The influence of e-service quality and chatbot usage on customer satisfaction

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Abstract
The rapid development of digital technology significantly aids in creating excellent services for customers. Excellent customer service is the key to competitive advantage for businesses, particularly in the retail sector. One of the adaptations of digital technology in the retail industry today is the utilization of chatbots as a medium for customer service. This study aims to determine the influence of e-Service Quality and chatbot usage on customer satisfaction in the retail business sector. The research method is quantitative, with a sample of 123 Shopee e-commerce retail customers using chatbots. The data obtained were analyzed using SPSS. The results indicate that e-Service Quality and using chatbots together can enhance customer satisfaction in retail. Therefore, retail businesses must continuously improve e-Service Quality and consistently utilize chatbots.

Keywords:
Retail Business, Chatbot, E-Service Quality, Customer Satisfaction

1. Introduction

The developments of digital technologies in the last few decades have allowed companies to communicate more with their customers, especially regarding online services or e-commerce. Chatbots are one of the most impressive innovations in this domain; they are AI-based chatbots with automated users and real-time responses. This virtual assistant has multiple advantages, from efficiency increase to giving the customers the ability to reach 24/7 (Nicolescu & Tudorache, 2022). Furthermore, e-service quality is an indicator of customer satisfaction and leads to the return use (Kalia & Paul, 2021). Overall, e-service quality and chatbots have a strong potential for all companies to increase customer satisfaction and remain loyal as customers. According to (Kotler et al., 2021) Customer satisfaction is the backbone of marketing success when customers repeatedly purchase their products, give positive word of mouth (WOM), and become loyal customers.

Many research have also studied the effect of e-service quality on customer satisfaction. The e-service quality includes several critical components, including privacy, security, and accessibility, which has a direct impact on customer perception(Kalia & Paul, 2021). Similar research also shows that high-quality online services can considerably enlarge customer pliancy in extremely competitive e-commerce markets (Ojochide et al., 2023). Responsibility and security have a positive effect on customer loyalty in Indonesian e-commerce. (Putu Puspita Sari & Cut Irna Setiawati, 2021)This suggests that customers have come to expect a safe, quick, and trustworthy experience when shopping online.

Chatbots are among the A.I. applications in customer support and provide an instant solution to these requirements. Chatbots respond instantly as they are designed specifically to fulfill customer needs, thus enhancing the service quality perceived by customers (Nicolescu & Tudorache, 2022). Chatbots integrated with AI systems can improve efficiency in customer service centers (Andrade & Tumelero, 2022). Furthermore, chatbots that use anthropomorphic features like emotional words enhance customer satisfaction and make user experiences more personalized (Yun & Park, 2022). Natural language processing technology-embedded chatbots can effectively reduce customer service wait times (Cheng & Jiang, 2022).

Suppose chatbots could fill this gap by increasing the overall quality of service. In that case, one of these gaps that need to be filled is to take into consideration that a chatbot provides you with 24/7 if it

is designed properly and how this forever-open impacts the balance between human service and automation. 24/7 services offered by chatbots are certainly beneficial in terms of increased responsiveness and coverage area, but they lessen some elements of human contact that are highly appreciated in many cases. While the 24/7 round-the-clock availability of chatbots caters to customers who demand speed, some customers still strongly prefer human interaction, particularly for complex or emotional issues (Istiqomah, 2023). The reason behind this is that, as discussed in the study, customers tend to feel more comfortable with human service if they need a greater degree(s) of empathy or resolution (for example, if they are in a confused, complex complaint situation and complaint handling situations (Aditya Permana et al., 2023).

Most of the previous studies considered only one part, which is the quality of online services or chatbot usage. However, they are not a mix of both since they can produce an optimal customer experience when their interaction occurs. To fill this gap, this study, in the context of e-commerce, analyses the influence of both e-service quality and chatbot usage simultaneously on customer satisfaction. It is expected that combining these two elements will enable this research to provide a more holistic perspective for firms in designing meaningful service strategies suitable for customers. The current study also seeks to provide recommendations for companies on the use of chatbots as a critical component in enhancing customer experience within the digital age.

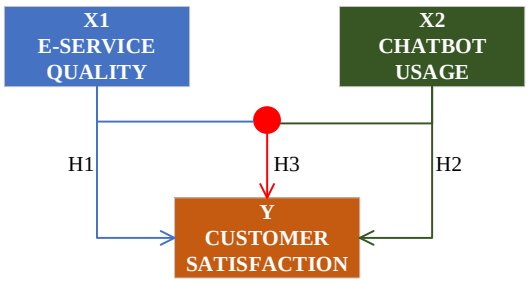
2. Method

The research design employed in this study follows a quantitative approach, utilizing multiple regression analysis to examine the relationships between variables. This design allows for hypothesis testing based on a deductive reasoning pattern, where the research begins with a theoretical framework and progresses toward testing hypotheses to reach specific conclusions. The participants in this study consist of 123 respondents who are active users of the Shopee e-commerce platform. They were selected using a convenience sampling method, which allows for easy access to respondents who meet the study criteria. While this sampling technique provides practical benefits, it may also introduce certain limitations in terms of generalizability.

Data collection was conducted through a structured questionnaire distributed to the selected respondents. The questionnaire items were designed to measure key variables using a Likert scale ranging from 1 to 5, where respondents indicated their level of agreement or perception regarding specific statements. The collected data represent primary data, obtained directly from respondents' responses.

For data analysis, SPSS version 25 was utilized to conduct a series of statistical tests. These included validity and reliability tests to ensure the accuracy and consistency of the measurement instruments, normality tests to assess data distribution, t-tests to examine the significance of relationships between variables, and the coefficient of determination analysis to measure the extent to which independent variables explain variations in the dependent variable. This comprehensive analytical approach ensures the reliability and validity of the research findings. This is the research's conceptual framework.

Figure 1. *Conceptual Framework*



A hypothesis serves as a provisional answer to a research question or problem. It is validated through the results of data analysis. Research hypotheses consist of a null hypothesis (H_0) and an alternative hypothesis (H_1 or H_a) that opposes the null hypothesis. Hypothesis testing determines

whether the researcher should accept or reject the null hypothesis in favour of the alternative. (Darwin et al., 2021).

1. Hypothesis 1 (H1) states that e-service quality influences customer satisfaction.
2. Hypothesis 2 (H2) states that the use of chatbots influences customer satisfaction.
3. Hypothesis 3 (H3) states that the combination of e-service quality and chatbot usage simultaneously influences customer satisfaction.

3. Results and Discussion

3.1 Results

Respondent Profile

Respondents totalled 123 people, 61% female and 39% male. The age profile of respondents varied, with the largest composition being 39% in the age range of 23 to 30 years. Job profiles vary, with the largest composition being 61% private employees, with the highest education level being 52% at bachelor's level. The media most widely used for interaction is mobile devices, with a composition of 87.8%, and the average interaction of respondents with chatbot services is 1-2x in the last 6 months, amounting to 42.2%. What is interesting is that the intensity of respondents interacting with chatbots is more than 5 times 18.7%. It can be concluded that the use of chatbots has become a common choice for respondents when accessing customer service. The following are the complete results of the respondents' profiles.

Table 1. *The respondent profiles*

		Frequency	Percent
Gender	Male	48	39,0
	Female	75	61,0
Age	< 23 years	23	18,7
	23 – 30 years	48	39,0
	31 – 40 years	23	18,7
	> 40 years	29	23,6
Occupation	Private Employee	75	61,0
	Entrepreneur or Self-employed	12	9,8
	Military / Police	6	4,9
	Student	13	10,6
	Housewife	8	6,5
	Others	9	7,3
Education	High School	42	34,1
	Diploma	13	10,6
	Bachelor's Degree	64	52,0
	Master's Degree / Ph.D. Degree	4	3,3
Monthly Income	< 4 million	57	46,3
	4 million – 8 million	37	30,1
	> 8 million	29	23,6
Access Device	Mobile Device	108	87,8
	Computer	14	11,4
	Others	1	0,8
Frequency of Chatbot Usage in the Last 6 Months	Never	33	26,8
	1 time – 2 times	52	42,3
	3 times – 5 times	15	12,2
	> 5 times	23	18,7

Source: data processing results, 2024

Results of Validity and Reliability Tests

The results of the validity test carried out using the SPSS program show that each indicator item has a correlation value that is higher than the threshold required by the validity test. Based on the results of the validity test, all indicator items can be said to be valid because in Table 3, it can be seen that all calculated r values are higher than the table r values. Apart from that, all variables have a Cronbach Alpha value greater than 0.6 or a reliability value showing results above 0.6. Therefore, the indicator items are considered reliable.

Table 2. *Results of Validity and Reliability Tests*

Questionnaire item	r calculated value	r table value	Cronbach's Alpha	Result
X1.1.1	,611	,1771	,974	Item Valid & Reliable
X1.1.2	,777	,1771	,974	Item Valid & Reliable
X1.1.3	,726	,1771	,974	Item Valid & Reliable
X1.1.4	,743	,1771	,974	Item Valid & Reliable
X1.1.5	,677	,1771	,974	Item Valid & Reliable
X1.2.1	,552	,1771	,975	Item Valid & Reliable
X1.2.2	,532	,1771	,975	Item Valid & Reliable
X1.2.3	,573	,1771	,975	Item Valid & Reliable
X1.2.4	,585	,1771	,974	Item Valid & Reliable
X1.2.5	,572	,1771	,975	Item Valid & Reliable
X1.3.1	,621	,1771	,974	Item Valid & Reliable
X1.3.2	,503	,1771	,975	Item Valid & Reliable
X1.3.3	,531	,1771	,975	Item Valid & Reliable
X1.3.4	,532	,1771	,975	Item Valid & Reliable
X1.3.5	,624	,1771	,974	Item Valid & Reliable
X1.4.1	,710	,1771	,974	Item Valid & Reliable
X1.4.2	,533	,1771	,975	Item Valid & Reliable
X1.4.3	,736	,1771	,974	Item Valid & Reliable
X1.4.4	,750	,1771	,974	Item Valid & Reliable
X1.4.5	,604	,1771	,974	Item Valid & Reliable
X2.1.1	,732	,1771	,974	Item Valid & Reliable
X2.1.2	,569	,1771	,975	Item Valid & Reliable
X2.1.3	,779	,1771	,974	Item Valid & Reliable
X2.1.4	,761	,1771	,974	Item Valid & Reliable
X2.1.5	,638	,1771	,974	Item Valid & Reliable
X2.2.1	,626	,1771	,974	Item Valid & Reliable
X2.2.2	,688	,1771	,974	Item Valid & Reliable
X2.2.3	,691	,1771	,974	Item Valid & Reliable
X2.2.4	,636	,1771	,974	Item Valid & Reliable
X2.2.5	,651	,1771	,974	Item Valid & Reliable
Y1.1	,823	,1771	,974	Item Valid & Reliable
Y1.2	,790	,1771	,974	Item Valid & Reliable
Y1.3	,755	,1771	,974	Item Valid & Reliable
Y1.4	,772	,1771	,974	Item Valid & Reliable
Y1.5	,772	,1771	,974	Item Valid & Reliable
Y2.1	,738	,1771	,974	Item Valid & Reliable
Y2.2	,724	,1771	,974	Item Valid & Reliable
Y2.3	,752	,1771	,974	Item Valid & Reliable
Y2.4	,724	,1771	,974	Item Valid & Reliable
Y2.5	,699	,1771	,974	Item Valid & Reliable
Y3.1	,736	,1771	,974	Item Valid & Reliable

Questionnaire item	r calculated value	r table value	Cronbach's Alpha	Result
Y3.2	,725	,1771	,974	Item Valid & Reliable
Y3.3	,720	,1771	,974	Item Valid & Reliable
Y3.4	,708	,1771	,974	Item Valid & Reliable
Y3.5	,706	,1771	,974	Item Valid & Reliable

Source: data processing results, 2024

Results of the Normality Test

Table 3. *Results of the Normality Test*

		Unstandardized Predicted Value
N		123
Normal Parameters[a,b]	Mean	49,1869919
	Std. Deviation	9,40229958
Most Extreme Differences	Absolute	,046
	Positive	,046
	Negative	-,045
Test Statistic		,046
Asymp. Sig. (2-tailed)		,200[c,d]

Source: data processing results, 2024

Based on the SPSS output table, it is known that the significance value (Asymp. Sig. (2-tailed)) is 0,200, which is greater than 0.05. Therefore, according to the decision-making criteria in the Kolmogorov-Smirnov normality test, it can be concluded that the data is normally distributed. Thus, the assumption and requirement of normality in the regression model have been met.

Results of the Correlation Test

Table 4. *Results of the Correlation Test*

		e-Service Quality	Chatbot Usage	Customer Satisfaction
e-Service Qualit	Pearson Correlation	1	,715**	,745**
	Sig. (2-tailed)		,000	,000
	N	123	123	123
Chatbot Usage	Pearson Correlation	,715**	1	,882**
	Sig. (2-tailed)	,000		,000
	N	123	123	123
Customer Satisfaction	Pearson Correlation	,745**	,882**	1
	Sig. (2-tailed)	,000	,000	
	N	123	123	123

Source: data processing results, 2024

In the bivariate correlation analysis mentioned above, there are at least two decision-making criteria that can be based on inferences given from the SPSS output table presented previously:

1. According to the significance value (Sig. (2-tailed))
   The Sig. The result also for the correlation test of the 2-tailed value from e-service quality and customer satisfaction is 0,000 < 0,05; thus, we can say that there is a significant relationship or correlation between the e-service quality variable and the customer satisfaction variable—furthermore, the Sig. The (2-tailed) value of chatbot usage and customer satisfaction is 0,000 < 0,05, which means there is a significant correlation between the chatbot usage variable and the customer satisfaction variable.

2. Derived from r value (Pearsons correlations)
   The e-service quality variable and customer satisfaction variable correlate because the value of r calculated at 0,745 is greater than 0.1771 (r table). Likewise, the r-value calculation of 0,882 for the relationship between chatbot usage and customer satisfaction obtained is greater than the r table (0.1771), which indicates that there is a correlation between the chatbot usage variable and the customer satisfaction variable.

Results of Multiple Linear Regression Analysis

The sample size of this study is 123 respondents, with α 0.05 and a total of 3 variables. Therefore, the t table is 1,980, and the F table is 3,072.

Table 5. *Results of Hypothesis 1 (H_1) Test*

Model		Unstandardized Coefficients		Standard Coeff	t	Sig.	Result
		B	Std. Error	Beta			
H1	(Constant)	4,434	3,698		1,199	,233	
	E-Service Quality (X1)	,633	,051	,745	12,284	,000	t calculated > t table
	Dependent Variable: Customer Satisfaction (Y)						
	R Square				,555		
	ANOVA (F Hitung)				150,907	,000b	F calculated > F table
Equations	:	Y = 4,434 + 0,633 X1					
Interpretation	:	The e-service quality variable has a significant influence on the customer satisfaction variable.					
		The e-service quality variable contributes to or influences customer satisfaction by 55,5%, with the remaining 44,5% influenced by other variables.					

Source: data processing results, 2024

Table 6. ***Results of Hypothesis 2 (H2) Test***

Model		Unstandardized Coefficients		Standard Coeff	t	Sig.	Result
		B	Std. Error	Beta			
H2	(Constant)	2,512	2,311		1,087	,279	
	Chatbot Usage (X2)	1,366	,066	,882	20,589	,000	t calculated > t table
	Dependent Variable: Customer Satisfaction (Y)						
	R Square				,778		
	ANOVA (F Hitung)				423,900	,000b	F calculated > F table
Equations	:	Y = 2,512 + 1,366 X2					
Interpretation	:	The chatbot usage variable has a significant influence on the customer satisfaction variable.					
		The chatbot usage variable contributes to or influences customer satisfaction by 77,8 %, with the remaining 22,2 % influenced by other variables.					

Source: data processing results, 2024

Table 7. *Results of Hypothesis 3 (H3) Test*

Model		Unstandardized Coefficients		Standard Coeff	t	Sig.	Result
		B	Std. Error	Beta			
H2	(Constant)	-2,705	2,526		-1,071	,286	
	E-Service Quality (X1)	,199	,049	,234	4,065	,000	t calculated > t table
	Chatbot Usage (X2)	1,107	,089	,715	12,394	,000	t calculated > t table
	Dependent Variable: Customer Satisfaction (Y)						
	R Square				,805		
	ANOVA (F Hitung)				247,414	,000b	F calculated > F table
Equations	:	Y = -2,705 + 0,199 X1 + 1,107 X2					
Interpretation	:	The e-Service Quality and Chatbot Usage variables, together or simultaneously, significantly influence the Customer Loyalty variable.					
		The negative constant is not relevant in the context of the model because the two independent variables cannot be zero, so it does not interfere with the interpretation of the results.					
		The Quality and Personalization variables together contribute to or influence Customer Loyalty by 80,5 %, with the remaining 19,5 % influenced by other variables.					

Source: data processing results, 2024

3.2 Discussion

This study used data from Shopee users to investigate how e-service quality and chatbot usage affect consumer satisfaction in e-commerce. The findings indicate that consumer satisfaction is greatly influenced by both e-service quality and chatbot usage, indicating that digital service quality is a major factor in determining customer loyalty and experiences in online retail.

Summary of Key Findings

According to regression analysis, e-service quality contributes 55.5% of customer satisfaction alone, whereas chatbot usage is 77.8%. These variables are correlated, which together drive 80.5% of customer satisfaction, reinforcing each other. These results align well with other studies that have noted the need for quality digital services to create a positive customer experience (Ojochide et al., 2023).

Relationship to Research Objectives

This study supports the hypothesis that both e-service quality and chatbot usage significantly impact customer satisfaction. These findings align with (Jenneboer et al., 2022), who found that high-quality digital interactions, particularly through chatbots, enhance customer loyalty by building trust and satisfying customer expectations. The analysis further indicates that combining traditional service quality with AI-driven support channels offers customers an efficient and personalized experience, fulfilling their demands for convenience and accessibility (Sudirjo et al., 2023).

Interpretation of Results

1. **e-Service Quality**: e-services must be able to meet customer expectations with high quality, and therefore, e-services must consist of some important factors such as privacy, security, and accessibility, which directly affect customer satisfaction levels. E-service quality with a high standard level exerts positive impacts on customer intentions to purchase, especially if customer satisfaction plays the mediating roles
2. **Chatbot usage**: Chatbot usage is very important for increasing consumer satisfaction because it satisfies the demand of customers who want its service to be fast and reliable. Chatbots can enhance customer experience with their instant replies 24/7, increasing recommendations for the service and repeat usage by customers. Our findings from this study add support to these conclusions, as chatbots incorporated with AI technology help in providing incessant assistance in meeting the increasing demand for immediate, easily accessible and reliable customer support in the era of digitalization.

3. **Combined Effect**: The interaction between e-service quality and chatbot usage together reconciles customer satisfaction (80.5%), indicating the need for an integrated strategy to serve consumers. This is consistent with the SERVQUAL model, which emphasizes the importance of service quality in influencing customer satisfaction, especially based on digital experiences. The current results show that both factors feed into one another, further emphasizing the necessity for companies to build AI support alongside a high standard of service quality.

Comparison with Previous Studies

These results align well with formerly existing literature about digital service quality and AI-based customer service. In terms of e-service quality, (Kalia & Paul, 2021) Emphasize that elements like privacy, security, and accessibility are critical to shaping customer perceptions and satisfaction, particularly in digital environments where customers expect reliability and safe interactions. In line with the substantial effect of chatbot usage on satisfaction in this study, (Yun & Park, 2022) noticed that the use of empathetic language as a type of humanlike attribute leads to higher customer satisfaction and loyalty. Furthermore, (Jenneboer et al., 2022) stated that human-like chatbots enhance customer satisfaction and trust, which in turn leads to loyalty. Past studies either link e-service quality to satisfaction or interaction with chatbot technology to customer satisfaction; however, this study broadens the horizon by investigating a combined impact of usage of a chatbot and e-service quality towards customer satisfaction, showcasing that all two elements are forming, enhanced contribution toward customers' satisfaction which is symbiotic instead one is dominating over other.

Practical Implications

The findings highlight the need for e-commerce platforms to invest in the quality of general e-service and chatbots. High service quality, or being timely and personalized, is the basis of customer satisfaction. Furthermore, a well-deployed AI chatbot with human characteristics, empathy, and interaction can help to gain satisfaction by providing individualized treatment. Businesses are urged to harness big data insights so that chatbot interactions can be further personalized in line with Industry 4.0 principles based on AI-enabled personalization and customer-centric services. (Mantik & Awaludin, 2023).

Limitations and Future Research

This study is limited by its focus on a single e-commerce platform (Shopee), which may not represent other platforms or industries. Future research should explore the impact of different chatbot types (e.g., AI-powered vs. rule-based) and examine how these variations affect customer satisfaction. Additionally, examining the role of AI-driven chatbots across various demographic groups could provide insights into tailoring chatbot strategies for diverse customer segments.

4. Conclusion

To summarize, this research found that e-service quality and the use of a chatbot are key characteristics behind customer satisfaction in the e-commerce scene. In short, the overall effect of these factors highlights that beyond maintaining a high standard in digital quality of service provision, there is a need to embed more sophisticated technological capability. In the face of soaring customer expectations in an omnichannel world, these findings highlight a strategic imperative for firms: deliver responsive, tailored service alongside dependable AI-assisted delivery to build satisfaction and loyalty.

As a next step up these findings, subsequent research could also explore the impact of different combinations of chatbot features, levels of personalization or empathy, and tone on customer satisfaction among diverse groups. In addition to this, understanding the comparison of satisfaction outcomes between rule-based and AI-driven chatbots across industries can be beneficial in maximizing chatbot usage. Longitudinal studies could also be designed to study long-term repeat usage of top-tier e-service and bot interaction overtime on future customer loyalty, improving the understanding of these tools for use in customer relationship management.

5. References

Aditya *Permana*, A., Ridlo Al-Hakim, & Rosyid. (2023). *Artificial Intelligence Marketing*. https://www.researchgate.net/publication/373043823

Andrade, I. M. De, & Tumelero, C. (2022). Increasing customer service efficiency through artificial intelligence chatbot. *Revista de Gestao*, *29*(3), 238–251. https://doi.org/10.1108/REGE-07-2021-0120

Cheng, Y., & Jiang, H. (2022). Customer–brand relationship in the era of artificial intelligence: understanding the role of chatbot marketing efforts. *Journal of Product and Brand Management*, *31*(2), 252–264. https://doi.org/10.1108/JPBM-05-2020-2907

Darwin, M., Reynelda Mamondol, M., Alparis Sormin, S., & Nurhayati, Y. (2021). *Metode Penelitian Pendekatan Kuantitatif*. www.penerbit.medsan.co.id

Istiqomah, N. H. (2023). Transformasi Pemasaran Tradisional ke e-Marketing: Tinjauan Literatur tentang Dampak Penggunaan Teknologi Digital terhadap Daya Saing Pemasaran Bisnis. *Jurnal Ekonomi Syariah Darussalam*, *4*, 2745–8407.

Jenneboer, L., Herrando, C., & Constantinides, E. (2022). The Impact of Chatbots on Customer Loyalty: A Systematic Literature Review. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(1), 212–229. https://doi.org/10.3390/jtaer17010011

Kalia, P., & Paul, J. (2021). E-service quality and e-retailers: Attribute-based multi-dimensional scaling. *Computers in Human Behavior*, *115*. https://doi.org/10.1016/j.chb.2020.106608

Kotler, P., Keller, K. L., & Chernev, A. (2021). *Marketing management*.

Mantik, H., & Awaludin, M. (2023). Revolusi Industri 4.0: Big Data, Implementasi Pada Berbagai Sektor Industri (Bagian 2). *Journal Universitas Suryadarma*. https://journal.universitassuryadarma.ac.id/index.php/jsi/article/view/991

Nicolescu, L., & Tudorache, M. T. (2022). Human-Computer Interaction in Customer Service: The Experience with AI Chatbots—A Systematic Literature Review. *Electronics (Switzerland)*, *11*(10). https://doi.org/10.3390/electronics11101579

Ojochide, P. F., Mubo, A. M., Oluwaseyi, P. A., Bunmi, A. S., & Ineba, D. L. (2023). E-service quality and customer loyalty in the e-commerce market, South West, Nigeria: Post-COVID-19. *Innovative Marketing*, *19*(3), 114–122. https://doi.org/10.21511/im.19(3).2023.10

Putu Puspita Sari, & Cut Irna Setiawati. (2021). *E-Service Quality, Customer Satisfaction, And Repurchase Intention: Analyzing The Impact On E-Commerce Platform*. https://doi.org/10.21776/ub.jam.2021.019

Sudirjo, F., Purwati, T., Unggul Budiman, Y., & Manuhutu, M. (2023). Analisis Dampak Strategi Pemasaran Digital dalam Meningkatkan Loyalitas Pelanggan: Perspektif Industri E-commerce. https://jptam.org/index.php/jptam/article/view/7422

Yun, J., & Park, J. (2022). The Effects of Chatbot Service Recovery With Emotion Words on Customer Satisfaction, Repurchase Intention, and Positive Word-Of-Mouth. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.922503