IConEnt
The 4th International Conference on Entrepreneurship

Factors Influencing Customer Performance (Case study on tokopedia.com)

Stefany Lutan[a], Innocentius Bernarto[b]

[a,b]Universitas Pelita Harapan Lippo Village Campus, Jakarta 15831, Indonesia

*lutan.stefany27@gmail.com

ABSTRACT

This research aims to test the influence of variables 1) AI assimilation with organizational and customer agility; 2) AI assimilation with customer relationship quality; 3) AI assimilation with customer experience; 4) Organization and customer agility with customer relationship quality; 5) Organization and customer agility with customer experience; 6) Customer experience with customer relationship quality; 7) Customer relationship quality with customer performance for Tokopedia customers in Jakarta, Bogor, Depok, Tangerang and Bekasi. This research uses a quantitative type of research with data collection tools in the form of questionnaires measured using a Likert scale. The data analysis method was carried out using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) with the help of SmartPLS version 4 software. Based on the results of data analysis, it shows that there is a significant correlation between AI assimilation and organizational and customer agility, AI assimilation with customer experience, organization and customer agility with customer relationship quality, organization and customer agility with customer experience, customer experience with customer relationship quality, and customer relationship quality with customer performance. And there is no correlation between AI assimilation and customer relationship quality.

Keywords: **AI assimilation, organization customer agility, customer experience, customer relationship quality, customer performance**.

INTRODUCTION

The rapid developments that occur in the digital era have brought many changes in various sectors,including the current economic and business sectors. Continuously developing information and communication technology has significantly changed business transaction patterns, including in industry e-commerce. E-commerce is a platform for selling and purchasing products, services andinformation via the internet (Irmawati, 2011). Transaction via e-commerce offers convenience forboth parties, both sellers and buyers, where producers can utilize technology to find out the price of goods on the global market, and consumers can compare the best offers against prices throughthe platform e-commerce and social media (Sholihin et al., 2018).

Indonesia is currently recognized as the largest e-commerce market in the Southeast Asia region. According to data from We Are Social and Hootsuite, around 90% of internet users in Indonesia have made purchases online (Asih, 2014). In Indonesia, competition marketplace which is known as a place for online shopping is getting tighter. This intense competition does not only come from local companies, but also comes from foreign companies that have entered the domestic market.

Tokopedia has succeeded in becoming one of the largest e-commerce platforms in Indonesia. This platform offers various features designed to provide comfort and security for consumers when shopping (Yunia et al., 2022). In 2021, Tokopedia was successfully listed as a shopping site online with the highest number of visits, namely reaching

158.1 million visitors per month, compared to competitors such as Shopee, Bukalapak, Lazada, and Blibli (Zainah et al., 2023). However, competition is increasingly intense in the business world, especially e-commerce making Tokopedia experience a significant decline in thenumber of visits in the following years. In 2022 the number of visits to Tokopedia will decrease to 136.7 million, in 2023 it will decrease to 108.1 million, and in 2024 Tokopedia will continue toexperience a decline in the number of visits until it reaches 100.3 million. To overcome this problem, a research model from Hariguna and Ruangkanjanases (2024) which states how effectivebusiness practices are as well AI Assimilation can have a positive impact on customer performance.

According to Huang and Rust, (2018) the higher the level of AI Assimilation, then it will be even higher organization and customer Agility because AI enables automation and faster innovation. In addition, according to Parasuraman and Colby (2015), good implementation of AI will improve customer experience, this can be achieved due to personalization, speed and accuracy of service. AI assimilation predicts that AI technology can have an impact in improving customer relationship quality (Da Costa et al., 2022).

Panagou et al. (2011), stated that a good relationship between the company and customerswill have an impact in creating trust and satisfaction, thereby allowing customers to continue to interact and be involved in the company's services. Previous research by Hariguna and Ruangkanjanases (2024) examined the impact of implementing artificial intelligence (AI) on customer performance and identified factors that contributed to its effectiveness, stating that AI implementation had a significant influence on customer performance. Overall, it can be concluded that customer performance can be a solution to overcome the problem of the number of visits thatoccur on Tokopedia, which this year was at a level of 100.3 million to return to a level of 158.13 million.

This research is very important to carry out, because if left unchecked, Tokopedia will increasingly lose market share and experience a more significant decline in business performance. On the other hand, if this research is successfully carried out and shows how AI canbe implemented effectively, it is hoped that this will help Tokopedia improve customer performance, thereby encouraging more visits and strengthening its competitiveness in the industry. e-commerce in Indonesia.

The objective of the research is to identify influences of AI assimilation to organization and customer agility, customer experience, customer relationship quality, to influence performancefor Tokopedia users in Jakarta, Bogor, Depok, Tangerang and Bekasi.

LITERATURE REVIEW AND HYPOTHESIS

A. Customer Performance (CP)

Customer performance is the results achieved by customers in using a product or service. This definition refers to the customer's contribution or interaction to the company, including the level of satisfaction, increased purchases, loyalty and recommendations to others (Wirtz et al., 2013). In customer performance, customer satisfaction and a positive experience are very important components. Customer performance in the context of artificial intelligence (AI) is one of the key factors that can determine the success of products or services that rely on AI technology. Customer performance reflects how customers respond to products and services that rely on AI. By using AI implementation, this can help in increasing customer satisfaction and loyalty so that it can have an

Impact on companies being able to maintain and expand market share in an era of continuously developing technology, thus leading to improving customer performance by offering personalized and timely services (Chin et al., 2003; Mujali Al-Rawahna and Al Hadid, 2020; Panagou et al., 2011; Sarstedt, 2008). Implementation of AI technology can be done by developing user-friendly

and intuitive features, as well as increasing customer trust by improving transparency and security to strengthen customer loyalty to the company (Chatterjee et al., 2021; da Costa et al., 2022; Zheng et al., 2010). Previous research conducted by Hariguna and Ruangkanjanases (2024), shows how AI implementation has a direct impact on customer performance. Effective use of AI can improve interactions with customers and strengthen customer performance in an increasingly competitive business environment.

B. Hypothesis Development

Relationship between AI Assimilation and Organization and Customer Agility

AI Assimilation refers to the integration of AI in organizations to increase agility in responding tochanges and customer needs (Chaudhuri, 2020). Wamba (2022), states that AI assimilation has a significant effect on improvement organization and customer agility. Apart from that, research by Hariguna and Ruangkanjanases (2024), states that AI assimilation has a positive impact on organizational and customer agility. According to Da Costa et al. (2022), AI assimilation has a role in organization and customer agility related to the use of AI technology in the business world. Therefore, this hypothesis states that assimilation can help companies respond to customer needs more agile and responsive. Besides that, Dynamic Capabilities Theory described by Teece et al. (2008) emphasizes that AI technology helps companies become more responsive to market changes by increasing the ability to handle various business processes quickly and efficiently. This can help companies create products and services that are more in line with customer desires, so that in the end it will have an impact on increasing customer loyalty. According to Huang and Rust (2018), the higher the level of AI Assimilation then it will be an even higher organization and customer Agility because AI enables automation and faster innovation.

H1: AI Assimilation have a positive influence on Organization and Customer Agility

Relationship between AI Assimilation and Customer Relationship Quality

Customer relationship quality refers to the level of satisfaction and trust that customers have in how good the relationship with the company is (Crosby et al., 1990). Boulding et al. (2005) explainthat high quality customer relationships can be achieved through reliable, responsive and personalized service, which is often facilitated by the use of AI in customer service. Hypothesis AI assimilation predicts that AI technology can have an impact in improving customer relationship quality (Da Costa et al., 2022). Hariguna and Ruangkajaneses (2024), stated that AI assimilation has a positive impact on the quality of customer relationships. According to Mikalef et al. (2020), the implementation of AI allows companies to process customer data, provide personalized services, and increase the efficiency of customer relationships, because AI technology can respond and understand customer needs more quickly and precisely. This can have an impact on increasing customer satisfaction and fostering better relationships between companies and customers by increasing customer trust in the company. Therefore, the stronger the level AI assimilation used will be higher too customer relationship quality which was created.

H2: AI Assimilation have a positive influence on Customer Relationship Quality

Relationship between AI Assimilation and Customer Experience

Customer experience is a perception formed by customers which refers to the customer's overall interaction with the business, either directly or indirectly, based on personal experience (Meyer and Schwager, 2007). The AI assimilation hypothesis suggests that AI technology will continue todevelop and become increasingly integrated into human life, impacting the way humans perceiveand respond to customer experiences (An, 2022; Zheng et al., 2011). Based on the theory of Verhoef et al. (2009), Customer Experience Management, the implementation of AI technology

allows for personalization of services based on customer behavior data. With AI assimilation, this helps create more personal and relevant interactions with customers, which ultimately improves the customer experience. Research conducted by Hariguna and Ruangkanjanases (2024), stated that AI assimilation has a positive impact on customer experience. According to Parasuraman and Colby (2015), good implementation of AI will improve customer experience, this can be achieved due to personalization, speed and accuracy of service.

H3: AI Assimilation has a positive influence on Customer Experience.

Relationship between Organization and Customer Agility and Customer Relationship quality

Organization and customer agility play a very important role in improving customer relationship quality (Zheng et al., 2011). Organization and customer agility are interconnected and depend oneach other to be able to build good customer relationship quality. Research conducted by Harigunaand Ruangkanjanases (2024), stated that Organization and Customer Agility have a significant positive effect on Customer Relationship Quality. According to Lee et al. (2015), organizations that have the ability to adapt quickly to changing customer needs will make customers feel more satisfied and have a closer relationship with the company. Effective organization will enable a company to meet customer needs quickly and precisely through quality products and services. In addition, through agility in understanding customers, companies can immediately anticipate and respond to changes in customer needs, thereby ultimately increasing customer satisfaction. This strengthens the quality of the relationship between the company and its customers, including trust,satisfaction, and commitment (Crosby et al., 1990). According to Tallon (2011), companies that are more agile in responding to market needs and changes will be able to build better relationshipswith customers.

H4: Organization and Customer Agility have a positive influence on Customer Relationship Quality.

Relationship between Organization and Customer Agility and Customer Experience

According to Chatterjee et al., 2021, *organization and customer agility* have a significant impact on improving customer experience. *Organization* has a role as a structure used by the company in managing resources effectively and efficiently to achieve organizational goals. Whereas *customer agility shows* the company's ability to anticipate and respond quickly to customer needs and preferences. Lemon and Verhoef (2016) emphasize that customer experience is influenced by howcompanies are able to provide services that are consistent, relevant, and in line with customer expectations, as well as how customers feel about their interactions with the company. Research by Hariguna and Ruangkanjanases (2024), states that organizational and customer agility has apositive impact on customer experience. According to Sambamurthy et al. (2003) *organization and customer agility* A high level will create a company that can respond quickly to customer needs and provide appropriate solutions will create a more positive experience. This will make customers feel more valued and understood by the company, thereby improving their perception of the overall experience and increasing customer trust in the company or organization. So, the higher the level of organization *and customer agility* then it will get higher too *customer experience*which was created.

H5: *Organization and Customer Agility* have a positive influence on *Customer Experience.*

Relationship between Customer Experience and Customer Relationship Quality

Chatterjee et al. (2021) revealed that *customer experience has a positive* influence on *customer relationship quality*. Research results from Hariguna and Ruangkanjanases (2024) state that customer experience has a positive impact on the quality of customer relationships. Companies must be able to provide a good customer experience in order to remain competitive in this modern era. The theory explained by Schmitt (1999) regarding *Customer Experience Management (CEM)* explains that positive customer experiences will result in higher customer engagement and better relationship quality, as customers who are satisfied with their interactions are more likely to build long-term relationships. Apart from that, Oliver (1980) explains through *Expectation Confirmation Theory* that satisfaction arising from positive experiences influences the quality of customer relationships. According to Verhoef et al. (2009), customers who have a positive experience are more likely to make repeat purchases and become advocates for products or services that improve their performance as customers. The better the customer experience in using AI-based services, the better the quality of the relationship created between the customer and the company.

H6: *Customer Experience* has a positive influence on *Customer Relationship Quality.*

Relationship between Customer Relationship Quality and Customer Performance

Research by Hariguna and Ruangkanjanases (2024) states that the quality of customer relationships has a positive influence on performance. Additionally, Panagou et al. (2011) stated that a good relationship between the company and customers will have an impact in creating trust and satisfaction, thereby allowing customers to continue to interact and be involved in the company's services. *Customer relationship quality* reflects customer trust, satisfaction and commitment, which ultimately has a positive impact on customer performance. According to *Customer Loyalty Theory* as stated by Dick and Basu (1994), customers who have a good quality relationship with a brand or organization will show higher performance in the form of loyalty and recommendations to other customers. In addition, Anderson and Sullivan (1993) say that *customer performance* Good results will be created when the quality of the relationship between the customer and the company is at a high level, characterized by loyalty and strong purchasing intentions. According to Crosby et al. (1990), the higher the quality of the customer relationship, the higher the customer performance will be, because customers who have a quality relationship with the company will be more likely to improve their purchasing performance, including repeat purchases and product recommendations.

H7: *Customer Relationship Quality* has a positive influence on *Customer Performance.*

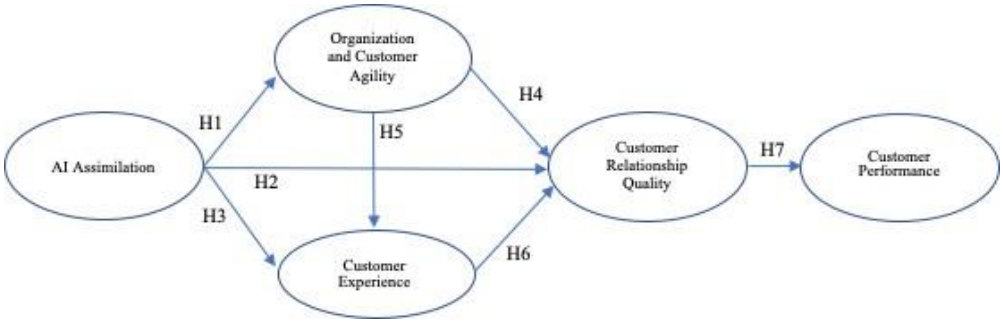

Figure 1. Research model

Source: Hariguna, and Ruangkanjanases (2024)

METHODOLOGY

A. Data Collection

This research uses a quantitative type of research, and data will be collected directly by researchersfrom respondents using a survey method via a questionnaire which is measured using a Likert scale. The population in the research includes all Tokopedia customers in Jakarta, Bogor, Depok, Tangerang and Bekasi (Jabodetabek). The target population taken in this research is customers who know that Tokopedia has been integrated with AI features, are active customers who have made at least one transaction on Tokopedia in the last three months, and are aged 16 years and over.

B. Population and Sample

The sampling method used in this research is non-probability sampling by using techniques of convenience sampling. In this technique, sampling is based on the availability of elements and ease of collection, namely respondents who are willing to fill out the questionnaire (Sugiyono, 2019). This research uses the Cochran formula from Sugiyono (2017) to determine the sample size because the population is too large and cannot be known with certainty. Based on this sample calculation, the number of samples needed to be used as a minimum limit is 100 respondents. In this research, the number of samples used was 196 respondents.

C. Analysis Technique

The data analysis method used in this research is Structural Equation Modeling (SEM) based Partial Least Squares (PLS) by using SmartPLS version 4 for data analysis. According to Nisa et.al. (2021) SEM is a data analysis technique used to simultaneously test the relationship between one or more independent variables or variables that are not measurable. Meanwhile, PLS has the function of being able to simultaneously test causal relationships between latent variables and their indicators (Nisa et.al., 2021). PLS-SEM has two stages of model evaluation, namely inner model (structural model) and outer model (measurement model).

RESULTS

A. Outer Model

According to Hair et al. (2021) measurements carried out in *outer model* includes a convergent validity test consisting of *outer loadings dan Average Variance Extracted* (AVE), a discriminant validity test consisting of *Heterotrait-Monotrait Ratio* (HTMT), as well as reliability tests consisting of *composite reliability*. Convergent validity is used to measure the extent to which a construct can explain the variance of its indicators. According to Hair et al. (2021), value *outer loading can* be said to be valid if the data shows a number more than 0.7 in order to fulfill its rule*of thumb*. Meanwhile, the AVE value must be ≥ 0.5 to show good convergent validity (Hair et al.,2021). Apart from that, reliability testing in this research will be carried out using composite reliability (rho_c) to measure the consistency of results when measurements are carried out repeatedly. Mark *composite reliability can* be said to be good if it shows a number above 0.7 (Hairet al., 2021). This research uses *Heteroit Monotrait Ratio of Correlation* as one of the measurementcriteria of discriminant validity. The HTMT value can be said to be valid if the data shows a number below 0.95 in order to meet the requirements, and a value above 0.95 is considered invalid (Henseler et al., 2015).

B. Outer Model Test Results

Outer loading, AVE, dan composite reliability

Table 1. Outer Model Evaluation

	Constructs and Items	Outer Loading
AI Assimilation (AVE=0.658, CR=0.931)		
AA1	AI in Tokopedia helps me manage my shopping activities.	0.826
AA2	AI on Tokopedia helps me find the products I'm looking for more quickly.	0.830
AA3	AI on Tokopedia helps me find information on my questions.	0.826
AA4	AI at Tokopedia understands my needs or preferences by recommending appropriate products.	0.791
AA5	AI in Tokopedia helps me save time in the shopping process.	0.802
AA6	AI on Tokopedia makes it easier for me to access information about the products I need.	0.818
AA7	AI in Tokopedia makes it easier for me to access information about the services I need.	0.783
Organization and Customer Agility (AVE=0.740, CR=0.895)		
OCA1	AI at Tokopedia has improved service efficiency, such as in returning goods.	0.846
OCA2	AI at Tokopedia helps anticipate my needs by providing appropriate solutions.	0.872
OCA3	I feel Tokopedia is more focused on my needs after using AI to improve services.	0.862
Customer Experience (AVE=0.759, CR=0.904)		
CE2	AI in Tokopedia makes my shopping experience more efficient.	0.878
CE3	AI in Tokopedia helps reduce product search time.	0.855
CE4	The use of AI at Tokopedia increases my satisfaction by providing fast service that meets my needs.	0.881
Customer Relationship Quality (AVE=0.722, CR=0.886)		
CRQ1	AI in Tokopedia helps improve the accuracy of the service, thereby strengthening my relationship with the platform.	0.832
CRQ2	The use of AI in Tokopedia helps anticipate my needs by providing relevant product recommendations.	0.846
CRQ3	AI at Tokopedia provides a more personalized shopping experience with more targeted service.	0.870
Customer Performance (AVE=0.606, CR=0.885)		
CP1	AI in Tokopedia helps me find products that are of high value to me.	0.750
CP2	The AI implemented in Tokopedia influences my purchasing decisions.	0.757
CP3	I will continue to shop at Tokopedia because AI helps improve my shopping experience.	0.827
CP4	My performance as a customer on Tokopedia with AI depends on how well I understand and trust the technology.	0.801
CP5	I'm more likely to trust AI in Tokopedia if I understand how it works.	0.755

Notes: AVE= average variance extracted; CR=composite reliability

The results of the convergent validity test are seen through the values outer loading (Table1) based on data processing on 196 respondents, showing that the overall value loading factor of all indicators have shown numbers more than 0.7. Therefore, all existing indicators meet the requirements or rule of thumb and can be declared valid. Apart from that, based on the data above (Table 1), the value of all variables shows a number ≥ 0.70, so it can be concluded that all variables have met the requirements and are declared reliable, and it can be seen that overall the AVE value of all variables has shown a value ≥ 0 .5. Therefore, all variables in this research have met the requirements and can be declared valid.

Heteroit Monotrait Ratio of Correlation (HTMT)

This research uses Heteroit Monotrait Ratio of Correlation as one of the measurement criteria ofdiscriminant validity. The HTMT value can be said to be valid if the data shows a number below 0.95 in order to meet the requirements, and a value above 0.95 is considered invalid (Henseler et al., 2015).

Table 2. HTMT

Variables	AA	CE	CP	CRQ	CP
AA					
CE	0.871				
CP	0.769	0.821			
CRQ	0.840	0.883	0.864		
CP	0.884	0.815	0.866	0.895	

Notes: AA=AI Assimilation; CE= Customer Experience; CP= Customer Eperience; CRQ= Customer Relationship Quality; CP= Customer Performance.

In table 2, attached are the results of the discriminant validity test as seen from the values Heteroit Monotrait Ratio of Correlation (HTMT) based on data processing from 196 respondents. The HTMT value of each variable shows a figure of no more than 0.95. Therefore, all variables have met the requirements rule of thumb and can be declared to have a valid value.

A. Inner Model

Inner model test has the aim of being able to test the relationship between the indicators that makeup the variables, namely the independent and dependent variables (Wijaya, 2019). Testing inner model in this research consists of tests R2, Variance Inflation Factor (VIF), size and significance of path coefficients. According to Hair et al. (2021), stated that in the test R2 a value of 0.75 indicates a strong model indication, 0.50 indicates a moderate model indication, and 0.25 indicatesa weak model indication. Apart from that, the VIF value test is said to be good if it shows a numberof no more than 5 (≤5) (Hair et al., 2021). This study uses standardized path coefficients and values Confidence Interval (CI) in conducting hypothesis testing. According to Hair et al. (2021),a hypothesis is considered accepted or supported when the standardized path coefficient shows a number approaching +1 and the value Confidence Interval (CI) when compared does not include zero values (all positive or all negative).

B. Inner Model Test Results

R-square (R&)

Test values R-square This research was carried out with the aim of assessing the model's ability

tofully explain the influence of the independent variable on the dependent variable. According to Hair et al. (2021), states that a value of 0.75 indicates an indication of a strong model, 0.50 indicates an indication of a moderate model, and 0.25 indicates an indication of a weak model.

Table 3. R-square

Variables	R-square
Customer Experience	0.606
Customer Performance	0.512
Customer Relationship Quality	0.638
Organization and Customer Agility	0.590

In table 3 above, the test result values are attached *R-square* which can be seen from the calculation of the dependent variable based on data processing from 196 respondents. Testing the coefficient of determination in this study shows that the results of the value *R-square is* 0.610 (moderate model) for customer experience, 0.515 (moderate model) for customer performance, 0.643 (moderate model) for customer relationship quality, and 0.592 (moderate model) for organization and customer agility.

Variance Inflation Factor (VIF)

The VIF test aims to detect problems in the form of a strong relationship between two or more independent variables, so that the model cannot make accurate predictions. The VIF value is said to be good if it shows no more than 5 (≤ 5) (Hair et al., 2021).

Table 4. VIF

Variables	AA	CE	CP	CRQ	CP
AA		2.450		3.336	1.000
CE				2.563	
CP					
CRQ			1.000		
OCA		2.450		2.588	

Notes: AA=AI Assimilation; CE= Customer Experience; CP= Customer Eperience; CRQ= Customer Relationship Quality; CP= Customer Performance.

In table 4, the test result values are attached to the Variance Inflation Factor (VIF) based on data processing from 196 respondents. Based on the test results data, it can be seen that all thevariables contained in this study have values below 5. Therefore, it can be said that all variables have met the requirements and do not have multicollinearity problems.

Size and Significance of Path Coefficients

This study uses standardized path coefficients and values Confidence Interval (CI) in conducting hypothesis testing. The method used in this test is bootstrapping, using a one-sided approach (one tailed), the significance level used is 0.05, and subsamples used is 5,000. This test was carried outwith the aim of ensuring that the hypothesis proposed in this research was accepted or rejected. Apart from that, this test can show the level of significance of the impact that the dependent variable has on the independent variable. According to Hair et al. (2021), a hypothesis is considered accepted or supported when the standardized path coefficient shows a number approaching +1 and the value Confidence Interval (CI) when compared does not include zero values (all positive or all negative).

Table 5. Size and Significance Coefficients

Hypothesis	Standardized Path Coefficient			
				Explanation
H1:AI Assimilation memiliki pengaruh positif terhadap Organization and Customer Agility	0.769	0.708	0.821	Supported
H2: AI Assimilation memiliki pengaruhpositif terhadap Customer Relationship Quality	0.186	0.019	0.430	No supported
H3: AI Assimilation memiliki pengaruh positif terhadap Customer Experience	0.588	0.410	0.723	Supported
H4: Organization and Customer Agility positif yang signifikan terhadap CustomerRelationship Quality	0.349	0.231	0.498	Supported
H5: Organization and Customer Agility memiliki pengaruh positif terhadap Customer Experience	0.232	0.113	0.370	Suported
H6: Customer Experience memiliki pengaruh positif terhadap CustomerRelationship Quality	0.348	0.079	0.525	Supported
H7: Customer Relationship Quality memiliki pengaruh positif terhadap Customer Performance	0.717	0.641	0.791	Supported

Based on the data above (Table 5), the test result values are attached Size and Significanceof Path Coefficient based on data processing from 196 respondents. Based on the test results data,it can be seen that the six hypotheses are supported because they meet the value requirements Size and Significance of Path Coefficient and Confidence Intervals (CI) is positive. Meanwhile, one hypothesis is not supported because it does not meet the requirements and has value Size and Significance of Path Coefficient with a value of -1 and value Confidence Intervals (CI) includes zero.

DISCUSSION

This research aims to examine AI assimilation, organization and customer factors agility, customerexperience, customer relationship quality which influence customer performance in the Tokopedia.com case study. The first hypothesis states that AI Assimilation has a positive influence on Organization and Customer Agility. Based on the results of the hypothesis test (Table 5), the Size and Significance of Path Coefficient shows a value of 0.708, and the 95% Confidence Interval (CI) has a value between the lower limit of 0.735 and the upper limit of 0.821 (does not include zero). So that H1 is supported, it can be said that AI Assimilation has a significant positive effect on Organization and Customer. This indicates that the higher the level of AI assimilation applied to Tokopedia.com, the higher the organizational and customer agility that will be created. These results are in line with the findings of Wamba (2022), which states that AI assimilation has a significant effect on increasing organizational and customer agility. According to Huang and Rust, (2018) the higher the level of AI Assimilation, the higher the Organization and Customer Agility, because AI allows automation and faster innovation.

The second hypothesis states that AI Assimilation has a positive influence on Customer Relationship Quality. Hypothesis test results (Table 5) show the value *Size and Significance of Path Coefficient* of 0.186, and *Confidence Interval* (CI) 95% has a value between the lower limit of -0.019 and the upper limit of 0.430 (covers zero). So that H2 is not supported, it can be said that *AI Assimilation has no significant* positive effect on *Customer Relationship Quality*. This indicates that if *AI Assimilation on Tokopedia.com* increases or decreases, then it has no impact on the

increase or decrease *Customer Relationship Quality*.The results of this research are not in line with the results obtained by Hariguna and Ruangkajaneses (2024) who stated that AI assimilation has a positive impact on the quality of customer relationships.

The third hypothesis states that *AI Assimilation* has a positive influence on *Customer Experience.* Based on the results of hypothesis testing (Table 5), *Size and Significance of Path Coefficient* shows a value of 0.588, and *Confidence Interval* (CI) 95% has a value between the lower limit of 0.410 and the upper limit of 0.723 (does not include zero). So that H3 is supported, it can be said that *AI Assimilation has a significant* positive effect on *Customer Experience.* This gives an indication that the higher the level, the higher the level *AI Assimilation on Tokopedia.com* the higher the level will be *Customer Experience* produced. These results are in line with research conducted by Hariguna and Ruangkanjanases (2024), which states that AI assimilation has a positive impact on customer experience. Apart from that, this research is also in line with Parasuraman and Colby (2015), who stated that good implementation of AI will improve customer experience, this can be achieved due to personalization, speed and accuracy of service. As is *AI assimilation*, then this helps create more personalized and relevant interactions with customers, ultimately improving the customer experience.

The fourth hypothesis states that *Organization and Customer Agility* have a positive influence on *Customer Relationship Quality.* Based on the results of the hypothesis test (Table 5), the Size and Significance of Path Coefficient shows a value of 0.349, and the 95% Confidence Interval (CI) has a value between the lower limit of 0.231 and the upper limit of 0.498 (does not include zero). So that H4 is supported, it can be said that Organization and Customer Agility have a significant positive effect on Customer Relationship Quality. This indicates that the higher the level of Organization and Customer Agility on Tokopedia.com, the higher the level of Customer Relationship Quality that will be created. The results of the analysis from this research are in line with those stated by These results are in line with research conducted by Hariguna and Ruangkanjanases (2024), which states that Organization and Customer Agility have a significant positive effect on Customer Relationship Quality. Lee et al. (2015) stated that organizations that have the ability to adapt quickly to changing customer needs will make customers feel more satisfied and have a closer relationship with the company.

The fifth hypothesis states that Organization and Customer Agility have a positive influence on Customer Experience. The results of the hypothesis test (Table 5) show that the Size and Significance of Path Coefficient has a value of 0.232, and the 95% Confidence Interval (CI) has a value between the lower limit of 0.113 and the upper limit of 0.370 (does not include zero). So that H5 is supported, it can be concluded that Organization and Customer Agility have a significant positive effect on Customer Experience. This indicates that the higher the Organization and Customer Agility on Tokopedia.com, the higher the level of Customer Experience that will be created. The results of the analysis of the relationship between these variables are in line with what Hariguna and Ruangkanjanases (2024) said, which stated that organizational and customer agility has a positive impact on customer experience. Sambamurthy et al. (2003) High Organization and Customer Agility will create a company that can respond quickly to customer needs and provide appropriate solutions that will create a more positive experience.

The sixth hypothesis states that *Customer Experience* has a positive influence on *Customer Relationship Quality*. The results of the hypothesis test (Table 5) show that the Size and Significance of Path Coefficient has a value of 0.348, and the 95% Confidence Interval (CI) has a value between the lower limit of 0.079 and the upper limit of 0.052 (does not include zero). So that H6 is supported, it can be concluded that Customer Experience has a significant positive effect on Customer Relationship Quality. This shows an indication that the higher the Customer

Experience of Tokopedia.com users, the higher the level of Customer Relationship Quality. These results are in line with research by Chatterjee et al. (2021) which revealed that customer experience has a positive effect on customer relationship quality. According to Verhoef et al. (2009), customers who have a positive experience are more likely to make repeat purchases and become product or service advocates, which improves their performance as customers. The better the customer experience in using AI-based services, the better the quality of the relationship created between the customer and the company.

The seventh hypothesis states that Customer Relationship Quality has a positive influence on Customer Performance. Based on the results of hypothesis testing (Table 5), *Size and Significance of Path Coefficient* shows a value of 0.717, and *Confidence Interval* (CI) 95% has a value between the lower limit of 0.641 and the upper limit of 0.791 (does not include zero). So H7 is supported, it can be concluded that *Customer Relationship Quality has a significant* positive effect on *Customer Performance.* This gives an indication that the higher the higher *Customer Relationship Quality pada Tokopedia.com* the higher the level will be *Customer Performance that will be created.* The results of the analysis from this research are in line with research conducted by Hariguna and Ruangkanjanases (2024), which states that the quality of customer relationships has a positive influence on performance. According to Crosby et al. (1990), the higher the quality of customer relationships, the customer performance will also increase because customers who have a quality relationship with the company will be more likely to improve their purchasing performance, including repeat purchases and product recommendations.

CONCLUSION

Based on the results of research conducted on 196 respondents using Tokopedia in Jakarta, Bogor,Depok, Tangerang and Bekasi, the results of the research analysis can be concluded that AI Assimilation has a significant positive effect on Organization and Customer Agility. This gives an indication that the higher the level of AI Assimilation, the higher the level of Organization and Customer Agility. Second, AI Assimilation has no significant positive effect on Customer Relationship Quality.This shows that if AI Assimilation experiences an increase or decrease, it has no impact on increasing or decreasing Customer Relationship Quality. Third, AI Assimilation has a significant positive effect on Customer Experience. This gives anindication that the higher the level of AI Assimilation, the higher the level of Customer Experience produced. Fourth, Organization and Customer Agility have a significant positive effect on Customer Relationship Quality. This indicates that the higher the level of Organization and Customer Agility,the higher the level of Customer Relationship Quality. Fifth, Organization and Customer Agility have a significant positive effect on Customer Experience. This gives an indication that the higher the Organization and Customer Agility, the higher the level of Customer Experience. Sixth, Customer Experience has a significant positive effect on Customer Relationship Quality. This shows an indication that the higher the Customer Experience, the higher the level of CustomerRelationship Quality. Seventh, Customer Relationship Quality has a significant positive effect on Customer Performance. This gives an indication that the higher the Customer Relationship Quality, the higher the level of Customer Performance.

Limitation and Suggestion

This research has one limitation in the respondent profile, namely that it does not include data on the daily or weekly frequency of use of the Tokopedia application by respondents. The frequencyof application use can have an influence on the level of engagement and respondents' perceptions of AI features. Therefore, it is recommended that further research consider the

frequency of application use by respondents in order to understand user engagement more deeply.

This research does not include questions regarding the types of transactions carried out such as purchasing goods, paying bills, or other services in the respondent profile section. Preferences for transaction types allow for an influence on respondents' perceptions of Tokopedia's AI services, especially on the types of services that are most frequently used. Future research is expected to consider transaction types to determine the types of transactions carried out, in order to better understand how AI plays a role in various contexts of use.

This research has limitations, namely that no data was collected regarding the main reasons respondents used Tokopedia, such as price, product variety, or promotions. With this data, it is possible to understand customers' main motivations for using Tokopedia so that it can help clarify the most appreciated aspects of the available AI features. Therefore, it is hoped that future research will take this into consideration in order to help researchers understand the aspects of AI that are most valued by customers, as well as what areas need to be improved to increase user engagement

REFERENCES

Al-Rawahna, A. S. M., & Hadid, A. Y. B. A. (2020). A propose model optimal supply chain distribution network for farmer industrial. *IJIIS International Journal of Informatics and Information Systems*, *3*(2), 43–53. https://doi.org/10.47738/ijiis.v3i2.62

Alwreikat, A. A. M., & Rjoub, H. (2020). Impact of mobile advertising wearout on consumer irritation, perceived intrusiveness, engagement and loyalty: A partial least squares structural equation modelling analysis. *South African Journal of Business Management*, *51*(1). https://doi.org/10.4102/SAJBM.V51I1.2046

Asih, E. M. (2024). Analisis pada shopee sebagai e-commerce terpopuler di Indonesia. *Jurnal Ekonomi Bisnis Antartika*, *2*(1), 73–79. https://doi.org/10.70052/jeba.v2i1.299

Boulding, W., Staelin, R., Ehret, M., & Johnston, W. J. (2005). *A customer relationship management roadmap: What is known, potential pitfalls, and where to go*. https://www.researchgate.net/publication/313564111

Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). The effect of AI-based CRM on organization performance and competitive advantage: An empirical analysis in the B2B context. *Industrial Marketing Management*, *97*, 205–219. https://doi.org/10.1016/j.indmarman.2021.07.013

Chaudhuri, A. B. (2020). *Flowchart and algorithm basics: The art of programming* (berilustrasi). Mercury Learning and Information

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a monte carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, *14*(2), 189–217. https://doi.org/10.1287/isre.14.2.189.16018

Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship Quality in Services Selling: An Interpersonal Influence Perspective. *Journal of Marketing*, *54*(3), 68.

https://doi.org/10.2307/1251817

Da Costa, R. L., Gupta, V., Gonçalves, R., Dias, Á., Pereira, L., & Gupta, C. (2022). Artificial intelligence and cognitive computing in companies in portugal: An outcome of partial least squares—structural equations modeling. *Mathematics*, *10*(22). https://doi.org/10.3390/math10224358

Dick, A. S., & Basu, K. (1994). Customer loyalty: toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, *22*(2), 99–113. https://doi.org/10.1177/0092070394222001

Ghozali, Prof. H. I. M. C. Ph. D. C. (2021). *Aplikasi analisis multivariate dengan program IBM SPSS 26 edisi 10*.

Badan Penerbit Universitas Dipenogoro.

Hair, J. F., Hult, G. T. M. Hult., Ringle, C. M., Sarstedt, Marko., Danks, N. P., & Ray, S. (2021). *Classroom companion: business partial least squares structural equation modeling (PLS-SEM) using R AAWorkbook*.

Hanafi, M., Widiyanto, A., Fahrizal Rahman, H., & Rahardian Adhitama, M. (2021). Implementation of knowledge management in different industries. *International Journal of Informatics and Information System*, *4*(2), 103–111. Hariguna, T., & Ruangkanjanases, A. (2024). Assessing the impact of artificial intelligence on customer performance: A quantitative study using partial least squares methodology. *Data Science and Management*, *7*(3), 155–163.

https://doi.org/10.1016/j.dsm.2024.01.001

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance- based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Huang, M. H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, *21*(2), 155–172. https://doi.org/10.1177/1094670517752459

Irmawati, Dewi. (2011). Pemanfaatan e-commerce dalam dunia bisnis. Edisi ke-VI. Jurnal Ilmiah Orasi Bisnis – ISSN: 2085-1375. Palembang: Politeknik Negeri Sriwijaya, h.95. Tersedia di: https://orasibisnis.files.wordpress.com/2012/05/dewiimarwati_pemanfaatan-e-commerce-dalam-dunia- bisnis.pdf. Diakses pada 16 November 2019

Lee, O., Sambamurthy, V., Lim, K. H., & Wei, K. K. (2015). How does IT ambidexterity impact organizational agility? *Information Systems Research*, *26*(2), 398–417. https://doi.org/10.1287/isre.2015.0577

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the Ccustomer Journey.

Journal of Marketing, *80*(6), 69–96. https://doi.org/10.1509/jm.15.0420

Mayatopani, H. (2021). Implementation of ANN and GARCH for stock price forecasting. *Journal of Applied DataSciences*, *2*(4), 109–134. https://doi.org/10.47738/jads.v2i4.41

Meyer, C., & Andre Schwager. (2007). Understanding customer experience," Harvard Business Review. *HarvardBusiness Review*, *85*(2), 117–126.

Mikalef, P., Pappas, I. O., Krogstie, J., & Pavlou, P. A. (2020). *Big data and business analytics: A research agenda for realizing business value*.

Nisa, M. (2021). Moderating structural equation modeling dengan partial least square pada pemodelan penerimaan dan penggunaan dompet digital di kota Semarang. *10*(1), 66–75.

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal ofMarketing Research*, *17*(4), 460. https://doi.org/10.2307/3150499

Panagou, E. Z., Mohareb, F. R., Argyri, A. A., Bessant, C. M., & Nychas, G.-J. E. (2011). A comparison of artificial neural networks and partial least squares modelling for the rapid detection of the microbial spoilage of beef fillets based on Fourier transform infrared spectral fingerprints. *Food Microbiology*, *28*(4), 782–790. https://doi.org/10.1016/j.fm.2010.05.014

Paramita, A. S. (2022). Implementation of the K-Nearest Neighbor Algorithm for the classification of student thesis subjects. *Journal of Applied Data Sciences*, *3*(3), 128–136. https://doi.org/10.47738/jads.v3i3.66

Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index. *Journal of Service Research*, *18*(1), 59–74. https://doi.org/10.1177/1094670514539730

Purvis, R. L., Sambamurthy, V., & Zmud, R. W. (2001). The assimilation of knowledge platforms in organizations: An empirical investigation. *Organization Science*, *12*(2), 117–135. https://doi.org/10.1287/orsc.12.2.117.10115

Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly*, *27*(2), 237. https://doi.org/10.2307/30036530

Sarstedt, M. (2008). A review of recent approaches for capturing heterogeneity in partial least squares path modelling. In *Journal of Modelling in Management* (Vol. 3, Issue 2, pp. 140–161). Emerald Group Publishing Ltd. https://doi.org/10.1108/17465660810890126

Sholihin, M. R., Arianto, W., & Khasanah, D. F. (2018). Keunggulan sosial media dalam perkembangan ekonomi kreatif era digital di Indonesia. *PROSIDING EKONOMI KREATIF DI ERA DIGITAL*, *1*(1). http://jurnal.unmuhjember.ac.id/index.php/PEKED/article/download/1286/1044

Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Alfabeta, CV.

Sugiyono. (2019). *Metode penelitian kuantitatif kualitatif dan R&D / Sugiyono* (1st ed.).

Tallon, P. P. (2011). Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. *Pinsonneault, Alain.*, *35*(2), 463–486.

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: determinants, dynamics and management Strategies. *Journal of Retailing*, *85*(1), 31–41. https://doi.org/10.1016/j.jretai.2008.11.001

Wamba, S. F. (2022). Impact of artificial intelligence assimilation on firm performance: The mediating effects of organizational agility and customer agility. *International Journal of Information Management*, *67*. https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2022.102544

Wijaya, A. (2019). *Metode penelitian menggunakan smart PLS 03* (Cetakan pertama). Yogyakarta : Innosain.

Wirtz, J., Ambtman, A. D., Bloemer, J., Horváth, C., Ramaseshan, B., Van De Klundert, J., Canli, Z. G., & Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management*, *24*(3), 223–244. https://doi.org/10.1108/09564231311326978

Yunia, A., Kaniawulan, I., & Singasatia, H. D. (2022). Analisis kesuksesan aplikasi e-commerce Tokopedia menggunakan model Delon and Mclean. *Jurnal Informatika Teknologi Dan Sains (Jinteks)*, *4*(3), 207–214. https://doi.org/10.51401/jinteks.v4i3.1947

Zainah, S., Hamzah, M. L., Rozanda, N. E., & Salisah, F. N. (2023). *Analisis kualitas layanan e-commerce shopee menggunakan metode e-servqual dan kano*. *10*(2).

Zheng, H., Jiang, L., Lou, H., Hu, Y., Kong, X., & Lu, H. (2010b). Application of artificial neural network (ANN) and partial least-squares regression (PLSR) to predict the changes of anthocyanins, ascorbic acid, total phenols, flavonoids, and antioxidant activity during storage of red bayberry juice based on fractal analysis and red, green, and blue (RGB) intensity values. *Journal of Agricultural and Food Chemistry*, *59*(2), 592–600. https://doi.org/10.1021/jf1032476