

Enhancing Consumer Experience at Modern Coffee Shops through Analysis of Customer Acquisition Cost, Lifetime Value, and Implementation of Blockchain Technology: A Case Study in Medan City

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Abstract. This study explores the influence of Customer Acquisition Cost (CAC), Lifetime Value (LTV), and Blockchain Technology on consumer experience in modern coffee shops in Medan. The research combines quantitative and qualitative approaches, using surveys, interviews, and regression analysis to identify key relationships. The findings indicate a significant positive relationship between CAC, LTV, and consumer satisfaction, showing that optimized acquisition costs and higher customer lifetime value enhance consumer experience. Furthermore, the implementation of Blockchain Technology in these coffee shops has led to increased transparency and trust, further elevating the consumer experience. Coffee shops that adopted blockchain technology showed higher customer loyalty and operational efficiency. These results provide actionable insights for coffee shop owners and stakeholders to improve their marketing strategies and remain competitive in a dynamic market.

Keywords: Customer Acquisition Cost, Lifetime Value, Blockchain Technology, Consumer Experience, Coffee Shops

1 Introduction

The coffee shop industry in Medan has witnessed significant growth in recent years, with over 122 modern coffee shops now listed. In an increasingly competitive environment, it is essential for coffee shop owners to understand the factors influencing consumer experience to retain and grow their customer base. Among these factors, Customer Acquisition Cost (CAC) and Lifetime Value (LTV) have emerged as critical metrics in understanding consumer behavior and optimizing marketing strategies. Blockchain Technology, known for enhancing transparency, security, and operational efficiency, is increasingly relevant for businesses aiming to improve consumer trust and loyalty. This study aims to fill the gap by analyzing the impact of CAC, LTV, and Blockchain Technology on consumer experience in modern coffee shops in Medan.

2 Literature Review

Prior research has emphasized the importance of CAC and LTV in various industries for improving customer retention and optimizing marketing spending. Blockchain Technology offers unique advantages, including increased transparency, secure consumer data, and streamlined operations. However, limited research has explored blockchain's impact in localized, small-scale businesses like coffee shops.

3 Research Methodology

This study employed both quantitative and qualitative methods, collecting data from 330 respondents across 66 coffee shops in Medan. Surveys focused on CAC, LTV, and consumer experience, while interviews with coffee shop owners provided insights into blockchain implementation. Regression analysis was used to evaluate the relationship between these variables.

4 Results and Discussion

4.1 Results

This study collected data from 66 coffee shops across Medan City, selected based on their Google Maps rating of over 4.0 and active presence on social media. Based on the analysis of the collected data, several key findings related to independent variables (Customer Acquisition Cost (CAC), Lifetime Value (LTV), and blockchain technology), as well as the dependent variable (consumer experience), were identified. The respondents consisted of 330 individuals.

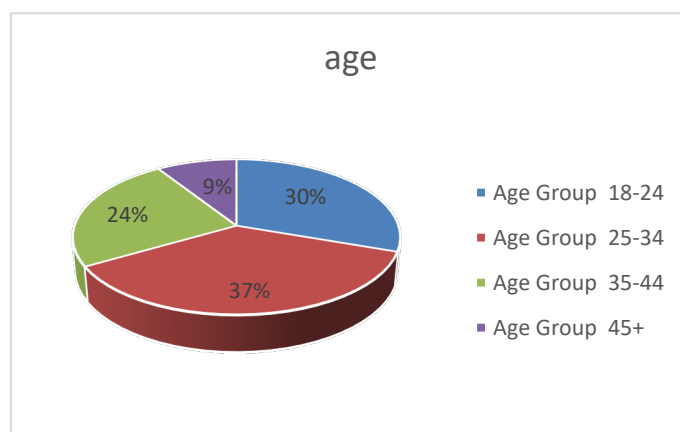


Fig. 1. The age distribution of respondents, with the majority in the 25-34 age group, indicating strong engagement with modern coffee shops and digital innovations.

The pie chart Fig.1 above illustrates the age distribution of the respondents in this study. This demographic data is crucial as age influences consumption behavior, technology preferences, and responses to marketing strategies, particularly in the fast-evolving modern coffee shop industry.

The **25-34 age group** represents the largest portion, accounting for **37%** of the total participants. This suggests that consumers within this productive age range are highly engaged with modern coffee shops in Medan. This group is often exposed to digital marketing strategies and is highly responsive to technology-based promotions, including the adoption of blockchain technology for transactions or supply chain management. Additionally, this age group is typically associated with stable purchasing power and a preference for high-quality service experiences, which include convenience and efficiency in digital payments.

The **18-24 age group**, comprising **30%** of the respondents, also shows significant engagement with modern coffee shops. Consumers in this age range are known as digital natives who are quick to adopt new technologies. They play a key role in accepting and utilizing technologies such as blockchain and digital payment methods (QRIS or bank transfers), which are predicted to enhance efficiency and trust in coffee shop transactions. Respondents in this age group also represent an important segment for developing social media-based marketing strategies due to their consumption patterns, which are closely linked to digital trends.

Respondents in the **35-44 age group** make up **24%** of the total population. This data indicates that this age group still maintains a considerable level of engagement with modern coffee shops, although their preferences may be more focused on service quality and loyalty programs offered by the coffee shops. As individuals more established in their careers and finances, they may place greater value on factors such as **Lifetime Value (LTV)**, which reflects the potential for long-term relationships with coffee shops that offer consistent quality and technological innovation.

The **45+ age group**, comprising **9%** of the respondents, shows lower engagement levels. This suggests that this group is not the primary target in the marketing strategies of modern coffee shops, likely due to a slower adoption rate of new technologies and differing consumption preferences. However, this group remains relevant in more traditional segments or in developing strategies that focus on service and product quality.

From this age distribution, the study reveals that consumers aged **18-34 years** are the primary target for technology-based and innovative marketing strategies. This group is the most responsive to digital promotions and technological innovations, such as blockchain and digital payments. Meanwhile, consumers aged **35-44 years** provide significant opportunities in terms of increasing **Customer Lifetime Value (LTV)** and fostering long-term loyalty. On the other hand, consumers aged **45 years and older** exhibit lower engagement, requiring a more tailored approach to create relevant value for this demographic.

Positive Correlation Between CAC, LTV, and Consumer Experience.

The analysis revealed that **Customer Acquisition Cost (CAC)** and **Lifetime Value (LTV)** are closely linked to consumer satisfaction and retention. Coffee shops with optimized marketing strategies that focused on reducing CAC and increasing LTV were

able to provide better consumer experiences. Specifically, the lower the cost to acquire a customer, the higher the level of consumer satisfaction. Additionally, when businesses could extend the LTV of their customers, these customers tended to remain loyal to the business, returning more frequently and making repeat purchases.

Impact of Blockchain Technology on Trust and Transparency.

The implementation of **Blockchain Technology** in coffee shops enhanced both **trust** and **transparency** for customers. By using blockchain for elements such as supply chain tracking or payment systems, coffee shops were able to provide verifiable and secure data, which consumers valued. This increased transparency made customers feel more confident in their transactions and fostered a stronger sense of loyalty toward the coffee shops.

Enhanced Customer Loyalty and Operational Efficiency.

The analysis also found that coffee shops utilizing blockchain technology outperformed those that did not, in terms of customer loyalty and operational efficiency. These coffee shops saw an increase in **repeat customers** and **operational efficiency**, as blockchain helped streamline processes such as payments, supply chain management, and customer loyalty programs. The ease of tracing product origin and ensuring secure payments was also found to play a role in improving operational workflows.

4.2 Discussion

Optimizing Acquisition Costs and Fostering High-LTV Customers.

The findings suggest that coffee shop owners should focus on strategies that **optimize Customer Acquisition Costs** and target customers with a **high Lifetime Value**. Reducing the cost to acquire a new customer while investing in customer retention efforts can lead to a more sustainable and profitable business model. High-LTV customers not only contribute more revenue over time but also act as brand advocates, further reducing the need for extensive marketing efforts.

The Role of Blockchain Technology in Strengthening Customer Relationships.

The role of **Blockchain Technology** in strengthening customer relationships cannot be understated. By enhancing **trust** and **transparency**, blockchain contributes to a deeper connection between businesses and consumers. When consumers feel that they can trust the business—through secure transactions and verified product authenticity—they are more likely to return and engage in long-term relationships with the coffee shop. This strengthens the shop's position in a highly competitive market.

Long-Term Performance and Competitive Advantage.

Blockchain technology also presents a **long-term competitive advantage**. Coffee shops that integrate blockchain into their operations are positioned to outperform competitors who do not. This is due to the combination of **customer loyalty**, **operational**

efficiency, and enhanced **brand trust**. In the long term, coffee shops that adopt block-chain are likely to maintain stronger customer relationships and have a more efficient operational model, which will help them navigate market fluctuations and stay competitive

5 Conclusion

This study provides valuable insights into the interplay between CAC, LTV, and Block-chain Technology in shaping consumer experiences in modern coffee shops. Optimizing acquisition costs and focusing on high-LTV customers, coupled with blockchain adoption, can significantly enhance customer satisfaction and loyalty.

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