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THE INFLUENCE OF SELF SERVICE TECHNOLOGY (SST) TOWARD CUSTOMER SATISFACTION

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Abstract - Companies view technology as a way to enhance service exchanges and has posited that the increasing role of technology in such encounters offers benefits to both customers and firms (e.g, Bitner, Brown, and Meuter 2000; Salomann et al. 2007). GS is one of the businesses that using technology in delivering their restaurant service to gain customer satisfaction. In this case, GS infused Self-Service Technology (SST) that largely replaced their personal service interaction with the customer. SST is a technology infusion, where customers deliver service themselves using some form of technological interface. Technology has replaced the human touch in the process of ordering food, delivering the ordered meal, and billing statement, and in the time customer needs waiter assistance they are able to call the waiter by clicking on the self-service technology device, which also replaced the menu book. Even though companies consider the technologies are able to enhance the service exchange, recent research argued that the technology implementation does not always lead to higher customer satisfaction scores. Therefore, it is important to determine the customer satisfaction of GS services, which remain unidentified. This study aims to explore the influence of SST and Personal Service toward Overall Satisfaction in GS. Quantitative research was conducted in this study by distributing online questionnaires to 100 respondents in Jakarta Selatan that at least had been once to GS, which taken place at Plaza Senayan, Jakarta Selatan. Indicators used in the questionnaire had been proven as valid and reliable using the Pearson correlation and Cronbach Alpha value. Descriptive Analysis and Multiple Linear Regressions (MLR) were conducted to analyze data collected. The research provided empirical evidence of relative impact of SST on overall consumer satisfaction. Findings show that SST positively influence overall satisfaction at GS, however personal service does not have significant influence toward the overall satisfaction, therefore SST considered as the only variable contributive to 21% of the overall satisfaction. This study result shows that Self-Service Technology has enhance service convenience and deliver efficient service process to the customer. The absence of personal service interaction has no direct effect to the overall satisfaction.

Introduction

The growing trend of Japanese culinary in Jakarta has attracted many prospect, many company see this big opportunity and interested in starting Japanese sushi restaurant business to earn more profit. GS is a sushi bar restaurant that joint with Mitra Adi Perkasa Company, focusing in a Japanese sushi restaurant business. GS restaurant has been trying to gain profit and customer satisfaction in experiencing Japanese food at Plaza Senayan Jakarta Selatan. Besides focusing on foods, a restaurant has to focus on service, that service is one of important aspect in the success of a business. Whatsoever the industry is, service has an important role it could affect the customers' expectation and provide the solution in the form of good or service (Kartajaya, 2009:7). In order to deliver the service that differ from other restaurant as their unique point of sale, GS offers technology infused in the service that detracts customer-waiter encounter. As the prior research (e.g, Bitner, Brown, and Meuter 2000; Salomann et al. 2007) has suggested that companies view technology as a way to enhance service exchanges and has posited that the increasing role of technology in such encounters offers benefits to both customers and firms. The technology infused in GS's service is the *Self-Service Technology* (SST), where customers deliver service themselves

using some form of technological interface.Technology has replaced the human touch in the process of ordering food, delivering the ordered meal, and billing statement, and in the time customer needs waiter assistance they are able to calling the waiter by clicking on the self-service technology device, which also replaced the menu book. The technological interfaces that GS used for its SST are Ipad and automatic conveyor to deliver the ordered meal.

Furthermore, as we could see in a restaurant, the core business of the restaurant is the service of food where it has high level of contact between the server and customer exists to gain customer satisfaction that would lead to loyalty, in this study called the conventional service. In the case of GS which using tablet technology in their restaurant service encounter including menu display, ordering, calling waiter and bill statement, and also automatic conveyor in delivering the ordered food, they tend to detract the encounter of waiter to customers communication, whereas there is the hospitality sacrificed in every encounter. Referring to the self-service technology infused, the recent research (Giebelhausen et al. 2014) stated that the technology implementation does not always lead to higher customer satisfaction scores. It is a complicating factor in the service encounter because it tends to pull customers attention away from the waiter in rapport building reminding to the conventional restaurant service where employees engage customers in positive rapport-building behaviors, including smiling, offering a warm greeting, and engaging in consistent eye contact. This research conducted to see if the existed self-service technology used by GS able to reach the customer satisfaction of the restaurant, as there is only little communication between human-to-human interactions and the impact of service methods in gaining customer satisfaction remains unidentified.

Literature Review

Service Quality

Service Quality is generally defined as the overall assessment of a service by the customers (Eshghi et al., 2008) or the extent to which a service meets customer's needs or expectations (Asubonteng et al.,1996). Parasuraman et al., (1985) define service quality as "*The discrepancy between consumers' perceptions of services offered by a particular firm and their expectations about firms offering such services*". Service quality has a major role especially in restaurant service because the consumers can feel their quality of service whether before, during or after service encounter. According to Douglas & Connor, (2003), Parasuraman, (1985), and Ladhari, (2008), the intangible elements of a service (inseparability, heterogeneity and perishability) are the critical determinants influencing service quality perceived by a consumer.

The service quality (SERVQUAL) is a method of service marketing created by Valerie A. Zeithaml, A. Parasuraman, and Leonard L., which stated that, "service quality is focused on the evaluation that reflects the customer's perception of reliability – responsiveness – assurance – empathy-tangibles (SERVQUAL dimensions). On the other, customer satisfaction is more inclusive. It is influenced by perception of service quality, product quality, and price as well as situational factors and personal factors." (2003: 10). This method is a technique that can use for performing a gap analysis of an organizations service quality performance against customer service quality needs. SERVQUAL is also an empirically derived method that may be used by a service organization to improve service quality. However, in this study the SERVQUAL dimension method cannot be used in measuring SST service quality as the customers deliver service themselves using some form of technological interface that replace the human-to-human interaction in delivering the service, which contained in the SERVQUAL dimensions.

Customer Satisfaction

For every business, they have their primary objective in doing business, which is satisfying the customers. Consumer satisfaction is a fundamental marketing concept (Fournier and Mick 1999). Satisfaction has a meaning of the customer's overall feeling of contentment with a customer

interaction. Satisfaction can also be a person's feelings of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations (Kotler& Keller, 2009). Consumer satisfaction has been linked to overall firm performance and is seen as a primary objective for managers (Anderson et al. 1994; Yi 1990). Many studies offer both theoretical justification and empirical evidence that supports the link between service quality and satisfaction (Cronin and Taylor, 1992; Dabholkar, 1995; Oliver, 1993). Recent SST and information system (IS) related studies also support the assertion that higher perceived service quality leads to higher customer satisfaction. In this case, the customer's satisfaction level can be affected by service aspects in the SST service attributes such as reliability, easy to use, convenient, saved time, etc. Refers to Albert Caruana (2000) the customer satisfaction are based on three elements which are the service themselves, overall restaurant performance, and restaurant performance compared to other business. Inside the customer's mind, they have many concern and consideration therefore the service giver need to give the correct solution for them and give a pleasant customer experience. There is a correlation of service quality with customer satisfaction because it can measure the satisfaction level from the SST service attributes. It is also the part of post-service phase in SST because it may leads to the customer loyalty.

Self-Service Technology (SST)

Self-service technology is where customers deliver service themselves using some form of a technological interface, such as point-of-sale terminals, tablets, and kiosks. According to Meuter et al. (2000, p. 50), SSTs are "technological interfaces that enable customers to produce a service independent of direct service employee involvement." Companies are drawn to SSTs by their promise of greater cost efficiencies, enhanced service quality, and attraction of new customers over in-person services (Parasuraman and Grewal 2000). Prior research (e.g., Bitner, Brown, and Meuter 2000; Salomann et al. 2007) has suggested that companies view technology as a way to enhance service exchanges and has posited that the increasing role of technology in such encounters offers benefits to both customers and firms.

Knowledge concerning factors influencing customer evaluation of SST service quality, which can be applied to various SSTs remains unexamined. Previous research, in a number of fields, has identified criteria customers use to evaluate specific SST related services, but results have differed widely across studies. SST attribute performance is defined as the actual performance of the self- service facilities rated by consumers. Adapting to Beatson, Coot & Rudd (2006) The SST attributes were selected from previous studies by Dabholkar (1996), Meuter et al. (2000), and Walker, Craig-Lees, Hecker and Kent (2000). The attributes are: convenient; time savings; low risk; and customized.

Personal Service

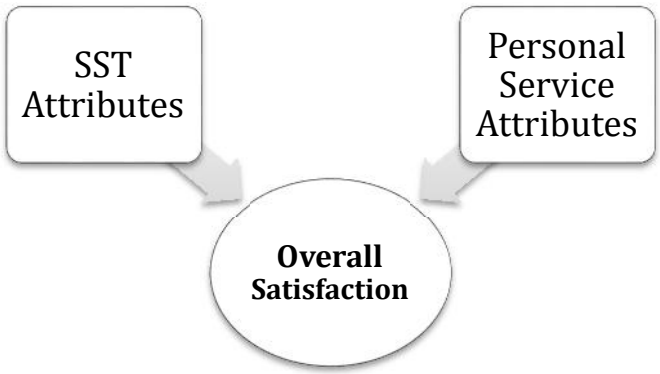
Past research has acknowledged that personal interactions between consumers and front-line employees are important for consumer satisfaction (Ganesh, Arnold and Reynolds 2000). Personal interactions have been identified as dominant contributors to consumer satisfaction and consumer commitment (Bitner 1990; Bitner et al. 2000; Czepiel 1990; McCallum and Harrison 1985; Reichheld 1993; Suprenant and Solomon 1987). Personal service attributes reflect the actual service performance the customer receives from hotel staff. The attributes include, prompt; informative; approachable; trustworthy; and professional referred to Beatson, Coote, and Rudd 2006.

Conceptual Framework

SST is a relatively recent service delivery method (compared to personal service) and as a result there is comparatively little research on it. Past research has acknowledged that personal interactions between consumers and front-line employees are important for consumer satisfaction and consumer commitment (Ganesh, Arnold and Reynolds 2000). The relationships among the key dimensions in the conceptual framework developed and discussed in this paper is adapting to Beatson, Coote & Rudd (2006) research in their research of Self-service Technology in the service encounter.

In their study it was hypothesized that direct relationships exist from the attributes of the two service-delivery modes (personal service and SST) to overall satisfaction and linked the overall satisfaction to customer commitment in form of affective commitment, temporal commitment, and instrumental commitment. Whereas, Beatson et al. defined overall satisfaction as an evaluation based on the consumer's overall experiences with a service organization over time (Garbarino and Johnson 1999). They argued that there are two independent variables that affected Customer Overall Satisfaction, which are SST and Personal Service. SST was defined as a facility that accommodated the customers to deliver the service for themselves through the use of technology. Examples of SST encounters include; withdrawing money from a bank using an Automatic Teller Machine (ATM) instead of a bank teller inside the branch. While, Personal service was defined as the front employee that delivered service directly to the customers.

The research setting for their study was three hotels in a metropolitan area in Australia using self-complete questionnaire to the traveller who stay in the hotel with total 248 questionnaires answered. The empirical results of the research largely support the conceptual framework proposed in their study. There is evidence that personal service and SST both positively impact overall satisfaction, however, personal service appears to be the more important contributor. Overall satisfaction appears to impact affective commitment and temporal commitment; however it appears that it does not have an effect on instrumental commitment. SST attributes appear to have an impact on all of the three dimensions of commitment, whereas personal service attributes only impact affective and temporal commitment. This framework illustrates diagrammatically the hypotheses developed in the following literature section. However, the commitment areas are not being discussed in this study regarding to the research objective to see the variables influence toward overall satisfaction.



Methodology

Research Settings

Quantitative research is conducted in this study, by distributing questionnaire to the determined sample which is people in Jakarta Selatan that have been experiencing GS service. Questionnaire is a method in collecting data from the respondent that contains into set of questions. In this research, the questionnaire is created in order to examine the customer satisfaction that occurred. The question lists are determined by the service quality attributes in GS.

Questionnaire distributed by online form, contained of four parts. The first part collected respondent demography data profile and screening question, whether or not they had been to GS before. The second part contained of question related to Self-Service Technology satisfaction, followed by the third part, which contained of the question about personal service satisfaction. The last part of the questionnaire is evaluating the customer overall satisfaction toward GS service.
The lists of question in each of questionnaire parts then will be scored by the Likert Scale from 1 to 5 score, except the demography part. A lower score describes that the attribute hasn't match the customer satisfaction and need to be evaluated immediately. The higher score means that the

attribute has matched the customers' satisfaction and need to be maintained. The scale of answering customer's reality or experience is provided as the following:

1. SK (Sangat Kurang) : Very Dissatisfied
2. K (Kurang) : Dissatisfied
3. B (Biasa Saja) : Average
4. P (Puas) : Satisfied
5. SP (Sangat Puas) : Very Satisfied

Variables	Sub-Variables	Definition	Indicators
Self-Service Technology	Convenient	Convenient as one of SST attributes shows that SST device helps the customer obtain their self service at ease	User Interface
			Easy to use
			Product description
			Price information
			Order accuracy
	Time Saving	The SST device, facilitates customer to obtain the service efficiently in a relatively short time	Order efficiency
			Payment efficiency
			Calling the waiter
			Application responsiveness
	Low Risk	SST device helps the customers to decrease the possibility of error in obtaining the service	Less margin of error
	Customized	SST device enable the customer to order their own menu	Special order
Personal Service	Promptness	The personal service possessed the immediate attention to the customer	Quick response

	Informative	Personal service provides useful information for the customer	Able to give detailed product information
			Able to give recommendation
	Approachable	The customer find that personal service are accessible in providing the service	Readily available
	Trustworthy	The personal service are dependable to obtain the service for customer	Dependable in ordering process
			Dependable in payment process
	Professional	The personal service provide appropriate service manners	Waiters' Credibility
Overall Satisfaction			Overall Satisfied
			Compared to other business
			Satisfied in General

As shown on the table above, there are operating variables that used in this research. Indicators and sub-variables are gathered from literature study and previous research. These data gathered and summarized into indicators that described every variables in each of the attributes. The data collection in this study gathered by questionnaire in Bahasa Indonesia and distributed online to the people who had been to GS in Jakarta Selatan. The data was collected during June-July 2015 while the research is conducted. The respondent for this research are those who have been experiencing the service performance of GS. The questionnaires were distributed by online form to the people via Line Messenger social media and expecting snowball effect to collect the responses.

Sample Characteristics

This research used a quantitative approach with the survey research methods that will takes samples from a population and using questionnaires as the main data collection tool. The population has been limited to those who had been to GS at least once to experience their service performance. Moreover, the questionnaire will be distributed for GS consumers by online form. To obtain a sample that can describe population, the determination of research sample is using Slovin Theory of sampling method. There are terms that the people who can fill the questionnaire are those who already been to GS at least once and those who come to GS when the research occurred. Slovin Formula as follows:

$$n = \frac{N}{1+NE^2}$$

n = Sample Size
N = Population Size
E = Margin of Error *desired

Based on Slovin table with the number of Y generation in Jakarta Selatan, where GS took placeis 445.583 (http://jakarta.bps.go.id/) and Margin of Error desired 10%, the number of sample what would be needed for this research is 100 respondents.

Data Analysis Technique

Descriptive Analysis

Descriptive analysis is used for the primary data, which collected by using quantity that based on score or scale. It is based on the frequency distribution of the data collected from the questionnaire. By using this technique, researcher can discover the respondent profile from the variables that has been determined, which is the service quality and satisfaction of experiencing GS restaurant service.

Multiple Linear Regressions Analysis

Regression analysis is used to find the most important variables based on equation in the existed variables in the attributes. The regression analysis defines the dependent and the independent variables, positively or negatively. *Multiple Linear Regressions* (MLR) is used to model the relationship between the explanatory and response variables. MLR takes a group of random variables and tries to find a mathematical relationship between them. The model creates a relationship in the form of a straight line (linear) that best approximates all the individual data points.

Analysis and Results

Validity and Reliability Test

An item is considered as invalid if it has validity coefficient below 0.3, then all of the indicators have been proven as valid. Meanwhile, all of the variables can be stated reliable with reliability coefficient above 0.6 as the critical point of reliability test. The questionnaire is ready to distribute to the respondent after it declared as valid and reliable.

Variable	Indicator	Validity Coefficient	Critical Point	Status	Reliability Coefficient	Critical point	Status
Self-Service Technology (X1)	p1	0,666	0,361	Valid	0,863	0,6	Reliable
	p2	0,646	0,361	Valid	0,864		Reliable
	p3	0,707	0,361	Valid	0,860		Reliable
	p4	0,735	0,361	Valid	0,858		Reliable
	p5	0,817	0,361	Valid	0,850		Reliable
	p6	0,713	0,361	Valid	0,859		Reliable
	p7	0,661	0,361	Valid	0,864		Reliable
	p8	0,506	0,361	Valid	0,878		Reliable
	p9	0,793	0,361	Valid	0,853		Reliable
	p10	0,616	0,361	Valid	0,868		Reliable
	p11	0,540	0,361	Valid	0,876		Reliable
Personal Service (X2)	p12	0,929	0,361	Valid	0,864	0,6	Reliable
	p13	0,905	0,361	Valid	0,862		Reliable
	p14	0,914	0,361	Valid	0,861		Reliable
	p15	0,676	0,361	Valid	0,900		Reliable
	p16	0,695	0,361	Valid	0,895		Reliable
	p17	0,781	0,361	Valid	0,883		Reliable
	p18	0,628	0,361	Valid	0,903		Reliable
Customer Overall Satisfaction (Y)	p1	0,898	0,361	Valid	0,836	0,6	Reliable
	p2	0,903	0,361	Valid	0,879		Reliable
	p3	0,922	0,361	Valid	0,799		Reliable

Self-Service Technology Response

The table Convenient shows high mean scores, which reflected that consumers are feeling convenient with GS's Self-Service. However, the device has not provided with well product information that the indicator has the lowest mean score, whereas the price description has the highest score. The customer evaluation shows that the device considered as easy to use, this might happen because most of the respondents are young adults that familiar with many kinds of technologies. Order accuracy also has high score, which means that the technology device has helped to record the ordering process well. Moreover, Convenient sub-variables considered as the most influencing factor in Self-Service Technology variable.

Based on the time saving sub-variable table the Order efficiency has the highest contributor, which means that self-service technology helps the customer order process in more efficient way. The ordering process using SST device include selecting the menu that divided into different types of menu, putting order amount for selected menu and after all the menu have been selected customers can choose the order button so the ordered menu will be processed by the kitchen. The application responsiveness inside the device works well, in the meaning that he device helps the ordering process without any problem. The device also provided to call the waiter feature to help the customers that need personal service assistance, which has slightly low score compared to order efficiency and responsiveness. This may happen regarding to low personal service responsiveness in the time the customers use calling the waiter feature on the device. In the payment process, which provided in the device feature has rather low score. The payment process includes customer using the billing statement feature inside the device so the cashier able to print out the paper bill to be delivered to customers by the personal service. However, for the payment itself still using manual method whether the consumers will use cash or other payment method. The time saving sub-variable scores can be considered has high satisfaction regarding to the SST usage by the customer, because the device itself has the features to record and order the service needed by the customer without any further effort to communicate with the personal service.

Low risk table shows that customer of GS mostly considered that the self-service technology can help then to avoid the errors in ordering process, otherwise there are people that still consider that there is still probability of error in the ordering process using the technology device. However, the error occurred by the customers' personal mistakes in ordering the menu inside the technology device. the last table shows customized sub-variable response, which shows that customer of GS hardly define whether they are satisfied with the service or not. The device itself does not accommodate any special request that customers have to order special menu through the personal service.

Personal Service Response

Promptness table reflects the customers' valuation of waiter's feedback when asked. This shows that most of the respondents are satisfied with waiters' quick response, even though the promptness should be improved in order to enhance the customer satisfaction for the personal service attribute. Personal service promptness including their responsiveness in delivering the service and response to the customers that used calling the waiter feature on the SST device. Whereas, the informative variable table reflects the customer evaluation in information provided by the personal services. Give recommendation to the customer has close score to neutral, while giving clear information has slightly higher score even though was not high enough for consumer satisfaction. This situation is not surprising that the consumers are prefer to use technology device to get information they needed about the service and menu.

Approachable dimension of personal service attributes shows that the personal services in GS are readily available and accessible to help the customers when needed. Based on the approachable sub-variable table, it is considered that customer has been satisfied to the personal service in helping them in the time they need. Trustworthy dimension defined as how the personal services

are dependable in delivering the service to the customer. There are two indicators of trustworthy dimension, dependable in ordering process and dependable in payment process. Trustworthy table shows that customers have been satisfied in trusting the personal service for ordering and payment process. Personal services are needed to help the customer when the Self-Service technology device does not accommodate to deliver the service needed by the customer. The events might in form of customized order and payment process or when there is problem with the device. Therefore, some of the customer still consider that personal service are dependable to record their orders. Moreover, regarding to the payment process, which still using manual method the customer also depends on personal service or cashier to pay for the service they had taken advantage of. Professional dimension in personal service variable shows customer valuation toward personal service manners in providing the service to the customer. The satisfaction level of professional dimension in GS is considered as high that the personal service has delivered the service professionally as shown on the table above.

Overall Satisfaction Response

Based on the Overall Satisfaction response there are three indicators. The first indicator is overall GS service, which reflects that customers of GS have been satisfied with overall GS service. In gereal, GS has also reached the customer satisfaction toward the restaurant. Meanwhile, there is slightly difference in comparison of GS to other sushi restaurant, which is lower than the overall service and overall restaurant satisfaction. This fact shows that there are other Sushi restaurants in Jakarta Selatan with more competitive advantage compared to GS in gaining the customer satisfaction in the service area or other variable that affecting overall satisfaction. These factors include sushi restaurant, which have more variety of food, intense marketing promotion and loyalty program, or more authentic Japanese atmosphere service scape.

Multiple Linear Regressions (MLR) Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,67870667
Most Extreme Differences	Absolute	,049
	Positive	,045
	Negative	-,049
Kolmogorov-Smirnov Z		,490
Asymp. Sig. (2-tailed)		,970

a. Test distribution is Normal.

b. Calculated from data.

There are three steps that needed to be done before conducting the MLR test to check if the data is ready to be tested. The first is normality test, which shown on the table on the left. Normality test conducted to determine whether the data taken from the population was normally distributed. A good regression models are normal or near-normal distributions. If the data does not follow a normal distribution pattern of distribution, it will obtain the estimation are biased. Kolmogorov-Smirnov method of normality analysis requires normal curve when the value Asymp. Sig. is above the maximum limit of error, which is 0.05. Normality test in regression analysis used to measure the residual or disturbance variable, the residual tend to be randomly stochastic. The table 4.11 shows that the Sig is 0.970> 0.05, it means that the data can be used as the variable residue has normal distribution.

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	,635	1,574
	X2	,635	1,574

a. Dependent Variable: Y

The second test is Multicollinearity Test, which conducted to measure whether the correlation between several or entire independent variables is high or low. From the output above it can be seen that the VIF value is less than 10, so it can be concluded that there is no multicollinearity in the data.

Correlations

			Unstandardized Residual
Spearman's rho	X1	Correlation Coefficient	,038
		Sig. (2-tailed)	,707
		N	100
	X2	Correlation Coefficient	,005
		Sig. (2-tailed)	,964
		N	100

The last is Heteroscedasticity Test that aimed to test whether in the regression model occurred inequality residual variance from one observation to another observation. If the residual variance from one observation to other observations remains the same, then it is called homoscedasticity. Spearman Rank correlation used to test the presence of heteroscedasticity by correlating each of free variables with absolute residual value. Based on the output above, can be seen that there is no significant correlation. It is shown that the p-value (Sig) is greater than 0.05. Therefore, it can be concluded there is no heteroscedasticity in the regression model.

MULTIPLE CORRELATIONS ANALYSIS

Model Summary

Mode	R	R Squar	Adjusted R Squar	Std. Error o the Estimat
1	,481[a]	,232	,216	,68567

a. Predictors: (Constant), X2, X1

Analysis of multiple correlations (R) used to determine the relationship simultaneously between the Self-Service Technology (X1) and Personal Service (X2) with Overall Customer Satisfaction (Y). Based on the software SPSS output table above, the value correlation coefficient (R) is 0.481. This shows that there are relationship between the Self-Service Technology (X1) and Personal Service (X2) with Overall Customer Satisfaction (Y).

PARTIAL EFFECT ANALYSIS

Variable	Standardized Coefficient Beta	Correlations Zero-order	Partial Influence Magnitude	Partial Influence Magnitude (%)
X_1	0,355	0,461	0,164	16,4%
X_2	0,175	0,390	0,068	6,8%
Total Influence			**0,232**	**23,2%**

Analysis of partial effect used to determine how closely the effect between each independent variables to the dependent variable. Partial effect is obtained by multiplying the standardized coefficient beta with zero-order. Based on the table above, it shown that the influence of the Self-Service Technology (X1) towards Overall Customer Satisfaction (Y) partially is 16.4%, whereas the influence of Personal Service (X2) towards Overall Customer Satisfaction (Y) is partially of 6.8%. Thus, the total effect of the Self-Service Technology (X1) and Personal Service (X2) towards Overall Customer Satisfaction (Y) simultaneously is 23.2%. This can also be seen from coefficient of determination value.

OVERALL HYPOTHESIS TEST (F TEST)

F test is used to measure the influence significance between independent variables simultaneously toward dependent variable.

Ho: There is no significant influence between Self-Service Technology (X1) and Personal Service (X2) toward Overall Customer Satisfaction (Y).
Ha: There is a significant influence between Self-Service Technology (X1) and Personal Service (X2) toward Overall Customer Satisfaction (Y).

Statistics Test:

$$F = \frac{R^2(n-k-1)}{k(1-R^2)}$$

(α= 5%). Test Criterion:
1. Accept Ho if F Value < F Table
2. Reject Ho if F Value ≥ F Table

F table = $F_{\alpha;(df_1, df_2)}$; df1 = k , df2 = n-k-1. F test based on SPSS process shown below:

F Value	df	F Table	Sig	Result	Conclusion
14,638	df1 = 2	3,090	0,000	Ho Rejected	Influence (Significant)
	df2 = 97				

As shown on the table above, the F value is 19.239. The F value of (14.638)> F Table (3.090), therefore Ho is rejected. It can be concluded that simultaneously there is a significant influence on the Self-Service Technology (X1) and Personal Service (X2) toward Overall Customer Satisfaction (Y).

PARTIAL HYPOTHESIS TEST (T TEST)

T test is used to measure the influence significance between independent variables partially toward dependent variable.

- $Ho_1 : \beta_1 = 0$ *Self-Service Technology* (X_1) has no significant influence toward*Customer Overall Satisfaction* (Y).
  $Ha_1 : \beta_1 \neq 0$ *Self-Service Technology* (X_1) has significant influence toward*Customer Overal Satisfaction* (Y).
- $Ho_2 : \beta_2 = 0$ *Personal Service* (X_2) has no significant influence toward*Customer Overal Satisfaction* (Y).
  $Ha_2 : \beta_2 \neq 0$ *Personal Service* (X_2) has significant influence toward*Customer Overal Satisfaction* (Y).

(α = 5%). Statistic Test:

$t_{hit} = \frac{b}{Se(b)}$, independent degree = n-k-1

Test Criterion:
1. Accept Ho If –t table ≤ t value ≤ t table
2. Reject Ho if t value < -t table or t value > t table

T test result based on SPSS process as shown below:

Variable	t value	df	t table	Sig	Explanation	Conclusion
X1	3,179	97	1,985	0,002	Ho Rejected	Significant
X2	1,569	97	1,985	0,120	Ho Accepted	Not Significant

Based on the table above, it shows that the t value of variable X1 is greater than its t table. According to the table, Ho is declined because the t value is (3.179)> t table (1.985). Therefore it can be concluded that there is partially significant influence between the Self-Service Technology (X1) toward Overall Customer Satisfaction (Y). At the same time, variable X2 has smaller t value than its t table. According to the table, Ho is accepted because t value (1.569) <t table (1.985). Therefore it can be concluded that there is partially no significant influence between Personal Service (X2) toward Overall Customer Satisfaction (Y).

This result does not support the research framework that personal service, as a variable, has no particular effect to the overall satisfaction at GS. Accordingly, the research framework should be trimmed and regression SPSS recalculation is needed to see how the only one variable X1 influence overall satisfaction.

CORRELATION ANALYSIS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,461[a]	,212	,204	,69076

a. Predictors: (Constant), X1

To determine the relationship between the Self-Service Technology (X1) with Overall Customer Satisfaction (Y), without Personal Service variable (X2), used correlation analysis (R). Based on the software SPSS output table above, the value correlation coefficient (R) is 0.461. This shows that there is a moderate relationship between the Self-Service Technology (X1) with Overall Customer Satisfaction (Y). The R Square of 0.212 means that the Self-Service Technology (X1) affecting by 21.2% against Overall Customer Satisfaction (Y). Meanwhile the remaining 78.8% are contributed by other variables besides Self-Service Technology (X1).

PARTIAL HYPOTHESIS TEST (T TEST)

T test is used to measure the influence significance between independent variable partially toward the dependent variable.

- $Ho_1 : \beta_1 = 0$ *Self-Service Technology* (X_1) has no significant influence toward *Customer Overall Satisfaction* (Y).

  $Ha_1 : \beta_1 \neq 0$ *Self-Service Technology* (X_1) has significant influence toward*Customer Overal Satisfaction* (Y).

($\alpha = 5\%$). Statistic Test:

$t_{hit} = \frac{b}{Se(b)}$, independent degree = n-k-1

Test Criterion: 1. Accept Ho If –t table ≤ t value ≤ t table

2. Reject Ho if t value < -t table or t value > t table

T test result based on SPSS process as shown below:

Variable	t Value	df	t Table	Sig	Result	Conclusion
X1	5,140	97	1,984	0,000	Ho Rejected	Significant

According to the table above, it shows that the t value of variable X1 is greater than its t table. Therefore, Ho is rejected because the t value is (5.140) > t table (1.984). It can be concluded that there is partially significant influence from self-service technology toward Overall Satisfaction.

THE INFUENCE OF SELF-SERVICE TECHNOLOGY (X1) TOWARD CUSTOMER SATISFACTION

The linear regression calculation resulting as shown on the table below:

Variable	Regression Coefficient	Std. Error	t	Sig.
(Constant)	1,330	0,419	3,178	0,002
X1	0,617	0,120	5,140	0,000

Linear regression is used to measure the influence from *Self-Service Technology* toward *Overall Satisfaction* with the formula and Linear Regression equation based on the calculation in the table above as shown below:

$Y = a + b_1X_1$	Y	= *Customer Overall Satisfaction*
$Y = 1{,}330 + 0{,}617X_1$	X_1	= *Self-Service Technology*
	a	= Constants
Details	b_1	= Regression Coefficient

The regression coefficient value on the independent variables described that when the independent variable is expected to rise by one unit and the other independent variable estimated to be constant or equal to zero, the dependent variable is expected to go up or down according to regression coefficients sign of the independent variables. The regression coefficient of independent variable showed the relationship between the independent variable toward Customer Overall Satisfaction. The regression coefficients of independent variables X1 is positive, it indicates the existence of a direct relationship between the Self-Service Technology (X1) with Overall Customer Satisfaction (Y). Regression coefficient of variable X1 is 0.617 implies that for each increment of Self-Service Technology (X1) by one unit will lead to increase Overall Customer Satisfaction (Y) equal to 0.617.

Conclusion and Recommedation

Conclusion

The research has gone some way to explore the relative impact of SST on consumer satisfaction. The empirical results have not supported the whole conceptual framework proposed in this study. The research framework in the previous chapter that mentioned there is influence between SST and Personal Service toward Overall Satisfaction has been changed regarding the SPSS calculation shows that there is no significant influence of personal service toward overall satisfaction, otherwise SST seemed to be the most significant influence that contributing to overall satisfaction. Contrast to the prior research, which stated that personal service appears to be the more important contributor (Beatson, Coote, and Rudd, 2006), the self-service technology appears to be the more important contributor influencing GS's consumer satisfaction.It is interesting, however is the magnitude of the relationships, SST in GS restaurant contributes a great deal more to overall satisfaction than personal service. This perhaps happened regarding to limited amount of personal service and consumer encounter, while SST has largely replaced personal service in process of ordering, ordered meal delivery and billing, although payment method still running manually by cashier. The respondent profile of this study, which mostly came from young adult age segment, may also affect this result. The young adult people are mostly familiar to the technology devices and they are preferred to use GS's self-service technology devices in delivering services for themselves.

This study result shows that Self-Service Technology has enhance service convenience and deliver efficient service process to the customer. The absence of personal service interaction has no direct effect to the overall satisfaction in GS restaurant in fact SST has led to high overall satisfaction by the consumer evaluation. While this research was successful at increasing our understanding of the relationship between SST and consumer satisfaction, it is important to acknowledge some possible limitations. In particular, future research might expand beyond the single context of the current research to multiple contexts. The current research setting, however, was deemed appropriates as there is increasing evidence of self-service technologies in restaurants. The research respondents are mostly come from young adult age segment, which then become this study limitation because it is only represent the specific segment of GS's consumer and cannot be generalized to the whole segment. Furthermore, the overall satisfaction in this study only linked to its service delivery, without linked to other variables that may also influence the overall satisfaction.

Recommendation

Recommendation section is aiming to give some improvement that can be made for GS in providing service to gain consumer satisfaction based on research result and conclusion. By summarizing the analysis, there are some recommendations that can be consideration:

- Give detailed product description. Regarding to the lack product description score, it is

important to give the detailed product description for the consumer. The product description contained of food materials and cooking process. The product description can help the consumer to avoid the unlikely food materials or allergic probability.

- Quick personal service. The result analysis shows low valuation of personal service response in the time the called the waiter by self-service technology device. Spry personal service can also increase consumer satisfaction in GS by giving more personal attention to the consumer when needed.
- In order to cover the self-service technology device absence to accommodate customized order, the personal service can help the consumer to order the menu outside the self-service device.
- Personal service providing detailed product information to the consumer. The product information is important for the personal service knowledge, in order to cover the absence of detailed product description in the self-service device.

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