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The Role of Locus of Control in Moderating the Influence of Financial Technology and Financial Knowledge on Financial Management Behavior (Case Study of the "M-Pise Digital" Micropay Application at KSP Bersama Kami Sejahtera)

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A B S T R A C T

This research is quantitative and associative in nature, aiming to examine the influence of Financial Technology (Fintech) usage and Financial Knowledge on Financial Management Behavior, with Locus of Control (LoC) as a moderating variable. The sample consisted of 56 active members who used the "m-Pise Digital" micro-payment application from KSP BISA, selected based on specific criteria. Primary data was collected from these respondents and analyzed using Structural Equation Modeling (SEM) with SmartPLS 4.1.0. The results indicated that Fintech has a significant positive effect on Financial Management Behavior, meaning that increased use of Fintech generally leads to better financial management behavior. Additionally, the presence of Locus of Control functions as a moderator, strengthening this relationship. This is supported by the interaction test between LoC and Fintech, which confirms LoC's role as an enhancer of the influence. Based on these findings, it is recommended to expand the sample coverage across different regions and demographic backgrounds to produce more representative results. Using a longitudinal design is also suggested to monitor changes in financial behavior over time. Furthermore, developing models that include mediating and moderating variables such as motivation and culture can enrich the analysis.

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INTRODUCTION

The success of cooperatives in surviving amidst Indonesia's economic crisis demonstrates the reliability of cooperatives as trustworthy business entities. This situation positions cooperatives as a vital economic sector that could evolve to support Indonesia's future economic growth. The cooperative method is closely linked to societal values ingrained in Indonesian culture, as all cooperative activities are directly empowered by the community, and the outcomes are returned to society based on principles of justice, mutual cooperation, and the kinship system (Zain, 2015).

Contrastingly, data from the Ministry of Cooperatives and Small and Medium Enterprises in 2023 shows that the number of cooperatives in Indonesia has declined significantly over the past decade—from 209,488 units in 2014 to 130,119 units in 2023, representing a decrease of 79,328 units. This growth trend in Indonesia is opposite to that of the global context, where cooperatives tend to dominate the real sector. The decline indicates many cooperative units are falling into disuse, mainly due to limited funding sources and slow innovation in providing financing to the public, leading to a loss of public trust and engagement (Barus & Syahbudi, 2019).

The development of the industrial world, especially the era of Industry 4.0, significantly influences the sustainability of cooperatives. Industry 4.0 necessitates industry players to adopt information technology in their operations (Ellitan, 2020). This revolution is bringing changes to human life and work systems, encouraging collaboration with automation and digitalization (Schwab, 2016). Additionally, Industry 4.0 has driven changes in societal behavior towards economic activities, with a growing preference for digital transactions over conventional methods (Mumtaha & Khoiri, 2019).

KSP Bersama Kami Sejahtera (KSP BISA), a cooperative founded in Denpasar, Bali in 2022, exemplifies this transformation. Its core business involves providing savings, loans, and other financial transactions. From the outset, KSP BISA has transitioned into digital transactions for its members, utilizing the "m-Pise Digital" micro-payment application. This integrated platform enables members to perform various transactions from digital savings and loan applications to payments through their smartphones, similar to mobile banking services offered by banks.

The use of this digital application is expected to enhance member participation in transactions, thereby improving KSP BISA's financial performance. Based on income statement data from 2023 and 2024, KSP BISA has demonstrated significant financial growth during this period.

One of the key factors supporting this achievement is the rise in transaction volume among members. In 2024, active members reached 449, an increase of 440 members from 29 in 2023. However, only 56 members (about 12%) actively used "m-Pise Digital," which is low compared to the total number of active members. Interviews conducted prior to this research indicated that although "m-Pise Digital" transaction processes are helpful, issues such as system disruptions and a lack of understanding of menu options cause hesitation or fear of transaction failure, thus limiting its adoption.

This phenomenon of implementing the "m-Pise Digital" micro-payment application exemplifies digital transformation within Indonesia's cooperative industry. Fintech, short for financial technology, refers to innovations that adopt technology in delivering financial services (Nizar, 2017). The rise of fintech as a digital financial service has gained popularity because of its convenience and numerous benefits, which make it attractive to the public (Pambudi, 2019).

Cooperatives, with their people-centered principles, have the potential to reach micro-scale farmers and rural communities (Zain, 2015). However, they face challenges in reaching urban populations, especially young people. Conversely, fintech can easily reach urban digital communities but tends to lack local cultural values that are pivotal in rural settings (Andriariza & Agustina, 2020).

According to Wonglimpiyarat (2017), fintech—an abbreviation of financial technology—has substantially transformed the financial sector over recent years. Fintech has greatly impacted the banking industry by utilizing information and communication technologies (Xavier, 2017). Its influence covers service offerings, operational efficiency, accessibility, and challenges faced by banking institutions (Thakor, 2020). One major impact of fintech is its ability to change transaction methods, provide access to financial services, and enable better personal and business financial management, which in turn affects living standards and economic health of users (Thakor, 2020).

Financial management behavior includes how individuals collect money, save it, responsibly spend, and make productive investments (Ariadin & Safitri, 2021). Past studies have shown a complex relationship between fintech and financial behavior. For instance, research by Al Rubaiai (2022) and Munawar (2023) reported positive relationships between fintech payment systems and financial management behavior, whereas Widiastuti (2020) found no significant impact. Kusumawardana & Febriyanti (2021) concluded that fintech generally influences financial behavior.

Another factor influencing financial behavior is financial knowledge itself—the understanding, skills, and beliefs that shape attitudes toward financial decision-making and management (Otoritas Jasa Keuangan, 2019). Better financial knowledge enables better decision-making and management.

Internal motivation to use fintech and external factors influencing financial behavior are often explained through the concept of locus of control. Individuals with a high internal locus of control tend to show initiative and motivation, making this variable a useful moderator in examining how fintech impacts financial management behavior (Buddelmeyer & Powdthavee, 2016).

The relationship between fintech payments and financial behavior, however, remains inconclusive; further research is needed. This study aims to re-examine the influence of fintech and financial knowledge on financial management behavior, specifically within the unique context of cooperative industry where members are both owners and customers, fostering stronger financial behaviors. An additional focus is on the moderating role of locus of control.

LITERATURE REVIEW

Financial management behavior encompasses how an individual can gather, save, and use money for non-consumptive transactions, as well as engage in productive investments (Ariadin & Safitri, 2021). Based on several previous studies, there exists a complex relationship between fintech and financial management behavior. Al Rubaiai (2022) and Munawar (2023) found a positive relationship between payment fintech and financial management behavior, while Widiastuti (2020) did not find any significant effect. Kusumawardana & Febriyanti (2021) concluded that fintech generally influences financial management behavior.

Another factor that encourages individuals to act or behave in financial management is financial knowledge. Financial knowledge is defined as the understanding, skills, and beliefs that influence attitudes and behaviors aimed at improving decision-making and financial management to achieve prosperity (Otoritas Jasa Keuangan, 2019). It is a primary factor in financial decision-making; someone with better financial knowledge tends to make better decisions and manage their finances more effectively.

The impact of fintech on financial management behavior is generally driven by internal and external factors, often referred to as locus of control. This concept explains an individual's motivation, decision-making, actions, and personal goals. Specifically, individuals with a higher internal locus of control tend to exhibit greater initiative and motivation. Therefore, locus of control is considered an important moderating variable in the relationship between fintech service usage and financial management behavior (Buddelmeyer & Powdthavee, 2016).

Laksmana (2018) indicated that internal and external factors together influence financial management behavior. The study emphasizes that self-control and financial knowledge are key drivers of better financial decision-making. Individuals with higher levels of knowledge and self-control are more capable of effectively utilizing fintech as a tool. In the same year, Laksmana also highlighted that the ease of access to fintech can accelerate and simplify financial transactions, encouraging individuals to be more active and involved in managing their finances. Development of financial education and improved access to trustworthy technology must go hand in hand to enable individuals to manage their finances independently, effectively, and sustainably (Laksmana, 2019; 2020; 2024). This research underscores that community empowerment through education and reliable technological access will support more positive financial behaviors. It also concludes that a combination of financial knowledge, self-control, and easy access to fintech is crucial in increasing individuals' confidence and initiative to manage their finances properly and sustainably.

Overall, various studies affirm that successful financial management depends not only on technology and knowledge but also on psychological factors such as internal control. These motivate individuals to act actively and independently.

METHODOLOGY

Hypothesis testing in this research was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) model, with the software

SmartPLS 4.0. The use of PLS-SEM as an analysis tool was chosen for several reasons: firstly, PLS-SEM is capable of resolving research problems related to small sample sizes and non-normal data distribution; and thirdly, PLS-SEM has the ability to improve model complexity and prediction-oriented analysis.

The analysis using PLS-SEM was carried out through six stages: conceptualization of the model, selecting the analysis algorithm, drawing the path diagram, evaluating the model, and reporting the analysis (Latan & Ghozali, 2017).

RESEARCH RESULTS AND DISCUSSION

Assessing the inner model involves examining the relationships between latent constructs by looking at the estimated path coefficient values and their significance levels. The structural model is depicted in the following diagram.

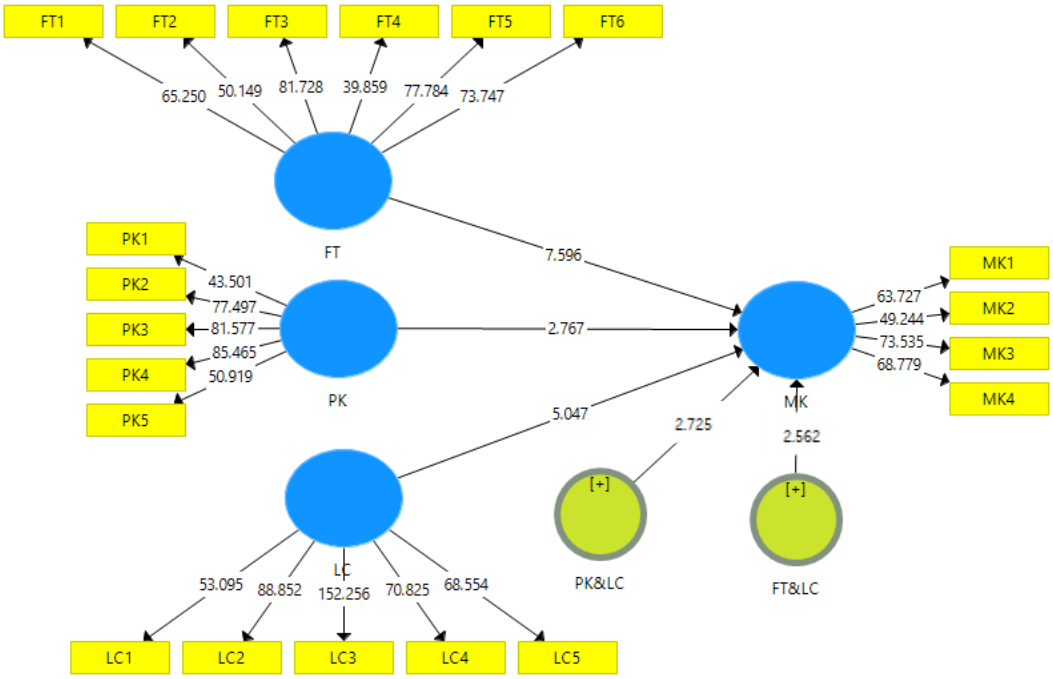

Figure 1. Structural Model (Inner Model)

The structural model indicates the strength of the estimated relationships between latent variables or constructs. When evaluating the structural model using PLS, the R-Square value for each endogenous latent variable is used as an indicator of the model's predictive power. The evaluation of the structural model shows that the R-Square value is 0.751, which falls into the strong category.

The significance test of the relationship between variables is carried out by considering the T-Statistic values and P-Values of the path coefficient using the bootstrapping method. In this context, the T-Statistic value must be greater than 1.96 for the hypothesis to be accepted. Meanwhile, the P-Values should be less than 0.05 to indicate that the hypothesis in this study is significant.

The effect of financial technology on financial management has a T-Statistic value of 7.596 and a P-Value of 0.000. These values indicate that the relationship between the variable of financial technology and financial management is significant, meaning hypothesis H1 is accepted and H0 is rejected. The influence of financial knowledge on financial management, based on the test results, shows a T-Statistic of 2.767 and a P-Value of 0.006. This suggests that fintech payments have a positive and significant effect on financial management; in other words, this result confirms that hypothesis H2 is accepted and H0 is rejected.

The locus of control variable significantly moderates the effect of financial technology on financial management. This is demonstrated by the results of the interaction effect between locus of control and financial technology (Ft&LC) on financial management, with a T-Statistic of 2.562 and a P-Value of 0.009. These findings indicate that locus of control functions as a moderator or amplifier of the relationship between financial technology and financial management. Therefore, hypothesis H3 is accepted and H0 is rejected.

Furthermore, the locus of control variable also significantly moderates the effect of financial knowledge on financial management. This is shown by the results of the interaction effect between locus of control and financial knowledge (PK&LC) on financial management, with a T-Statistic of 2.725 and a P-Value of 0.007. This finding suggests that locus of control functions as a moderator or enhancer of the relationship between financial knowledge and financial management. Consequently, hypothesis H3 is accepted and H0 is rejected.

Theories of behavioral finance and locus of control provide a conceptual basis that a person's financial behavior is heavily influenced by their perception of control over financial outcomes. Individuals with an internal locus of control tend to believe that their financial success is influenced by their own efforts and knowledge, while those with an external locus believe that external factors outside their control determine financial results.

The first implication of this theory is that financial literacy development programs should be designed to strengthen members' internal beliefs regarding their capability to manage finances. Through training, workshops, and empowerment initiatives, members are expected to perceive that their financial success largely depends on their own efforts, knowledge, and personal skills. As a result, they will be more motivated to actively and responsibly utilize fintech services because they believe their actions directly influence their financial outcomes.

The second implication relates to the use of financial technology such as fintech and digital applications, which can reinforce an internal locus of control if members feel capable of independently managing transactions and financial activities through the features provided. This theory emphasizes that increasing mastery of technology will boost members' confidence, encouraging them to manage their finances more discipline and systematically.

The third implication highlights that, within risk management, members with an internal locus of control are more likely to take preventive measures such as financial planning, budgeting, and investment diversification. Therefore, if educational programs can strengthen internal locus, members will better

understand risks and adopt appropriate preventive actions, ultimately improving their healthy financial management behavior.

The fourth implication concerns the influence of financial knowledge as a primary variable from the information processing and decision-making theory. Adequate knowledge increases members' ability to analyze risks, benefits, and market conditions, thereby improving the quality of their financial decisions—such as choosing suitable financial products and managing debts responsibly.

The fifth implication indicates that the success of educational programs and fintech usage is also significantly affected by other psychological factors, including confidence and motivation. Through behavioral psychology theories, programs should aim to build a positive sense of personal control (internal locus), so members feel empowered to manage their finances independently. This is believed to strengthen the positive effects of fintech and financial knowledge on financial behavior.

The sixth practical implication suggests that fintech-based technology development should consider theories of ease of use and users' sense of control. Features like automatic notifications, financial simulations, and secure data management will increase members' confidence and reinforce their internal locus of control, motivating them to be more active and disciplined in their financial management.

The seventh implication emphasizes the need to develop success indicators in educational and technological programs that focus not only on increasing knowledge but also on strengthening members' perceived control and self-efficacy. These psychological aspects will support sustainable behavioral change and motivate members to adopt more disciplined and responsible financial behaviors.

The eighth implication underscores the importance of integrating these theories into the formulation of policies and standard operating procedures within cooperatives to ensure that implemented programs address psychological factors and members' perceptions of their financial control. This approach will help sustain long-term behavioral effects.

The ninth implication places central importance on psychological literacy and confidence-building environments for members as key to successful behavioral change. Empowerment programs must integrate psychological, technological, and knowledge aspects so members feel grounded and autonomous in managing their finances.

Finally, the overall takeaway from these foundational theories is that strengthening internal locus of control, increasing financial knowledge, and the strategic utilization of fintech will synergistically foster more disciplined, responsible, and sustainable financial management behaviors. With this understanding, policymakers and cooperative managers can devise strategies that go beyond technical aspects to include psychological and psychosocial factors affecting member behavior.

CONCLUSIONS AND RECOMMENDATIONS

The influence of financial technology on financial management has been proven significant, with a T-Statistic of 7.596 and a P-Value of 0.000, indicating strong evidence to support the hypothesis that fintech positively affects financial management (H1). Additionally, the impact of financial knowledge on financial management is also significant, demonstrated by a T-Statistic of 2.767 and a P-Value of 0.006, confirming that increased financial literacy leads to better financial management practices (H2). Moreover, locus of control significantly moderates the relationship between financial technology and financial management, as evidenced by an interaction term with a T-Statistic of 2.562 and a P-Value of 0.009. This means that individuals with a higher internal locus of control are more likely to strengthen the positive effect of fintech on their financial behavior, thus supporting the moderation hypothesis (H3). Overall, these findings emphasize that both technological and psychological factors play crucial roles in shaping financial management behavior among individuals.

ADVANCED RESEARCH

Based on the research findings, it is recommended to expand the sample coverage across various regions and demographic backgrounds to attain more representative results, as well as adopt a longitudinal design to monitor changes in financial behavior over time. Additionally, developing models that incorporate mediating and moderating variables such as motivation and culture will enrich the analysis, while employing qualitative methods can provide in-depth insights into members' perceptions. It is also important to improve the validity of psychological measurement instruments, experimentally test the effectiveness of technology-based education programs, and consider the influence of culture and social norms on financial behavior. Cross-sectoral research, along with managing related psychological risks associated with fintech, and applying a multidisciplinary approach, are strategic steps toward generating more comprehensive and applicable results.

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