

Analysis of the Benefits of Product Recommendation Features in E-Commerce in Increasing Public Spending

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Abstract

Product recommendations generally appear when users search through search engines such as Google or directly on e-commerce platforms. The platform not only displays one option but also presents several alternatives from various sellers, allowing consumers the convenience of determining the best option according to their needs. Consumers generally expect a variety of product choices because they consider quality, price, and service simultaneously. Therefore, the presence of multiple recommendations is indispensable in today's digital shopping ecosystem. Based on research conducted through surveys and supported by SWOT and Balanced Scorecard methods, it was concluded that the use of product recommendations in search received a high score, ranging from 4 to 5. These results suggest that product recommendations have the potential to increase public purchasing power; however, they may also encourage unplanned purchases by consumers. The problem previously faced was related to the lack of comprehensive product information on the platform. Platforms that are able to present the most complete and timely information tend to become the primary choice for consumers when shopping. This research identifies the function of product recommendations as a foundation for changing consumer mindsets while providing a wide variety of choices. With a neutral recommendation system, no seller can dominate the market unilaterally. This condition promotes fair pricing and encourages every seller to offer the best products to consumers.

Keywords : recommendations; swot; balance scorecard; community assessment.

INTRODUCTION

The development of technology and social media in the current digital era has changed the pattern of people's interactions, not only as a means of communication but also as a space for sharing information and product transactions (Amelia & Balqis, 2023; Emon et al., 2026; Gensler & Rangaswamy, 2025; Hanandini, 2024; Xia et al., 2024). This transformation has led to the birth of various platforms E-commerce and Social Commerce that offers convenience for users of different ages and demographic backgrounds (Molinillo et al., 2018). One of the features that is growing rapidly in E-commerce is Product Recommendation Features, which plays an important role in helping consumers find products that fit their needs while increasing the potential for impulse purchases. Usage Social Commerce provides benefits for users, especially related to the ease of obtaining information, social support, and more personalized recommendations (Al-Omoush et al., 2022; Asanprakit & Kraiwanit, 2023; Attar et al., 2022; Lin & Wang, 2023; Tseng, 2023). This shows that the recommendation aspect has become an important part of the digitalization process and people's purchasing behavior (Baghdadi, 2013).

In addition, the trend shift from E-commerce other Social Commerce influenced by video content and direct interaction that is able to provide a clearer picture of products, especially the beauty and fashion categories (Attar et al., 2022).

In the context of product recommendations, consumers' need for complete, accurate, and trustworthy information is very important. Trust in the platform, the integrity of the seller, and the quality of the system are factors that determine the purchase decision (Hassan et al., 2018). Platforms that are able to provide relevant product recommendations and are supported by consumer behavior data will more easily attract users' interest and increase their shopping activities.

Finally, the success of the mechanism E-commerce It is largely determined by the quality of information delivery and how product recommendations can affect user behavior. Strong marketing, active interaction, and an effective recommendation system will increase the chances of transactions and drive significant growth in public spending (Sura et al., 2021).

The novelty of this research lies in combining SWOT and Balanced Scorecard methods to evaluate product recommendation features. This study also introduces the concept of a "neutral recommendation system" that does not favor specific sellers. Additionally, this research measures the direct impact on public purchasing power and the potential for unplanned purchases. The indicators used include information power, emotional power, transaction flow, system quality, and platform reliability. The research objectives are: (1) to analyze the effect of product recommendation features on increasing public spending, (2) to identify strengths, weaknesses, opportunities, and threats of recommendation features, (3) to measure platform reliability based on user perceptions, and (4) to formulate a neutral recommendation model that can increase purchasing power while preventing excessive impulse buying.

The contribution of this research is both theoretical and practical. Theoretically, it enriches e-commerce and social commerce literature with a dual evaluation framework (SWOT-BSC). Practically, the results can be used by platform managers to design fairer and more transparent recommendation features. For sellers, this research provides insights into the importance of product and service quality to maintain ratings. The benefits of this research are felt by three main parties. For consumers, neutral and varied recommendations facilitate price and quality comparisons. For sellers, a fair system encourages healthy quality-based competition. For regulators, this research provides a basis for formulating policies on transparent recommendation algorithms. Ultimately, the public as end-users will enjoy a safer, more comfortable, and more beneficial digital shopping experience.

METHOD

This study used a quantitative descriptive approach supported by qualitative data through interviews. Data collection was carried out through questionnaires distributed to e-commerce and social commerce users to assess the benefits of product recommendation features in increasing people's shopping activities. The research analysis was carried out using SWOT methods and balance scorecards to see the influence of recommendation features from various perspectives.

The stages of the research are described as follows:

1. Literature Study

Conduct a search of relevant literature regarding product recommendation features, digital consumer behavior, and comparison of e-commerce and social commerce as the basis for analysis development.

2. Problem Identification

Identify problems related to consumer needs for product recommendations and obstacles that arise in providing information on e-commerce platforms.

3. Hypothesis Formulation

Develop a hypothesis about the extent to which product recommendation features affect the increase in public interest and spending intensity.

4. Interviews and Questionnaire Dissemination

Conduct interviews with digital platform users and distribute questionnaires to obtain empirical data on their experience in using the product recommendation feature.

5. Data Analysis

Analyze the results of interviews and questionnaires using SWOT methods and balance scorecards to describe the strengths, weaknesses, opportunities, and challenges related to product recommendation features on e-commerce platforms.

6. Drawing Conclusions and Recommendations

Concluding research findings and providing suggestions for the development of product recommendation features that can improve people's shopping experience and intensity on digital platforms.

The implementation of analysis and research is carried out through several stages as follows:

1. Research Instrument Activities

The research instrument is compiled to obtain valid and reliable data regarding the user experience in utilizing the product recommendation feature on the platform E-commerce. Data collection was carried out through the distribution of questionnaires to respondents who had used the digital platform. In addition, interviews were also conducted to strengthen the validity of the data by exploring the opinions and experiences of users from various community groups (Et.al, 2021)

2. Participants

The selection of respondents was purposively carried out based on research needs, namely users who actively made transactions on E-commerce. The selection of participants takes into account variations in product preferences, need segmentation, and level of interest in product recommendation features. This aims to ensure that the data obtained reflects relevant conditions and is in accordance with the characteristics of the user E-commerce (Nistah et al., 2019)

3. Analysis

The main analysis in this study uses the SWOT method to identify strengths, weaknesses, opportunities, and threats related to the utilization of product recommendation features. This method helps to know how the recommendation feature affects behavior and Mood users in making digital transactions (Fardani et al., 2020) The results of the analysis were also associated with supporting studies on performance improvement E-commerce

and how product recommendations can contribute to increased people's shopping activities (Bazi et al., 2022)

RESULTS AND DISCUSSION

Technical Analysis of Usage

This technical analysis illustrates how users assess the quality of services on digital platforms, especially in the context of features that support product recommendations. Based on the results of the questionnaire, several aspects were considered very good by the public, such as the quality of information, ease of transactions, and social presence that allows the exchange of views between users. This assessment shows that supporting features such as product information, interaction services, and system quality are important foundations that affect the effectiveness of product recommendations.

Table 1. Technical Analysis of Usage (X1)

Measurement Variables	Description	Average Score
The Power of Information	The power of the information provided on the application to support the information that can be received by the customer	4.83
Emotional Power	Support assistance from input for the quality and suitability of the recommended products, e-commerce will get a direct role	4.71
Transaction Flow	The process of describing the function of product recommendations for sales transactions by both parties either buyer or seller	4.84
System Quality	Product recommendation system that has the function to provide support to the system	4.85
Quality of Information	Complete information for product recommendations based on the seasonality of consumer transactions	4.82
Quality of Service	Information support in the form of quantity and name of suitable products for transaction	4.77

Reliability Test Analysis

Reliability tests are conducted to measure users' level of trust and comfort with the platform. The results of the analysis show that trust, seller integrity, and risk protection systems are the dominant factors that contribute to the effectiveness of the recommendation feature. The reliability of the platform plays a big role in ensuring that product recommendations are well received by consumers and do not decrease their shopping interest.

Table 2. Technical Analysis of Social Commerce Reliability Test (X2)

Measurement Variables	Description	Average Score
Individual Strengths in Product Selection Based on Recommendations	Get in touch with recommended products for further transactions	4.25
Risk Management (Products and Data)	Relating functions to ensure the product is spread out properly	4.65

Increased Purchasing Needs	The number of transactions that occurred has increased significantly	4.71
Customer Satisfaction	Relate to information support that helps the public to make transactions more appropriately	4.75
Seller Competence	Related to better service because the products provided are also suitable products	4.82
Seller Policy	Dealing with the stock of goods that the seller needs to provide	4.95

Analysis of the Function of Social Commerce Features

This analysis shows that features that are common to social commerce, such as search, reviews, product videos, chat rooms, and information blogs, have a high value in influencing purchase interest. The Recommendation feature in particular gets a high score, indicating that consumers rely on the opinions of other users to make product choices. This corroborates the conclusion that the development of accurate and relevant recommendation features can increase public spending.

Table 3. Technical Analysis of Social Commerce Functions (X3)

Measurement Variables	Description	Average Score
Search	Makes it easy to find the desired product	4.82
Recommendations	Makes it easier to recommend products that need to be purchased	4.81
Customer Reciprocal Needs	There is input if the recommendations given are inadequate	4.28
Desires	Provide needs according to customer needs	4.81
Image	Make it easy for customers to see the types of recommended products	4.77

Analysis of the main objectives of the business

The results of the analysis show that the implementation of recommendation features and other social features has a positive impact on the business goals of digital platforms. Starting from increased collaboration, community trust, decision-making capabilities, to consumer satisfaction. Product recommendations help speed up the product discovery process, increase interaction, and drive business sustainability through easy access to relevant information.

Table 4. Technical Analysis of Social Commerce (Y)

Measurement Variables	Description	Average Score
Product Recommendations	Relating to the combination of being able to integrate well with each other and exchange information	4.27
Provide Cooperation Support	Deal with vendor-to-vendor cooperation to provide product recommendations	4.72
Creating a community that can work together	Relating to providing information to sellers regarding the alpha needs of customers	4.72
Assisting Business People in Making Decisions	With product recommendations and knowing customer behavior	4.71
Opportunity to Produce New Products		

SWOT Analysis Related to the Desire to Buy Online

This SWOT analysis illustrates how convenience, positive perceptions, and negative experiences affect purchasing decisions. The recommendation feature has a strategic role in the opportunity aspect, especially because informative recommendations can increase greater sales opportunities. However, threats such as poor seller response can also affect the effectiveness of recommendations in the long run.

Table 5. Online Purchase SWOT Analysis

Aspect Analysis	Analysis Results
Convenience	
Strength	Customers feel calm and support due to the influence of product recommendations
Weakness	Have the opportunity to become addicted and no longer have analytical skills
Opportunity	Product recommendations given can increase trust
Threat	Need to increase the change of goods, especially stock because there can be seasonal influences
Positive Mood	
Strength	Have a clear mind in responding to product recommendations given
Weakness	The mind becomes chaotic because there is a chance that more products will be sold
Opportunity	Provide opportunities to develop even better ideas and ideas
Threat	Chances of having like-minded competitors
Negative Mood	
Strength	Provides the ability to be even more critical of the recommendations given
Weakness	Once you show poor performance, it's hard to believe anymore
Opportunity	Have the ability to be critical
Threat	Have the opportunity to be suspicious of each other, especially with fellow customers

CONCLUSION

The research concludes that user interaction on e-commerce platforms is strongly influenced by the quality and completeness of features—particularly product recommendation systems—which enhance user experience and increase transaction interest when they are interactive, personalized, and supported by elements such as reviews, videos, and communication tools. It also finds that platform preference depends on product characteristics: highly visual and interactive products like clothing and cosmetics are more often purchased through social commerce, while simpler products are typically bought via e-commerce due to efficiency and accessibility. Overall, product recommendation features play a significant role in boosting user engagement, expanding purchasing options, and increasing public spending, highlighting their importance for platform competitiveness and sustainable growth. Future research could explore the long-term behavioral effects of personalized recommendation algorithms, including their impact on consumer decision-making, potential bias, and ethical considerations in influencing unplanned purchases.

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