

# Online Purchase Decision for Tourism : How do Social Media Marketing and Artificial Intelligence Impact it?

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## ABSTRACT

This research explores the impact of social media marketing and artificial intelligence (AI) on online purchasing decisions in the tourism sector. This study identifies the strategic role of social media in building brand awareness, consumer interaction, and dissemination of information that influences tourist perceptions and preferences. AI, through big data analysis and personalization, improves user experience by providing relevant recommendations and customized offers. This research uses a quantitative approach by collecting data through questionnaires distributed to tourists who have visited tourism in Yogyakarta. The analysis results show that marketing via social media significantly influences consumer interest and trust, while AI contributes to increasing customer satisfaction through more responsive and targeted services. These findings emphasize the importance of integrating social media marketing strategies with AI technology to improve online purchasing decisions in the tourism industry. The practical implication is that industry players must optimize the use of social media and AI to strengthen competitiveness and meet consumer needs more effectively.

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## INTRODUCTION

In the ever-evolving digital era, the tourism industry is experiencing a significant transformation in the way tourists search for information and make purchasing decisions. The internet has become the primary tool for tourists to explore destinations, compare prices, read reviews, and ultimately decide on a purchase (Solikhah et al., 2024). Online purchasing decisions in tourism no longer only depend on information from travel agents or printed brochures, but are also influenced by various digital factors such as social media marketing (Le et al., 2019; Solikhah & Rizky, n.d.) and artificial intelligence (Allal-Chérif et al., 2021). The combination of these two factors plays an important role in shaping consumer behavior and determining their final decision.

Social media has changed the marketing landscape drastically. Platforms like Facebook, Instagram, Twitter, and TikTok have become not only communication tools but also powerful marketing channels (Et.al, 2021a; Solikhah et al., 2023). In the context of tourism, social media allows companies to reach a wider audience, build brand awareness and create deep engagement with consumers (Hanaysha, 2022). Through engaging content, such as stunning images and videos of destinations, as well as reviews and testimonials from other users, social media can influence tourists' perceptions and motivate them to make purchases (Le et al., 2019).

The influence of social media in purchasing decisions cannot be separated from the concept of electronic word of mouth (eWOM) (SOLIKHAH, 2022). Positive reviews and recommendations from friends, family, or influencers on social media have a very strong influence in shaping consumer opinions and decisions (Kuncoro & Kusumawati, 2021; SOLIKHAH, 2022). In the tourism industry, where personal experiences are highly valued, eWOM plays a key role. Companies that are able to properly utilize the power of social media can build strong and loyal communities, which in turn can increase conversion rates and customer retention (Moslehpour et al., 2021).

Apart from social media, artificial intelligence (AI) is also bringing major changes in the way tourism companies operate and interact with customers. AI offers advanced data analysis capabilities and deep personalization (Prayogi et al., 2023). By analyzing big data, AI can understand consumer behavior and preferences more accurately (Hamdan & Aldhaen, 2024). This allows companies to provide more relevant recommendations and customized experiences, ultimately increasing customer satisfaction and driving purchasing decisions (Bag et al., 2022). AI in tourism is often used in the form of chatbots and virtual assistants that can provide customer service around the clock. These tools can answer questions, help with ordering, and provide necessary information quickly and efficiently (Duan et al., 2019). AI's superiority in processing and responding to data quickly makes it a very effective tool for improving user experience. Additionally, AI can be used to optimize pricing strategies, identify market trends, and develop more effective marketing campaigns (Stone et al., 2020).

This research aims to explore how social media marketing and AI influence online purchasing decisions in the tourism industry. By combining these two elements, companies can create a more holistic and effective marketing strategy. This study also seeks to fill a gap in the existing literature

by providing more comprehensive insights into the strategic role of social media and AI in influencing consumer behavior. Based on the entire explanation that has been explained, the aim of this research is to examine the relationship between the social media marketing and artificial intelligence on online purchasing decisions.

## LITERATURE REVIEW

Social media marketing has emerged as a powerful tool that significantly influences consumer behavior, particularly in the context of online purchase decisions for tourism. Research indicates that visual content on social media platforms like Instagram and Facebook plays a crucial role in attracting and engaging potential customers. (Hanaysha, 2022) found that visually appealing and user-generated content enhances the attractiveness of products and services, thereby increasing the likelihood of online purchases. Visual elements such as high-quality images and videos not only capture the attention of users but also build emotional connections, which are pivotal in driving purchase intentions.

Influencer marketing is another key component of social media marketing that impacts online purchase decisions. Studies, such as those by (SOLIKHAH, 2022), demonstrate that consumers tend to trust recommendations and reviews from influencers whom they follow on social media. These endorsements often carry more weight than traditional advertising because influencers are perceived as authentic and relatable. Electronic word of mouth (eWOM) generated by influencers can significantly sway consumer opinions and lead to increased purchase intentions. The personal connection and perceived credibility of influencers make their recommendations particularly effective in converting followers into customers.

Engagement and interaction through social media also play a critical role in influencing online purchase decisions. (Et.al, 2021b) highlighted that interactive features such as live videos, polls, and quizzes can enhance user engagement, leading to stronger relationships between brands and consumers. This heightened engagement not only keeps the brand top-of-mind but also fosters a sense of community and loyalty. Moreover, personalized social media advertising, as discussed by (Le et al., 2019), has been shown to increase the relevance of marketing messages, thereby boosting consumer response rates and purchase likelihood. Overall, these studies underscore the multifaceted impact of social media marketing on driving online purchase decisions through enhanced visual appeal, influencer credibility, and interactive engagement.

H<sub>1</sub> : Social Media Marketing has a significant positive effect on Online Purchase Decision for Tourism

Artificial intelligence (AI) has revolutionized the landscape of online shopping by enhancing the personalization and efficiency of the consumer experience. AI-powered recommendation systems have become a pivotal element in e-commerce platforms, significantly influencing online purchase decisions for tourism. According to (Khrais, 2020), these systems analyze vast amounts of data on consumer behavior, preferences, and past purchases to provide personalized product recommendations. This personalization increases the likelihood of purchase as consumers are more likely to encounter products that match their interests. The study found that AI-driven recommendations can boost conversion rates by up to 30%, highlighting the substantial impact of AI on consumer purchasing behavior.

In addition to personalized recommendations, AI enhances online purchase decisions through improved customer service. Chatbots and virtual assistants, which utilize natural language processing (NLP) and machine learning algorithms, provide real-time assistance to customers, addressing their queries and concerns efficiently. A study by (Stone et al., 2020) demonstrated that AI-powered customer

service tools lead to higher customer satisfaction and trust, which are critical factors in purchase decisions. The research indicated that consumers are more likely to complete a purchase when they receive timely and accurate information from AI-driven chatbots, reducing the friction and uncertainty often associated with online shopping.

Moreover, AI plays a crucial role in dynamic pricing strategies, which further influence online purchase decisions. By analyzing market demand, competitor pricing, and consumer behavior in real-time, AI algorithms can optimize pricing to maximize sales and profits. As noted by (Duan et al., 2019), dynamic pricing strategies enabled by AI can lead to a 20% increase in sales by offering competitive and attractive prices to consumers. This adaptability ensures that prices remain competitive while aligning with consumer willingness to pay, thereby driving more purchases. Overall, the integration of AI in e-commerce through personalized recommendations, enhanced customer service, and dynamic pricing significantly shapes and boosts online purchase decisions.

H<sub>2</sub> : Artificial Intelligence has a significant positive effect on Online Purchase Decision for Tourism

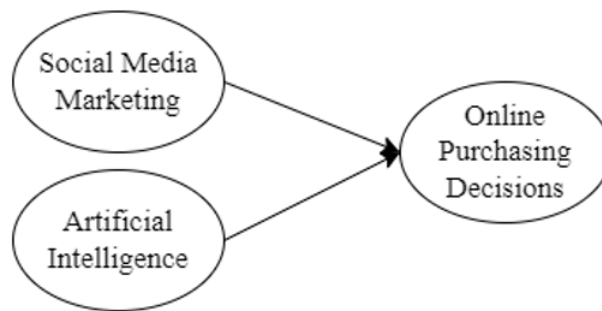


Figure 1. Mechanism of the Relationship between Social Media Marketing and Artificial Intelligence on Purchasing Decisions for Tourism

**METHODS**

This type of research is explanatory quantitative. The objects of this research are consumers of online purchase tourism on Yogyakarta. The sample in this study was selected using a purposive sampling technique. The sample in this study amounted to 184 respondents with 65,8% women and 34,2% men. From 184 respondents, 150 respondents filled in completely. The type and source of data used in this research is primary data. Primary data obtained in this research were the results of a questionnaire distributed to respondents who were the research sample. The data analysis used was SEM with the help of the SmartPLS 3.0 program.

Table 1. Operational Definition of Variables

Variable	Operational Definition	Indicator
Social Media Marketing	Social media marketing refers to the use of social media platforms and websites to promote a product or service. It involves creating and sharing content on social media networks to achieve marketing and branding goals.	1. Engagement Rate. 2. Conversion Rate. 3. Reach.
Artificial Intelligence	Artificial intelligence (AI) refers to the branch of computer science that is focused on creating systems capable of performing tasks that typically require human intelligence. These tasks include learning, reasoning,	1. Efficiency. 2. Accuracy and Precision. 3. User Satisfaction and Engagement.

Variable	Operational Definition	Indicator
	problem-solving, perception, language understanding, and decision-making.	
Online Purchase Decision	An online purchase decision refers to the process by which a consumer decides to buy a product or service over the internet. This decision-making process involves several stages, including recognizing a need, researching options, evaluating alternatives, making a purchase, and sometimes post-purchase behavior such as sharing reviews or seeking customer support.	<ol style="list-style-type: none"> <li>1. Accuracy.</li> <li>2. Speed in purchasing products.</li> <li>3. Steadiness when buying products.</li> </ol>

## RESULT AND DISCUSSION

Before analysis, validity and reliability testing of the questionnaire distribution was carried out first. Using the SmartPLS 3.0 program, the factor loading value of each indicator was examined as an analytical tool to assess the level of validity of the data in this research. If the loading factor value of an indicator is less than 0.4, then the indicator can be removed from the research model. On the other hand, if the illumination is more than 0.7, the indicator is considered good. The results of validity testing show that all items are valid because they have a Loading Factor value  $> 0.5$ , so these items are included in the model being analyzed.

Table 2. Final Validity Test Results

Variable	Item	Loading Factor	Information
<b>Social Media Marketing (SMM)</b>	SMM1	0,821	Valid
	SMM2	0,884	Valid
	SMM3	0,781	Valid
<b>Artificial Intelligence (AI)</b>	AI1	0,802	Valid
	AI2	0,902	Valid
	AI3	0,846	Valid
<b>Online Purchase Decision (OPD)</b>	OPD1	0,691	Valid
	OPD2	0,860	Valid
	OPD3	0,893	Valid
<b>Acceptable Limits</b>		<b><math>&gt; 0,5</math></b>	<b>Accepted</b>

The validation test shows valid results because the loading factor values obtained from variables have an overall value of  $> 0.5$  so that the data can be accepted, so all items can proceed to the next stage of analysis. By measuring the composite reliability value, one can determine reliability by looking at the output results in SmartPLS 3.0. If the composite reliability value is more than 0.7 and the recommended Cronbach's alpha value is greater than 0.6, then the variable can be said to be very good.

Table 3. Reliability Test Results

Variable	Item	Construct Reliability	AVE
<b>Social Media Marketing (SMM)</b>	SMM1	0,869	0,689
	SMM2		
	SMM3		
<b>Artificial Intelligence (AI)</b>	AI1	0,887	0,724
	AI2		
	AI3		
<b>Online Purchase</b>	OPD1	0,859	0,672

Variable	Item	Construct Reliability	AVE
Decision (OPD)	OPD2		
	OPD3		

The results of reliability testing on the research questionnaire show that the value of construct reliability for all items is  $\geq 0.70$ . Apart from that, the research also obtained a value for the Average Variance Extracted (AVE) for each item  $\geq 0.50$ . So the results of reliability testing on the research questionnaire show reliable results. Therefore, the data obtained can be processed further for model testing.

### Testing Research Model Path Analysis

In PLS, weight estimation for latent variable score components is obtained based on the inner model and the outer model is the relationship between indicators and their constructs. Structural model testing is carried out to test between configurations. The results of the evaluation of the structural model of this research are as follows.

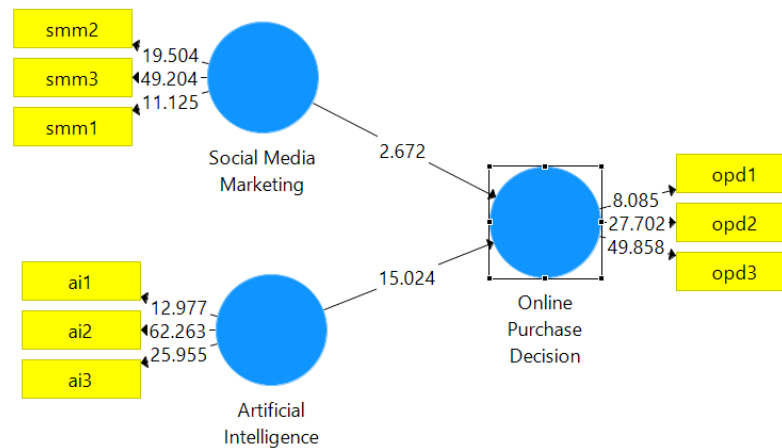


Figure 2. SmartPLS 3.0 Structural Model

Furthermore, decision making to determine whether to accept or reject the hypothesis is based on the resulting significance probability, the value of the significance level is  $\alpha = 5\%$  (0.05). The research results are presented in the following table.

Table 4. Path Model Significance Test Results

Variable	Original Sample (O)	Sample average (M)	Standard Deviation (STDEV)	T-Statistic ( O/STDEV)	P	Information
SMM $\rightarrow$ OPD	0,172	0,171	0,064	2,672	0,008	Accepted
AI $\rightarrow$ OPD	0,801	0,801	0,053	15,024	0,000	Accepted

The results of the significance test in Table 4 show Social Media Marketing has a significant positive effect on Online Purchase Decision for Tourism ( $0.008 < 0.05$ ), so  $H_1$  is accepted. Furthermore,  $H_2$  is accepted, which Artificial Intelligence has a significant positive effect on Online Purchase Decision for Tourism ( $0.000 > 0.05$ ).

### Discussion

#### 1. The positive influence of celebrity endorsement marketing on purchasing decisions

The results of hypothesis testing regarding the influence of social media marketing on online purchasing decisions for tourism show a positive path coefficient. The P-value is 0.008, which is

smaller than 0.05, indicating that there is a positive and significant influence of social media marketing on online purchasing decisions in the tourism sector. Social media marketing, which includes activities such as engaging visual content, user reviews, and direct interactions with consumers, has been proven to significantly improve travelers' purchasing decisions.

Social media marketing utilizes platforms such as Instagram, Facebook, and Twitter to showcase tourist destinations, user experiences, and special promotions that attract tourist interest. Interesting visual content, such as stunning photos and videos of a destination, can trigger a desire to visit that place. Positive reviews and testimonials from other tourists also play an important role in building the trust and interest of potential tourists in purchasing tour packages or travel tickets.

Additionally, direct interaction via social media allows tourism service providers to respond to questions and provide information in real-time. This increases consumer satisfaction because they feel more connected and receive fast and effective service. These interactions also create an emotional connection between consumers and brands, which drives loyalty and the possibility of repeat purchases.

The positive influence of social media marketing on online purchasing decisions for tourism can also be seen in increasing consumer engagement and loyalty. A more personalized and interactive shopping experience through social media can create stronger relationships between tourists and tourism service providers. Travelers who are satisfied with their interactions on social media are more likely to share their positive experiences, which in turn can attract more new consumers.

This research is supported by various previous studies. For example, research conducted by (SOLIKHAH, 2022) shows that social media marketing has a significant influence in shaping tourists' purchasing decisions. Another study by (Hanaysha, 2022) found that effective presence and activities on social media can increase the visibility of tourist destinations and attract more visitors. The results of this research are in line with previous findings which show that social media marketing plays an important role in influencing consumer purchasing decisions positively and significantly in the tourism sector. Thus, implementing an effective social media marketing strategy not only improves immediate purchasing decisions but also builds long-term relationships with tourists, which ultimately increases loyalty and income for tourism service providers.

## **2. The positive influence of hedonic shopping motivation on purchasing decisions**

The results of hypothesis testing regarding the influence of artificial intelligence (AI) on online purchasing decisions show a positive line coefficient. A P-value of 0.000, which is much smaller than 0.05, indicates that there is a positive and significant influence of AI on online purchasing decisions. AI, with its ability to provide personalized product recommendations, responsive chatbot interactions, and advanced consumer behavior analysis, is proven to significantly improve consumer purchasing decisions.

By using AI, consumers can receive product recommendations that are more relevant to their preferences and habits. For example, an AI-based recommendation system is able to analyze previous purchase data and provide appropriate product suggestions, making it easier for consumers to find the items they need or want. This increases the likelihood of purchase as consumers feel better served and receive a personalized shopping experience.

Additionally, AI-powered chatbots provide fast and efficient customer service, answer consumer questions in real-time, and provide assistance throughout the purchasing process. This fast and responsive interaction can increase consumer satisfaction, reduce distance, and encourage them to complete purchase transactions. AI also helps in aggregating and analyzing consumer behavior in real-time, enabling sellers to adjust their marketing strategies more effectively.

The positive influence of AI on online purchasing decisions is also reflected in increased consumer loyalty. A better, more personal shopping experience can create an emotional connection between consumers and brands, which in turn drives repeat purchases and recommendations to others. Consumers who are satisfied with AI-based services tend to be more loyal to the brand and more likely to return to shop in the future.

This research is supported by various previous studies. For example, research conducted by (Allal-Chérif et al., 2021) show that the application of AI in e-commerce significantly improves user experience and purchasing decisions. Another study by (Duan et al., 2019) also found that AI-powered personalization increases consumer satisfaction and brand loyalty. These studies are in line with results showing that AI plays an important role in influencing consumer purchasing decisions positively and significantly. Thus, the application of AI in online shopping platforms not only improves immediate purchasing decisions but also builds long-term relationships with consumers, ultimately increasing loyalty and revenue for sellers.

## CONCLUSION

Social media marketing and artificial intelligence (AI) have a significant influence on online purchasing decisions in the tourism sector. Social media provides a platform for consumers to share experiences, seek recommendations, and obtain information directly, all of which contribute to shaping their perceptions and purchasing decisions. The use of AI in tourism, such as chatbots, personalized recommendations, and data analysis, helps simplify the information search process, improve customer experience, and provide faster and more efficient service. The combination of these two factors creates a dynamic marketing ecosystem, where real-time interactions and personalization are key. As a result, consumers are more likely to make online purchases because they feel more informed and well served. Thus, social media marketing and artificial intelligence collectively increase customer trust and satisfaction, ultimately driving increased conversion and loyalty in online tourism purchases.

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