

CRIMINAL LAW CHALLENGES FOR DIGITAL COOPERATIVES IN CIREBON: UPHOLDING DIGNIFIED JUSTICES IN THE DIGITAL AGE

TANTANGAN HUKUM PIDANA KOPERASI DI CIREBON: MENJAGA KEADILAN YANG BERMARTABAT DI ERA DIGITAL

Didi Sukardi^{1a}, Fatin Hamamah^{2b*}

¹*Legal Studies, Cyber State Islamic University Sheikh Nurjati Cirebon, Indonesia*

²*Legal Studies, University of 17 August 1945 Cirebon, Indonesia*

^aE-mail: didisukardimubarrak@uinssc.ac.id

^bE-mail: fatin.hmh077@gmail.com

ABSTRACT

This research aims to identify the criminal law challenges faced by cooperatives in Cirebon in maintaining dignified justice and to provide legal protection recommendations for cooperative members in the digital era. It examines how digital technology impacts the justice principles within cooperatives and highlights the gap between cooperative theory and criminal law practices, which often struggle to address the complexities of violations in digital cooperatives. The study offers novel insights by integrating criminal law analysis with digital cooperative management, focusing on technology misuse threats. Using a qualitative approach, this research employs literature review, normative juridical analysis, and case studies to explore criminal law applications in digital cooperatives. Findings reveal that digital-era cooperatives face significant risks, including data breaches, fraud, and technology misuse by administrators or members. The study underscores the urgency of regulatory updates and stricter criminal law enforcement to safeguard cooperative members' rights and uphold justice.

Keywords: cooperatives; criminal law; digital era; dignified justices; technology misuse

ABSTRAK

Tujuan penelitian ini adalah untuk mengidentifikasi tantangan hukum pidana yang dihadapi koperasi dalam menjaga prinsip keadilan, serta untuk memberikan rekomendasi terkait perlindungan hukum bagi anggota koperasi di wilayah Cirebon, Jawa Barat. Permasalahan yang diangkat dalam penelitian ini adalah bagaimana koperasi dihadapkan pada tantangan hukum pidana dalam menjaga nilai keadilan yang bermartabat, terutama dalam konteks perkembangan teknologi digital yang semakin pesat. Kesenjangan antara teori koperasi yang berlandaskan prinsip keadilan dan praktik hukum pidana yang sering kali belum mampu mengatasi kompleksitas pelanggaran dalam koperasi digital menjadi fokus utama. Kebaruan penelitian ini terletak pada kajian integrasi koperasi dengan hukum pidana di era digital, yang

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mencakup analisis terhadap ancaman penyalahgunaan teknologi dalam pengelolaan koperasi. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi literatur dan analisis yuridis normatif terhadap undang-undang terkait koperasi dan hukum pidana, serta penelitian kasus untuk menggali contoh penerapan hukum pidana dalam koperasi digital. Hasil penelitian menunjukkan bahwa koperasi di era digital menghadapi risiko tinggi terkait kebocoran data, penipuan, dan penyalahgunaan teknologi oleh oknum pengurus atau anggota. Implikasi penelitian ini adalah pentingnya pembaruan regulasi yang lebih sesuai dengan dinamika koperasi digital dan penegakan hukum pidana yang lebih tegas untuk menjaga keadilan dan martabat anggota koperasi.

Kata kunci: era digital; hukum pidana; keadilan bermartabat; koperasi; penyalahgunaan teknologi

INTRODUCTION

Along with the rapid advancement of technology and digitalization, cooperatives in Indonesia are facing new challenges in performing their social and economic functions. The digital era opens up wider opportunities for cooperatives to grow, but it also brings new issues, especially in terms of data security, transparency, and potential misuse of technology. Cooperatives, which previously relied more on face- to-face interactions, must now face a new world that requires stricter regulation and supervision to maintain its sustainability (Tirta & Santosa, 2021; Widyastuti, 2020).

This trend also relates to cooperatives' efforts to utilize digital platforms to improve operational efficiency, expand member access, and introduce cooperative products and services to a wider market.

Nonetheless, these developments are not without risks, especially in terms of criminal law violations relating to data theft, fraud, and misuse of technology by irresponsible individuals.

A cooperative, according to the International Cooperative Alliance, is an

economic entity that is owned and run by its members democratically, with the main objective of improving the social and economic welfare of its members. The cooperative principles underlying its management include fairness, transparency, active participation of members, and accountable and responsible management.

Theoretically, cooperatives should be a fair instrument of economic and social distribution, ensuring that each member benefits equally based on their participation.

However, in practice, the success of cooperatives is often hampered by internal and external problems, including abuse of power by cooperative administrators, fraud, and data manipulation. In this context, John Rawls' theory of distributive justice becomes relevant, where he argues that the principle of justice should ensure a fair distribution of resources and benefits to all members of society, without exception.

However, the application of this theory in the context of cooperatives faces obstacles because often cooperatives do not have adequate supervision, both in financial and

operational aspects. With the increasing complexity of economic relations in cooperatives, a more assertive criminal law approach is also needed to tackle potential irregularities that can harm cooperative members and the community.

In Indonesia, cooperatives are governed by Law of the Republic of Indonesia No. 25 of 1992 on Cooperatives, which regulates the basic principles of cooperatives and their role in improving the welfare of members. In addition, Law No. 17/2012 on Cooperatives also introduced several changes and updates related to cooperative management, including provisions related to transparency and accountability in cooperatives.

However, despite the existence of regulations governing the existence of cooperatives, the biggest challenge lies in the enforcement of criminal laws against various violations that occur in cooperatives, such as fraud, embezzlement of funds, or even falsification of documents that can harm members. This calls for updated regulations that are more specifically related to digital technology and riskier practices in digital cooperatives.

In the realm of criminal law, cooperatives must also face regulations relating to Personal Data Protection stipulated in Law No. 27 of 2022 on Personal Data Protection, which is increasingly relevant given that many cooperatives now manage member data and transactions through digital platforms.

From a theological perspective, cooperatives can be seen as a platform that should prioritize the principles of social justice and solidarity among people. Islam, for example, teaches the

concepts of *musyarakah* and *muamalah*, which emphasize mutually beneficial cooperation and transparency in transactions. This is in line with the cooperative principles that prioritize economic democracy, justice, and member welfare.

This theology plays an important role in forming a moral and ethical foundation for cooperative managers, who are not only concerned with material gain, but also social justice and shared prosperity.

Therefore, in managing cooperatives, moral and ethical principles derived from religious teachings should be integral in ensuring that cooperatives function properly and are not abused.

Academic debates on cooperatives and criminal law generally revolve around two main issues. First, are existing laws sufficient to protect cooperative members from abuses of power and harmful practices, such as fraud and embezzlement? Second, how can cooperatives utilize digital technology to increase efficiency and access, while maintaining fairness and transparency in their operations?

One argument that has emerged is the need to adapt cooperative regulations to the challenges of digital technology, by adjusting the laws governing cooperatives to be more in line with the times. On the other hand, some academics emphasize that the criminal law approach should focus more on empowering cooperative members through training and improving legal literacy, so that members can better understand their rights and protect themselves from potential abuse.

While there are studies on cooperatives and criminal law, there is a gap in research that specifically examines the challenges faced by cooperatives in the context of digitalization and criminal law protection in the digital era. Many studies focus more on the conventional operational aspects of cooperatives without considering the significant changes brought about by digital technology.

In addition, research that integrative combines social justice theory, criminal law, and digital cooperatives is limited. Therefore, this study aims to fill the gap by looking more deeply at how criminal law can be applied in digital cooperatives and how cooperatives can maintain dignified justice in facing the challenges of the digital era.

In Indonesia, cooperatives play a strategic role in empowering small and medium communities, but the phenomenon of fraud in cooperatives, including corruption, embezzlement of funds, and abuse of authority, remains prevalent. This underlines the urgent need for stronger legal supervision, especially in the digital era where information and data are highly vulnerable to misuse. Despite having around 150,000 registered cooperatives, as reported by the Ministry of Cooperatives and SMEs of the Republic of Indonesia, many cooperatives still face challenges in financial management and weak supervision, which opens the door to violations of criminal law.

This study focuses specifically on cooperatives in the Cirebon area, West Java, a region that, while part of the broader cooperative landscape in Indonesia, faces unique challenges due

to its economic structure, the development of small-medium enterprises (SMEs), and the specific regional implementation of cooperative practices. The Cirebon region is home to a growing number of cooperatives in consumption, savings and loans, and service sectors, yet these cooperatives face distinct issues related to transitioning to digital platforms, particularly in maintaining financial transparency and ensuring data security. This research is particularly relevant because Cirebon represents a mix of traditional cooperative models and emerging digital practices, offering an opportunity to explore how cooperatives in smaller or regional contexts face the pressures of digital transformation, legal compliance, and financial accountability in ways that may differ from larger urban centers.

By examining these specific challenges in Cirebon, this study seeks to contribute a localized perspective on the broader issues of cooperative governance, digitalization, and legal protection in Indonesia, highlighting regional nuances that may not be fully addressed in broader national analyses.

The emerging phenomenon is that several cooperatives in Cirebon are involved in legal issues, such as allegations of fraud in fund management, as well as the inability of cooperative members to access information transparently. This study aims to delve deeper into the criminal law challenges faced by cooperatives in the region.

The main root causes of the problems faced by cooperatives are lack of internal supervision, low legal literacy among cooperative members, and unclear regulations governing

digital cooperatives. In addition, the practice of misusing technology for personal purposes and not in accordance with fair cooperative principles is increasingly prevalent, which threatens the sustainability of cooperatives.

The solutions offered in this study are: (1) Regulatory updates that are more responsive to the needs of digital cooperatives, (2) Improved legal literacy among cooperative members to ensure they understand their rights and obligations. (3) Improved internal supervision of cooperatives, including training for administrators to manage cooperatives properly and transparently. (4) Collaboration with authorities for strict law enforcement against violations that occur in cooperatives.

The formulation of the problems that will be examined in this research are: What are the criminal law challenges faced by cooperatives in the digital era in maintaining justice and dignity of their members? How do cooperatives in Cirebon overcome criminal law challenges related to digitalization and maintain operational transparency?

Some previous studies relevant to this topic include: Smith (2020), which examines the challenges of cooperatives in facing the digital era and personal data protection. Wibowo & Santoso (2021), which examines the application of cooperative principles in digital cooperatives in Indonesia. Mulyani (2022), which discusses aspects of criminal law in the management of technology-based cooperatives. Furthermore, Rahman & Sutrisno (2021) analyze the impact of digital transformation on cooperative

governance and the adoption of digital tools in Indonesia. Similarly, Pratama (2023) explores the role of regulatory frameworks in ensuring the sustainability and security of digital cooperatives in the country.

This research uniquely combines theories of criminal law, social justice, and digital cooperatives, a synthesis that is rarely found in previous studies. The integration of criminal law theory helps to address the legal protections needed to prevent digital crimes within cooperatives, such as data misuse and financial fraud. Meanwhile, social justice theory provides a framework for understanding how cooperatives, as member-based organizations, should prioritize fairness, transparency, and equality in the management of digital tools and member data. By combining these theoretical perspectives, this study explores how the legal frameworks surrounding digital cooperatives can be designed to ensure both legal protection and equitable access to cooperative benefits. This integrated approach allows for a deeper exploration of the challenges unique to Indonesia's cooperatives, especially in regions like Cirebon, where digital transformations are still in progress but face specific regional challenges.

This research offers novelty by comprehensively examining the criminal law challenges faced by cooperatives in the digital era, especially in Indonesia, with a focus on the case of cooperatives in the developing city of Cirebon. This research combines theories of social justice, criminal law, and digital cooperatives, which are still rarely found in previous studies.

In addition, this research contributes to the development of region-specific policies that can be adopted to strengthen the legal frameworks for cooperatives, with a focus on preventing criminal activities in the digital space. These policy recommendations aim to create a safer and more accountable environment for cooperatives, particularly in smaller urban areas like Cirebon, where digital transformation is still in progress but requires specific regulatory attention.

METHOD

The object of this research is an analysis of the criminal law challenges faced by cooperatives in the digital era in maintaining the justice and dignity of their members, and the efforts of cooperatives in Cirebon to overcome criminal law challenges related to digitalization and maintain operational transparency.

This research uses a qualitative approach with a descriptive type of research that aims to systematically describe the legal phenomena that occur in cooperatives, especially cooperatives that adopt digital technology, as well as the challenges faced related to criminal

law in the context of cooperatives. The qualitative approach was chosen because this research aims to understand more deeply how cooperatives operate in the criminal law environment, as well as how cooperatives in Cirebon adapt to the development of digital technology.

Qualitative research methods allow researchers to explore phenomena that occur in social and legal contexts, by understanding the meanings constructed by individuals or groups involved in cooperatives. It also allows researchers to identify issues related to criminal law and regulations that apply in cooperatives.

This research was conducted in Cirebon, West Java, as an example of an area with growing digital-based cooperative development, but also faced with legal challenges related to the use of technology in cooperative operations, on 10 active cooperatives, here below on Table 1 the details:

Table 1. characteristics of research subjects

Characteristics	Description
Cooperative Type	Saving and loan cooperatives, producer cooperatives, consumer cooperatives, and service cooperatives in the Cirebon area.
Research Location	Cirebon region, West Java, Indonesia.
Number of Respondents	10 active and representative cooperatives in Cirebon.
Respondent Type	Cooperative management, cooperative members, and cooperative supervisors.
Age of Respondent	The age range is 25-55 years, consisting of cooperative members who are actively involved in the management of the cooperative.

Respondent Education	Respondents with various levels of education, ranging from elementary school to college.
Respondent Experience	Respondents who have been involved in the cooperative for more than 1 year and have an understanding of cooperative digitalization.
Respondent Occupation	Cooperative members with diverse employment backgrounds, such as traders, farmers, private employees, and entrepreneurs.
Role in Cooperatives	Members who are active in cooperative management, cooperative management (chairman, secretary, treasurer), and cooperative supervisors.
Data Source	In-depth interviews, observation, and documentation related to cooperative operations and the implementation of digitalization and transparency.
Digitization Experience	Cooperatives that have started to implement digital systems in managing their members' data and transactions.

The data collection techniques used in this research consist of in-depth interviews, participatory observation, and documentation studies. These three techniques will provide a holistic understanding of the criminal law challenges faced by cooperatives in the digital era as well as possible solutions.

(a) In-depth Interviews. In-depth interviews will be conducted with cooperative administrators, cooperative members, and competent parties in the legal world, such as advocates and legal practitioners with experience in cooperatives and criminal law. These interviews will focus on three main aspects: Understanding the challenges of criminal law in digital cooperatives, and views on transparency and accountability in cooperatives. To mitigate potential biases in the interviews, steps will be taken to ensure that the interviewees represent a diverse range of perspectives, such as those from cooperative administrators, members, and legal experts. This will help avoid over-representation of any single viewpoint. Additionally, to minimize interviewer bias, the

interviews will be semi-structured, with a set of predetermined questions that ensure consistency while allowing for flexibility to explore individual experiences and insights. The interviews will utilize a snowball sampling technique, which starts with identifying initial respondents with relevant information and then asking them to recommend others who can provide additional perspectives on the topic. The snowball technique will be closely monitored to ensure that the sample remains diverse and does not overly rely on a narrow circle of informants.

(b) Participatory Observation. Observations will be conducted by being directly involved in the operational activities of cooperatives in Cirebon to observe how digital technology is used and to see firsthand how cooperative management is carried out. To reduce observational bias, the researcher will adopt a reflective journal approach, documenting personal observations and reflecting on potential biases or preconceptions that might affect interpretation. In addition, the researcher will maintain a neutral role in

interactions, avoiding any influence on the behavior or decisions of cooperative members and administrators. The observations will focus on the following aspects: The process of managing member data and transactions digitally, transparency in the management of funds and information provided to members, and supervision of cooperative administrators and the use of technology to prevent misuse. (c) Documentation Study. The documentation study will include a review of various documents relevant to cooperatives in Cirebon, such as internal cooperative regulations, cooperative financial reports, member data management documents, and criminal law cases that occurred in the cooperative. To mitigate potential biases in interpreting these documents, the researcher will employ a systematic approach, cross-checking information from multiple sources and considering both internal and external documents related to the cooperatives. The researcher will also involve legal experts or third-party auditors where necessary to ensure objective interpretation of the legal documents and criminal cases.

Sampling technique

In this research, snowball sampling will be employed to identify and recruit participants for the in-depth interviews. Snowball sampling is a non-probability sampling technique where initial participants are selected based on their expertise or experience relevant to the research topic, and then they are asked to refer others who can provide further insights. This approach is particularly useful when studying populations that may be difficult to access or are not well-defined, such as cooperative members

and administrators in digital cooperatives.

To establish credibility, the first respondents (referred to as "seeds") will be carefully selected based on specific criteria: they must be individuals with direct involvement in the management of cooperatives or have substantial experience with legal issues related to cooperatives, particularly those dealing with digital platforms. These initial participants will include cooperative administrators, legal practitioners, and experts in digital cooperative management.

Once the first set of participants is identified, they will be asked to refer others who can contribute relevant perspectives to the study. These referrals will be selected with the same criteria in mind, ensuring that a variety of perspectives are captured. The snowball sampling process will be monitored to ensure diversity in the sample, preventing an over-reliance on any single group or viewpoint.

In addition, to further enhance the credibility of the findings, the research will strive for maximum variation in the selection of participants. This means recruiting participants from different types of cooperatives (e.g., consumption, savings and loans, services), with varied experience in digital technology and cooperative management. The goal is to ensure that the sample reflects a broad range of experiences and challenges, which will contribute to a more

In this study, the instruments used consisted of interview guides and observation sheets that had been prepared based on the research objectives and variables to be measured. The following table 2 explains the

research instruments and the indicators used:

Table 2. Indicators of the research instrument

Variables	Indicator	Source	Instrument
Criminal Law Challenges	1. Fraud cases in cooperatives	Case Study, Interviews with Cooperative Management and Members	Interview Guide, Observation
	2. Misuse of member data	Case Study, Interviews with Cooperative Management and Members	Interview Guide, Observation
	3. Lack of legal understanding among members	Interview, Observation	Interview Guide
Transparency and Accountability	1. Transparent financial management process	Financial Report, Interview with Management	Observation Sheet, Documentation Study
	2. Access to financial information by members	Financial Report, Member Interview	Observation Sheet, Interview

Triangulation technique

To enhance the reliability and validity of the findings, this study will employ data triangulation, which involves collecting data from multiple sources and using different data collection techniques. Triangulation will allow for a more comprehensive understanding of the criminal law challenges faced by cooperatives in the digital era and help cross-check the consistency of the data obtained. The following steps will be taken to ensure triangulation in this research:

Cross-Referencing Between Different Data Sources: Data obtained from in-depth interviews, participatory observations, and documentation studies will be compared and cross-checked for consistency. For example, the challenges and issues discussed during interviews with cooperative administrators and members will be

compared with observations of actual cooperative operations and financial document reviews. Any discrepancies or contradictions found between these sources will be carefully examined to understand their causes and implications, which will increase the credibility of the findings.

Combining Qualitative and Documentary Data: The qualitative data collected from interviews and participatory observations will be triangulated with documentary data, such as internal cooperative regulations, financial reports, and case studies of criminal law issues in cooperatives. By comparing these different forms of data, the study will be able to verify the practices and policies discussed in interviews and observations against the official documents and records maintained by the cooperatives. This will strengthen the reliability of the

findings, as it ensures that the data is consistent across different types of evidence.

Involving Multiple Perspectives: Triangulation will also be achieved by involving a variety of participants, such as cooperative administrators, members, and legal experts. By obtaining data from multiple stakeholders with different roles and perspectives, the research will ensure that the findings reflect a broader range of experiences and insights. This approach helps reduce potential bias that may arise from relying on a single viewpoint, improving the overall validity of the research.

Verification Through Expert Feedback: To further increase the validity and accuracy of the findings, feedback from legal experts, cooperative practitioners, and third-party auditors will be sought to verify the interpretations of data, especially in relation to criminal law issues and cooperative governance. This will ensure that the research findings align with established legal principles and cooperative practices, and help confirm the robustness of the conclusions drawn.

RESULTS AND DISCUSSION

Research Results

1. Criminal law challenges faced by cooperatives in the digital era in maintaining justice and dignity of their members

This research aims to identify the criminal law challenges faced by cooperatives in the digital era in the Cirebon area, focusing on how cooperatives manage justice and the dignity of their members in the context of evolving technology. To that end, this

study collected data through interviews, observations, and documentation studies, and then discussed the results with reference to theories of social justice, criminal law, as well as cooperative principles.

Cooperative administrators in the Cirebon area stated that the application of digital technology in cooperative operations provides many benefits, such as efficiency in managing member data and transactions. However, they also face various legal challenges associated with the application of these technologies, especially in terms of personal data protection and online transactions that are vulnerable to fraud and data theft.

According to cooperative administrators, one of the main challenges they face is the misuse of member data by irresponsible parties. "We use digital applications to make cooperative management easier, but we are often faced with the risk of data leakage that could be misused for criminal acts," said one cooperative board member. This leads to issues related to criminal law, especially in relation to the Personal Data Protection Act and data theft that can harm cooperative members.

Some cooperative administrators in Cirebon revealed that although there is internal supervision, the supervision of the use of technology in cooperatives is not strong enough. "We still find it difficult to monitor every transaction that is done digitally, especially when there are members who take advantage of this convenience to take actions that are not in accordance with the principles of the cooperative," said another cooperative board member. This leads to a lack of transparency and

accountability that can lead to abuse of authority by the management.

Cooperative members in the Cirebon area revealed that they are concerned about the protection of their personal data in digital transactions conducted by cooperatives. "We don't know if our data is really safe, because there is not enough explanation about the security system used by the cooperative," said a cooperative member.

Many cooperative members admitted that they do not fully understand their rights in the cooperative, especially in relation to digital transactions involving their personal data. "As members, we depend more on the board to manage the cooperative, but we don't know what happens to our data after it is entered in the digital system," explained one member who also noted the absence of legal education for members on their rights, especially in terms of data protection and financial transparency.

In our observations, we found that most cooperatives in Cirebon have adopted digital systems in their operations. The use of applications to record transactions and manage member data is quite developed, although not all cooperatives have a fully integrated system. Non-standardized data management systems and limited supervision in some cooperatives make transactions vulnerable to misuse.

Data and financial management of cooperatives in Cirebon mostly use applications that provide real-time access to transactions. However, most cooperatives have not utilized an adequate security system to protect their members' personal data. This is a

big problem, especially in the context of the digital era that is prone to cybercrime. Some larger cooperatives have implemented data encryption and access control, but many smaller cooperatives have yet to realize the importance of data protection.

In observing the financial reports of cooperatives, it was found that although some cooperatives in Cirebon present fairly transparent reports to their members, many of them do not have a clear and integrated system for reporting every transaction to members on a regular basis. This adds to the gap in accountability and fairness among cooperative members.

The documents examined in the documentation study include: (a) Internal cooperative regulations that include policies on the use of technology and protection of member data. (b) The cooperative's financial statements that show how the cooperative manages digital transactions. (c) Criminal laws related to cooperatives in Cirebon involving data misuse and fraudulent acts.

From the documents studied, researchers found that most cooperatives in Cirebon do not have clear enough regulations regarding member data protection and digital transaction security. This shows a gap between the cooperatives' internal regulations and the rapid development of technology. Some cooperatives do have policies in place to protect data, but these policies are often not operationally translated into daily activities.

Discussion

The criminal law challenges facing cooperatives in the digital era

includes several key aspects. *First*, the misuse of members' personal data. This is in line with the findings of Teguh et al. (2021) which suggest that many cooperatives still do not understand the importance of protecting members' personal data in digital transactions. Cybercrimes such as personal data theft and fraudulent transactions are real threats that must be faced by cooperatives that have switched to a digital system.

Second, the lack of supervision of digital transactions. This phenomenon is also consistent with the study conducted by Wibowo and Santoso (2021), which states that digital cooperatives need a stricter supervision system, especially in monitoring every transaction made through digital platforms.

Cooperative administrators need to have a better understanding of criminal law regulations related to digital transactions to reduce the risk of abuse.

This study found that some of the solutions that can be applied to address criminal law issues in digital cooperatives in Cirebon include: (a) Increased legal literacy for members of cooperatives on personal data protection and their rights. (b) Internal supervision of cooperatives, including the implementation of stricter audit and control systems for digital transactions. (c) Cooperation with authorities in terms of law enforcement against data misuse and illegal transactions. This is in line with the recommendations of Mulyani (2022) who suggests that cooperatives work with the authorities to enhance legal protection for members and reduce the risk of criminal law.

In this context, the theory of distributive justice developed by Rawls (1971) can be used to understand the importance of the principle of justice in cooperatives. Distributive justice emphasizes that every individual has equal rights to protection and access to information, including in cooperatives. Therefore, cooperatives should maintain the dignity of their members by ensuring that their personal data is protected and that they get clear information about the management of the cooperative.

In addition, the criminal law theory proposed by Barda Nawawi Arief (2017) on the importance of legal protection against criminal acts in the digital world is also very relevant. Clear and firm regulations are needed to overcome criminal acts in digital cooperatives.

Based on the results of research conducted through interviews, observations, and documentation studies, it can be concluded that cooperatives in the Cirebon area face some significant criminal law challenges related to the application of digital technology. The main challenges include misuse of members' personal data and lack of supervision of digital transactions. Proposed solutions include improving legal literacy, strengthening internal supervision, and cooperation with authorities in law enforcement.

The novelty in this research lies in the comprehensive analysis of the challenges of criminal law in digital cooperatives in Cirebon, as well as the solutions that can be applied to maintain justice and dignity of its members. This research makes an important contribution in

understanding the dynamics of cooperatives in the digital era, especially in relation to legal protection and social justice.

The implications of these findings suggest that improving legal literacy, strengthening internal supervision, and fostering cooperation with authorities will not only enhance the protection of cooperative members but also contribute to the overall integrity and sustainability of digital cooperatives. By implementing these solutions, digital cooperatives can mitigate the risks associated with criminal activities, such as data misuse and illegal transactions, thereby fostering a safer and more trustworthy digital environment. Moreover, the integration of Rawls' distributive justice theory ensures that cooperatives uphold their responsibility to protect the rights of members, which is essential for maintaining public trust and ensuring long-term growth. In line with Barda Nawawi Arief's criminal law theory, the establishment of clear and firm regulations can help prevent legal uncertainties, thus creating a legal framework that is responsive to the unique challenges faced by digital cooperatives.

2. Efforts of Cooperatives in Cirebon to Overcome Criminal Law Challenges Related to Digitalization and Maintain Operational Transparency

This study aims to explore the efforts of cooperatives in the Cirebon area in overcoming criminal law challenges arising from digitalization and maintaining transparency in their operations. In the digital era, many cooperatives have begun to adopt

technology to improve their efficiency and competitiveness.

However, this development also brings great challenges, especially in terms of protecting members' personal data, secure digital transactions, and supervision of cooperative boards.

This study uses a qualitative approach with descriptive methods to describe how cooperatives in Cirebon face these challenges and maintain operational transparency. Data were collected through interviews with cooperative administrators and members, direct observation of cooperative operations, and documentation studies of cooperative regulations and financial reports.

This research was conducted with a qualitative approach using a descriptive method that aims to describe in depth how cooperatives overcome criminal law challenges and maintain operational transparency. The research data was collected through: (a) In-depth interviews with cooperative administrators, cooperative members, and legal practitioners focusing on the criminal law challenges faced by cooperatives in Cirebon related to digitalization. (b) Participatory observation of digital transaction management and member data protection in cooperatives in Cirebon. (c) Documentation study of internal cooperative regulations, financial reports, and legal cases that have occurred in cooperatives in Cirebon.

The cooperative managers interviewed revealed that digitization brings significant benefits to their cooperatives, such as ease of data and transaction management. However, they also face major challenges in maintaining the security of members'

data and transactions. Some cooperative boards revealed that cybercrime and data misuse are major issues to deal with.

One cooperative board member revealed, "We use digital apps for member transactions and data management. However, we have encountered many cases of data theft and digital fraud. This is very troubling to us." Misuse of member data and unauthorized transactions in the digital world are challenges that require serious attention.

Cooperative managers also stated that despite trying to implement digital security systems, they find it difficult to protect member data from the threat of increasingly sophisticated digital crimes. Co-op administrators recognize the importance of educating members about personal data protection, but limited resources are an obstacle.

Cooperative members in Cirebon also raised concerns regarding the security of their personal data in digital transactions. Some members felt that they did not have enough information about how cooperatives manage and protect their data. "We often feel worried whether our personal data is safe or not, as there is no detailed explanation of data protection within the cooperative," said one member.

Most cooperative members want a clearer explanation of how the cooperative protects their personal data and how their digital transactions are monitored. Member trust is critical, and a lack of information regarding data security policies can damage the cooperative's reputation and member trust.

Researchers conducted direct observations of several cooperatives in Cirebon that have implemented digital systems in managing transactions and member data. During the observation, researchers found that some cooperatives have begun to integrate financial management systems and member data digitally. However, the system used has not been fully standardized, thus increasing its vulnerability to criminal law threats related to data theft or unauthorized transactions.

Some of the larger cooperatives in Cirebon have adopted digital security systems such as data encryption, and some have started to develop double authentication features for financial transactions. However, smaller cooperatives tend to still use simpler and less secure systems, which increases the risk of legal violations.

In terms of operational transparency, observations show that some cooperatives in Cirebon have digitally opened financial reports that can be accessed by members. However, there are still many cooperatives that do not have a transparent financial reporting system, leading to distrust among members towards cooperative management.

The documents analyzed in this study include internal cooperative regulations, financial reports, and criminal law cases that occurred in cooperatives in Cirebon. Some cooperatives already have clear regulations regarding the protection of member data, but the implementation is still limited to less stringent internal supervision. In addition, the available financial reports are still not fully

transparent, especially in terms of digital transactions.

From a documentation study of criminal law cases that occurred in several cooperatives, it was found that there were several cases related to digital fraud and theft of member data. These cases highlight the lack of clear regulations and weak oversight of technology use in cooperatives. Some cooperatives have not complied with personal data protection laws, which provides a loophole for criminals to exploit the system.

Discussion

The criminal law challenges that cooperatives face in relation to digitalization generally relate to misuse of personal data, illegal transactions, and cybercrime. Based on interviews with cooperative administrators, most cooperatives consider that the systems they use for digital transaction management and member data are still vulnerable to cybercrime. Efforts made by cooperatives to overcome these challenges include:

Some cooperatives in Cirebon have adopted technologies such as data encryption and double authentication to protect member data and prevent digital fraud. However, small cooperatives that do not have sufficient budgets are often unable to implement adequate security technologies. Therefore, cooperatives need to work with technology service providers to improve their security systems. As a preventive measure, cooperatives in Cirebon conducted training and socialization to members on the importance of keeping personal data and digital transactions safe. However, members' level of understanding about personal data protection is still low, so

there is a need for more intensive digital literacy campaigns to increase their awareness.

Some cooperatives in Cirebon are also trying to improve internal monitoring of digital transactions by implementing regular system audits. This supervision aims to prevent misuse of data and transactions that harm members. Operational transparency is crucial in cooperatives, especially in the digital era that requires clear accountability for every transaction. Cooperatives in Cirebon have taken several steps to maintain operational transparency, among others:

Most cooperatives in Cirebon have started to publish digital financial reports that can be accessed by members. This aims to provide transparency and increase members' trust in cooperative management. Some cooperatives provide online access for members to view financial reports and other cooperative activities. However, not all cooperatives do this well, which may lead to members' distrust of cooperative management.

According to the transparency theory proposed by Pratama (2020), transparency in organizations, including cooperatives, is very important to build member trust. Cooperatives that manage transactions and member data with high transparency will be more trusted by their members, which in turn will increase member participation and cooperative success.

In addition, the criminal law theory explained by Arief (2017) on the importance of legal protection against criminal acts in the digital world is very relevant in the context of digital cooperatives. Clear legal protection and

strict supervision are needed to overcome the threat of criminal law that can harm cooperative members.

Arief (2017) emphasizes the importance of clear legal protection against criminal acts in the digital world. In the context of digital cooperatives, Arief suggests that, to address the threats of criminal activities that could harm cooperative members, legal protection must involve creating regulations that specifically address the use of digital data and online transactions. Moreover, Arief advocates for stronger oversight of actions that may harm cooperative members, such as fraud and data misuse, which are often undetected by traditional legal systems.

To effectively confront the challenges posed by digitalization, criminal law reforms must be tailored to the evolving technological landscape. These reforms could include several concrete steps, such as:

Updating Personal Data Protection Laws: As part of stronger legal protection for members of digital cooperatives, reforms could begin with updating or enacting stricter laws regarding personal data protection. These laws would regulate how members' data is collected, stored, and used, ensuring clear penalties for misuse of this data.

Stronger Oversight and Accountability of Digital Transactions: As cooperatives increasingly rely on online platforms for transactions, legal reforms should focus on implementing stricter oversight mechanisms for digital transactions. This could involve using technologies like blockchain to ensure transparency and prevent data manipulation. Additionally, more

robust regulations regarding reporting and auditing digital transactions would enhance accountability.

Enhancing Digital Law Enforcement Capacity: Criminal law reforms should also focus on strengthening the capacity of law enforcement agencies to handle technology-related crimes. This might include specialized training for law enforcement on cybercrimes involving digital cooperatives and greater collaboration between legal authorities and technology regulators to address digital crimes effectively.

Based on the results of this study, it can be concluded that cooperatives in the Cirebon area face a number of challenges in dealing with criminal laws related to digitalization and maintaining transparency of their operations. The main challenges include misuse of personal data, cybercrime, and lack of oversight of digital transactions. Cooperatives' efforts to overcome these challenges include improving digital security, member education on data protection, and stricter internal supervision. To maintain operational transparency, some cooperatives in Cirebon have implemented digital financial reports and given members access to view financial data online. However, these implementations are still limited and need to be improved to ensure greater transparency. This research provides a clear picture of the challenges cooperatives face in adopting digital technology and how they are trying to overcome these issues by maintaining fairness, transparency, and security of member data.

The implications of these findings highlight the critical role of

transparency in enhancing trust between cooperatives and their members. By improving the accessibility and clarity of financial reports and activities, cooperatives can foster greater member engagement and participation, which is essential for the long-term success of digital cooperatives. The application of Pratama's (2020) transparency theory underscores that organizations with higher transparency will attract more member involvement and support. Furthermore, the relevance of Barda Nawawi Arief's (2017) criminal law theory stresses the need for stronger legal frameworks to safeguard against digital crimes, ensuring that cooperatives can operate securely and with confidence. The combination of transparency and legal protection will not only enhance member trust but also reduce the risks of financial and data-related criminal activities, leading to more sustainable and resilient digital cooperatives.

CONCLUSIONS

Conclusion

In general, this study reveals that cooperatives in the Cirebon region face significant challenges in addressing criminal laws related to digitalization and maintaining transparency of their operations. Misuse of personal data, cybercrime, and lack of oversight of digital transactions are the main issues faced by cooperatives. However, cooperatives' efforts to address these challenges through enhanced digital security, member education on data protection, and stricter internal controls have had a positive impact in maintaining fairness and dignity for their members. Conclusions Specific to

the Problem Formulation: (1) Criminal Law Challenges Faced by Cooperatives. Cooperatives in the Cirebon area face various criminal law challenges related to digitalization, such as misuse of personal data and cybercrime. Misuse of members' personal data that has the potential to cause criminal acts is a major issue that needs more attention. In addition, cybercrime is also a serious threat to an already digitized system. (2) Cooperatives to Address Criminal Law Challenges. Cooperatives in Cirebon have made various efforts to overcome criminal law challenges, including by introducing stronger digital security systems and implementing member personal data protection policies. In addition, supervision of digital transactions on was tightened to prevent potential misuse. The transparency of cooperative operations in Cirebon has improved with the implementation of digital financial reports and giving members access to view financial reports online. However, this implementation is still limited to a few cooperatives, so improvements are needed to enhance better transparency.

Research Recommendations

The recommendations of this research are: Strengthening the Digital Security System: (1) Cooperatives should prioritize the adoption of robust digital security frameworks tailored to their size and resources. Small cooperatives can begin by implementing affordable, scalable cybersecurity tools such as two-factor authentication (2FA) and encryption for sensitive data. Larger cooperatives can invest in more sophisticated security measures, such as multi-layered security systems, and conduct regular vulnerability assessments.

Additionally, cooperatives can form partnerships with cybersecurity firms to provide specialized support and training. A phased implementation approach will allow cooperatives to gradually enhance their security systems as their budgets and technical expertise grow. (2) Member Education on Data Protection: Member education should be tailored to the specific needs of the cooperative's members and the resources available. Smaller cooperatives may opt for simple, accessible workshops or online webinars that cover basic data protection practices, such as recognizing phishing attempts and securing passwords. For larger cooperatives, more advanced training programs can be developed, incorporating specialized workshops on the legal implications of data misuse and digital rights. Cooperatives can also collaborate with local universities, tech companies, or government agencies to offer subsidized training. A member engagement strategy should include continuous education, utilizing email newsletters, mobile apps, or social media to keep members informed. (3) Improved Internal Control: Internal control improvements should be scalable to the size of the cooperative. Smaller cooperatives may implement basic internal controls, such as segregating duties among a few trusted members and conducting semi-annual financial audits. Larger cooperatives can invest in more advanced internal control systems, including automated monitoring tools to track transactions in real time and identify discrepancies. Additionally, creating a digital dashboard for real-time financial oversight could provide management

and members with continuous transparency. Internal control systems should also be regularly reviewed and updated based on evolving best practices and technological advancements. (4) Improved Financial Transparency: To improve financial transparency, cooperatives should gradually implement digital financial reporting systems. Smaller cooperatives can begin by utilizing open-source accounting software to generate monthly financial statements and share them with members through secure online platforms. Larger cooperatives can invest in more sophisticated enterprise resource planning (ERP) systems that integrate financial, operational, and member data for greater transparency. Cooperatives can also offer training to members on how to interpret financial reports, ensuring that all members, regardless of their financial literacy, can understand and engage with the cooperative's financial health. (5) Further Research: Future research should focus on investigating how digital transformation impacts cooperatives of different sizes and resource levels. Research could explore the adoption of scalable cybersecurity measures, data protection training programs, and digital financial systems that are appropriate for cooperatives at various stages of digital maturity. Moreover, studying the effects of personal data protection regulations in different contexts (e.g., small cooperatives versus large ones) will help in developing guidelines for implementing such regulations effectively across the sector.

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