

Effect of Price, Risk, and Service Quality to Customer Satisfaction by Considering Demographics as a Moderating Variable in A Coffee Shop Business

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Abstract. Customer satisfaction is one aspect that needs to be considered to win the competition. Currently, competition occurs in the coffee shop industry in Indonesia. Previous research states that customer satisfaction is influenced by variables including price, risk, service quality, and demographics as moderating variables. The purpose of this study is to examine the effect of price, risk, service quality, and demographics on customer satisfaction using PLS-SEM. The object of this research is a coffee shop in Pekanbaru, Riau City. The data collection technique used was a questionnaire. The number of research respondents was 218. The test results show that price, risk, and service quality have a significant positive effect on customer satisfaction. Price has a significant positive effect on risk and service quality. Meanwhile, demographics do not moderate the relationship between price, service quality, and customer satisfaction.

1 Introduction

Current developments generate innovation and new ideas in the coffee shop business. Coffee is a drink with a distinctive aroma and is in great demand at all levels of society. Indonesia is the fifth country in the world with the highest coffee consumption [1]. High coffee consumption in Indonesia also triggers the emergence of various coffee shops or coffee restaurants from competitor brands, resulting in increasingly fierce competition between companies. Intense competition can be won with the company's strategy for achieving customer satisfaction. This research was conducted at a coffee shop in Pekanbaru, Riau. This research aims to examine the effect of price, risk, and service quality on customer satisfaction, with demographic factors including age, gender, and income as moderating variables supported by previous studies. These variables are variables that affect customer satisfaction [2-7].

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2 Research Methodology

2.1 Formulation of the problem

Customer satisfaction is a key success in tight competition. Customer satisfaction is influenced by several other variables, including price, risk, service quality, and demographics (age, gender, and income). This study will identify these variables affecting customer satisfaction using the PLS-SEM method.

2.2 Literature Review

The theoretical foundation is a supporting theory used as a reference, including price, risk, service quality, customer satisfaction, and the PLS-SEM method.

2.3 Moderating Variable

According to [8], a moderating variable is a variable that can be used to strengthen or weaken the relationship between the two constructs or between the independent variables and the dependent variable. This study uses demographic factors as a moderating variable. In this study, the demographic factors used were gender, age, and income.

2.4 Determination of problem-solving methods

This research aims to test and analyze hypotheses using the PLS-SEM method. This study has criteria, namely that the research objectives are predicting and developing theories, the approach is based on variance, the sample size is small, and there is no reciprocal relationship between variables. These criteria are in accordance with the PLS-SEM method.

2.5 Research Model

Several previous studies were utilized to formulate the research hypotheses. According to [2] and [4], prices positively impact customer satisfaction, implying that higher prices lead to greater customer satisfaction. Based on this previous research, the first hypothesis (H1) posits a relationship between price and customer satisfaction. According to [3], risk negatively affects customer satisfaction, suggesting that lower levels of risk result in higher customer satisfaction. This relationship between risk and customer satisfaction is articulated as the second hypothesis (H2). According to [5], service quality has a positive influence on customer satisfaction, indicating that better quality service received by customers correlates with increased customer satisfaction. This relationship between service quality and customer satisfaction is presented as the third hypothesis (H3). According to [2], price has a positive effect on risk, implying that the higher the price of a product or service, the greater the risk accepted by customers. This relationship between price and risk is expressed as the fourth hypothesis (H4). According to [7], price has a positive impact on service quality, suggesting that the higher the price of a product or service, the better the service quality is perceived by customers. This relationship between price and service quality is presented as the fifth hypothesis (H5).

According to [6], demographic factors, including gender, age, and income, can moderate the effects of service quality and price on customer satisfaction. Demographic factors can influence customer satisfaction due to differences in gender, age, and income. The

relationship between price and customer satisfaction, with gender as a moderating variable, is articulated as the sixth hypothesis (H6). The relationship between service quality and customer satisfaction, with gender as a moderating variable, is formulated as the seventh hypothesis (H7). The relationship between price and customer satisfaction, with age as a moderating variable, is posited as the eighth hypothesis (H8). The confirmation of the relationship between service quality and customer satisfaction, with age as a moderating variable, is presented as the ninth hypothesis (H9). Validation of the relationship between price and customer satisfaction, with income as a moderating variable, is expressed as the tenth hypothesis (H10). Verification of the relationship between service quality and customer satisfaction, with income as a moderating variable, is put forth as the eleventh hypothesis (H11). The research model is shown in Fig 1.

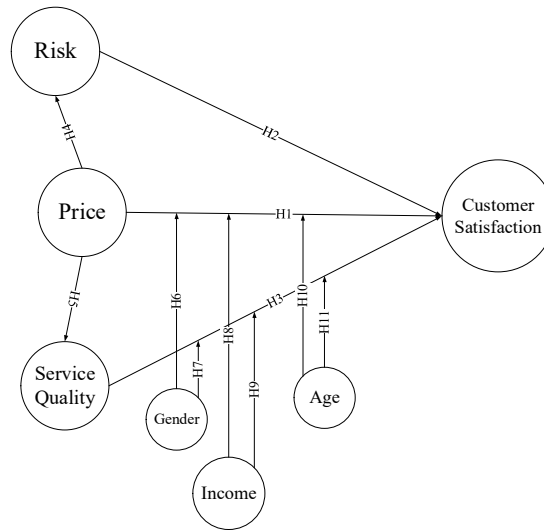


Fig. 1. Research Model

In this study, there are several hypotheses, including:

H1: Prices have a positive effect on customer satisfaction.

H2: Risk has a positive effect on customer satisfaction.

H3: Service quality has a positive effect on customer satisfaction.

H4: Price has a positive effect on risk.

H5: Price has a positive effect on service quality.

H6: Price has a positive effect on customer satisfaction, with gender as a moderating variable.

H7: Service quality has a positive effect on customer satisfaction, with gender as a moderating variable.

H8: Price has a positive effect on customer satisfaction, with age as a moderating variable.

H9: Service quality has a positive effect on customer satisfaction, with age as a moderating variable.

H10: Price has a positive effect on customer satisfaction, with income as a moderating variable.

H11: Service quality has a positive effect on customer satisfaction, with income as a moderating variable.

2.6 Data Collection

Collected data by distributing questionnaires for nine days on the scale used, namely the Likert scale with a scale of 1-6. The questionnaire consists of 49 research instruments based on previous research and confirmed research on important-level instruments given to coffee shop owners to identify. Respondents who can fill out the questionnaire belong to generations Z (15–26 years) and Y (27–42 years) with a minimum of two purchases in the period March–May 2023 in Riau and its surroundings. The amount of data collected reached as many as 218 respondents.

2.7 Data Processing using the PLS-SEM

This data processing stage is the stage of processing the questionnaire result data, which is input to the Smart-PLS software. Data processing includes evaluating the outer and inner model and processing Importance-Performance Matrix Analysis (IPMA).

3 Result and Analysis

3.1 Measurement Model

The evaluation of the measurement model (outer model) includes validity and reliability tests. The validity test conducted on the research model consisted of convergent validity and discriminant validity. The reliability test used was the internal consistency reliability test. Testing the validity of the outer model can be carried out using a convergent validity test, which can be seen from the outer loading value. According to [8], the loading value must be ≥ 0.4 , and the average variance extracted (AVE) value that can be said to be valid is the AVE value > 0.5 . If there is an outer loading value of 0.4 for each indicator or an AVE value < 0.5 , then it is necessary to improve the model by removing the indicator with the smallest outer loading value.

Reliability testing is carried out after the validity test has met all the requirements of the convergent validity test. A construct is said to be reliable when the composite reliability (rho_c) value is > 0.7 and the Cronbach's alpha value is > 0.7 [8]. The discriminant validity test can be seen from the heterotrait-monotrait ratio (HTMT) test; according to [8], a value of HTMT < 0.9 can be said to be a valid discriminant. Validity testing is based on outer loading and AVE values. The results of the validity test after 12 iterations. The modification model shows that two indicators of price and 11 indicators of service quality were eliminated. The results of the reliability test based on the internal consistency reliability test based on the composite reliability and Cronbach's alpha shown in Table 1.

Table 1. Reliability Test Result

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Interpretation
CS	0.904	0.905	0.921	Reliable
P	0.815	0.844	0.868	Reliable
R	0.915	0.948	0.928	Reliable
SQ	0.89	0.892	0.91	Reliable

Based on the results of the reliability test, all constructs were reliable because the rho_c and Cronbach's alpha values were > 0.7 . Based on the results of the Heterotrait-Monotrait Ratio

(HTMT) discriminant validity test on all variables, it was appropriate because the HTMT value was 0.9

3.2 Structural Model

An evaluation of the inner model is carried out to determine the relationship between latent variables. The results of the inner model can be carried out using a significance test, a coefficient of determination test (R-Square), f^2 , and a predictive relevance test (Q2). The significance test looks at the t-statistic value to conclude the initial hypothesis (H0) that is rejected or accepted: accept H0 or reject H1, when the t-statistic is < 1.645 , and accept H1 or reject H0, when the t-statistic is ≥ 1.645 [8]. Based on the results of the test statistics, it was shown that price has a positive and significant effect on customer satisfaction (H1), so when the price is higher, customer satisfaction increases. The results of this study are in line with research conducted by [2, 4, 6]. H2 shows that risk has a positive and significant effect on customer satisfaction. The higher the risk value, the higher the level of customer satisfaction. The purpose of a high-risk value here is to indicate that the risk experienced by customers is low. Small or high-risk value can increase customer satisfaction. H3 shows that service quality has a positive and significant effect on customer satisfaction, so when the service quality is higher, customer satisfaction increases. The results of this study are in line with research conducted by [4, 6, 7]. H4 shows that price has a positive and significant effect on risk. The results are the same as [2]. H5 shows that price has a positive and significant effect on service quality. The results are the same as [7]. In this study, H6 and H7 are rejected, which means that gender does not moderate the relationship between price and customer satisfaction [7] and gender does not moderate the relationship between service quality and customer satisfaction [9]. H8 is accepted, which means that age moderates the relationship between price and customer satisfaction, so the hypothesis is accepted because it is influential. The findings are consistent with those of [6]. H9, H10, and H11 are rejected, which means that age does not moderate the relationship between service quality and customer satisfaction [9], income or allowance does not moderate the relationship between price and customer satisfaction, and income does not moderate the relationship between service quality and customer satisfaction. According to [8], the criteria for r-square are divided into three categories: 0.75 (strong), 0.50 (moderate), and 0.25 (weak). The coefficient of the determination test (R-square) is shown in Table 2.

Table 2. R² Test Result

Construct	R-square	Interpretation
CS	0.685	Strong correlation
R	0.157	Weak correlation
SQ	0.296	Weak correlation

The R² value shows that exogenous variables (price, risk, and quality of service) have an effect on customer satisfaction by 68.50%, price variables have an effect on risk by 15.70%, and price variables have an effect on service quality by 29.60%, and the rest is influenced by other factors outside of these variables. According to [8], the criteria for the value of the effect size (f^2) are 0.02 (small), 0.15 (medium), and 0.35 (large). The effect size (f^2) value from hypothesis testing is shown in Table 3.

Table 3. f^2 Test Result

<i>Path</i>	f^2	<i>Range</i>	<i>Interpretation</i>
P ↔ CS	0.07 6	$0,02 \leq f^2 < 0,15$	Small effect
R ↔ CS	0.02 3	$0,02 \leq f^2 < 0,15$	Small effect
SQ ↔ CS	0.30 6	$0,15 < f^2 < 0,35$	Medium effect
P ↔ R	0.19 1	$0,15 < f^2 < 0,35$	Medium effect
P ↔ SQ	0.42 7	$0,15 < f^2 < 0,35$	Large effect

The f^2 (effect size) shows that the moderating variable does not moderate the relationship between price variables and customer satisfaction or the relationship between service quality variables and customer satisfaction. Based on the test results, a coffee shop's companies must prioritize variables on customer satisfaction. It is known that S a coffee shop's service quality has a greater influence on customer satisfaction than price and risk variables. Each construct has a Q^2 value > 0 , which shows that the construct in the research model has predictive relevance [8]. Next, a re-check of the Q^2 test is carried out for each indicator. The determination of using RMSE or MAE values is based on the skewness value; if the skewness value is between -2 and 2, then this value indicates that the predictions are distributed symmetrically, so the calculation uses RMSE, and vice versa [10]. Based results, there is a Q^2 value less than 0 on the R3 indicator. This value indicates that the R3 indicator does not have predictive relevance ability. There are 30 indicators in the table, and out of those 30, there are 23 indicators that have a value of PLS-SEM_RMSE less than LM_RMSE if the majority of indicators have a value of PLS-SEM_RMSE less than LM_RMSE, which means that it has moderate predictive ability [10].

3.3 Importance-Performance Matrix Analysis (IPMA)

Importance-Performance Matrix Analysis (IPMA) data processing is carried out to find out the priorities for improving research instruments to increase customer satisfaction. Based on the IPMA results, it can be seen that the indicators in quadrant I are indicators P1, P3, P4, P5, SQ21, and SQ32. Indicators in quadrant I are priority indicators that must be improved. Improvements to these indicators aim to increase customer satisfaction because they have a high level of importance but low performance.

4 Conclusion

This research discusses the influence of price, risk, and service quality on customer satisfaction with demographic factors as moderating variables and the influence of price on risk and service quality in generations Z and Y. The study's findings indicate that, at a coffee shop, price, risk, and service quality have a 68.5% impact on customer satisfaction, while other variables have a 31.5% influence. The price variable influences risk and service quality, but demographic factors do not moderate the price and service quality variables on customer satisfaction at a coffee shop. This may be due to the lack of wider demographic coverage.

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