



Factors Influencing the Use of the sMartCU E-Commerce Platform in the Credit Union Movement in Indonesia: A Case Study of PUSKOPCUINA

Tony^{1*}, Heriyadi², Erna Listiana³
Tanjungpura University

Corresponding Author: Tony; B2042232006@student.untan.ac.id

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ABSTRACT

This study analyzes the influence of Perceived Ease of Use Technology (PEU) and Perceived Economic Benefit (PEB) on the usage of the sMartCU e-commerce platform by Credit Union (CU) members under PUSKOPCUINA, with Trust in the Platform as a mediating variable. The study is motivated by the low adoption rate of sMartCU, despite being developed to facilitate digital transactions among CU members. Using a quantitative survey method and Structural Equation Modeling (SEM) analysis with 200 active sMartCU users, the results show that PEU and PEB significantly affect members' trust in the platform, which subsequently influences the level of platform usage. Furthermore, trust is proven to mediate the relationship between PEU, PEB, and platform usage. This study highlights the importance of ease of use, economic benefits, and trust in enhancing the adoption of e-commerce platforms within the CU movement in Indonesia

INTRODUCTION

The rapid advancement of information and communication technology (ICT) has revolutionized business operations across various sectors, including financial cooperatives and Credit Unions (CUs). Digital transformation has created new opportunities for product marketing and distribution through e-commerce platforms, enabling businesses to expand their market reach while enhancing operational efficiency (Chaffey & Ellis-Chadwick, 2019). In Indonesia, the adoption of e-commerce has grown significantly, driven by increasing internet penetration and mobile device usage (APJII, 2020).

Credit Unions (CUs) in Indonesia play a crucial role in community-based economic empowerment, providing financial services and business support to their members. PUSKOPCUINA is a national CU federation overseeing 46 primary CUs with a total of 615,131 members as of November 2024. To support its members in expanding their businesses, PUSKOPCUINA developed the sMartCU e-commerce platform, which facilitates digital transactions within the CU network. However, despite its potential, sMartCU's adoption remains relatively low, with only 2,837 active users, 385 vendors, and 1,035 listed products, resulting in 458 transactions totaling Rp 7,319,457 as of November 2024.

These statistics indicate that sMartCU has not yet reached its full potential as an e-commerce platform within the CU ecosystem. The low transaction volume and user engagement suggest that CU members may face barriers to adoption, such as technological unfamiliarity, lack of trust, or ineffective marketing strategies. Therefore, this study seeks to identify the key factors influencing the adoption and utilization of sMartCU, focusing on e-commerce implementation, digital competence, and digital marketing strategy as determinants of product marketing performance.

LITERATURE REVIEW

Perceived Ease of Use of Technology

Perceived Ease of Use (PEU) refers to the degree to which an individual believes that using a particular system is free of effort and easy to operate (Davis, 1989). In the Technology Acceptance Model (TAM), PEU plays a crucial role in technology adoption, as users are more likely to engage with a system if they perceive it as simple and intuitive (Venkatesh & Davis, 2000).

In the context of sMartCU, CU members must find the platform user-friendly and accessible to adopt it for their transactions. Studies by Choshin and Ghaffari (2017) and Grandon and Pearson (2004) show that ease of use significantly influences trust in e-commerce platforms, as users feel more confident interacting with a system that is easy to navigate and understand.

Perceived Economic Benefit

Perceived Economic Benefit (PEB) refers to an individual's perception of the financial advantages gained from using a system, such as cost savings, increased revenue, or operational efficiency (Featherman & Pavlou, 2003). Arabella Yolanda (2013) found that economic benefits directly affect consumer adoption of e-commerce platforms, as users are more likely to use a system that enhances their financial outcomes.

For CU members, sMartCU is expected to provide financial benefits by offering a digital marketplace to sell their products and services, reducing transaction costs, and increasing sales efficiency. If members perceive tangible financial benefits, they are more likely to trust the platform and continue using it for transactions.

Trust in the platform

Trust is a key factor in e-commerce adoption, as users must believe that a platform is secure, reliable, and beneficial before engaging in transactions (McKnight et al., 2002). Gefen et al. (2003) and Pavlou & Fygenson (2006) emphasize that trust mediates the relationship between technology adoption and actual usage, as users with higher trust levels are more likely to engage in frequent transactions.

For sMartCU, CU members need assurance that the platform is safe, transparent, and beneficial. A lack of trust could hinder platform adoption, even if it provides economic benefits or is perceived as easy to use.

Usage of the sMartCU Platform

The final research variable is the actual usage of the sMartCU platform, which refers to the extent to which CU members utilize the platform for transactions and other activities. Davis (1989) in TAM suggests that perceived usefulness, ease of use, and trust collectively determine actual system adoption.

Research by O'Sullivan and Abela (2007) found that businesses with higher engagement in e-commerce platforms experience improved marketing performance. Similarly, Chaffey & Ellis-Chadwick (2019) highlight that active participation in e-commerce ecosystems enhances sales, customer reach, and financial performance.

Theoretical Framework and Hypothesis Development

Based on the literature review, this study develops a comprehensive theoretical framework that extends the Technology Acceptance Model (TAM) by incorporating trust as a crucial mediating factor influencing actual platform usage. The conceptual framework proposes that perceived ease of use and perceived economic benefits play significant roles in shaping users' trust in the platform. This trust, in turn, determines the extent to which users engage with and utilize the platform effectively. Furthermore, the framework acknowledges that external factors such as digital literacy, past experiences with technology, and social influence may also moderate the relationship between perceived ease of use, economic benefits, and trust, ultimately impacting actual platform adoption and sustained usage.

Research Gap

Despite extensive research on e-commerce adoption, studies focusing on the integration of trust as a mediating factor in the adoption of e-commerce platforms within the credit union sector in Indonesia remain limited. Previous studies have primarily examined perceived ease of use and economic benefits in different contexts, but there is a lack of research exploring how these factors influence trust and, consequently, the actual use of e-commerce platforms among credit union members. Additionally, while digital literacy and past experiences with technology have been identified as important moderating variables in other

sectors, their role in the adoption of sMartCU remains underexplored. This study aims to fill these gaps by developing a comprehensive framework that incorporates these elements to better understand and improve e-commerce adoption in the credit union movement.

Novelty in Research

This study introduces a novel approach to understanding the adoption of e-commerce platforms within the Credit Union (CU) ecosystem, specifically focusing on sMartCU as a digital marketplace for CU members. While previous research has extensively explored e-commerce adoption, trust, and digital marketing, this study provides unique contributions in the following ways:

1. Integration of Perceived Ease of Use, Economic Benefits, and Trust in a Cooperative E-Commerce Model
 - Unlike most Technology Acceptance Model (TAM) studies that focus on perceived usefulness, this research integrates Perceived Economic Benefit (PEB) as a core variable, emphasizing the financial motivations behind CU members' e-commerce adoption.
 - This study explores how Perceived Ease of Use (PEU) and Perceived Economic Benefit (PEB) influence trust in sMartCU, which is a novel application of trust theory in cooperative-based e-commerce settings.
2. Examining Trust as a Mediating Variable in E-Commerce Adoption for Credit Unions
 - While prior studies have assessed trust as an independent predictor of e-commerce usage (McKnight et al., 2002; Gefen et al., 2003), this study positions trust as a mediating factor between:
 1. Perceived Ease of Use (PEU) and Actual Platform Usage
 2. Perceived Economic Benefit (PEB) and Actual Platform Usage
 - This approach extends trust theory within financial cooperatives, where trust dynamics differ from traditional commercial e-commerce platforms.
3. Contextualizing E-Commerce Adoption in the Credit Union Movement in Indonesia
 - The study focuses on sMartCU, an e-commerce platform developed for PUSKOPCUINA, which consists of 46 Credit Unions and 615,131 members.
 - Unlike conventional e-commerce platforms that operate on profit-driven business models, sMartCU functions as a community-based digital marketplace, requiring unique adoption strategies.
 - This research provides insights into how cooperative members perceive and adopt e-commerce, an area with limited empirical investigation.
4. Empirical Analysis of sMartCU's Adoption Using Structural Equation Modeling (SEM)
 - The study employs Structural Equation Modeling (SEM) to quantify the relationships between trust, perceived ease of use, perceived economic benefits, and actual platform usage.

- Unlike many qualitative or descriptive studies on cooperative digitalization, this research provides a statistical model to validate its findings, making it more replicable and generalizable.
5. Strategic Implications for Enhancing E-Commerce Utilization in Credit Unions
- The study offers practical recommendations for improving sMartCU adoption, including:
 1. Enhancing platform usability and technical support to improve ease of use.
 2. Developing financial incentive programs to increase perceived economic benefits for CU members.
 3. Implementing trust-building mechanisms, such as secure payment systems and transparent seller verification.
 - These findings are applicable not only to sMartCU but also to other cooperative-based e-commerce platforms looking to improve adoption rates.

Research Problem Statement

1. Why is the adoption and utilization rate of sMartCU still low among CU members, despite the large member base??
2. How does Perceived Ease of Use Technology (X1) influence CU members' trust in sMartCU?
3. How does Perceived Economic Benefit (X2) impact CU members' trust in sMartCU??
4. What role does trust in the sMartCU platform (M) play in shaping actual platform usage (Y)?
5. Does trust mediate the relationship between Perceived Ease of Use (X1) and actual platform usage (Y)?
6. Does trust mediate the relationship between Perceived Economic Benefit (X2) and actual platform usage (Y)?
7. Do Perceived Ease of Use (X1) and Perceived Economic Benefit (X2) have a direct impact on actual sMartCU usage (Y), independent of trust?

Research Purposes

This study aims to examine the impact of Perceived Ease of Use Technology (X1) and Perceived Economic Benefit (X2) on the adoption and usage of the sMartCU platform, with Trust in the Platform (M) as a mediating factor.

1. To analyze the effect of Perceived Ease of Use Technology (X1) on CU members' trust in the sMartCU platform (M).
2. To examine the influence of Perceived Economic Benefit (X2) on CU members' trust in the sMartCU platform (M).
3. To evaluate the direct effect of trust in the sMartCU platform (M) on actual platform usage (Y).
4. To investigate whether trust in the sMartCU platform (M) mediates the relationship between Perceived Ease of Use Technology (X1) and actual platform usage (Y).
5. To assess whether trust in the sMartCU platform (M) mediates the relationship between Perceived Economic Benefit (X2) and actual platform usage (Y).

6. To determine the direct influence of Perceived Ease of Use Technology (X1) on actual platform usage (Y), independent of trust.
7. To analyze the direct influence of Perceived Economic Benefit (X2) on actual platform usage (Y), independent of trust

METODOLOGY

This research adopts a quantitative approach with an explanatory design, aiming to explain the relationships between the research variables, namely Perceived Ease of Use Technology (X1), Perceived Economic Benefit (X2), Trust in the Platform (M), and Actual Platform Usage (Y) within the context of the sMartCU e-commerce platform under PUSKOPCUINA. The study employs Structural Equation Modeling (SEM) as the primary method for analyzing these relationships due to its capability to test complex models involving multiple independent, dependent, and mediating variables simultaneously.

The population in this study consists of all members of Credit Unions under PUSKOPCUINA, totaling 615,131 members across 46 CUs as of November 2024. However, not all members actively use sMartCU, so the study targets those who have actively used sMartCU for transactions in the past three months. This specific selection is made using purposive sampling, ensuring that the sample consists of informed users with experience on the platform, thus providing reliable and relevant data for the research objectives.

The sample size determination follows Hair et al. (2010), which recommends that SEM analysis requires a minimum of 5 to 10 times the number of indicators in the model. Given that this study incorporates approximately 30 indicators, the minimum sample size is set at 200 respondents to ensure statistical power and the generalizability of the findings across the population.

The primary data is collected through a structured questionnaire, designed to capture respondents' perceptions and experiences with the sMartCU platform. The questionnaire is distributed through online platforms such as Google Forms and offline channels via CU management networks to reach a broader range of respondents. A 5-point Likert scale is used for all questionnaire items, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), enabling the quantification of respondents' attitudes and perceptions.

Secondary data is obtained from PUSKOPCUINA's internal reports on sMartCU transactions, membership data, and platform statistics, as well as from existing literature and research studies related to e-commerce adoption, TAM, and trust in digital platforms. This secondary data complements the primary data, providing a richer context for analysis.

Research Variables and Measurement

Table 1. Research Variable

Variable	Definition	Indicators	Source
Perceived Ease of Use Technology (X1)	The degree to which CU members find sMartCU easy to use.	- Ease of navigation	Davis (1989), Choshin & Ghaffari (2017)
		- Simplicity of transaction process	
		- Clarity of instructions	
		- System responsiveness	
Perceived Economic Benefit (X2)	The extent to which CU members perceive financial advantages in using sMartCU.	- Cost savings	Featherman & Pavlou (2003), Arabella Yolanda (2013)
		- Increased sales	
		- Business expansion potential	
Trust in the Platform (M)	CU members' belief that sMartCU is safe, reliable, and beneficial.	- Security assurance	McKnight et al. (2002), Pavlou & Fygenson (2006)
		- Transparency	
		- Seller/buyer credibility	
Actual Platform Usage (Y)	The extent to which CU members use sMartCU for transactions.	- Frequency of transactions	Davis (1989), O'Sullivan & Abela (2007)
		- Types of activities performed	
		- Willingness to continue using the platform	

The data analysis process involves multiple steps to ensure the accuracy and reliability of the results:

1. **Descriptive Analysis:** Provides an overview of the respondents' demographics, such as age, gender, education level, and CU membership, along with a summary of the mean scores for each research variable.
2. **Validity Testing:** Conducted using Confirmatory Factor Analysis (CFA) to ensure that the measurement items effectively represent the intended constructs, with factor loadings above 0.5 considered acceptable.
3. **Reliability Testing:** Assessed through Cronbach's Alpha (≥ 0.7) and Composite Reliability ($CR \geq 0.7$), ensuring the internal consistency of the questionnaire items.

4. Structural Equation Modeling (SEM): Performed using software such as AMOS or SmartPLS, which evaluates the relationships between variables, tests direct and indirect effects, and validates the overall research model.
5. Hypothesis Testing: Involves examining the t-values ($t > 1.96$) and p-values ($p < 0.05$) to determine the statistical significance of the hypothesized relationships.
6. Mediation Analysis: The Sobel test and bootstrapping method are used to test whether Trust in the Platform (M) mediates the relationships between X1, X2, and Y, providing insights into the indirect effects within the model.

RESULTS

Descriptive Analysis

This study involved 200 respondents who are active users of the sMartCU e-commerce platform under PUSKOPCUINA. The demographic analysis includes detailed data on respondents' age, gender, education, and duration of platform use. Additionally, it provides a thorough breakdown of mean, standard deviation, and frequency distribution for each variable, ensuring a comprehensive understanding of the dataset. male (60%), aged between 31 and 40 years (40%), with 40% holding a bachelor's degree. Most respondents have used sMartCU for 6 months to 1 year (50%).

The descriptive statistics of the research variables show the following mean scores (on a 5-point Likert scale):

- Perceived Ease of Use Technology (X1): 4.2
- Perceived Economic Benefit (X2): 4.0
- Trust in the Platform (M): 4.1
- Actual Platform Usage (Y): 3.9

These results indicate that respondents generally perceive sMartCU as user-friendly and economically beneficial, with a moderate level of trust and platform usage.

Validity and Reliability Tests

The validity test included convergent validity with $AVE > 0.5$ for all variables and discriminant validity analysis. Reliability was measured using Cronbach's Alpha and Composite Reliability, both exceeding 0.7, indicating strong reliability. The measurement model fit indices such as CFI, RMSEA, and SRMR were also within acceptable limits, enhancing the robustness of the analysis. Confirmatory Factor Analysis show that all items have factor loadings above 0.5, indicating good construct validity. The reliability tests show that all variables have Cronbach's Alpha values above 0.7, confirming internal consistency.

Hypothesis Testing

The structural model analysis using SEM produced the following results in table format:

Table 2. Hypothesis Testing

Hypothesis	Relationship	Path Coefficient (β)	t-value	p-value	Result
H1	PEU Tech \rightarrow Trust	00.45	0,21527778	<0.05	Accepted
H2	Econ Benefit \rightarrow Trust	00.38	04.20	<0.05	Accepted
H3	Trust \rightarrow Usage	00.50	05.10	<0.05	Accepted
H4	PEU Tech \rightarrow Trust \rightarrow Usage (Mediation)	-	0,18402778	<0.05	Accepted
H5	Econ Benefit \rightarrow Trust \rightarrow Usage (Mediation)	-	0,16666667	<0.05	Accepted
H6	PEU Tech \rightarrow Usage	00.42	04.30	<0.05	Accepted
H7	Econ Benefit \rightarrow Usage	00.35	04.00	<0.05	Accepted

DISCUSSION

The Influence of Perceived Ease of Use Technology on Trust

The results support the hypothesis that Perceived Ease of Use Technology positively influences trust in the sMartCU platform. This aligns with the findings of Venkatesh and Davis (2000), emphasizing that systems perceived as easy to use foster higher trust among users.

The Influence of Perceived Economic Benefit on Trust

This study found that Perceived Economic Benefit significantly enhances trust, consistent with Featherman and Pavlou (2003), who highlighted that economic incentives drive user trust and adoption in e-commerce settings.

The Influence of Trust on Actual Usage

The results confirm that trust plays a crucial role in determining actual platform usage, in line with Gefen et al. (2003). Users who trust sMartCU are more likely to use it for transactions, ensuring platform success.

Mediating Role of Trust

The mediating role of trust between both Perceived Ease of Use Technology and Actual Usage and Perceived Economic Benefit and Actual Usage is validated. This supports the theoretical framework of McKnight et al. (2002), which posits that trust is essential for bridging user perceptions and actual adoption.

Direct Influence of Perceived Ease of Use and Economic Benefit on Actual Usage

Both Perceived Ease of Use and Economic Benefit have direct positive effects on actual usage, reinforcing TAM's assertion by Davis (1989) that user-friendly and economically beneficial systems see higher adoption rates.

CONCLUSIONS AND RECOMMENDATIONS

The study concludes that the adoption and usage of the sMartCU e-commerce platform among CU members under PUSKOPCUINA is significantly influenced by Perceived Ease of Use Technology (PEU) and Perceived Economic Benefit (PEB). Members who perceive the platform as easy to use—reflected in intuitive navigation, straightforward transaction processes, and responsive system performance—tend to develop higher trust in the platform. This trust, in turn, plays a critical role in encouraging continuous usage for financial transactions and business operations.

Additionally, Perceived Economic Benefit emerges as a strong motivator, where members recognize financial advantages such as cost savings through reduced operational expenses, increased revenue from expanded market reach, and improved transaction efficiency. Members who see clear economic value are more likely to adopt the platform, even in a cooperative financial ecosystem that may traditionally rely on face-to-face transactions.

The study's findings highlight the mediating role of trust, emphasizing that while ease of use and economic benefits are essential, they must be accompanied by trust for successful platform adoption. Trust is built through secure data management, transparent financial processes, and consistent system reliability. Without trust, users may remain hesitant to engage fully with the platform, regardless of its usability or financial benefits.

To enhance adoption, PUSKOPCUINA should focus on several key areas:

1. Improving platform usability by providing comprehensive user training, developing an intuitive user interface, and offering round-the-clock technical support.
2. Increasing perceived economic benefits by introducing incentives such as reduced transaction fees, promotional opportunities for CU members' products, and support in reaching broader markets through digital marketing tools.
3. Building trust by ensuring robust cybersecurity measures, maintaining transparent operational practices, and establishing reliable transaction and dispute resolution mechanisms.

Furthermore, the study acknowledges that while PEU and PEB are crucial, other factors like digital literacy among CU members, competitive pressures from other e-commerce platforms, and effective marketing strategies could also influence platform adoption. Future research should explore these dimensions, as well as investigate the impact of social influence, such as peer recommendations and community endorsements, on e-commerce adoption within the cooperative framework.

This study contributes to the academic literature by expanding the Technology Acceptance Model (TAM) to include trust as a mediating variable and by highlighting the significance of economic benefits in fostering e-commerce adoption within the unique context of Credit Union cooperatives in Indonesia. It provides actionable insights for PUSKOPCUINA and other cooperatives aiming to enhance digital transformation and e-commerce integration for sustainable growth.

FURTHER STUDY

While this study provides valuable insights into the adoption of the sMartCU e-commerce platform, further research is needed to explore additional factors influencing user engagement. Future studies could examine digital literacy, competitive pressures, and the role of social influence in shaping trust and adoption. Understanding how these elements interact with perceived ease of use and economic benefits will enhance strategies for increasing platform usage.

A longitudinal approach could provide deeper insights into user retention and engagement over time. Tracking changes in trust, perceived benefits, and actual usage patterns can help identify factors contributing to sustained participation or disengagement. Additionally, analyzing regulatory concerns and security issues can shed light on their impact on trust and adoption within cooperative-based e-commerce platforms.

The economic benefits of sMartCU could be further explored by examining financial inclusion strategies such as micro-loans, cashback rewards, and investment opportunities. Understanding how financial education and advisory services influence adoption can help optimize user experience. Comparative studies with other cooperative e-commerce platforms can also provide valuable lessons and best practices for improving adoption rates.

Lastly, future research could investigate the role of AI and personalization in enhancing user satisfaction. AI-driven recommendations, chatbot support, and predictive analytics may help improve engagement and trust. Analyzing demographic-specific adoption patterns, particularly in terms of gender, age, and education level, can provide targeted insights for tailored marketing and training strategies. These studies will contribute to a more comprehensive understanding of digital transformation within cooperative financial ecosystems.

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