

## THE ROLE OF ARTIFICIAL INTELLIGENCE: INCREASING E-COMMERCE PURCHASE INTENTIONS IN INDONESIA

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**Goal:** This essay aims to illustrate the significance of artificial intelligence in online shopping. This article will examine and discuss the significance of artificial intelligence for e-commerce using the Theory of Planned Behavior (TPB) framework. The goal of this essay is to present a deeper and more thorough analysis of the factors that make artificial intelligence crucial to e-commerce. **List of References and Works Review design, technique, and strategy** have been applied from a variety of sources to gather data that can serve as the foundation for hypotheses and findings. **Results:** Four characteristics of artificial intelligence are identified in this study to enhance purchasing intention in e-commerce. The four dimensions are Information & Insight Experience, Interactive Experience & Accessibility, Interactive Experience and Customization, and Accuracy & Experience Interaction Dimensions. **Limitations and implications of the research:** emphasize qualitative over quantitative, Findings are difficult to generalize, and direct control experiments are not possible. **Practical Implications:** By assisting e-commerce businesses in implementing AI technology effectively, this paper helps them enhance consumer purchase intentions. **Originality/value:** According to this paper, businesses can establish an environment that encourages rising Purchase Intention from prospective customers, rising loyalty, and bolstering overall business performance in this digital era by comprehending and measuring the pertinent dimensions.

**Key words:** Artificial Intelligence; Digital Marketing; Purchase Intention; Online Shopping; E-Commerce; Theory of Planned Behavior (TPB).

**JEL Classification Codes:** C81, D91, L81, M31, O33.

### 1. INTRODUCTION

The ongoing advancement of technology creates new opportunities for people in a variety of industries (Soni et al., 2020). Businesses can offer services that are more effective, high-quality, and reasonably priced thanks to technology. If conventional technology becomes outdated, technological progress may cause disruptions. Nowadays, AI has developed into an information management system that greatly affects organizational procedures and business operations (Bahoo et al., 2023). Businesses utilize this to see how new skills can be applied to take advantage of market opportunities. For instance, they use AI to recognize the value of new ideas, open collaboration, and precision innovation in business innovation (J. Bus. Res., 2022 et al). This demonstrates how AI can help businesses run more quickly and effectively.



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Artificial intelligence (AI) in e-commerce refers to applying techniques, systems, tools, or algorithms to facilitate the online purchase and sale of products and services (Adwan & Aladwan, 2022). The term "artificial intelligence" describes the engineering of the human mind to be able to learn, plan, comprehend, or analyze natural language. Algorithms powered by artificial intelligence assist e-commerce businesses with inventory management. By conducting analytical analyses of historical sales data, these algorithms establish relationships between present and future sales. This supports managers' forecasting of future sales and prudent inventory management (Pallathadka et al., 2023).

In the research researched by Ho & Chow, they applied the SOR model to explain the role of AI (stimulus) on brand experience (organism), which influences brand preference and repurchase intention (response) (Ho & Chow, 2023a). Meanwhile, the marketing experience AI online shopping platform is divided into three dimensions: accuracy experience, insight experience, and interactive experience. As an intermediary variable, consumer perceived value can be divided into perceived utilitarian value and perceived hedonic value (Yin & Qiu, 2021). It turns out that these dimensions have the same importance in building purchase intentions based on these two theories.

When it comes to predicting consumer purchase intentions and evaluating transaction data, artificial intelligence (AI) holds great promise for the e-commerce industry. AI has the potential to improve e-commerce by assisting in the identification of market trends, demand forecasting, and cost optimization for marketing and promotions. Based on these findings, e-commerce can use AI to predict customers' purchase intentions with some degree of validity.

## 2. LITERATUR REVIEW

The goal of artificial intelligence (AI) is to build "thinking machines" that can mimic, pick up on, and eventually replace human intelligence. Since the late 1970s, artificial intelligence (AI) has demonstrated considerable potential in enhancing human decision-making processes and, therefore, productivity in a variety of business endeavors. This is because AI is capable of identifying business patterns, researching business phenomena, finding information, and doing intelligent data analysis (Min, 2009). Human-made machines can perform a wide range of labor-intensive tasks. Nonetheless, humans have frequently attempted to integrate human intellect into computers, which was the original purpose of artificial intelligence (AI) (Duch & Mańdziuk, 2004). This attempt may have been motivated by a desire for increased productivity or just plain curiosity.

By implementing an approach that can develop consumers' purchase intentions, we argue that managers should be able to optimize e-commerce with the help of AI diagnostics AI diagnostic systems, and that effective contestation of aspects of AI diagnostics that are relevant to consumers requires the availability of various types of information about 1) Accuracy Experience and Interaction, 2) Insight Experience and Information, 3) Interactive Experience and Accessibility, 4) Interactive Experience and Customization. Businesses may provide a setting that encourages a rise in Purchase Intention from prospective clients by skillfully integrating these four components (Ho & Chow, 2023a, Yin & Qiu, 2021).

### *2.1 Accuracy Experience and Interaction*

Accurate experiences and effective interactions are critical to building positive and rewarding relationships with customers. Businesses can increase user trust and encourage active engagement by providing reliable, responsive information and ensuring that interactions are seamless. As a result, they can increase conversions, build long-term loyalty, and strengthen customer relationships on an ongoing basis (Yin & Qiu, 2021a).

### *2.2 Insight Experience and Information*

By using the Insight Experience qualitative research method, companies can significantly improve customer experience (CX) in e-commerce. Research results show that Insight Experience can

help companies in several ways: understanding customer needs and desires through a better understanding of how customers interact with products or services in the real world (Popli & Rishi, 2021).

### *2.3. Interactive Experience and Accessibility*

Chapter 5, paragraphs 2-5 in the book *E-Commerce Power: How the Little Guys Are Building Brands and Beating the Giants at E-Commerce* discusses the power of interactive experiences in e-commerce, aiming to create engaging and accessible customer experiences. Brown highlighted that interactive experiences can help companies understand more deeply how people think, feel, and behave in real e-commerce contexts, as well as discover new opportunities for innovation and the development of new products and services. (Miles, 2021).

### *2.4 Interactive Experience Customization*

Interactive experiences that can be tailored to user preferences are critical to fostering strong relationships between businesses and customers. Customer experiences that can be tailored to their needs and preferences increase customer satisfaction and encourage them to purchase something. By combining these components effectively, businesses can create an environment that encourages greater purchasing desire from potential customers and leaves a deep and lasting impression in the hearts and minds of customers (Ho & Chow, 2023a, Yin & Qiu, 2021).

### *2.5 Theory of Planned Behavior*

One of the basic models for explaining purchase intentions and behavior in non-contractual customer-company relationships is the Theory of Planned Behavior (TPB) which states that attitudes towards behavior and the impact of relevant reference people (referred to as subjective norms) as well as the customer's perceived control over the behavior under study (referred to as perceived behavioral control) leads to the formation of behavioral intentions, which in turn result in behavior (Ajzen, 1991, Ajzen, 2002, Armitage and Connor, 2001, Ouelette and Wood, 1998). Armitage and Connor (2001) conducted a meta-analysis to show that this method is effective in many situations.

## **3. METHOD**

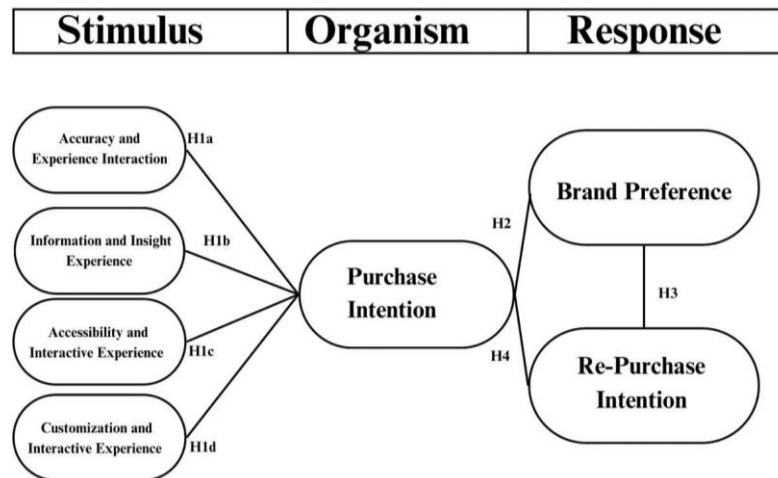
Measurement and analysis of this subject can be accomplished through the systematic gathering and arrangement of data from several sources using the bibliographic technique. According to Hagler (1997), this approach seeks to identify patterns and advancements as well as help authors formulate hypotheses and findings.

Finding out what is known about a given issue and how other researchers approach it can be accomplished by conducting a literature review, which is the process of gathering and evaluating information from multiple sources. A critical analysis of the research that has been done on a specific subject, as presented in books, journal articles, or other sources, is called a literature review. This allows the author to learn about the many perspectives and ideas that have been proposed on the subject (Academia, 2022).

In this article, we have used the method of bibliographical and literature review from several article to gather information that may then be used as a starting point to develop a theory and conclusion. A compilation of data from many sources yields more accurate illustrations of the impact of AI on purchase intention.

According to Ho and Chow (2023c), Brand Experience may be developed by Interaction, Information, Accessibility, and Customization. This leads to Brand Preference and Repurchase Intention. In the meantime, Yin & Qiu assert that Accuracy Experience, Insight Experience, and Interactive Experience—which produce Perceived Utility Value and Perceived Hedonic Value—are the causes of Purchase Intention (2021a). In contrast, Ho & Chow and Yin & Qiu discuss two viewpoints on the impact of variables on the brand experience and the purchase experience that are

equivalent in significance. These two viewpoints demonstrate how elements of the brand and purchase experiences have an impact on the positive brand and purchase experiences, which in turn have an impact on the positive brand and purchase experiences.



**Figure 1 The Proposed Research Model**

*3.1 Variable Name: Accuracy & Experience Interaction*

When users experience accurate experiences (e.g., timely and appropriate information), this can improve their interactions with the product or service. An accurate experience makes users feel confident in making purchasing decisions.

*3.2 Variable Name: Insight Experience dan Information*

Insight Experience, such as gaining new insight or knowledge about a product or service, is closely related to Information. Users who receive useful and meaningful information are more likely to be interested in purchasing because they feel more informed.

*3.3 Variable Name: Interactive Experience and Accessibility*

User engagement may be raised by having a positive experience with a product or service, especially when it is provided on an accessible platform. It is ensured by good accessibility that consumers can find what they need, learn more, and eventually make a purchase with ease.

*3.4 Variable Name: Interactive Experience and Customization*

Interactive experiences that can be tailored to user preferences also play an important role. If users can organize or customize their experience according to personal needs and preferences, this can increase satisfaction and desire to purchase.

*3.5 Variable Name: Purchase Intention*

When customers have a strong intention to purchase products or services from a particular brand, this often results in the formation of a stronger brand preference. Positive experiences during the process of purchasing and using a product can strengthen brand preference. Apart from that, high purchase intention also tends to lead to higher re-purchase intention in the future, because satisfied customers tend to choose the same brand again for their next purchase. Thus, the higher the purchase intention, the greater the possibility of forming strong brand preferences and sustainable re-purchase intention.

*3.6 Variable Name: Brand Preference*

Customers who have a strong preference for a brand tend to have high repurchase intentions. To attract purchase intention and build strong brand preference, a strategy that focuses on positive user experience, attractive promotions, product innovation, and brand quality and credibility is very important.

#### 4. DISCUSSION AND IMPLICATION PRACTICE

The aim of the research "The Role of Artificial Intelligence: Increasing E-Commerce Purchase Intentions in Indonesia" is to determine how artificial intelligence (AI) affects consumer behavior in the Indonesian e-commerce market. The study examines how AI-powered tactics, such as chatbots for customer service, dynamic pricing algorithms, and personalized product recommendations, affect consumers' intent to buy. This study examines the relationship between AI applications and customer decision-making processes to educate companies operating in the Indonesian e-commerce sector. In the end, this research aims to offer guidance on the optimal application of AI to boost consumer engagement, boost conversion rates, and propel business expansion in Indonesia's quickly expanding e-commerce industry.

The business landscape is undergoing substantial change as a result of the quick expansion of e-commerce, which is forcing businesses to adapt and embrace new technology to stay competitive. Artificial intelligence (AI) is one technological advancement that is turning the e-commerce sector upside down. AI has the potential to enhance customer experience and increase conversions by providing a range of benefits such as personalization, automation, and more intelligent decision-making.

This research has several practical implications that can be used as input for stakeholders, especially in the retail e-commerce industry. First, it has been established that AI plays a significant role in boosting consumer purchase intentions in a variety of settings. Empirical data demonstrates that artificial intelligence (AI) can boost purchase intent in several ways, including personalization, which enables businesses to provide clients with more intriguing and relevant product recommendations, boosting the possibility that they will find things they need (Mamadou, 2024).

Then there's automation, where AI may take over jobs like order processing, customer support, and logistics to free up staff members' time and resources to work on higher-value tasks. According to Beyari & Garamoun (2022) and Yin & Qiu (2021b), this can lead to a faster and more satisfied client experience, which in turn encourages purchase intentions. And lastly, make wiser decisions. Businesses may make better judgments about pricing, promotions, and marketing tactics by using AI to analyze complex customer data and find patterns and trends. This can enhance the value provided to clients and stimulate their desire to make a purchase (Bhagat et al., 2022, Yin & Qiu, 2021b).

Businesses should measure the intent of their customers to make purchases. To improve marketing and sales tactics, businesses can leverage the Accuracy & Experience Interaction aspects to better understand consumer preferences and behavior. Businesses may improve customer experiences and forge better bonds with their customers by using experience and information insights, which offer important insight into consumer requirements and expectations. Businesses can better engage customers and build stronger brand ties by offering them simple, engaging access through interactive experiences and accessibility. Finally, Interactive Experience and Customization is a feature that enables businesses to tailor their offerings to the unique preferences of their customers, resulting in a more fulfilling and personalized experience. Businesses can boost customer loyalty, fortify ties with customers, and enhance overall performance by incorporating and quantifying these factors.

#### 5. CONCLUSIONS

Companies should take great care to measure consumer purchase intentions, particularly in light of recent technical advancements and the growing importance of artificial intelligence (AI) in e-commerce. Understanding and influencing consumer behavior and fostering enduring relationships between businesses and customers are significantly aided by the dimensions of accuracy and experience interaction, insight experience and information, accessibility, and customization. Businesses may improve marketing strategies, boost client engagement, and fortify brand preference

and repurchase intention by utilizing pertinent techniques and resources, such as artificial intelligence algorithms and the Theory of Planned Behavior model.

The practical implications of this research include the importance for e-commerce companies to appropriately adopt AI technology to increase consumer purchase intentions. Using AI in an e-commerce setting can lead to several advantages, including automation, personalization, and more intelligent decision-making. Through comprehension and assessment of pertinent factors, businesses can establish a setting that fosters a rise in prospective consumers' Purchase Intention, augments client loyalty, and fortifies overall business success in this digital age.

## 6. LIMITATION AND FUTURE RESEARCH

Limitations of writing papers using bibliographic and literature review methods include the focus on qualitative rather than quantitative analysis, difficulties in generalizing findings, and the inability to conduct direct control experiments. It is advised that future studies combine qualitative and quantitative methodologies for a more thorough analysis, use more empirical data to improve generalizability, and take into account research designs that incorporate experimental methods to test the suggested hypotheses directly. Thus, more thorough and trustworthy insights into the subject matter can be obtained through future research.

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