective (2), Importance-Performance Analysis (IPA) was used in assessing consumers' responses. Methodologically, the IPA consists of two components including quadrant analysis and gap analysis. First, quadrant analysis reflects respondents' perception which figured out the importance and performance of each attributes into Cartesian diagram. In figure, horizontal axis represents performance score of attributes and vertical axis represents importance score of attributes. The diagram divided into four quadrants, namely concentrate here (Quadrant I), keep up the good work

(Quadrant II), low priority (Quadrant III), and possible overkill (Quadrant IV). Each quadrant has a different meaning and strategy to solve the problems relating to services offered by the firm (Silva & Fernandes, 2011). In other words, the IPA matrix shows service attributes that should be improved and preserved by the management. The IPA matrix is presented in Figure 1. Second, gap analysis is intended to describe an asymmetric perceived services assigned by the consumers. Gap or different value is obtained by comparing importance score with performance score of service attributes.

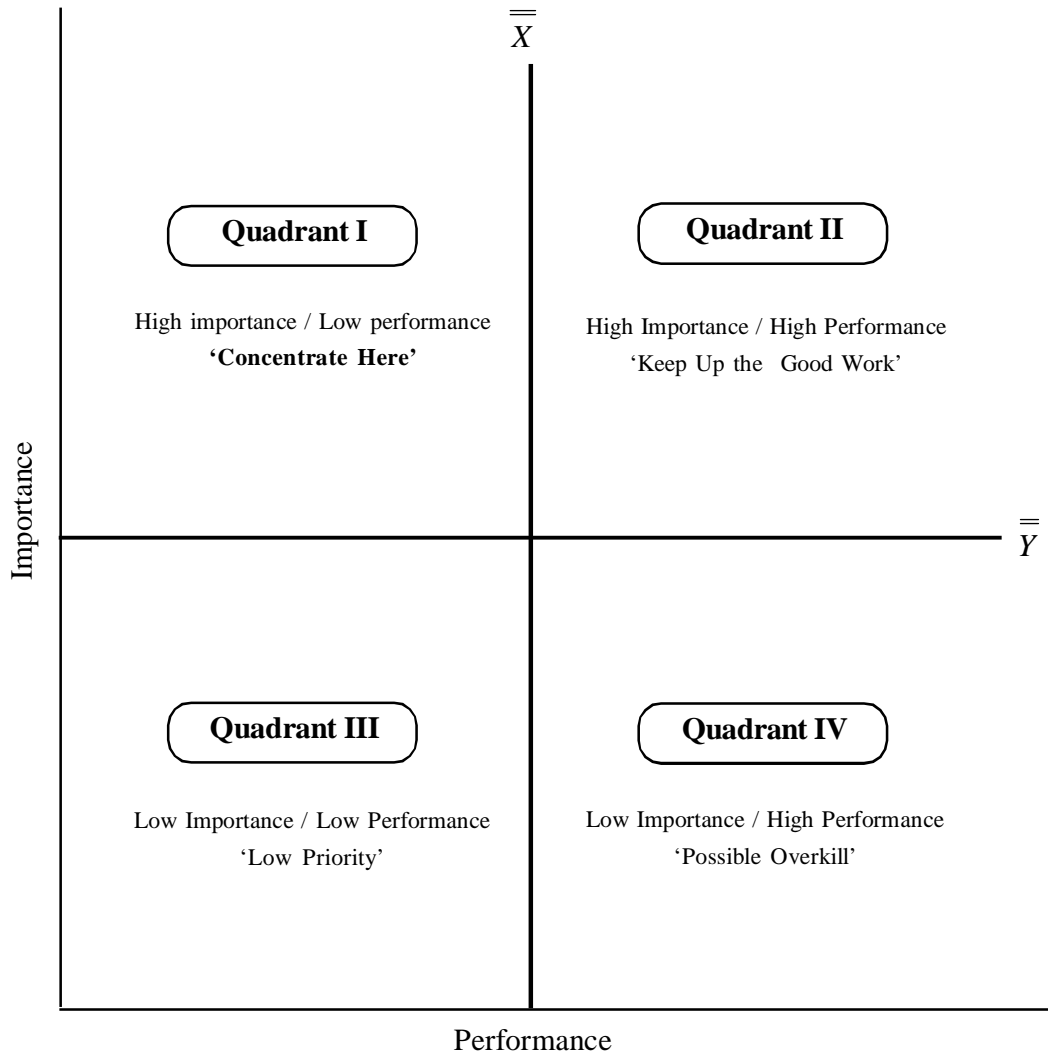


Figure 1. Importance - Performance Matrix adapted from Martilla & James (1977)
(Source: Silva & Fernandes, 2011)

In general, the objective of this research was analyzed by using descriptive and statistical analysis. Descriptive method was used for analysing and interpreting qualitative data. Meanwhile, statistical test was intended to assessing the effect of service quality on word of mouth. In this case, customer satisfaction was to be moderating variable in explaining behavior intentions, particularly word of mouth as marketing tool. Moderator regression analysis (MRA) was used to identify interaction effect of service quality and customer

satisfaction on word of mouth. Model specification of MRA consists of three regression models which are expressed as follows:

$$Y = \alpha + \beta_1 X_1 + \mu \tag{1}$$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \mu \tag{2}$$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_1 X_2 + \mu \tag{3}$$

where: Y is word of mouth; X_1 is perceived service quality; and X_2 is customer satisfaction. Diagnostic checking was conducted to evaluate those regression models in order

to comply BLUE (Best Linear Unbiased Estimator) model. It includes normality test, multicollinearity test, autocorrelation test and heteroscedasticity test. Nevertheless, the raw data should be measured the level of reliability and validity using statistical tools, SPSS IBM 21 and E-views 7. The results of that reflect the questionnaire was consistent and valid to be used.

RESULTS AND DISCUSSION

In this section, validity and reliability test were conducted to identify the questionnaire could be used as measurement tool of

service quality, customer satisfaction and word of mouth. The result of validity and reliability test are shown in Table 2. In so doing, construct validity was used to test whether questionnaire, in term of questions/statements, have accuracy in measuring variables according to the concept of satisfaction. The statements are to be valid if t-statistic is greater than t-table at confidence level of 95% ($\alpha = 5\%$). Refers to Table 2, t-statistic in each statement is greater than t-table (1.984), then it concluded that the questionnaire was considered to be valid as an instrument to conceptualize satisfaction research. Meanwhile, the Cronbach's Alpha

Table 2. The results of reliability and validity tests of each statements

Statements/ Questions	Performance				Importance			
	Validity test		Reliability test		Validity test		Reliability test	
	t-Statistic	Result	Cronbach's Alpha	Result	t-Statistic	Result	Cronbach's Alpha	Result
1	9.274	Valid	0.968	Reliable	6.707	Valid	0.966	Reliable
2	8.599	Valid	0.968	Reliable	5.851	Valid	0.967	Reliable
3	10.557	Valid	0.967	Reliable	6.620	Valid	0.966	Reliable
4	9.402	Valid	0.968	Reliable	8.738	Valid	0.966	Reliable
5	9.001	Valid	0.968	Reliable	5.945	Valid	0.967	Reliable
6	9.747	Valid	0.968	Reliable	8.599	Valid	0.966	Reliable
7	8.177	Valid	0.968	Reliable	10.840	Valid	0.965	Reliable
8	11.657	Valid	0.967	Reliable	9.377	Valid	0.966	Reliable
9	11.068	Valid	0.967	Reliable	10.872	Valid	0.965	Reliable
10	9.099	Valid	0.968	Reliable	11.304	Valid	0.965	Reliable
11	9.074	Valid	0.968	Reliable	8.134	Valid	0.966	Reliable
12	7.384	Valid	0.968	Reliable	9.199	Valid	0.966	Reliable
13	10.286	Valid	0.967	Reliable	11.304	Valid	0.965	Reliable
14	7.442	Valid	0.968	Reliable	11.443	Valid	0.965	Reliable
15	12.343	Valid	0.967	Reliable	13.333	Valid	0.965	Reliable
16	13.196	Valid	0.967	Reliable	13.106	Valid	0.965	Reliable
17	9.639	Valid	0.968	Reliable	11.168	Valid	0.965	Reliable
18	8.307	Valid	0.968	Reliable	8.904	Valid	0.966	Reliable
19	11.101	Valid	0.967	Reliable	10.904	Valid	0.965	Reliable
20	9.174	Valid	0.968	Reliable	10.776	Valid	0.965	Reliable
21	8.285	Valid	0.968	Reliable	10.681	Valid	0.965	Reliable
22	10.904	Valid	0.967	Reliable	9.829	Valid	0.965	Reliable
23	9.612	Valid	0.968	Reliable	8.715	Valid	0.966	Reliable
24	11.694	Valid	0.967	Reliable	9.775	Valid	0.965	Reliable
25	12.030	Valid	0.967	Reliable	11.514	Valid	0.965	Reliable
26	10.650	Valid	0.967	Reliable	9.693	Valid	0.965	Reliable
27	9.377	Valid	0.968	Reliable	9.885	Valid	0.965	Reliable
28	10.808	Valid	0.967	Reliable	10.969	Valid	0.965	Reliable
29	10.681	Valid	0.967	Reliable	9.274	Valid	0.966	Reliable
30	11.270	Valid	0.967	Reliable	13.106	Valid	0.965	Reliable
31	11.236	Valid	0.967	Reliable	11.916	Valid	0.965	Reliable
32	11.408	Valid	0.967	Reliable	9.099	Valid	0.966	Reliable
33	12.714	Valid	0.967	Reliable	8.904	Valid	0.966	Reliable
34	9.720	Valid	0.968	Reliable	10.840	Valid	0.965	Reliable

Note: t-table (df 100; confidence level 99%) = 2,626
t-table (df 100; confidence level 95%) = 1,984

method is used to determine the consistency and stability of data if repeated measurements are made. The questionnaire will be reliable in case the value of Cronbach's Alpha shows more than 0.7 (Nunnally *cit.* Panayides, 2013). The results revealed that its coefficient in each statement is higher than 0.7, this means that the questionnaire is reliable to be used in this research. Generally, all of the statement items can be good predictors on evaluating service quality according to customers' perception.

Perceived Service Quality

According to several literature, service quality is an activity or effort offered by company which intended to fulfill consumers' needs, so thoroughness of delivery of its services will satisfy consumers (Tjiptono, 2007). In another definition, service quality describes consumers' impression and attitude to the company in respect of what the consumers received and how the services is delivered in achieving consumer satisfaction. Hence, perceived service quality should be the same or beyond what consumers expected. As the one of determinant factors of customer satisfaction, perceived service quality play an important role in generating consumers' trust to use its services. Eventually, it could give an impact on companies' performance, particularly in financial aspect and establishing long-term relationship (Kassim & Abdullah, 2010).

Table 3 represents that the average score of perceived service quality is 3.736. It indicates that service provision in the coffee cupping training should be improved to meet expectation of the customers. Some of customers evaluate ICCRI's capability especially in the form of tangible dimension must be addressed in order to providing the best services. Attributes in its dimension are not considered to meet of customers' expectation of what they want. Unlike the case of

tangible dimension, service attributes on the assurance dimension have the highest average score compared to the other dimensions. It reveals that instructors' competencies, training materials and learning process are important aspects in coffee cupping training to satisfy the customers. In order to eliminate some of service failures, the management should avoid customer dissatisfaction because of customer desire will be more complex overtime. Without any improvement, the customers will be less loyal and even, will bring negative result in customer leaving (Gautam, 2011). Thus, the attributes on that dimension have to be resolved by many institutions which interested in organizing coffee cupping training. ICCRI's competitiveness must be strengthened through offering the strongest quality program based on customer orientation to face high business competition with other competitors in service sector. Developing a business, particularly in the service sector, need to pay much attention on customer preferences, so the company shall be taking an action in arranging customer oriented business strategies.

Table 3. Average score of perceived service quality using weighted Servperf on each dimension

Dimensions	Average score of perceived service quality*
Tangible	3.483
Reliability	3.707
Responsiveness	3.618
Assurance	3.974
Empathy	3.898
Average	3.736

*Score range: 1-5

Importance-Performance Analysis

The IPA matrix describes the distribution of service attributes into four quadrants as presented in Figure 1. In detail, the attributes which must be improved can be found through the diagram. Quadrant I represents that the attributes have a high level of importance, but the performance of these attributes

is low. Service attributes in this quadrant include (i) Q9/Conformity of materials, visual practices and information provided by instructors to consumers' needs; (ii) Q18/Understandable and up to date training materials; (iii) Q20/Duration of the training is matching with consumers' needs. It means that those attributes must be prioritized to be improved immediately by management. Customers believe the training materials and duration in delivering both theory and practice do not meet their expectations. Training materials should be updated, so participants who have participated in the training will obtain additional knowledge and new atmosphere while teaching process. In addition, management ought to pay more attention in rearrangement the duration of delivering theory and implementing practice based on customers' needs and suggestions.

Quadrant II reflects service attributes having high level of importance and performance. These attributes are considered very important and have well performance, hence, it could be satisfy the customers. There are 11 attributes in this quadrant including Q1; Q6; Q8; Q17; Q19; Q21; Q22; Q23; Q24; Q26; and Q27. To keep up the performance, management should apply defensive marketing strategy (Tsoukatos & Rand, 2006 *cit.* Kassim & Abdullah, 2010) particularly in maintaining the quality and the performance of those attributes. According to customers' perception, all of those attributes are the strenght of ICCRI in providing the coffee cupping training. Therefore, it can be a marketing tool to settle ICCRI's positioning as the best cupping training provider. Enhancement of its competitiveness is supposed to be one of the positioning strategies in facing

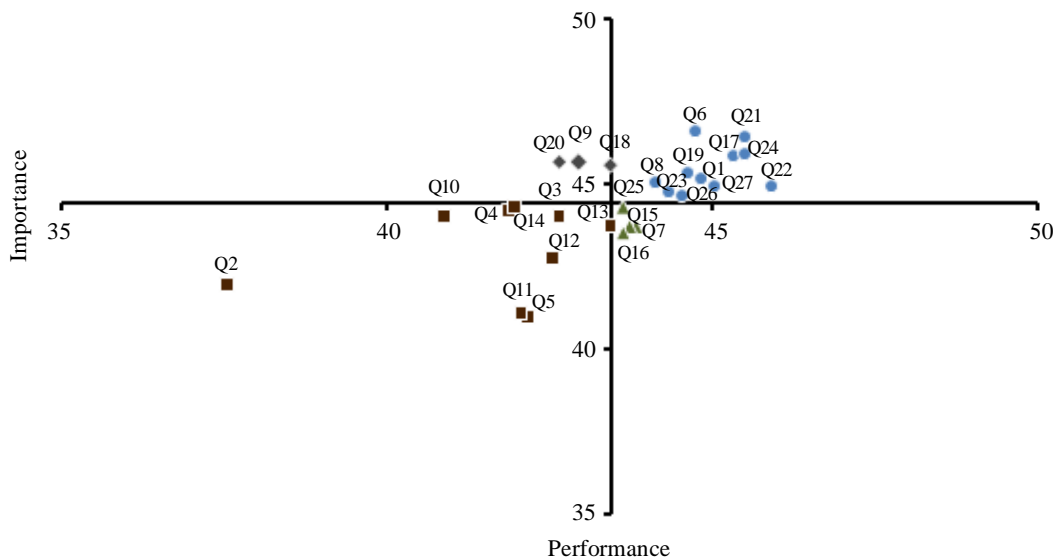


Figure 1. IPA matrix of service attributes on the coffee cupping training

the competitors which offers the same training. Those attributes include places and training facilities, competency of instructors and organizing committee, learning process and participants' convenience towards the hospitality of instructors and organizing committee.

Quadrant III interprets the level of importance and performance of service attributes are low. These attributes include Q2, Q3, Q4, Q5, Q10, Q11, Q12, Q13, and Q14. To avoid declining in service quality, improvement of these attributes ought to be conducted. In general, improvement actions are mainly related to training cost, training kits, physical facilities/equipment, arrangement of training schedule, variation in food menus, and responsiveness of the organizing committee. Postponement in that improvement will bring an impact on shifting customers' perception which leads these attributes to be included in Quadrant I.

Quadrant IV reflects the importance level of service attributes are low, but its performance exceeds the customer expectations. Thus, the assessment of these attributes are considered excessive. Several attributes in this quadrant including Q7, Q15, Q16, and Q25. The timeliness of instructors' presence, quickness of the committee in serving customers' needs and empathy of the committee towards the participants have been well assessed by the participants. These indicate the professionalism of the instructors and organizers of the coffee cupping training. All of these attributes make participants feel comfortable during the training. Eventually, providing superior services could gain intangible advantages as such trust, intention, brand image and positive word of mouth which are creating customer loyalty (Aspizain, 2016; Cheng & Rashid, 2013). According to Oktaviani & Suryana (2006), the improvement of these attributes will be worthless because as mentioned

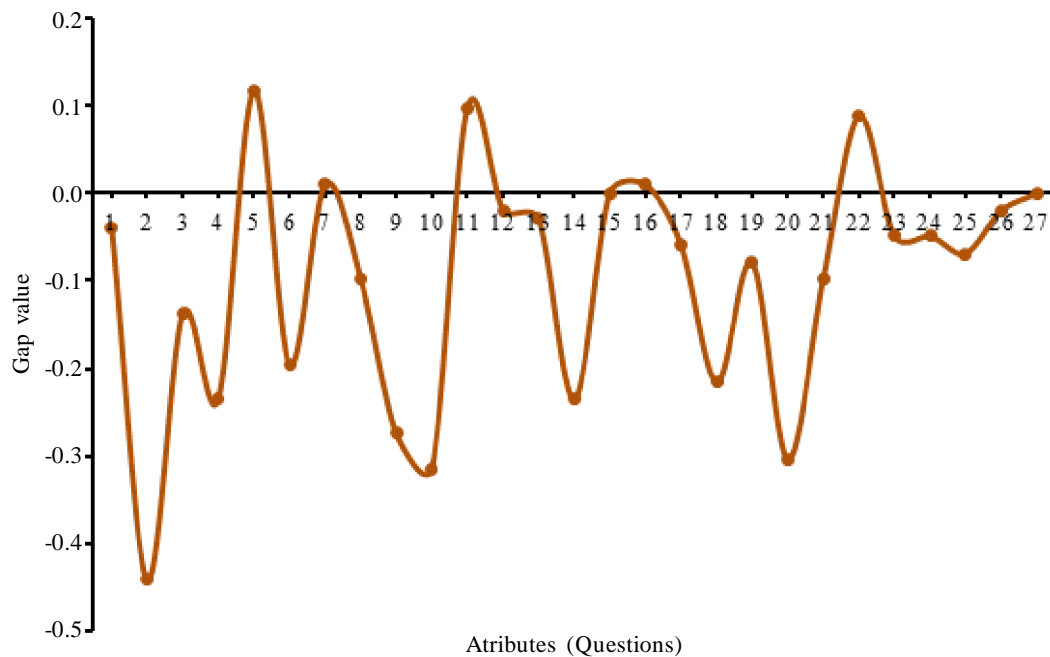


Figure 2. Gap value of service attributes assigned by the consumers

above that the importance level of these attributes are low.

Gap Analysis

The results of gap analysis found that the most service attributes have not exceeded customer expectations. According to customer perceptions, management has not provided the best quality services. Customer tend to be looking for superior services which is offered by service provider. By looking at the gap score, the most of service attributes are negative. The highest gap appears in the training cost attribute with a score of -0.441. Furthermore, the timeliness and arrangement of training schedules have a high gap value with a score of -0.314. Looking to another attributes, duration of delivering theory and practice of cup test has a gap score of -0.304. Mapping of service attributes that have high gap score can be taken into an overview for management to draw up strategies and set up priorities in improving these services. In doing the improvement of that, management can offer better services, arrange marketing strategies and do active marketing for strengthening company position in order to be able to compete with other competitors. As such previous research, recovering services should be implemented as an action in respond to service failure which experienced by the customers (Gautam, 2011).

Relationship between Service Quality, Customer Satisfaction and Word of Mouth

Table 4 shows that customer satisfaction is the only one of variable which is significant to word of mouth (Model III). Meanwhile, regression coefficient of service quality and interaction term are not significant on word of mouth. Based on that results, non-significant interaction term in Model III indicates that customer satisfaction has not been able to act in moderating the relationship between service quality and word of mouth. In other words, customer satisfaction on service quality provided by ICCRI does not affect customers to do word of mouth to other potential customers. It is assumed that there are other variables beyond the model that are able to more explain the variance of word of mouth than the existing models.

The results of this research are not in line with previous research (Tam, 2000; Bearden & Teel, 1983 *cit.* Caruana, 2002; Caruana, 2002; Kuo *et al.*, 2009; Ryu & Han, 2010; Cheng & Rashid, 2013) which revealed that the framework of satisfaction and service quality can influence customer behavior in doing word of mouth. In this case, entering interaction term between satisfaction and service quality in the regression model has caused independent variables to be non-significant. It indicates that customer satisfaction does not appear as moderator

Table 4. Results of linear regression model on the effect of service quality to word of mouth using customer satisfaction as moderating variable

Model	Variable	R ²	F-test		T-test		
			F-Statistic	Probability	Coefficient	t-Statistic	Probability
Model I	Constant	0.549357	121.9051	0.000000	7.157935	12.88805	0.0000
	Service quality (X ₁)				0.058730	11.04106	0.0000
Model II	Constant	0.686044	108.1653	0.000000	2.787462	3.430521	0.0009
	Service quality (X ₁)				0.024733	3.618294	0.0005
	Customer satisfaction (X ₂)				0.443528	6.565181	0.0000
Model III	Constant	0.687135	71.74481	0.000000	0.487615	0.121388	0.9036
	Service quality (X ₁)				0.049844	1.146079	0.2546
	Customer satisfaction (X ₂)				0.573000	2.474340	0.0151
	Interaction term (X ₁ X ₂)				-0.001389	-0.584697	0.5601

variable in explaining the relationship between service quality and word of mouth. Another study by Baker & Crompton (2000) also denoted that the indirect effect of quality on behavioral intention was not fully mediated by satisfaction, in case of perception model. Past research on hospitality industry which listed in Liu & Jang (2009) confirmed that the determinants of customer satisfaction are occasionally following the factors that affecting customer behavior intention. Bodet (2008) expressed that both customer satisfaction and attitudinal loyalty did not influence on behavioral dimensions. Notwithstanding service quality has a direct effect toward customer behavior to do word of mouth. Based on this analysis, providing good service quality does not necessarily satisfy the customers. Closely related to that relation, Tam (2000) encloses some of literature which suggested that satisfaction is erratically influencing customer loyalty. Discrepancy both theory and previous research with the results of this research is due to ICCRI has had loyal customers who often attend coffee cupping training. This loyalty is manifested in the form of repeat purchases in order to keeping their skills up.

In addition to loyalty, company's image is the other variable that encourages customers' interest (Gouji *et al.*, 2016) in participating coffee cupping training at ICCRI. This view is supported by Caruana (2002) referring to Selnes (1993) and Dick & Basu (1994) which reveals that customers will be loyal when satisfaction with the brand is achieved. More clearly, we demonstrates that company's image can be analogous to a brand that is creating satisfaction or sense of pride for customers who used it. Based upon the underlying results of this research it addresses the familiarity level of ICCRI as training center which provide service business particularly coffee cupping training could be affecting customers' decision in using its service product. In future behavior, it is assumed to be able

to attract customers' intention in determining repeat purchases and spreading positive recommendation to the others. Creating positive word of mouth and positive strength of brand are important aspects which intended to establish a loyalty considering in provision of good quality services (Aspizain, 2016). However, in this research, company's image has not been included as independent variable in the existing model, so it could be categorized as an external factor beyond the model which has an effect on word of mouth. Ryu & Han (2010) also states that previous hospitality studies pointed out intangible attributes to be a mainly focus on determining customer judgments to repurchase and reconsumption. Referring to Cheng & Rashid (2013) confirms that corporate image was to be moderating variable in explaining the relation among customer satisfaction and customer loyalty. Gautam (2011) also suggested that corporate image does plays as moderator in pointing out the relationship between perceived justice dimensions and recovery satisfaction.

In conducting diagnostic checking of the parameters, model I and model II did not indicate any classical assumption such as heteroscedasticity, autocorrelation and multicollinearity. In addition, the data were normally distributed, so it concluded that the regression model could be a good predictor model. Inclusion of moderator variable in the regression model, which is interaction term, leads to occurring multicollinearity as shown in Table 5. Although the data transformation has been done, however, multicollinearity was still detected. It was seen that among independent variables have very strong correlation. This is supported by previous research of Taylor & Baker (1994) which states that compiling regression equation including interaction of independent variables will cause multicollinearity, given that service quality and customer satisfaction are two variables that have very close relation.

Table 5. Results of diagnostic checking of linear regression model on the effect of service quality to word of mouth

Model	Diagnostic checking	Method	Analysis results		Result
			Statistic	Value	
Model I	Heteroskedasticity	White heteroskedasticity test	Obs*R-squared	1.906026	Noheteroscedasticity
			Probability	0.3856	
	Autocorrelation	Breusch-godfrey serial correlation LM test	Obs*R-squared	3.949396	Noautocorrelation
			Probability	0.1388	
	Normality	Histogram	Jarque-Bera	0.199845	The data normally distributed
			Probability	0.904908	
Model II	Heteroskedasticity	White heteroskedasticity test	Obs*R-squared	4.129514	Noheteroscedasticity
			Probability	0.5309	
	Autocorrelation	Breusch-godfrey serial correlation LM test	Obs*R-squared	5.939395	Noautocorrelation
			Probability	0.0513	
	Normality	Histogram	Jarque-Bera	4.759689	The data normally distributed
			Probability	0.092565	
	Multicollinearity	Klein Method	R ² Y	0.686044	Not multicollinearity
		R ² X ₁	0.573874		
		R ² X ₂	0.573874		
Model III	Heteroskedasticity	White heteroskedasticity test	Obs*R-squared	9.861830	Noheteroscedasticity
			Probability	0.2749	
	Autocorrelation	Breusch-godfrey serial correlation LM test	Obs*R-squared	0.310039	Noautocorrelation
			Probability	0.5777	
	Normality	Histogram	Jarque-Bera	4.239439	The data normally distributed
			Probability	0.120065	
	Multicollinearity	Klein Method	R ² Y	0.686044	Multicollinearity
		R ² X ₁	0.989403		
		R ² X ₂	0.963492		
		R ² X ₁ X ₂	0.994759		

CONCLUSION

The perceived service quality of coffee cupping training was 3.736 which categorized in quite good on providing services. There were 3 attributes of service quality that must be immediately improved, among others (i) conformity of materials, visual practices and information provided by instructors to consumer needs; (ii) understandable and up to date training materials; and (iii) duration of the training is matching to consumers' needs. The result of moderator regression analysis showed that interaction between service quality and customer satisfaction was not significant to word of mouth. Thus, customer satisfaction could not act to moderate in providing a better understanding of relationship between service quality and word of mouth than each variable on the model.

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