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RESEARCH ARTICLE

THE IMPACT OF CUSTOMER EXPERIENCE AND AUGMENTED REALITY TO ATTRACT MOTORCYCLE PURCHASES

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Abstract

Indonesias transportation landscape is rapidly evolving, as seen in the growing preference for automatic motorcycles, especially among young people. This study investigates how customer experience and Augmented Reality (AR) technology influence the intention to purchase motorcycles. Based on data from 400 respondents aged 20–24 in Cirebon City, the results show that both factors positively affect buying interest, with AR playing the most significant role..AR technology allows potential buyers to virtually explore various motorcycle models, examining features, colours, and designs in real-time via their screens. This interactive experience not only makes the buying process more engaging but also helps reduce doubts, leading to greater confidence when making a purchase decision. These findings highlight AR's growing importance as an innovative marketing tool, particularly for younger, tech-savvy consumers. For motorcycle manufacturers and dealers, adopting AR in their marketing strategies offers a valuable way to improve product presentation, build stronger connections with potential buyers, and boost sales performance.

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Introduction:-

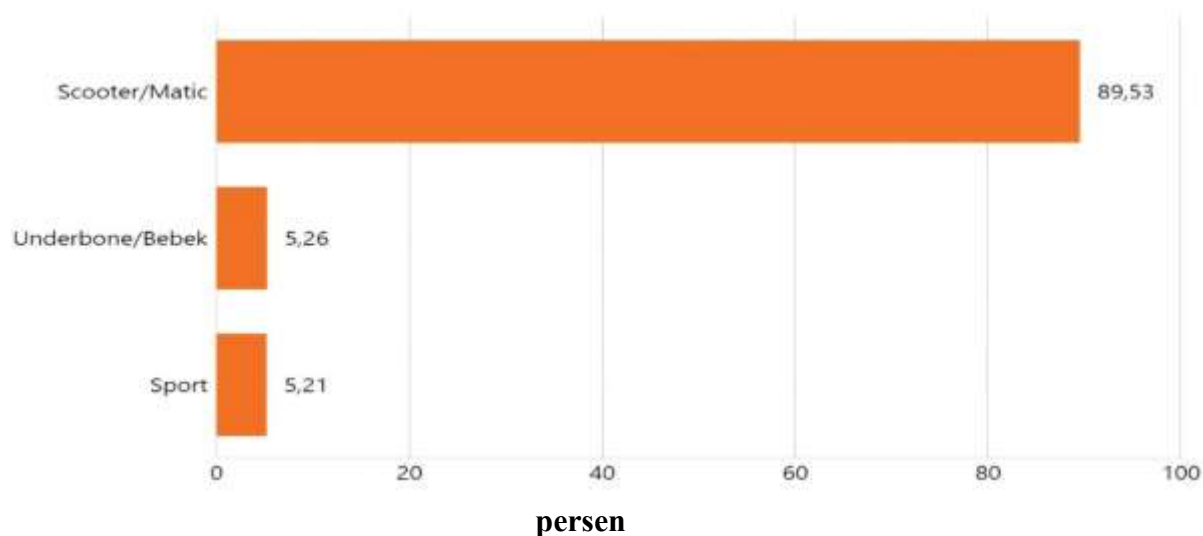
One of the advances in the automotive industry can be seen in the motorcycle segment, which continues to increase every year, including in Indonesia. This development is driven by the needs and demands of the community for adequate transportation facilities. This can be seen from the increasingly crowded city roads and the increasing flow of motorized vehicles. The market demand for motorized vehicles is so high that automotive and motorcycle manufacturers are competing to get products that can meet all the demands of potential buyers (Fatimah, SE2023). The rapid growth of the motorcycle industry is also marked by the number of foreign manufacturers entering Indonesia, most of which come from India and China. So that producers in Indonesia are competing to create quality products by creating innovations in order to attract consumer interest. Motorcycle manufacturers provide a variety of products with attractive design innovations, a variety of colour choices, and shapes that align with the brand image and market segment they want to target. The rapid growth of the motorcycle industry is also marked by the number of foreign manufacturers entering Indonesia, most of which come from India and China. So that producers in Indonesia are competing to create quality products with innovations to attract consumer interest. Motorcycle manufacturers provide a variety of products with attractive design innovations, a variety of colour choices, and

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shapes that are by the brand image and market segment they want to target (Lestari, NPN, Utomo, S., &Fitriyadi, SR2024). Motorcycle transportation is considered the most efficient and effective, because motorbikes are the best way to avoid traffic jams quickly, so the types of motorbikes are also growing. This is because consumers want convenience when driving a motorised vehicle. The development of automatic motorbikes is increasing by offering various models and uses of automatic motorbikes that are favoured by consumers. Consumers can choose various automatic motorbikes according to their needs and financial capabilities.

Proportion of Motorcycle Sales in Indonesia by Type (July 2023)



Source:

Indonesian Motorcycle Industry Association (AISIR)

Figure 1:- Total sales of matic motorcycles in Indonesia. (July 2023)

Motorcycle sales in Indonesia. shows that there are more types of automatic motorcycles than duck motorcycles and sports motorcycles. Besides that, automatic motorcycles are easier to use and effective, so they are the ideal choice. The choice of an automatic motorcycle can be felt through the customer experience. Customer experience when moving from a duck to a matic motorbike is usually very influential, because these two motorbikes have their respective advantages. The difference that can be experienced by customers when moving from a duck motorbike to an automatic motorbike is ease of use, but duck motorbikes also have advantages in terms of price and simplicity, which are still an attraction for some customers. Customer experience is very important in making purchasing decisions, especially in the automotive industry, especially for motorbikes. Therefore, the experience of customers who have a positive experience can have a significant impact on their perception of a motorcycle brand and product. When customers feel high satisfaction, this not only creates loyalty, but also increases their interest in making repeat purchases. If they feel satisfied when using or interacting with a particular motorcycle, it is likely that they will continue to choose the same brand and product in the future. In choosing an automatic motorcycle to purchase, consumer involvement is needed so that they can make choices. Consumer involvement in choosing an automatic motorcycle product starts from information search involvement until consumers are facilitated by an automatic motorcycle test drive provided by the dealer. Large luxury matic motorbikes are relatively expensive, but their sales are increasing every year. This is due to its large and attractive design, resembling a high-end European matic motorcycle. Today, many young people and workers make motorbikes more than just a means of transportation, but also an integral part of their lifestyle. The problem of this research is the decision to buy consumers who offer a variety of motorbikes with various engine specifications, so that consumers must be more careful in making the motorcycle purchase decision process. Novelty. In this study, we compare with previous studies that research on purchasing decisions seen from augmented reality is still small. Meanwhile, previous research on purchasing decisions is only related to Customer Experience, Service Quality, Price and their Impact on Purchasing Decisions. This study aims to explore the customer decision-making process in buying an automatic motorcycle by paying attention to customer experience and the use of augmented reality. So that this research can be used by businesses to determine marketing strategies (Retail Marketing Strategy 2_EBOOK_ Siska Ernawati Fatimah, 2023).

Literature Review:-

Customer Experience

Customer experience encompasses the interaction and engagement that customers have with their company. In the automotive industry, especially motorcycles, customer experience plays a very important role in influencing purchasing decisions. A positive experience can help customers' views of motorcycle brands and products, considering that motorcycles are not just a means of transportation, but also a symbol of identity and lifestyle for their owners (Ramadhani & Nuzil, 2023). Customer experience not only facilitates interaction between consumers and companies but also focuses on managing the overall experience as perceived by consumers. This approach seeks to foster a strong relationship between consumers and brands (Gaberamos & Pasaribu, 2022). Customer experience can be measured through several indicators. There are three types of experiences that we can identify. Specifically, there are three types of experience, namely (1) sensory experience, (2) emotional experience, and (3) social experience. Sensory experiences are related to perceptions and reactions caused by stimuli from the surrounding environment. Meanwhile, emotional experience involves complex psychological experiences, including subjective feelings, physiological responses, and behavioural expressions. Meanwhile, social experiences include a variety of social interactions and spatial contexts that a person experiences throughout their life (Oktaviansyah & Setiawan, 2022).

Augmented Reality (AR)

Augmented reality is an advanced technology that effortlessly integrates real-world objects with virtual elements, enriching our perception of the environment around us. This technology works interactively and directly, allowing integration between objects in three-dimensional space. With augmented reality, virtual objects can connect and interact with the real world. The merging of the physical and digital worlds is now possible thanks to advanced display technologies. Interactivity can be realised through the use of specific input devices, while achieving optimal integration requires an efficient tracking system (Yusuf, 2020). Augmented reality is an advanced and interactive technology that seamlessly blends digital elements, such as videos and 3D models, with the physical world. By overlaying these digital objects onto a real-world environment, it creates the illusion that they are present. This allows customers to virtually try out products in any setting they choose. Augmented reality is measured through indicators, namely (1) Behavioral Factors, this explains changes in consumer behavior, which relate to an action determining how information is observed and organized for future use, (2) Individual Factors, are personalities that are formed and formed through the surrounding community, and (3) Social Factors, are ways of how individuals interconnect with other people in their lives (Lavoye et al., 2023).

Purchase Intention (PI)

Purchase intention as the emotional intensity or desire of a person or a person's to buy goods and services. This is likely to result in a purchase decision shortly. Purchase intentions are used to forecast consumer behaviour patterns, as they effectively reflect actual consumer actions (Gaberamos & Pasaribu, 2022). When consumers shop for motorcycle products, this is essentially more free-floating. As a result, when engaging in this challenging experience, the presence of specials tends to influence purchase intentions (Lavoye et al., 2023). Purchase intention is the readiness or desire to acquire a product or service, driven by an assessment of its quality and value. Purchase intention is measured by indicators, namely (1) transactional intention which is the tendency of consumers to buy the desired product, (2) referential intention which is the tendency of consumers to refer to previously purchased products that can encourage other consumers to buy similar products, (3) preferential intention refers to the tendency of consumers to repeatedly choose products that they previously enjoyed, and (4) exploratory intention is the behavior of individuals who seek information about a particular product from various sources (Kojongian & Ariadi, 2024).

Methodology:-

Population and Sample

This research uses a quantitative approach based on positivist philosophy. To collect data, surveys are conducted on certain populations or samples (Sugiyono, 2019). Quantitative research involves collecting data that is available or expressed in the form of numbers that can be obtained through direct observation in the field. Meanwhile, qualitative data can also be converted into numbers by converting qualitative values into quantitative values (Stadtlander, 2009). The population in this study consisted of residents of Cirebon City aged between 19 and 24 years, with a total of 56,626 people (BPS Kota Cirebon, 2024). The research sample was determined using the Slovin formula, which

resulted in 400 respondents who were willing to participate. This study used incidental sampling as the main technique to select participants.

Data Analysis Method:-

This analysis uses Structural Equation Modelling-Partial Least Squares (SEM-PLS) to test the data, we chose the Partial Least Square (PLS) technique which is very effective in complex causal-predictive analysis. This method is very suitable to be applied in predictive applications as well as theory development, as is done in this study. (Djakasapura et al., 2023).

Measurement Variables:-

In this study, variables can be measured through a questionnaire designed based on the Likert Scale. This questionnaire allows respondents to provide answers by choosing from five score options. The available answer options are: Strongly Disagree (1), Disagree (2), Somewhat Agree (3), Agree (4), and Strongly Agree (5). Each variable in this study is measured through certain dimensions and indicators that have been determined:

i. Customer Experience

Indicators of customer experience can be assessed through various aspects, specifically these experiences can be divided into three different categories, namely (1) sensory experiences, (2) emotional experiences, and (3) social experiences (Oktaviansyah & Setiawan, 2022) which were developed into 6 statements.

ii. Augmented Reality.

The indicators of augmented reality are as follows: (1) behavioural factors, (2) individual factors, (3) social factors (Lavoye et al., 2023)

iii. Purchase Intention

Indicators of buyer interest include various aspects, including: (1) intention to make transactions, (2) intention to recommend, (3) intention to choose, and (4) intention to explore (Ferdinand, 2014). Which was developed into eight statements.

Results and Discussion:-

Analysis

A total of 401 respondents completed the questionnaire, and the following is their description:

Tabel 1:- Respondent Demographics.

Category	Possible answers	F	%
Gender	Female	192	0,48
	Men	209	0,52
Age	20-24 years old	324	0,80
	25-29 years old	48	0,12
	30-34 years old	24	0,06
	> 39 years	5	0,12
Education	SMP	8	0,02
	SENIOR HIGH SCHOOL	111	0.28
	Academy	20	0,05
	Higher education	235	0,58
	More	27	0.67
Motorcycle	Duck Bike	25	0.62
	Matic Motor	357	0,89
	Motor Sports	19	0.47

Source: Data processing

Table 1 shows that out of a total of 401 respondents, male gender dominates, with 209 people. Most respondents aged 20-24 years have a college education level. In addition, it can be seen that interest in matic motorcycles is higher among consumers compared to duck and sport motorcycles. This is because matic motorcycles are easier to ride. After all, they do not require manual gear shifting, making them ideal for riders who are just learning or who prioritise comfort.

Model Measurement Test Results

An external model analysis is conducted to ensure that the measurements used in the model are appropriate and meet the required standards. To assess the suitability of these measurements, validity and reliability analyses were conducted. To guarantee the validity and reliability of the research data, we applied several analytical tests. These analyses included several key metrics. These include outer loading, average variance extracted (AVE), Cronbach's alpha, and construct reliability. The findings of this evaluation are presented in Table 2.

Table 2:- Measurement Model.

Variable	Indicator	Outer Loading	AVE	Cronbach's Alpha	Composite Reliability
Customer Experience (X1)	CE1	0,704	0,596	0.864	0.898
	CE2	0,797			
	CE3	0,837			
	CE4	0,710			
	CE5	0,789			
	CE6	0,788			
Augmented Reality (X2)	AR1	0,842	0.698	0.913	0,933
	AR2	0,839			
	AR3	0,882			
	AR4	0,846			
	AR5	0,785			
	AR6	0,815			
Purchase Intention (Y)	PI1	0,743	0.705	0.940	0,950
	PI2	0,828			
	PI3	0,848			
	PI4	0,869			
	PI5	0,888			
	PI6	0,809			
	PI7	0,862			
	PI8	0,863			

Source: Data processing

Table 2 shows that a measuring instrument is said to be valid if the Outer Loading value for all indicator items exceeds 0.7 and the Average Variance Extracted (AVE) is greater than 0.5. In this study, it can be seen that the results of the outer loading and AVE values are in accordance with the criteria, so that all indicators in this study are valid. As for the reliability value with the Cronbach Alpha and Composite Reliability value criteria above 0.7, the results of the reliability calculation in this study show the Cronbach alpha value and the composite variable by the criteria, so that this research item is valid and reliable.

Analysis Model Structure

Model analysis is conducted to evaluate structures designed to predict causal relationships between latent variables that cannot be directly observed or measured. In this analysis, model quality is evaluated using various indicators, such as squared, R-squared, and adjusted R-squared. The following are the results of data processing related to R-squared and adjusted R-squared:

Table 3:- Output of R-squared and adjusted r squared.

Model	R Square	Adjusted Squared R
X1 and X2 ke Y	0,717	0,716

Source: Data processing

There are three criteria in assessing the R-squared value. The strong category is when the R-squared value exceeds 0.75. The moderate category is determined if the R square value is in the range of 0.50 to 0.74, while the weak category applies to the R square value which is between 0.25 to 0.49 (Harli et al., 2021). Table 3 shows that the R Square and Adjusted R Square values for the Customer Experience (X1) and Augmented Reality (X2) models on Purchase Intention (Y) are above 0.50. This shows that the independent variable has a significant influence on the

dependent variable. To assess whether there is a significant influence relationship between variables, it is necessary to consider the magnitude of the influence that occurs between these variables through Effect Size or f-square (Wong, 2013). The criteria for determining the f-square value can be explained as follows: A value of 0.02 indicates a small effect, while 0.15 indicates a medium effect, and a value of 0.35 indicates a large effect. In this study, the f-squared value can be seen:

Table 4:- Quadratic F Output.

Variables	Purchase Intention
Augmented Reality (X2)	0,511
Customer Experience (X1)	0,284

Source: Data processing

Table 4 shows the effect size value or F-squared value for the research variables, showing that the Customer Experience variable on purchasing decisions has a large influence, and the Augmented Reality variable has a large influence on purchasing decisions.

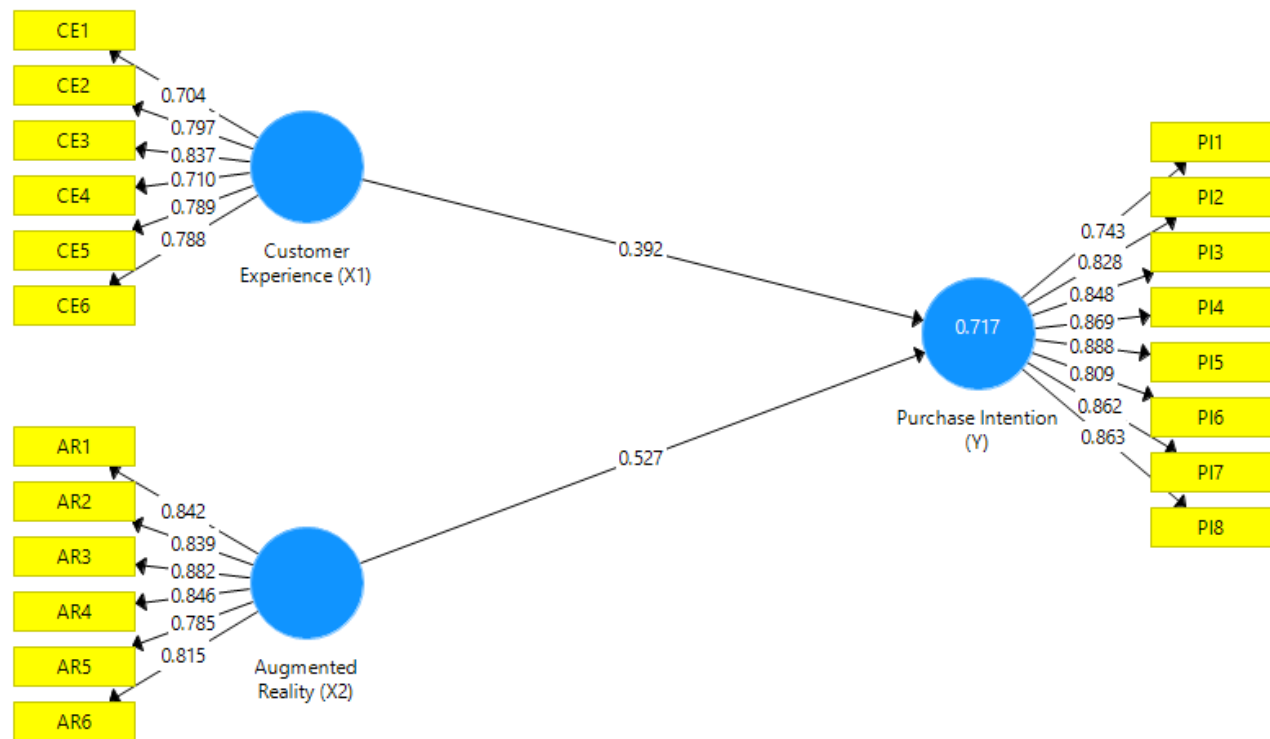


Figure 3:- Anal Output Path.

Hypothesis Testing

To see the hypothesis testing, both direct and indirect, please see Table 5 in this study.

Table 5:- Summary of Hypothesis Testing.

Hypothesis	Independent Variable	Path Analysis	t value	P-value
H1	Customer Experience (X1) -> Purchase Intention (Y)	0,392	7.446	0.000
H2	Augmented Reality (X2) -> Purchase Intention (Y)	0,527	10.460	0.000

Source: Data processing

The results of the data show that the Customer Experience path coefficient directly affects Purchase Intention, with a value of 0.392. While the Augmented Reality variable shows a greater influence of 0.527, it can be concluded that Augmented Reality has the most significant direct effect on Purchase Intention. For the results of the t value for all variable relationships obtained > from the t table, it is known that all independent variables, both direct and indirect, have a significant influence on the dependent variable.

Discussion:-

A satisfying customer experience has great potential to encourage their interest in making repeat purchases. When customers are satisfied with the motorcycle they use, they tend to continue to choose the same brand and product in the future. Customer experience has a great influence on purchase intention. This research shows that providing a great customer experience not only increases customer satisfaction but also drives higher purchase intent. Companies that prioritise their customer experience are more likely to build loyalty and strengthen their customers' purchasing decisions. This is indicated by the results of Customer Experience research showing a direct influence on Purchase Intention of 0.392 or 39.2% of the total research value. The results of the above research are in line with the research (Aghivirwiati, 2023), which states that positive experiences that customers experience when interacting with products or services can increase their interest in making purchases. Conversely, negative experiences can decrease interest. Customer experience has a close relationship with purchase intention, so it can be concluded that the more satisfying the experience experienced by users, the greater their interest in buying the product or service.

This result is also by the statement (Oktaviansyah & Setiawan, 2022). Customer experience turns out to have a positive impact on purchase interest. customer experience of a marketplace is good, then purchase interest is also good. This is by the statement of Meyer & Schwager (2007), which states that customer experience is a response from customers that is internal and also subjective. For the research results, Augmented Reality has a direct influence on Purchase Intention with a value of 0.527 or 52.7%. This is because AR has a big influence on purchase intention. After all, it increases interaction, personalisation, and consumer trust, while providing a pleasant experience. This technology not only creates added value for consumers but also strengthens their relationship with the brand, which directly increases their interest in buying. Augmented Reality (AR) has a relationship that is in line with buying interest (PI). AR technology users in the context of marketing and sales have been proven. These results are in line with research (Sustaningrum, 2023), which states that it increases consumer buying interest. Improved customer experience provides an interactive experience that allows consumers to try products virtually before making a purchase. This increases consumer confidence in the product and encourages purchase interest. This study found that the positive experience provided by Augmented Reality can increase consumer buying interest.

The results of the research that has been done show that Customer Experience and Augmented Reality have a significant effect on Purchase Intention by 71.6%. However, this study is more dominated by the Augmented Reality variable. This is because it can provide significant added value in influencing purchasing decisions. This result is in line with research (Mussa, 2022) yang menjelaskan pengguna AR dapat meningkatkan pengalaman pelanggan, yang pada gilirannya meningkatkan minat beli mereka. Dapat diketahui dari hasil penelitian yang dilakukan menunjukkan bahwa hubungan antara customer experience, augmented reality, dan purchase intention cenderung sejalan. Penelitian ini menunjukkan bahwa pengguna AR dapat meningkatkan pengalaman pelanggan, yang pada gilirannya meningkatkan minat beli mereka. Selain itu, penelitian lain menunjukkan bahwa AR dapat meningkatkan minat beli melalui peningkatan pengalaman pelanggan. Zhu (2010) berpendapat bahwa dengan semakin populernya internet, review online pelanggan telah menjadi sumber penting yang dicari konsumen untuk mengetahui kualitas produk sehingga memiliki efek positif terhadap minat pembelian (Oktaviansyah & Setiawan, 2022).

Conclusion:-

Based on the analysis of data from 401 respondents—predominantly male, aged 20–24 years, students, and users of automatic motorcycles—it was found that Enhanced Customer Experience and Augmented Reality both have a positive influence on purchase intention. Automatic motorcycles, known for their affordability and lower maintenance costs compared to sports or manual motorcycles, are particularly appealing to students seeking economical transportation options. Among the influencing factors, Augmented Reality emerged as the most dominant. It plays a crucial role in helping users make informed choices, reducing confusion during the decision-making process before purchasing an automatic motorcycle. Augmented Reality proves to be more reliable in delivering comprehensive product information, thereby increasing potential buyers' confidence. As a result, Augmented Reality is highly recommended by the people of Cirebon, especially for those considering the purchase

of automatic motorcycles. Future studies are encouraged to investigate additional factors that may influence purchase intentions beyond those examined in this research.

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