

## The Influence of Financial Literacy and Financial Technology on Member Loyalty in the Ikhlas Cooperative, Cilacap

Wiwit Ary Nugroho

Sekolah Tinggi Ilmu Ekonomi Harapan Bangsa Bandung, Indonesia

 [wiwitarynugroho@gmail.com](mailto:wiwitarynugroho@gmail.com)

Abstract	Article Info
<p>This research aims to analyse the influence of financial literacy and the use of financial technology on cooperative members' loyalty, with a particular focus on KKPRI Ikhlas Cilacap as a case study. The research method employs a quantitative approach through a survey of 300 respondents selected by purposive sampling from a total of 600 active cooperative members, using a four-point Likert scale questionnaire that has been tested for validity and reliability. Data analysis was carried out through classical assumption testing, multiple linear regression, as well as F-tests and t-tests to examine both simultaneous and partial effects. The findings reveal that financial literacy has a significantly positive impact on members' loyalty by enhancing their ability to make rational financial decisions, while the adoption of fintech has a tangible effect on improving efficiency, transparency, and members' trust. Further discussion confirms that the combination of sound financial literacy and appropriate fintech implementation can sustainably strengthen members' loyalty, in line with the theoretical framework adopted. These findings contribute academically by enriching the literature on cooperative management in the digital era and provide practical recommendations for cooperative boards to enhance financial literacy education and optimise service digitalisation as a strategy to sustain member loyalty.</p>	<p><b>Article History</b>  <i>Received :</i>  <i>July 21, 2025</i>  <i>Revised :</i>  <i>September 11, 2025</i>  <i>Accepted :</i>  <i>October 20, 2025</i></p> <p><b>Keywords:</b>  <i>Financial Literacy,</i>  <i>Financial Technology,</i>  <i>Member Loyalty,</i>  <i>Cooperative,</i>  <i>Digital Era.</i></p>

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### INTRODUCTION

In the digital and globalisation era, which continues to accelerate, the financial sector is undergoing an inevitable phase of transformation. Financial technology innovation, more commonly referred to as fintech, has created both opportunities and challenges for various institutions, including cooperatives. Digitalisation of finance has been proven to improve operational efficiency, expand service outreach, and promote governance transparency. However, this development also compels traditional institutions such as cooperatives to adapt in order to remain relevant amidst increasing competition from non-cooperative financial services, which are often more modern and flexible. In the Indonesian context, cooperatives—one of the main pillars of the people's economy—bear the responsibility not only to transform but also to maintain their members' loyalty in the midst of digitalisation.

One phenomenon that underscores the urgency of digital transformation in

cooperatives is the initiative of the Ministry of Cooperatives and SMEs in establishing the Koperasi Merah Putih model, a modern digitally based cooperative. Koperasi Merah Putih was designed to become a pioneer in the application of information technology that supports transparency, accountability, and service efficiency. The emergence of this concept demonstrates that cooperatives must adopt digital technology immediately in order to compete, both in terms of management and services to their members. More than a mere trend, digitalisation of cooperatives constitutes a strategic necessity to strengthen institutional structures, build members' trust, and ensure the sustainability of cooperatives in the digital economy era.

Within this framework, KKPRI Ikhlas Cilacap, one of the cooperatives growing in Cilacap Regency, offers an interesting case for study. With business units covering savings and loans, general trading, and online payment services (PPOB), the cooperative faces the challenge of balancing the tradition of togetherness rooted in mutual cooperation with the demands of technological modernisation. Members' loyalty becomes a crucial variable determining the cooperative's existence, especially when many fintech services offer more practical and personalised transaction conveniences. Therefore, cooperatives must ensure that their members possess an adequate level of financial literacy so that they can navigate these changes and continue to choose the cooperative as their primary financial service provider.

Financial literacy is a vital aspect that cannot be overlooked. Adequate understanding of financial management, investment, and financial risk enables cooperative members to make wiser decisions and to support the sustainability of the cooperative. Financial literacy is not merely an instrument for improving individual welfare but also a collective tool that can strengthen the long-term foundation of the cooperative. On the other hand, the adoption of fintech in cooperative services offers opportunities to enhance efficiency, improve accessibility, and encourage transparency. However, such adoption also carries the risk of reducing loyalty if members are more attracted to external fintech services perceived as faster and easier. The combination of strong financial literacy and appropriate technological adoption becomes a key determinant of the cooperative's success in maintaining members' loyalty.

Previous research has shown that financial literacy and the use of digital technology play a significant role in shaping individuals' financial behaviour. Kurniawan (2024) found that financial literacy has a positive influence on financial behaviour, while the use of fintech also significantly improves financial management efficiency. In line with these findings, Veronica, Marsono, and Bobby (2023) asserted that financial literacy encourages better financial decision-making, thereby enhancing the welfare of both individuals and communities. In a more specific context, Darmayanti (2023) demonstrated that financial literacy and financial technology simultaneously contribute to greater financial inclusion in rural communities, thereby expanding access to various financial products and services.

A study by Fauzi and Oktaroza (2022) revealed that technology utilisation and service quality significantly influence the loyalty of digital wallet users, a phenomenon that can be projected onto the dynamics of cooperatives. Similarly, research by Nurlaeli, Saeliani, and Setiawan (2025) analysed the implementation of the SILAKOP digital system in cooperatives. Their findings confirmed that digitalisation of services improves transparency, administrative efficiency, and member engagement, which ultimately enhances loyalty. Nevertheless, empirical studies on the relationship between financial literacy, fintech, and members' loyalty in the Indonesian cooperative context remain very limited.

KKPRI Ikhlas Cilacap provides concrete evidence of how digital transformation affects cooperative institutional dynamics. Asset development data over the past five years indicates a consistent growth trend. Total assets, initially valued at IDR 28.51 billion in 2020, increased to IDR 37.37 billion in 2024. This growth was accompanied by rising equity and increased business revenues. These facts suggest that digitalisation of transaction recording and real-

time financial reporting has contributed to improved transparency and internal management efficiency. However, the implementation of fintech in its broader sense—such as peer-to-peer lending services or digital wallets—has not yet been fully integrated into the cooperative's operations.

A comparison of assets before and after fintech adoption provides strong evidence of the positive impact of digitalisation. In 2012, the cooperative's total assets were recorded at IDR 5.76 billion, while in 2024 they reached IDR 37.37 billion. Equity also grew sharply from IDR 4.66 billion to IDR 26.15 billion during the same period. Business revenue increased from IDR 586.80 million in 2012 to IDR 3.56 billion in 2024, further strengthening the indication that digital innovation has played a crucial role in driving cooperative growth. Although business expenses also rose significantly, this can be interpreted as a consequence of business expansion and greater operational complexity.

This evidence underscores the necessity for cooperatives to integrate financial literacy and digital technology into their member management strategies. Members' loyalty is not only determined by direct economic benefits but also by trust in transparency, ease of access, and quality of services. For KKPRI Ikhlas Cilacap, factors such as the distribution of surplus (Sisa Hasil Usaha or SHU), member welfare programmes, and the role of management are significant dimensions that can influence loyalty. By combining strong financial literacy with well-directed fintech adoption, cooperatives can build sustainable competitiveness without losing their identity as family-based institutions.

This research seeks to address the gap in the literature by focusing on the influence of financial literacy and financial technology on cooperative members' loyalty, specifically in the case of KKPRI Ikhlas Cilacap. Through a quantitative approach, the study will evaluate the extent to which these two factors affect members' decisions to remain loyal to the cooperative. The findings are expected not only to contribute theoretically to the development of knowledge but also to provide practical recommendations for cooperative boards in designing policies that are more adaptive to the era of financial digitalisation.

Furthermore, the research is expected to offer policy benefits for regulators and other stakeholders in developing strategies for strengthening cooperatives in Indonesia. By enhancing members' financial literacy while gradually integrating fintech, cooperatives can become more resilient in facing competition from modern financial institutions. Beyond this, the findings are anticipated to inspire other cooperatives across regions to undergo transformation, thereby ensuring that the role of cooperatives as a pillar of the people's economy remains increasingly relevant in a digital era filled with both challenges and opportunities.

## **Theoretical Review**

Members' loyalty is one of the fundamental elements in ensuring the sustainability and success of cooperatives. Loyalty is not only understood as an emotional attachment, but also as a form of commitment by members to continue using cooperative services and to actively participate in organisational activities. According to Oliver (1999), loyalty results from consistent satisfaction, trust, and repeated positive experiences, which in the cooperative context are reflected through active participation, the use of cooperative products, and members' willingness to remain even when alternative options exist outside the cooperative. In the digital era, members' loyalty is increasingly influenced by factors such as digital experience, service transparency, and trust in technology-based financial systems (Winarto, 2020; Rasuma Putri & Rahyuda, 2017).

The main theoretical foundation for this research is the Theory of Planned Behaviour (TPB) developed by Ajzen (1991). TPB explains that an individual's behaviour is influenced by attitudes towards behaviour, subjective norms, and perceived behavioural control. In the cooperative context, financial literacy and the adoption of financial technology can influence members' attitudes and intentions in maintaining their loyalty. Members with higher levels of

financial literacy will possess better abilities in making planned financial decisions, thereby strengthening their commitment to the cooperative. Furthermore, the use of fintech that is perceived as useful and accessible can also reinforce members' intentions to remain loyal to the cooperative, given the improvement in efficiency, transparency, and service convenience.

Financial literacy itself is understood not only as knowledge, but also as skills, motivation, and confidence in managing finances (Otoritas Jasa Keuangan, 2017). Research has shown that financial literacy plays an important role in reducing impulsive decision-making and in improving individuals' ability to manage savings, investments, insurance, and credit (Latifiana, 2016; Mahwan & Herawati, 2021). A high level of financial literacy makes cooperative members more financially capable, enabling them to understand risks, take advantage of investment opportunities, and make more rational financial decisions. In relation to loyalty, financial literacy strengthens members' connections with the cooperative because they feel more confident in using the products and services offered.

Studies on technology acceptance often use the Technology Acceptance Model (TAM) developed by Davis (1989). TAM explains that individuals' acceptance of technology is determined by perceived usefulness and perceived ease of use. Fintech, as an integration of technology with financial services, can be well accepted if cooperative members perceive it to be beneficial and easy to use (Arner et al., 2016; Junianto & Kohardinata, 2021). More recent studies have even added dimensions of trust, risk, and user experience as important variables influencing fintech adoption (Masri et al., 2023). Trust in data security and service transparency has become a key factor in determining members' loyalty, since risks of data breaches and fraud may undermine their confidence to continue using digitally based cooperative services.

In the cooperative context, fintech has substantial potential to increase financial inclusion, service efficiency, and financial reporting transparency. Services such as digital payments, peer-to-peer lending, and crowdfunding not only facilitate transactions but also broaden members' access to various financial products (Firmansyah et al., 2023; La Rocca, 2024). Nevertheless, in this study fintech is understood in a more limited sense, namely as the digitalisation of internal cooperative processes in the form of computerised transaction recording and real-time financial reporting. Such digitalisation enables cooperatives to improve accountability and strengthen members' trust, which ultimately has a positive effect on loyalty.

The importance of financial literacy has also been reinforced through OJK Regulation No. 76/POJK.07/2016, which emphasises its aims to improve decision-making quality, transform financial behaviour, and enable society to make better choices of financial products and services. Thus, financial literacy serves as a fundamental basis for cooperative members to more easily accept digital innovation. Financially literate members will be better prepared to face risks, understand the benefits of technology, and make optimal use of cooperative services.

As stated in Law No. 25 of 1992, members' loyalty to cooperatives is also strongly influenced by ongoing cooperative education. Such education plays a role in enhancing members' involvement and strengthening their sense of belonging to the cooperative. With sound financial literacy and easy access to financial technology, members are more likely to feel satisfied and committed to remaining with the cooperative. This aligns with the findings of Blut et al. (2023), who emphasised that loyalty is not only determined by rational benefits but also by emotional attachment built through positive experiences and long-term trust.

Therefore, the interconnection between financial literacy, fintech, and members' loyalty can be understood through complementary theoretical frameworks. TPB explains the process of planned decision-making, TAM provides an understanding of technology acceptance, while Oliver's (1999) customer loyalty theory highlights the importance of experience and satisfaction in building long-term commitment. When applied in the cooperative context, these three frameworks indicate that sound financial literacy and

appropriate utilisation of fintech will strengthen members' loyalty, enabling cooperatives to survive and develop in the digital era.

## **METHOD**

The research method employed in this study is a quantitative approach with a survey method. The quantitative approach was chosen because it aligns with the objective of the study, namely to measure objectively the effect of financial literacy and financial technology on members' loyalty to cooperatives. This is important in order to provide a comprehensive picture of the phenomenon occurring among cooperative members, particularly concerning loyalty influenced by levels of financial literacy and the use of financial technology.

The population in this research consists of all members of the Consumer Cooperative of Republic of Indonesia Employees (KKPRI) Ikhlas Cilacap who actively use the cooperative's financial services, totalling 600 people. From this population, the sample was determined using purposive sampling, with criteria including members who had used the cooperative's digital services for at least one year, had conducted active transactions within the past year, and possessed basic understanding of financial technology. The sample size was determined using the Slovin formula with a margin of error of 5 per cent. Based on the calculation, the required sample size was 300 respondents. This number was considered adequate to provide high validity and reliability while also representing nearly half of the total cooperative membership.

Data collection was carried out from two types of sources, namely primary and secondary. Primary data were obtained directly from respondents through a four-point Likert scale questionnaire, designed to avoid neutral responses and encourage respondents to provide clearer assessments of each statement. Secondary data were collected from official cooperative documents such as financial reports, members' transaction records, and literature related to financial technology. Prior to distribution, the questionnaire was tested for validity using factor analysis to ensure the instrument could measure the intended variables, and for reliability using Cronbach's Alpha to confirm consistency of responses.

For data analysis, the study applied a series of statistical tests. Classical assumption tests were conducted to ensure regression requirements were met, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. Hypothesis testing was then performed using the F-test to examine the simultaneous effect of financial literacy and financial technology on members' loyalty, and the t-test to assess the partial effect of each variable. Multiple linear regression analysis was applied to determine the quantitative relationship between the independent and dependent variables, with the model:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + e$$

where Y represents members' loyalty, X1 is financial literacy, and X2 is financial technology. Furthermore, the coefficient of determination ( $R^2$ ) was used to measure the extent to which the independent variables contribute to variations in cooperative members' loyalty.

Through this research design, the study is expected to provide empirical insights into how financial literacy and the adoption of financial technology contribute to members' loyalty. The findings are anticipated not only to enrich academic literature but also to offer practical recommendations for the management of KKPRI Ikhlas Cilacap in formulating strategies to strengthen member engagement through enhanced financial literacy and sustainable use of digital cooperative services.

### **Research Questions:**

1. Is there an effect of financial literacy on the loyalty of KKPRI Ikhlas Cilacap members?
2. Is there an effect of financial technology on the loyalty of KKPRI Ikhlas Cilacap members?
3. Is there a simultaneous effect of financial literacy and financial technology on the loyalty of KKPRI Ikhlas Cilacap members?

### **Identification**

This study focuses on the issue of low cooperative members' loyalty, which is often influenced by the level of financial literacy and the adoption of financial technology. In the

digital era, cooperatives are required not only to provide traditional savings and loan services but also to integrate financial technology in order to remain relevant to the needs of their members. KKPRI Ikhlas Cilacap, as the object of this research, has implemented digital-based services such as PPOB and online financial systems; however, not all members have been able to utilise these optimally. This condition creates a gap between the potential of technology and the actual level of member engagement. Therefore, it is important to identify the extent to which members' financial literacy plays a role in encouraging the use of financial technology, and how both factors together influence members' loyalty to the cooperative. This research seeks to address that need through a quantitative approach, thus providing a more accurate empirical picture of the determining factors of members' loyalty within the context of a modern cooperative.

### **Screening**

This research was conducted to ensure that the respondents involved truly met the predetermined criteria, so that the data obtained could reflect the real conditions in the field. The selection process required respondents to be active members of KKPRI Ikhlas Cilacap who had used the cooperative's digital financial services for at least one year, had carried out transactions regularly during the past year, and possessed a basic understanding of financial technology. This screening process was important to ensure that the respondents selected had direct experience of the cooperative's services and were therefore able to provide relevant and credible responses. In this way, the findings are expected to accurately capture the influence of financial literacy and financial technology on members' loyalty, while being academically and practically accountable.

### **Eligibility**

To ensure that the respondents involved fully met the criteria relevant to the research objectives, eligibility was carefully defined in this study. Respondents considered eligible were active members of KKPRI Ikhlas Cilacap who had been part of the cooperative for at least one year, had used the cooperative's digital financial services, and had an active transaction record within the past year. In addition, respondents were required to have a basic understanding of the concept of financial technology, enabling them to assess its influence on members' loyalty more objectively. The establishment of these criteria aimed to ensure that the data obtained genuinely reflected members' actual experiences in utilising cooperative services, so that the results of the study could be analysed validly, reliably, and provide a representative picture of the target population.

### **Review**

A review of the literature shows that cooperative members' loyalty is the result of a complex interaction between satisfaction, trust, financial literacy, and the acceptance of financial technology. Loyalty Theory (Oliver, 1999) emphasises the importance of consistent positive experiences in building members' commitment, while the Theory of Planned Behaviour (Ajzen, 1991) provides a framework for understanding how attitudes, subjective norms, and perceived behavioural control influence members' intention to remain loyal. In the digital context, the Technology Acceptance Model (Davis, 1989) highlights perceived usefulness and perceived ease of use as the main determinants of fintech adoption, further reinforced by dimensions of trust and risk perception as found in recent studies (Masri et al., 2023). Financial literacy has been proven to enhance members' ability to make rational decisions and to reduce impulsive behaviour (Latifiana, 2016; Mahwan & Herawati, 2021), while OJK regulations and cooperative education provide a normative basis that strengthens members' readiness to embrace digital innovation. Although fintech in cooperatives is often understood broadly, in this study it is focused on internal digitalisation, which serves to improve transparency, accountability, and efficiency, thereby fostering members' trust and emotional attachment to the cooperative (Firmansyah et al., 2023; La Rocca, 2024). Thus, previous research consistently demonstrates that a combination of strong financial literacy and appropriate utilisation of fintech can reinforce cooperative members' loyalty in the digital era.

## RESULT AND DISCUSSION

The results of this study are presented to provide a comprehensive account of the empirical findings concerning the influence of financial literacy and financial technology on members' loyalty within the Employees' Cooperative of the Republic of Indonesia (KKPRI) Ikhlas Cilacap. This section begins with a general description of the research object, followed by the presentation of respondent data, classical assumption testing, validity and reliability of the instruments, multiple linear regression analysis, simultaneous testing, partial testing, and the coefficient of determination. All results are presented in a comprehensive narrative, supported by quantitative data displayed in tables to clarify the findings.

KKPRI Ikhlas Cilacap, the subject of this study, was established on 22 August 1974 with the aim of improving its members' economic and social welfare through savings and loan services, productive business programmes, and various additional welfare schemes. Over time, the cooperative has not only focused on conventional activities but has also begun to adopt financial technology to enhance transparency, accountability, and efficiency in financial management. This makes KKPRI Ikhlas Cilacap an organisation that is both adaptive to developments and relevant to the challenges of the digital era.

This study involved 300 respondents, all of whom were active members of KKPRI Ikhlas Cilacap. The sample size was determined using Slovin's formula with a margin of error of 5 per cent, resulting in a representative sample from a population of 600 cooperative members. Data were collected through questionnaires using a four-point Likert scale designed to avoid neutral responses. In addition to primary data from respondents, secondary data such as the cooperative's financial reports, transaction records, and official documents were also utilised.

Respondent characteristics formed the initial step in contextualising the study, as socio-demographic backgrounds may influence members' perspectives on financial literacy, fintech adoption, and loyalty to the cooperative. In terms of gender, 142 respondents (47.3 per cent) were male, while 158 (52.7 per cent) were female. This composition shows that women's participation in the cooperative is slightly higher, though the difference compared with men is not significant, reflecting the cooperative's inclusive nature. Regarding membership duration, all respondents had been members for more than one year, indicating that they possessed sufficient experience to understand the dynamics of the cooperative. This confirms that the respondents were a relevant group for evaluating the study variables, as they had long interacted with the cooperative's system and services.

From the income perspective, the majority—206 respondents (68.7 per cent)—earned between IDR 3,000,000 and IDR 4,999,999. A further 77 respondents (25.7 per cent) earned more than IDR 5,000,000, while 17 (5.6 per cent) were in the range of IDR 1,000,000 to IDR 2,999,999. This indicates that most members came from middle-income groups with adequate financial capacity to utilise the cooperative's savings, loans, and financial products. Such relatively stable income levels also supported members' ability to evaluate the benefits of fintech adoption in the cooperative.

Experience in cooperative education or training also served as an important indicator. A total of 176 respondents (58.7 per cent) had attended cooperative training, while 124 (41.3 per cent) had not. This shows that more than half had received formal cooperative education, though a significant portion remained untrained, potentially affecting variations in members' understanding of financial literacy and fintech. In terms of age, the study was dominated by respondents aged 41–50 (159 respondents, 53 per cent) and 51–60 (135 respondents, 45 per cent). Meanwhile, those aged 18–30 and 31–40 each comprised only three respondents (1 per cent). This composition illustrates that the majority of cooperative members belonged to the middle-to-upper productive age group with greater financial stability, whereas younger members' participation was relatively low. This highlights the need for digitalisation strategies that are more adaptive in engaging younger members, who are generally more technologically adept.

Prior to regression analysis, classical assumptions were tested to ensure model feasibility. The normality test of residuals using the Kolmogorov-Smirnov method yielded a significance value of 0.200, greater than 0.05, indicating normally distributed residuals. This result was reinforced by the P-P Plot, where most points lay around the diagonal line, further confirming residual normality. The multicollinearity test revealed a Tolerance value of 0.639 and a VIF value of 1.566, both within acceptable limits, indicating no multicollinearity. Therefore, the independent variables—financial literacy (X1) and financial technology (X2)—could be further analysed without excessive linear influence between them.

The heteroscedasticity test using Glejser’s method showed significance values of 1.000 for both independent variables, well above 0.05, confirming no heteroscedasticity. This suggested that the regression model was homoscedastic, with constant residual variance. The Durbin-Watson test yielded a value of 1.476, within the acceptable range, indicating no problematic autocorrelation.

Instrument validity testing was carried out to ensure that questionnaire items adequately measured the intended constructs. Results showed that all items for financial literacy (X1), financial technology (X2), and members’ loyalty (Y) had correlation values greater than the r-table (1.648) and were statistically significant. Thus, all items were deemed valid. Reliability testing using Cronbach’s Alpha revealed high and acceptable reliability: financial literacy (X1) scored 0.911, financial technology (X2) 0.955, and members’ loyalty (Y) 0.936. Although these values exceeded the 0.60 minimum threshold, some indicators revealed internal consistency weaknesses, which future research should address.

The multiple linear regression analysis indicated that financial literacy (X1) had a positive coefficient of 0.239, while financial technology (X2) had a positive coefficient of 0.658 in relation to members’ loyalty (Y). This means that, holding other variables constant, each one-unit increase in financial literacy increased loyalty by 0.239, and each one-unit increase in financial technology increased loyalty by 0.658. However, despite these positive relationships, partial tests produced a significance value of 1.000, greater than 0.05, showing that neither financial literacy nor financial technology had a significant partial effect on members’ loyalty.

In contrast, the simultaneous F-test showed an F value of 343.864 with a significance of 0.000, confirming that financial literacy and financial technology together had a significant effect on loyalty. In other words, their combined effect was stronger than their individual effects. This aligns with the Theory of Planned Behaviour, which posits that behaviour and intentions are influenced by combinations of factors rather than single variables.

Table 1. Summary of Multiple Linear Regression Analysis

Variable	Coefficient (B)	Std. Error	Beta	t-value	Sig.
Constant	3.864	1.479	-	2.613	0.009
Financial Literacy (X1)	0.239	0.043	0.221	5.553	1.000
Financial Technology (X2)	0.658	0.038	0.684	17.142	1.000

Source: Primary data processed with SPSS (2025).

The R value of 0.836 indicates a strong correlation between financial literacy and financial technology with members’ loyalty. The R Square value of 0.698 shows that the independent variables explained 69.8 per cent of the variation in loyalty, while the remaining 30.2 per cent was influenced by other variables outside the model. These findings emphasise the complementary roles of financial literacy and fintech in shaping loyalty. They also suggest that while stronger financial literacy combined with more integrated fintech adoption enhances loyalty, the partial effects of each variable alone were insufficient to be statistically significant—likely due to uneven member understanding of fintech, varying levels of digital service use, or instrument reliability weaknesses.

These findings provide practical implications: cooperatives must adopt a comprehensive approach to strengthening loyalty. Financial literacy programmes should be integrated with effective digitalisation strategies, including mass training and fintech socialisation, to ensure

members both understand and feel comfortable using digital services. This must be supported by data security, transparency, and accountability in financial management to maintain members' trust. Furthermore, other factors not included in the model—such as service quality, satisfaction, member engagement, and socio-cultural dynamics—should be considered in future studies for a more holistic understanding.

The results reaffirm that cooperative loyalty is not built by financial literacy or fintech adoption in isolation, but by their synergy. Financial literacy provides the knowledge and skills foundation, while fintech offers practical tools that enhance convenience and efficiency. Together, they create positive member experiences that ultimately strengthen loyalty.

## DISCUSSION

The study revealed that financial literacy and financial technology had a significant simultaneous effect on members' loyalty in KKPRI Ikhlas Cilacap, although individually neither variable showed a significant partial effect. This finding suggests that loyalty cannot be explained by a single factor but is instead the outcome of complex interactions among financial knowledge, management skills, trust in systems, and experiences with digital services provided by the cooperative. Accordingly, loyalty should be understood as a multidimensional phenomenon shaped by rational, emotional, and instrumental aspects simultaneously.

Regression coefficients indicated positive relationships for both financial literacy and fintech. Higher literacy tends to foster loyalty, as financially literate members are better able to appreciate cooperative products, assess risks, and make rational financial decisions. Similarly, fintech's positive coefficient implies that ease, speed, and transparency in digital services encourage members to remain. However, non-significant partial tests suggest that these factors are not strong enough on their own, resonating with the Theory of Planned Behaviour, which asserts that behaviour results from a combination of attitudes, norms, and perceived control rather than single determinants.

From the financial literacy perspective, the findings align with Latifiana (2016) and Mahwan & Herawati (2021), who showed that literacy affects individuals' abilities to manage savings, investments, and credit. Yet, within a cooperative, literacy alone is insufficient without systems enabling members to apply their knowledge in daily financial activities. This explains why financial literacy in KKPRI Ikhlas Cilacap did not significantly influence loyalty on its own. Knowledge must be reinforced by digital services to translate into loyal behaviour.

The insignificant partial effect of fintech is also noteworthy. According to the Technology Acceptance Model (Davis, 1989), perceived usefulness and ease of use drive adoption. Yet, in this study, fintech did not significantly influence loyalty on its own, likely because KKPRI's fintech is limited to digital transaction recording and reporting, not broader services such as mobile payments or peer-to-peer lending. While digitalisation increased transparency, members' digital experiences may not yet be sufficient to view fintech as a key determinant of loyalty.

The significant combined effect suggests that literacy empowers members to appreciate the benefits of technology, while technology enables practical application of financial knowledge, thereby creating more satisfying experiences and stronger loyalty. This supports findings by Firmansyah et al. (2023) and La Rocca (2024), which emphasised the integration of financial knowledge and technological access in enhancing inclusion and participation.

Demographics also provide context: most respondents were aged 41–60, financially stable but less digitally engaged than younger cohorts. This helps explain why fintech had no significant partial effect, as older members may feel less comfortable using digital services. However, combining their financial literacy with fintech convenience enhanced loyalty. Similarly, only 58.7 per cent had attended cooperative training, which may explain why literacy alone lacked significance—knowledge was unevenly distributed.

The R Square value of 69.8 per cent confirms that financial literacy and fintech explain most of the variation in loyalty, though other factors—service quality, satisfaction,

organisational culture, social ties, and external conditions—remain influential. Previous research (Blut et al., 2023) underscored that loyalty also rests on emotional attachment, reinforcing that rational and social-emotional factors must both be considered.

Comparisons with loyalty theory (Oliver, 1999) support this, highlighting consistent positive experiences as the foundation of loyalty. Within a cooperative, financial literacy enhances product understanding while fintech ensures convenience. Together, they foster satisfying experiences that encourage loyalty despite alternative financial institutions.

Practically, KKPRI should strengthen literacy through regular training, digital modules, and financial mentoring, while simultaneously improving fintech systems to be more user-friendly, secure, and efficient. Developing a mobile application for transactions, savings monitoring, and real-time reporting would enhance digital experiences and amplify the benefits of literacy, fostering stronger loyalty.

Theoretically, this study contributes to understanding cooperative behaviour in the digital era by integrating the Theory of Planned Behaviour and the Technology Acceptance Model. Financial literacy relates to attitudes and perceived control, while fintech relates to perceived usefulness and ease of use. Loyalty arises from their interaction, validated here by significant simultaneous effects.

From a policy perspective, the findings align with OJK Regulation No. 76/POJK.07/2016, which stresses the role of financial literacy in decision-making, and Law No. 25 of 1992, which emphasises cooperative education. Integrating literacy and digitalisation directly supports these frameworks. The results also resonate with international studies (e.g., Arner et al., 2016), which showed fintech's potential in expanding financial access, though this study highlights that literacy is essential for fintech to deliver real impact in Indonesia. Despite limitations—such as instrument reliability weaknesses, an age-skewed respondent profile, and fintech restricted to internal digitalisation—the study underscores that loyalty stems from the synergy of literacy and fintech, not either factor alone.

## CONCLUSION

This study concludes that financial literacy and the use of financial technology play significant roles in strengthening cooperative members' loyalty, particularly within KKPRI Ikhlas Cilacap. Financial literacy functions not only as foundational knowledge of financial management but also as a set of skills, attitudes, and confidence that support rational and planned decision-making. At the same time, fintech integration through digitalised recording and reporting systems provides convenience, transparency, and efficiency that increase trust and comfort in using cooperative services. The findings show that the combination of adequate financial literacy and appropriate fintech application positively contributes to members' attitudes, intentions, and behaviours in remaining loyal, participating actively, and supporting cooperative sustainability. These results align with the Theory of Planned Behaviour, the Technology Acceptance Model, and Customer Loyalty Theory, which collectively explain that member decisions are influenced by attitudes, norms, perceived control, and positive service experiences. Accordingly, this study highlights the importance of cooperative strategies that strengthen financial literacy education and optimise service digitalisation to adapt to the digital era while sustaining members' loyalty as the foundation of organisational success and continuity.

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