E-COMMERCE THEORY AND CONCEPTS, ANALYSIS IN IMPLEMENTING SEMBOL (ONLINE GROCERY) GAMBIR TRADITIONAL MARKET

Supina Batubara[1], Eko Hariyanto[2], Abdul Khaliq[3], Afdi Afandi[4]
[1,2,3,4]Universitas Pembangunan Panca Budi, Medan, Indonesia

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***Correspondence Address:**
ekohariyanto@dosen.pancabudi.ac.id

Abstract: This research aims to design an e-commerce based SEMBOL (Sembako Online) application that uses big data technology and predictive analysis. This study takes a case study at the Gambir Percut Sei Tuan Traditional Market as an example of implementation. Traditional markets often face challenges in providing the convenience of shopping offered by modern e-commerce platforms. By utilizing big data technology, the SEMBOL application is expected to provide users with a more efficient and personalized shopping experience, while also helping traditional traders improve the operational efficiency of the Gambir Traditional Market. The research methods used in this research include user needs analysis, user interface design, and development big databased system. Additionally, predictive analytics will be used to understand customer shopping patterns, predict product demand and optimize supply chains. It is hoped that the results of this research can be a guide for traditional traders and other stakeholders in utilizing e-commerce technology and big data to increase the competitiveness of the Gambir Traditional Market

INTRODUCTION

Traditional markets play an important role in the lives of people in Indonesia. They are not only a place to buy daily goods, but also a center of the local economy that supports the sustainability of the household economy. However, in the digital era and the rapid development of e-commerce, traditional markets often face challenges in maintaining their competitiveness. The ease of online shopping, the wide selection of products, and the convenience of transactions are the reasons why consumers turn to e-commerce platforms. On the other hand, Big Data technologies and predictive analytics have become key elements in successful business strategies. They enable companies to extract valuable insights from big data and predict consumer trends and market demand. However, the application of these technologies in the context of traditional markets in Indonesia is still limited. Therefore, this research aims to address the challenges faced by traditional markets by designing an e-commerce-based SEMBOL (Sembako Online) application. This application will utilize Big Data technology and predictive analytics to improve the operational efficiency of traditional markets and provide consumers with a better shopping experience. A case study on Gambir Percut Sei Tuan Traditional Market will be used as an implementation example to test the concept and benefits of this application. The SEMBOL app is expected to maintain its relevance in the digital era, increase its appeal to the younger generation who are more inclined to shop online, and help traditional traders increase their revenue. In addition, the application of Big Data technology and predictive analytics in traditional markets can serve as a model for other traditional markets across Indonesia, helping them transform into more competitive and data-oriented entities. Overall, this research will provide an in-depth look at how modern technologies such as e-commerce, Big Data, and predictive analytics can transform the traditional market landscape and provide tangible benefits to local communities and regional economies..

LITERATURE REVIEW

The development of digital technology has changed the face of global trade through the implementation of e-commerce that enables business interactions without geographical and time boundaries. E-commerce is defined as the process of buying, selling, or exchanging products, services, and information over computer networks,

including the internet [1]. In this context, e-commerce not only functions as a means of transaction, but also as a business transformation strategy that creates added value for consumers and businesses.

According to Laudon and Traver, e-commerce has six main components, namely: (1) digital market, (2) digital goods, (3) business model, (4) consumer behavior, (5) security and payment system, and (6) technology infrastructure [2]. In its application, these concepts are adapted to local needs and unique market potential, such as traditional markets in Indonesia.

The implementation of e-commerce in the traditional market sector, such as Pasar Gambir, offers an opportunity to modernize the distribution system through online grocery platforms such as SEMBOL. This model is a form of digital adoption that combines the power of local wisdom with the ease of technology [3]. Based on the SWOT analysis conducted in the study, SEMBOL's main strengths are the availability of fresh products and trust in local traders, while its main challenges include the digital literacy of business actors and logistics infrastructure [3]. A similar study by Suyanto et al. shows that the success of local-based e-commerce platforms is highly dependent on technological adaptability and understanding of digital consumer behavior [4]. On the other hand, trust, delivery speed, and payment integration are crucial factors in maintaining consumer loyalty [5]. Theoretically, the implementation approach of local e-commerce such as SEMBOL is also related to the Technology Acceptance Model (TAM), which emphasizes the importance of perceived usefulness and ease of use as determinants of technology adoption [6]. Thus, the successful development of SEMBOL in Pasar Gambir is not only determined by technological readiness, but also by the interaction between digital infrastructure, relevant business strategies, and empowerment of traditional businesses through education and collaboration.

METODOLOGY

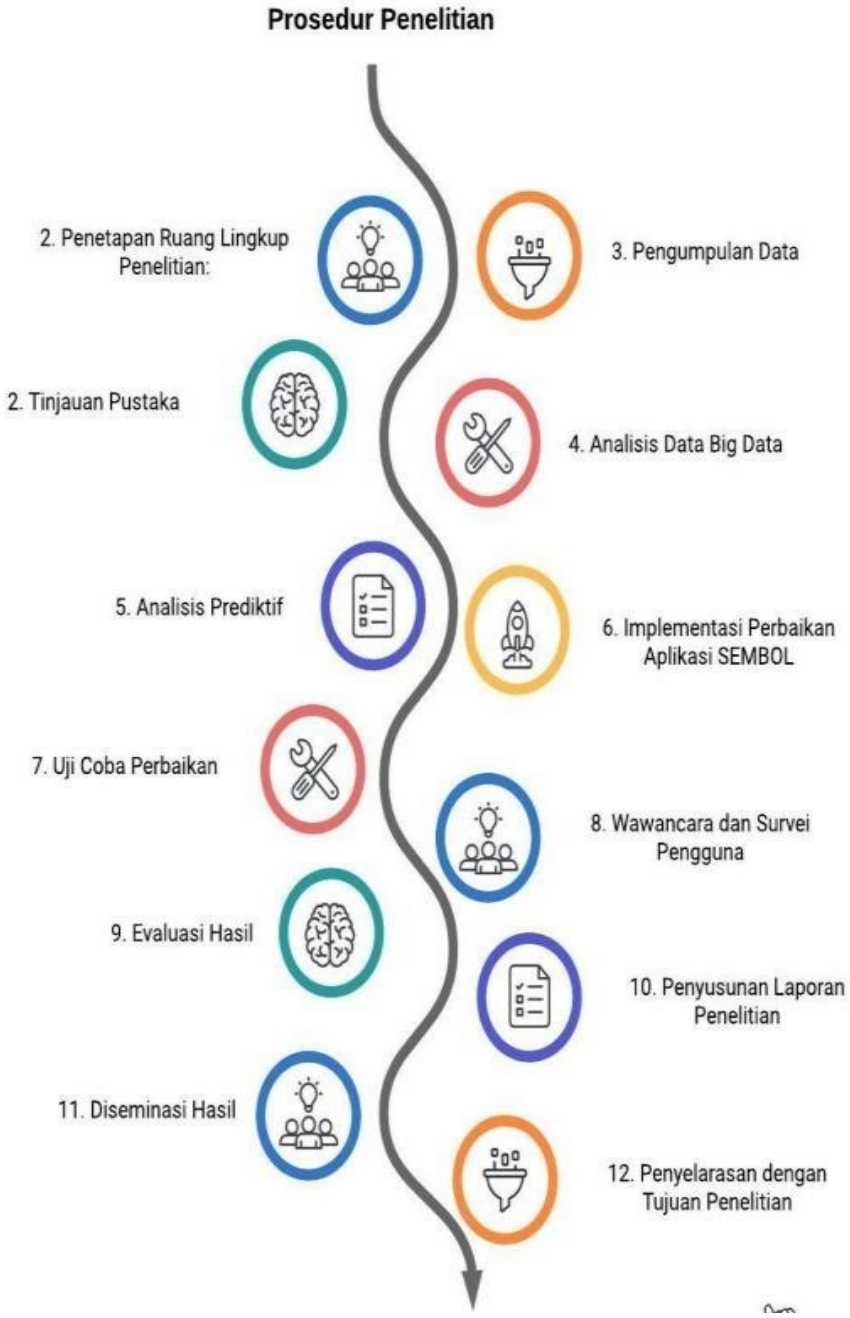

Fig. 1. Research architecture

RESULTS AND DISCUSSION

a) Design of E-Commerce Based SEMBOL (Sembako Online) Application:

1. Description of SEMBOL Application: The research material will include details about the SEMBOL app to be designed. This includes key features, user

interface, and the purpose and vision of the app in the context of grocery e-commerce.

2. Technical Architecture: The research will discuss the technical architecture of the application, including the development platform, programming language, and infrastructure to be used.

b) Utilization of Big Data Technology:

1. Data Collection: The research will discuss how data will be collected from various sources in the context of Gambir Percut Sei Tuan traditional market. This could include transaction data, stock data, customer data, and other relevant data.
2. Data Storage and Processing: The research material will explain how the data will be stored and processed using Big Data technology. This may include the use of specialized databases, data analysis tools, and supporting infrastructure.

c) Predictive Analysis:

1. Predictive Analysis Method: The research will describe the predictive analytics methods that will be used in the SEMBOL application. This could include the use of statistical models, machine learning, or other data analysis techniques.
2. Predictive Analytics Objectives: The research material will outline the purpose of predictive analytics in the context of the SEMBOL application, such as optimizing product recommendations, predicting product demand, or understanding customer buying patterns.

d) Case Study: Gambir Percut Sei Tuan Traditional Market:

1. Traditional Market Description: The research will provide an in-depth description of Gambir Percut Sei Tuan Traditional Market, including its history, structure, and characteristics.
2. Challenges and Opportunities: The research material will include an identification of the challenges and opportunities facing this traditional market in adopting e-commerce, Big Data technology, and predictive analytics.

e) Research Objectives:

1. Main Objectives: The research will outline the main objectives of designing the SEMBOL application and the implementation of Big Data technology and

predictive analysis in the context of Gambir Percut Sei Tuan Traditional Market.

2. Supporting Objectives: The research material will describe the supporting objectives which include improving operational efficiency, enhancing customer experience, and positively impacting the local economy.

CONCLUSION

1. Users will experience increased convenience in shopping online as this app will allow them to easily find, compare and purchase grocery products according to their needs.
2. Traditional traders in Gambir Percut Sei Tuan Traditional Market will experience improved operational efficiency in product stock management, price management, as well as supply chain planning thanks to a better understanding of customer behavior and preferences.
3. Predictive analytics integrated in the app will enable smarter decision making, including selection of the right products to stock and competitive pricing based on customer demand trends.
4. Gambir Percut Sei Tuan Traditional Market will increase its competitiveness against modern e- commerce platforms by providing a comparable online shopping experience.
5. The adoption and use of the SEMBOL app will provide tangible economic benefits to both traditional traders and other stakeholders, by increasing sales turnover, reducing wastage and creating new jobs.

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