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COOPERATIVES IN THE ERA OF DIGITALIZATION FROM THE PERSPECTIVE OF INNOVATION DIFFUSION THEORY AT THE CU SEHATI COOPERATIVE IN JAKARTA

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Abstract

This research discusses the change of cooperatives towards digitalization from the perspective of Innovation Diffusion theory from Everett M Rogers at the CU Sehati Cooperative in Jakarta. Digitalization is an important strategy for cooperatives to continue to exist and be relevant during such rapid technological changes. This study uses a qualitative-descriptive approach with case study and literature study methods. The study results show that the implementation of digitalization in the CU Sehati Cooperative is in the innovation stage, with cooperative members as adopters who support the organization's sustainability. The study identifies the key factors influencing technology adoption. It also recommends training cooperative members and strengthening digital infrastructure to accelerate technology adoption so that cooperatives can increasingly contribute to the community's economy.

Keywords : cooperatives, digitalization, diffusion of innovation, technology

1. INTRODUCTION

According to Law No. 25 of 1992 concerning Cooperatives, Cooperatives are business entities consisting of individuals or cooperative legal entities, whose activities are based on the principle of cooperatives and are part of the people's economic movement based on kinship. (Mujiyanti, 2023). Cooperatives are financial institutions that have a significant role in community development However, in the era of digitalization, cooperatives face great challenges in maintaining their existence. Digitalization is considered both an opportunity and a challenge for cooperatives, especially savings and loan cooperatives, to improve operational efficiency and service quality. A cooperative is a form of business organization in which the individuals involved with the organization also own and control it collectively, with profits distributed based on patronage rather than capital investment. (Gong & Cullinane, 2018). As regulated in Law Number 25 of 1992 concerning Cooperatives, cooperatives are divided into 5 (five) types, namely: Marketing Cooperatives, Service Cooperatives, Savings and Loan

Cooperatives (KSP), Consumer Cooperatives, and Producer Cooperatives (Kemenkopukm, 2023).

A cooperative is a business entity that has unique characteristics in the business world. They are established and operated by their members to achieve common interests, which means that cooperatives focus on common desires and benefits rather than individual interests (Abdurohim, Ch Abbas Sopamena, Dian Lestari, 2024). According to data from the Ministry of Cooperatives and SMEs (2023), as many as 40% of cooperatives in Indonesia have adopted digital technology. Digital transformation in cooperatives is arguably slower than in other business entities(Saadah, 2023).

Adopting digital technologies, such as financial management applications, e-wallet-based payment systems, and online platforms, has great potential to improve the operational efficiency of cooperatives and expand access to services to members. However, this implementation is uneven and often faces obstacles, such as limited infrastructure, digital literacy, and members' resistance to change. The significant changes caused by digital disruption affect almost all aspects of cooperative operations. This includes how they conduct transactions, communicate with members, manage resources, and even market their products and services. The use of technology such as online platforms, social media, and data-driven solutions has opened up new opportunities to reach and serve members more effectively. Therefore, this article discusses the digital transformation of the CU Sehati Jakarta Cooperative from the perspective of innovation diffusion theory. Digitalization is important for cooperatives to remain relevant amid rapid technological changes.

Innovation diffusion theory is one of the widely influential communication theories explaining how the community introduces, accepts, and adopts an innovation. Everett M. Rogers introduced this theory in his book Diffusion of Innovations, published in 1962(Rogers, 1962). The theory was born out of multidisciplinary research, including sociology, anthropology, and economics, which studies the patterns of the spread of innovation in society.

The initial inspiration for this theory came from Bryce Ryan and Neal Gross's 1943 research on adopting hybrid corn seeds in Iowa, United States. They found that the adoption process occurs gradually through social interaction among farmers(Everett M Roger, 1983). This research is an important basis for understanding that the spread of innovation involves complex social elements. According to Rogers, diffusion is the process by which an innovation is disseminated through communication channels over a certain period among members of a social system (Rogers, 2003). He emphasized that innovation is accepted not only based on its technical advantages but also through social influences and applicable cultural norms. Rogers identified four main elements in the innovation diffusion process, namely:

1. Innovations, new ideas, or practices that are introduced.
2. Communication Channels are information channels used to convey innovations, both interpersonally and through mass media.
3. Time, including the duration of the adoption process.
4. Social System, which is a community or group that accepts innovation.

Rogers also introduced five stages in the innovation adoption process(Rogers, 2003):

1. Knowledge – individuals first become aware of innovation through the information received.
2. Persuasion – individuals begin to form a positive or negative attitude towards innovation.
3. Decision – the individual decides to accept or reject the innovation.
4. Implementation – innovation begins to be applied in the lives of individuals.
5. Confirmation – the individual seeks reinforcement against his or her adoption decision

In this theory, Rogers groups individuals based on their adoption speed into five categories: innovators, early adopters, early majority, late majority, and laggards. This category explains that the adoption of innovation does not occur simultaneously but through different stages in society (Rogers, 1962). This theory has continued to be developed over time for various fields, such as information technology, public health, education, and marketing.

Although very influential, this theory has also been criticized. Some researchers state that the theory pays less attention to structural inequalities, such as access to resources, that can affect the ability of individuals or groups to adopt innovations(Valente, 1996). In addition: another criticism is the overemphasis on individual roles, without considering broader institutional factors.

Nevertheless, the book Diffusion of Innovations remains the main reference. The latest version, published in 2003, provides important updates and applications of theory in the digital age, reinforcing its relevance in understanding social transformation through innovation. The implementation of this theory has been carried out in various fields, for example: the application of innovation diffusion theory in the context of educational technology, highlighting how innovation is introduced and adopted in the educational environment (Nisrokha, 2020). Then, a study explores the diffusion of innovation through the Siputeri application and its impact on improving public services(Lindawati, 2014).

The study results show that the implementation of digitalization at Koperasi CU Sehati Jakarta is in the innovation stage, with cooperative members as adopters who support the organization's sustainability. This study recommends training cooperative members and strengthening digital infrastructure to accelerate technology adoption. For this reason, understanding the process of adopting innovation in cooperatives is important to facilitate digital transformation effectively. This article analyzes the application of digitalization in KSP Sehati Jakarta using Everett Rogers' perspective of innovation diffusion theory. This theory is relevant for identifying the factors that influence the successful adoption of technology.

2. METHODOLOGY

This research uses qualitative research with interview methods and literature studies. Qualitative research is understanding and interpreting the meaning of data according to the researcher's perspective. This research uses a literature study method, namely examining and understanding books, journals, articles, scientific works, and other sources of written

documents that are relevant to the topic of discussion, as well as interviews with the CU Sehati Cooperative supervisory board and direct observation at the CU Sehati cooperative, as well as documentation studies. Data were analyzed using a thematic approach to identify relevant patterns and themes.

3. RESULT AND DISCUSSION

History of CU Sehati Cooperative

This cooperative was established on August 22, 1987, with the first number of members, 29 people (Perbats). Starting from two Associations, namely: IKK and Manunggal. The first at the annual end-of-year meeting have assets: Rp.3,584,525,- with 68 members. In 1987-1994, the service was held 2 times a month, 1 time at IKK and 1 time in Manunggal. We started to have a legal entity (BH) on May 17, 1994, with the working area of Jak-sel and its surroundings. In 1994-1996, it began to appoint employees with services 2 times a week, where the service rented a room at the house of Chairman I, with night servants, namely Wednesday nights and Saturday nights. In 1997, he bought a house with an area of 62 m² at for Rp. 48,000,000,- which was then used as an office. In 2000 started to appoint Managers and services 5 times a week. August 2001, began building the building at Rp. 128,740,000,-

The inauguration of the Building on January 13, 2002, coincided with the annual end-of-year meeting XIV, inaugurated by Dr. H.M Darmono Skm as the chairman of the Puskopdit. In 2005, the Articles Association/by-laws (AD/ART) were amended with the national working area. Inauguration of a new 3-storey building on a land area of 600 m² on June 15, 2008. On May 3, 2013, he bought a shophouse in Cibitung Rp. 350,000,000,- a land area of 40 M² and a building area of 80 M². March 04, 2014, bought land in Cakung with an area of 150 M² Rp. 778,000,000,- then built and inaugurated to coincide with In annual end-of-year meeting XXVII on April 19, 2015. It has 6 Service Offices: Pasar Minggu, Depok, Cakung, Cibitung, Ciracas, Jagakarsa and Bojong Gede.

Digitalization is expected to increase efficiency, expand the range of services, and increase the competitiveness of cooperatives in an era that is increasingly dependent on technology. The theory of innovation diffusion, first introduced by Everett Rogers, explains how an innovation is disseminated through communication channels at a given time. These innovations are adopted by individuals or groups who then spread the change. In the context of cooperatives, digitalization is an innovation expected to be accepted by cooperative members to improve performance and service quality.

One of the key points in innovation diffusion is the characteristics of the innovation itself, such as relative excellence, compatibility, complexity, trial, and observability. In the Sehati Savings and Loan Cooperative context, adopting digital systems (e.g., mobile applications or online services) is an innovative step. Its relative advantage is seen in the ease of access to the service, while compatibility has to do with ease of use for members who are mostly elderly.

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The Relevance of Innovation Diffusion Theory in the Context of Cooperatives

Innovation diffusion, a theory that explains how innovations are introduced and adopted by society, is very relevant in the context of savings and loan cooperatives. In a cooperative environment, innovation usually includes digital technology, such as online-based applications for financial management, digital accounting systems, or e-payment platforms. The diffusion of the innovation process helps explain why some cooperatives are faster to adopt technology than others and how this adoption pattern is influenced by social interactions, leadership, and the cooperative's cultural system. (Rogers, 2003).

Elements of Innovation Diffusion

The four main elements of this theory—namely innovation, communication channels, time, and social systems—can be analyzed in the context of cooperatives:

1. Innovation: The digitization of the cooperative system, such as using loan and savings management applications, is considered a major innovation. These innovations increase efficiency and transparency, but their success depends on the extent to which cooperative members understand the benefits.
2. Communication Channels: Disseminating information in cooperatives often occurs through member meetings, training, and social media. Interpersonal communication channels among cooperative members play a huge role in building trust in innovations.
3. Time: Technology adoption takes time, and larger or well-resourced cooperatives tend to adopt technology faster than smaller cooperatives. Collective decisions in the cooperative system also prolong the adoption process.
4. Social System: The culture of cooperation and mutual trust in cooperatives is a social system that encourages or inhibits the adoption of innovation. Social systems that are open to change facilitate the diffusion of innovation more quickly

Stages of Innovation Adoption at CU Sehati Cooperative Jakarta

Based on the theory of innovation diffusion, the technology adoption process at KSP Sehati Jakarta can be divided into five stages:

1. Knowledge: Cooperative members begin to get to know the digital system through socialization and training conducted by the management.
2. Persuasion: Most members are aware of the benefits of digitalization, such as ease of access to services and transparency.
3. Decision: The management decided to adopt a digital-based financial application to improve efficiency.

4. Implementation: Digital systems have begun to be implemented in cooperative activities, such as recording savings, loans, and online payments.
5. Confirmation: Members who experience the benefits of the technology provide positive feedback, encouraging administrators to develop the feature further.

Adopting innovation in this cooperative involves introduction, persuasion, decision, implementation, and confirmation. The Sehati Savings and Loan Cooperative began to introduce digital technology through socialization with its members. Some younger and tech-savvy members are more receptive to these innovations, while older members tend to be slower. The following table explains the picture more clearly.

Table 1. Diffusion of Innovation in Cooperatives

Aspects	Description	Category adopter
Innovation	Digitization of the cooperative system, such as financial management applications.	innovator, Early Adopters, Early Majority, Late Majority, Laggards
Communication channels	Dissemination of information through member meetings, training, and social media.	Interpersonal interaction supports early adopters.
Time	Adoption takes time, depending on the size and resources of the cooperative.	Innovators are faster, laggards take longer.
Social system	The power of mutual cooperation and mutual trust is a driver or inhibitor.	An open social system encourages rapid adoption, conservatives slow down.

Categories of Adopters in Cooperatives

Five categories of adopters in cooperatives:

1. Innovator: Usually the management of the cooperative is the first to adopt new technology.
2. Early Adopters: Members of the cooperative who have better access to information and resources.
3. Early Majority: Members who wait for proof of the success of the innovation before adopting it.
4. Late Majority: Members who are more conservative and need a greater push to adopt innovation.
5. Laggards: Members who resist change and are only willing to switch if innovation becomes the standard (Woo & Magee, 2017).

Driving and Inhibiting Factors

1. Driver:
   Leadership Support: Innovative cooperative leadership drives technology adoption.

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Efficiency Needs: Digitalization is considered a solution to increase the transparency and efficiency of cooperative operations.
Competitive Pressure: Competition with other financial institutions encourages cooperatives to innovate.

2. Retardant:
   Lack of Digital Literacy: Many cooperative members do not have adequate digital skills (Nisrokha, 2020).
   Resistance to Change: Cultures that are too traditional can be a major obstacle.
   Funding Limitations: Technology adoption requires a large initial investment.

Factors Influencing Technology Adoption

The study identified five key factors:

1. Perception of Benefits: Members understand that digital technology can improve efficiency and transparency.
2. Compatibility: The digital system is following the operational needs of the cooperative.
3. Complexity: Administrators overcome member resistance by providing intensive training.
4. Observability: Members can see tangible results from the use of technology, such as reduced administrative processing time.
5. Trialability: The app is tested before it is fully implemented, so members are more confident in using it.

Communication plays a crucial role in the diffusion of innovation. Cooperatives must provide effective communication channels to convey the benefits of this new technology. In this case, the Sehati Savings and Loan Cooperative uses various communication channels, including regular meetings, brochures, and seminars. However, the challenge is reaching members who are not tech-savvy or have limited access.

Social and cultural factors of cooperative members also affect the adoption of innovation. The Sehati Savings and Loan Cooperative, whose members are mostly elderly adults, faces cultural barriers related to dependence on conventional methods. Some members feel that face-to-face interactions and manual transactions are more reliable, although digitization offers a lot of convenience and speed.

Several factors, such as leadership in cooperatives, perception of benefits, and external support, influence the speed of innovation adoption. In the Sehati Savings and Loan Cooperative, cooperative leaders who are proactive in adopting technology affect the speed of adoption by members. Additionally, members' perceptions of the benefits of digitalization, such as ease of transactions and transparency, drive faster adoption.

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Strategies to Accelerate Adoption

The main obstacles faced are members' resistance to change, limitations in digital literacy, and suboptimal technological infrastructure.

Digitalization significantly impacts cooperative services, such as the ease for members to make transactions anytime and anywhere. In addition, digitization allows cooperatives to manage member data better, make it easier to record transactions and speed up the loan process. This has a positive impact on the quality of service and the level of member satisfaction. To accelerate the process of diffusion of innovation in savings and loan cooperatives, several strategies can be implemented:

1. Education and Training: Improving the digital literacy of cooperative members through regular special training.
2. Implementation Assistance: Provides intensive assistance in the use of new technologies.
3. Pilot Model: Demonstrating the success of other cooperatives that have adopted technology as inspiration (Pineda et al., 2023).
4. Partnership with Technology Providers: Collaborate with technology companies to get solutions that suit the needs of cooperatives.Partnership with Technology Providers: Collaborate with technology companies to get solutions that suit the needs of cooperatives.

4. CONCLUSION

Innovation diffusion theory provides a comprehensive framework for understanding the digitalization process of savings and loan cooperatives. By understanding the elements and factors that influence innovation adoption, cooperatives can design more effective strategies to increase technology adoption. The digital transformation at the CU Sehati Jakarta Cooperative shows great potential to improve operational efficiency and service quality. Using the innovation diffusion theory, this study found that the successful adoption of the technology depends on the perception of benefits, compatibility, and effective trials. This study recommends strengthening the digital literacy of cooperative members and infrastructure development as a strategic step to accelerate digital transformation. Digitalization at the Sehati Savings and Loan Cooperative has been successfully implemented, with various challenges faced, especially related to the adoption of technology by members. Innovation diffusion theory can be used to explain the process of adopting this technology, which relies heavily on effective communication and the sustainability of training. Further efforts are needed to improve members' digital literacy and strengthen technological infrastructure to ensure the success of cooperative digitalization in the future

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