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E-Commerce Analysis of Customer Satisfaction and Hotel Reservation Quantity in Cilacap Regency

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ABSTRACT

This research aims to determine the effects of e-commerce implementation on customer satisfaction and room reservation quantity. The data is obtained from questionnaires distribution and analyzed using Multiple Regression Analysis where F-Test and T-Test tested the 168 samples of 290 population. From the result of analysis, Partial test on customer satisfaction shows that the three variables have $t_{count} > t_{table}$, the independent variable is quality of use (X_1), namely $8,132 > 1,974$; the independent variable information quality (X_2), namely $2,609 > 1,974$; the independent variable of interaction quality (X_3) is $2,956 > 1,974$, so each H_1 is accepted. Regarding the room reservation level, the partial test shows the three variables have $t_{count} > t_{table}$, the independent variable is the quality of use (X_1), namely $2,181 > 1,974$; the independent variable information quality (X_2), namely $2,021 < 1,974$; the independent variable of the quality of the interaction (X_3), namely $3,497 > 1,974$, so H_1 is accepted. It can be concluded that the usability quality (X_1), quality of information (X_2), and quality interaction (X_3) have significant effects on customer satisfaction (Y_1) and room reservation quantity (Y_2). Specifically, the quality of interaction shows a significant effect on the room reservation quantity as well as the quality of information and interaction on customer satisfaction. Based on this research, it can be concluded that the quality of interaction and quality of information have a positive effect on customer satisfaction, and only the interaction variable has a positive effect on the quantity of hotel room reservation.

Kata kunci:

E-commerce

Kepuasan Konsumen

Tingkat Reservasi Kamar Hotel.

ABSTRAK

Tujuan penulisan untuk mengetahui pengaruh penerapan *e-commerce* terhadap kepuasan konsumen dan tingkat reservasi kamar. Data diambil dari penyebaran kuesioner, dengan ukuran populasi 290 menggunakan rumus *slovin* dibutuhkan sampel minimal sebanyak 168. Data dianalisis dengan Analisis Regresi Berganda, diuji dengan F-Test dan T-Test. Uji parsial terhadap kepuasan konsumen menunjukkan ketiga variabel memiliki $t_{hitung} > t_{tabel}$, variabel bebas kualitas kegunaan (X_1) yaitu $8,132 > 1,974$; variabel bebas kualitas informasi (X_2) yaitu $2,609 > 1,974$; variabel bebas kualitas interaksi (X_3) yaitu $2,956 > 1,974$ maka masing-masing H_1 diterima. Terhadap tingkat reservasi kamar, uji parsial menunjukkan ketiga variabel memiliki $t_{hitung} > t_{tabel}$, variabel bebas kualitas kegunaan (X_1) yaitu $2,181 > 1,974$; variabel bebas kualitas informasi (X_2) yaitu $2,021 < 1,974$; variabel bebas kualitas interaksi (X_3) yaitu $3,497 > 1,974$ maka masing-masing H_1 diterima. Dapat disimpulkan kualitas kegunaan(X_1), kualitas informasi(X_2) dan kualitas interaksi(X_3) terdapat pengaruh yang signifikan secara simultan terhadap kepuasan konsumen (Y_1) dan tingkat reservasi kamar (Y_2). Dan secara parsial kualitas interaksi menunjukkan pengaruh yang signifikan terhadap tingkat reservasi kamar kemudian kualitas informasi dan kualitas interaksi menunjukkan pengaruh yang signifikan terhadap kepuasan konsumen. Hasil penelitian ini dapat disimpulkan bahwa variabel kualitas interaksi dan kualitas informasi berpengaruh positif pada kepuasan konsumen dan hanya variabel interaksi yang mempunyai pengaruh positif terhadap tinggi rendahnya tingkat reservasi kamar hotel.

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INTRODUCTION

The utilization of information technology in the company/organization has become essential for companies/organizations to gain efficiency and effectiveness. In term of usability, information technology plays an important role in banking, education, health, police, electronic commerce, and other fields. The usability of information technology, especially the Internet, is expected to be beneficial for the business world to keep advancing and developing (Loukis et al., 2012)(Simangunsong, 2016). Nowadays, only companies with the capability of applying information technology are able to keep up with the business competition. One type of application of information technology to increase business competition is by utilizing electronic commerce (e-commerce), which is part of e-business (Sfenrianto et al., 2018)(Habibi & Hajati, 2015)(Sucipto & Budihartanti, 2020). E-commerce is said to be the buying, selling, and marketing of goods and services via electronic systems (Grandon & Pearson, 2004)(Liu et al., 2016).

A hospitality business is greatly assisted by the existence of e-commerce to improve services, development, and ease in the marketing (Dominici & Guzzo, 2010)(Wiastuti & Wiliam, 2018). Currently in Cilacap, Central Java, the hospitality business is considered to have a great potential. There are many ways to make a hotel room reservation, some of which are through the Travel Bureau (BPW), Tour Operator, and Hotel Representative. Making reservation via online through internet sites such as www.traveloka.com, www.booking.com, www.klikhotel.com, www.agoda.com, www.pegipegi.com, Hawaii, and www.nusatrip.com are also available and widely used. All those business process affect the low room reservation and the customer satisfaction level.

Based on data from PHRI Cilacap, reservation is a significant number between hotels that implement e-commerce and conventional hotels. At @Home Premiere, one of the starred hotels that have made use of e-commerce, there was 11,000 reservations in 2017. There was an increase to 12,800 in 2018, and up to 14,450 reservations in 2019. In 2017, there were 12,130 reservations at Dafam Hotel, a famous one-star hotel in Cilacap, 14,000 reservations in 2018, and slightly decreased to 13,980 reservations in 2019. In contrast to the conventional hotels with no e-commerce utilization, one of which is the Grand Liana Hotel, there were 2,108 reservations in 2017, 3,200 reservations in 2018, and 4,259 reservations in 2019. The increase in reservations each year is not too significant compared to hotels that have utilized e-commerce, as well as other conventional hotels in Cilacap. This issue needs resolving, therefore a Webqual 4.0 is brought to analyze customer satisfaction with the application of technology, in this case the room reservation process with e-commerce. A decrease or even a slight increase in reservations quantity is a serious issue for hotel owners or managers. So that it is necessary to map out strategic steps by utilizing information technology to resolve the issue.

A research by (Crnojevac et al., 2009) reviewing the differences in the ordering methods (online and offline) by the guests, obtained the results on how the development of Internet significantly changed market conditions in the tourism sector. As a result, it changes the entire process of development, management, marketing in the field of tourism and also how the hotel guests' satisfaction increases. A research by Mihajovic, The Analysis Of Serbian Customers Satisfaction With E-Services Quality Dimensions Of Lodging E-Intermediaries (Mihajlovic, 2017) carries out Servqual method which is the initial method of Webqual to measure customer satisfaction on online shopping in Serbia including ordering lodging online. The research finds that the Servqual variable affects consumer satisfaction in Serbia.

The current research was to find out how e-commerce affects consumer satisfaction level and hotel room reservation quantity using website quality measurement method based on end-user perception (Webqual 4.0)(Tarigan, 2008)(Oktavia, 2012)which is the development method of Servqual used in previous research(Hasanov & Khalid, 2015).

RESEARCH METHODS

According to WEBQUAL theory, there are usability, information quality and service interaction as the dimension that represents good quality from a website. The researcher first determines the topics, namely the effect of e-commerce on customer satisfaction and hotel room reservation quantity. Next stage was to search for references from books, several journals, related articles and direct observations to hotels in Cilacap. The third stage was to analyze the utilization of E-commerce in order to provide an overview of E-commerce industry. From the analysis, it is obtained the formulation of problems related to the topic. At this stage a hypothesis is also formulated which will be accepted or rejected.

A questionnaire was used to collect the data and aimed at consumers / guests at hotels in Cilacap. SPSS software was used for testing the questionnaire validity and reliability. Validity acts as the reference in development and evaluation of a test, while reliability functions as an indicator in believing the value of a test for its consistency. Multiple Regression Analysis and hypothesis testing were carried out to determine whether the hypothesis is accepted or rejected (Hasanov & Khalid, 2015). From the analysis, it can be concluded whether or not e-commerce affects customer satisfaction and the quantity of hotel room reservations

The questionnaire of this research took the previous studies (Crnojevac et al., 2009)(Tarigan, 2008) as reference. The questionnaire was divided into 2 parts. The first part of the nominal scale is usability to collect demographic scales such as the profile of respondents i.e sex, occupation, and age. The second part is the quality of usability, quality of information, quality of interaction, customer satisfaction, and room reservation quantity.

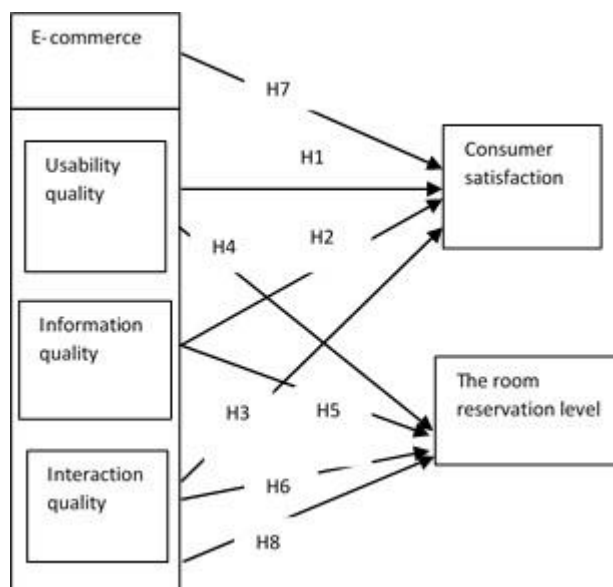


Figure 1. Research Model

The Research model is explained by the :

H₁ = The influence of usability quality on customer satisfaction.

H₂ = The influence of information quality on customer satisfaction.

H₃ = The influence of interaction quality on customer satisfaction.

H₄ = The influence of usability quality on room reservation level.

H₅ = The influence of information quality on the room reservation level.

H₆ = The influence of interaction quality on room reservation level

H₇ = The influence of e-commerce on customer satisfaction.

H₈ = The influence of e-commerce on the room reservation level.

To ensure the contents validity, all measurement items used in the survey were modified and validated using relevant research. The Table 1 illustrates the complete demographics of the respondents in this study.

Table 1. Demographics of Respondents

Respondents Characteristics	Total	%
Sex		
Male	80	47,6
Female	88	52,4
Occupation		
House Wife	10	5
College Student	20	15,4
Civil Employment	35	22
Private Employment	65	30,2
Student	2	1,6
Soldier/Police	6	2,4
Self Employment	30	23,4
Age		
<20 y.o	10	6
21-30 y.o	90	53,6
31-40 y.o	54	32,4
41-50 y.o	12	7,2
>50 y.o	2	1,2

Sample data collected from 290 respondents by looking at the number of hotel guests after being calculated using the Slovin method were 168 respondents with an error rate of 5%. This data is then processed to find out the respondent's profile. There are several characteristics of the respondent profile including: gender, occupation and age.

RESULTS AND DISCUSSION

1. Regression Test Simultaneously and Partially

The simultaneous test is carried out to identify the influence of all independent variables on the dependent variable together, while the partial test is to identify the influence of each independent variable on the dependent variable individually. In this study, the independent variables are the quality of usability, the quality of information, the quality of interaction, while consumer satisfaction and room reservation quantity belong to the dependent variables.

2. SIMULTANEOUS REGRESSION TEST

This test is conducted to prove whether or not e-commerce -among the quality of usability, information and interaction- statistically has significant influence on customer satisfaction and room reservation quantity.

H₀ = There is no significant influence among the quality of usability, quality of information and quality of interaction on customer satisfaction and room reservation quantity.

H_1 = There is a significant influence among the quality of usability, quality of information, and quality of interaction on customer satisfaction and room reservation quantity.

Table 2. The simultaneous test results of consumer satisfaction variables

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33,807	3	11,269	69,476	,000 ^b
	Residual	26,276	162	,162		
	Total	60,083	165			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), quality of usability, quality of information and quality of interaction

The first analysis obtains the value of f arithmetic = 69.4 with f Table of 2.42 then the value of f arithmetic > f Table that can be concluded there is a significant influence among the quality of usability (X1), information (X2) and interaction (X3) simultaneously on consumer satisfaction (Y1) and vice versa.

Table 3. Simultaneous test results of room reservation variables

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,763	3	1,254	8,826	,000 ^b
	Residual	23,022	162	,142		
	Total	26,785	165			

a. Dependent Variable: Reservation

b. Predictors: (Constant), quality of usability, quality of information and quality of interaction

The second analysis obtains the value of f arithmetic = 8.82 then the value of f arithmetic > f Table meaning that there is a significant influence among the quality of usability (X1), information (X2), interaction (X3) simultaneously on room reservation quantity (Y2).

Based on the analysis above, it can be inferred that H_0 is rejected which means there is significant influence among the quality of interaction, quality of information, and quality of usability together on customer satisfaction and room reservation quantity.

3. PARTIAL REGRESSION TEST

Partial regression test is a continuation of the regression coefficient. Based on data collected using IBM SPSS 23 program, resulted in a data of how much influence of interaction quality, information quality and usability quality on customer satisfaction as shown in the Table 4.

Table 4. Regression Test Result Partially Effect of E-commerce on Consumer Satisfaction

Variable	B	Beta	Tcount	TTable	Significance Level	Description
Constanta	594		1,956		,052	
Quality of Usability (X1)	455	502	8,132	1,974	,000	Significant
Quality of Information (X2)	248	178	2,609	1,974	,010	Significant
Quality of Interaction (X3)	244	208	2,956	1,974	,004	Significant

From Table 4, it can be seen that the linear regression model can be analyzed through its coefficients. The quality of interaction, quality of information and quality of usability show significant influence on customer satisfaction because t arithmetic > t Table or sig < 0,05. The best multiple linear regression equation model is¹³:

$$Y = 0,594 + 0,455 (X_1) + 0,248 (X_2) + 0,244 (X_3) \quad (1)$$

From the regression function, it is known that e-commerce consisting of the quality of usability, quality of information and quality of interaction is very influential on customer satisfaction so that:

- If the variable of usability quality (X_1) is improved, consumer satisfaction (Y) will increase with the regression coefficient of 0.455.
- If the variable of information quality (X_2) is improved, then the consumer satisfaction (Y) will increase with a regression coefficient of 0.248.
- If the variable of interaction quality (X_3) is improved, then the consumer satisfaction (Y) will increase with the regression coefficient of 0.244.

While the results of the processed influence of interaction quality, information quality and usability quality on room reservation quantity can be seen in the Table 5.

Table 5. Partial Regression Test Result E-commerce Influence on Room Reservation Level

Variable	B	Beta	Tcount	TTable	Significance Level	Description
Constanta	,181		11,183		,000	
Quality of usability (X1)	114	189	2,181	1,974	,031	Significant
Quality of Information (X2)	179	193	2,021	1,974	,045	Significant
Quality of Interaction (X3)	270	344	3,497	1,974	,001	Significant

From Table 5, it can be seen that the linear regression model can be analyzed through its coefficients. The quality of interaction, the quality of usability and the quality of the information showed significant influence on the reservation level because of ability $t \text{ count} > t \text{ Table}$ or $\text{sig} < 0,05$. The best multiple linear regression equation model is¹³:

$$Y = 3.181 + 0.114 (X_1) + 0.179 (X_2) + 0.270 (X_3) \quad (2)$$

From the regression function, it is known that e-commerce which is very influential on the reservation quantity is the quality of usability and quality of interaction, so that:

- If a variable of usability quality (X_1) is increased, the reservation level will increase with the regression coefficient of 0.114.
- If a variable of information quality (X_2) is improved, then the room reservation level will increase began regression coefficient of 0.179.
- If the variable of interaction quality (X_3) is improved, the reservation level will increase with the regression coefficient of 0.270.

4. HYPOTHESIS TESTING

Table 6. Hypothesis Test Result of e-commerce influence on customer satisfaction

Variable	Tcount	TTable	Result	Description
Constanta	1,956			
Usability quality (X1)	8,132	1,974	H_0 Rejected, H_1 Accepted	Influenced
Information quality (X2)	2,609	1,974	H_0 Rejected, H_1 Accepted	Influenced
Interaction quality (X3)	2,956	1,974	H_0 Rejected, H_1 Accepted	Influenced

Table 7. Result of a hypothesis test of e-commerce influence to room reservation level

Variable		Tcount	TTable	Result	Description
Constanta		11,183			
Usability (X1)	quality	2,181	1,974	H ₀ Rejected, H ₁ Accepted	Influenced
Information (X2)	quality	2,021	1,974	H ₀ Rejected, H ₁ Accepted	Influenced
interaction (X3)	quality	3,497	1,974	H ₀ Rejected, H ₁ Accepted	Influenced

Overall this study shows that the three variables of e-commerce namely usability quality, information quality, and interaction quality have a positive effect on customer satisfaction and the quantity of room reservations. In terms of the quality of e-commerce usability, it provides ease of use and provides an attractive appearance so that consumers can easily access and understand. In terms of the quality of information, e-commerce is able to provide clear, accurate, trustworthy, relevant, easy to understand, precise and detailed information to consumers / guests. In terms of the quality of interactions, e-commerce is trustworthy so that consumers / guests feel safe making room bookings, making payments online and having the convenience to communicate. So it can be concluded that the utilization of e-commerce has a positive effect on consumer satisfaction and the quantity of hotel room reservations.

CONCLUSIONS AND RECOMMENDATIONS

This research shows that the three variables of e-commerce are quality of interaction, quality of information and quality of usability, which have a positive effect on consumer satisfaction and room reservation level. In terms of usage quality, e-commerce provides ease of usability and provides an attractive appearance so that consumers feel easy to access and easy to understand. In terms of information quality, e-commerce can provide information that is clear, accurate, reliable, relevant, easy to understand, precise and detailed to consumers/guests. In terms of the quality of interactions, e-commerce is trustworthy so that consumers / guests feel safe making room bookings, making payments online and having the convenience to communicate. So it can be concluded that the utilization of e-commerce has a positive effect on consumer satisfaction and the quantity of hotel room reservations.

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