

Digital Transformation of MSMEs through B2C E-Commerce Adoption: A Study of Mitra Karsa Selaras Cooperative

Nurlaila Maysaroh Chairunnisa¹, Yuha Nadhirah Qintharah², Hadi Mahmudah³, Abd. Rasyid Jalil⁴

¹ Accounting, Faculty of Economics, Universitas Islam 45, West Java, Indonesia

^{2*} Accounting, Faculty of Economics, Universitas Islam 45, West Java, Indonesia

³ Accounting, Faculty of Economics, Universitas Islam 45, West Java, Indonesia

⁴ Marine Sciences, Faculty of Marine and Fisheries Sciences, Universitas Hasanuddin, South Sulawesi, Indonesia

*Corresponding Author(s) E-mail: yuha_nadhirah@unismabekasi.ac.id

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Abstract

The rapid growth of information technology has transformed business practices by simplifying complex processes, reducing costs, and expanding market reach through digital platforms such as e-commerce. E-commerce gives many micro, small, and medium-sized businesses (MSMEs) the chance to increase their competitiveness, diversify their product offerings, and carry out quick, inexpensive transactions. However, the low level of digital literacy among its members—the majority of whom are retired women—presents serious difficulties for Koperasi Mitra Karsa Selaras, which oversees 52 MSMEs in Pekayon, Bekasi. Especially during the COVID-19 pandemic, this restriction has made it more difficult for them to adopt technology, which has led to a decline in their income and limited access to markets. By using a business-to-consumer (B2C) e-commerce model as a tactic to increase the digital capability and revenue of cooperatively assisted MSMEs, this community service program sought to address these issues. To guarantee that the activities were founded on already-existing community assets and to encourage the cooperative members' active participation, the program combined the strategies of Asset-Based Community Development (ABCD) and Participatory Action Research (PAR). The three primary activities of the implementation method's community education model were: (1) education to explain the idea and advantages of e-commerce; (2) training to impart technical skills in account creation, product uploading, and transaction management; and (3) mentoring to guarantee that participants could use e-commerce platforms on their own. The findings demonstrated that participants successfully created e-commerce store accounts, improved their comprehension of e-commerce concepts and advantages, and produced digital product catalogues that were prepared for online promotion. Overall, the program contributes to the achievement of several Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 5 (Gender Equality), SDG 8 (Decent Work and Economic Growth), and SDG 9 (Industry, Innovation, and Infrastructure), by empowering women-led MSMEs through digital transformation and inclusive economic participation.

INTRODUCTION

The development of information technology today is very rapid and affects almost all aspects of human life. One of the sectors that has experienced the most significant impact is the business world, where technology plays an important role in simplifying business processes that were previously long, complicated, and high-cost to become more efficient and cost-effective marketing (Hardilawati, 2020; Pranata & Darma, 2014). One form of use of technology in the business sector is electronic commerce (e-commerce), which is an electronic trading system that allows transactions to buy and sell goods, services, and information online through computer networks and the internet (Ekayanti et al., 2022; Maulana & Putra, 2020).

According to Azhari et al., (2025) and Kasmi & Candra (2017), e-commerce is a series of dynamic technologies that support the relationship between companies, consumers, and certain

communities in a business process. This technology facilitates electronic transactions related to the trade of goods, the provision of services, and the exchange of information. Thus, e-commerce can be understood as a technological system that is directly connected to buying and selling activities, both between individuals, between institutions and individuals, and between institutions. Abed et al., (2015) added that e-commerce is able to increase the competitiveness of a business at the local, national, and international levels. In addition, the implementation of e-commerce also opens up opportunities for product diversification, provides easier and more convenient transaction services, and streamlines administrative expenses in the long run.

The benefits of e-commerce are felt not only by sellers, but also by consumers. This phenomenon is reflected in the significant increase in the use of e-commerce in Indonesia, especially since the COVID-19 pandemic (Ausat & Suherlan, 2021; Suminah et al., 2022). Koesno, (2020) and Nurhayati & Adhi (2021) noted that during the pandemic, the number of e-commerce users in Indonesia increased by 38.3%. Data from the Central Statistics Agency (2021) also shows that as many as 79.91% of e-commerce users are sellers, and 71.23% of transactions come from end consumers (Central Statistics Agency, 2021; Anhar & Qintharah, 2024; Miranda et al., 2022). This fact indicates that most e-commerce transactions in Indonesia use a business-to-consumer (B2C) model, which is a business pattern in which companies offer products or services directly to the end consumer (Ekayanti et al., 2022; Maulana & Putra, 2020).

The Mitra Karsa Selaras Cooperative is one of the cooperatives that seeks to adopt e-commerce opportunities. These cooperative houses 52 MSMEs from four RWs in Pekayon Jaya Village, South Bekasi, and is under the auspices of the Environmental Care Movement Foundation. The cooperative, which was founded by a group of retired women, has a vision to improve the welfare of its members through business development. The MSME products fostered are quite diverse, ranging from culinary, handicrafts, to household needs. However, the COVID-19 pandemic has had a significant impact on the decline in MSME income under this cooperative. The condition is further exacerbated by the limited digital literacy of administrators and cooperative members, most of whom are elderly, so that they experience difficulties in operating information technology. This shows that there is a gap between the great opportunities offered by e-commerce and the real ability of cooperatives to take advantage of it.

A number of previous studies have shown that the implementation of e-commerce can provide strategic benefits. (Kasmi & Candra, 2017; S. S. Putri et al., 2022) prove that the implementation of e-commerce is able to expand market reach, reduce logistics costs, improve brand image, and provide better customer service. Alwendi (2020) and Tay & Sundiman (2021) added that e-commerce also has a positive impact on business operations, such as increasing efficiency, cost savings, controlling goods, and strengthening the distribution chain. Research by (Putri et al., 2020) even confirms that e-commerce-based digital marketing is able to increase women's participation in economic activities while strengthening family economic resilience.

Unlike most previous service programs that focused on general digital marketing socialization, single training on a single platform, or application development without ongoing mentoring, this program has a clear novelty. Several studies, such as those conducted by (Soraya et al., 2023) which emphasized marketplace-based marketing training, (Astuti et al., 2021) which only focused on social media optimization, and (Ramadhan et al., 2025) which focused on the development of local marketing applications, showed that interventions stopped more at the promotion aspect. Other studies, such as (Lestari et al., 2022; Nugroho et al., 2022), only highlight basic digital literacy without a systematic mentoring strategy. The service program by Putra et al. (2023) is also limited to short workshops, while (Dimas et al., 2023; Evangeulista et al., 2023) focus on the introduction of e-commerce without strengthening the sustainability aspect. In fact, in recent studies by Faruq et al. (2024; Putro et al. (2022), it was still found that most service activities have not targeted groups with limited digital literacy, especially cooperative communities with elderly members. Thus, the gap filled by this program is the need for a more integrative, sustainable, and tailored approach to the participants' profiles. The program not only provides conceptual understanding, but also practical skills through intensive training, as well as ensuring the sustainability of e-commerce use with ongoing mentoring.

Distinct from previous service initiatives, this focuses on cooperatives whose members are predominantly retired women with minimal or no digital skills. For this program, community

education has been tailored in three interlinked dimensions—teaching, technology training, and sustained mentoring. This contrasts with previous service initiatives which provided mainly theoretical e-commerce familiarisation or rudimentary digital marketing. This new focus not only aims to instill a theoretical understanding of e-commerce but is structured to engrain the practice at a level of sustainability and to provide practical skills through intensive mentoring.

The focus on women's empowerment and digital transformation adds social and economic value to the program. Incorporating e-commerce into community cooperatives, particularly those with low digital literacy, is innovative and addresses scholarship and service gaps. Given the digital economy's transformation prerequisites, the need for this program becomes even clearer. When cooperative members lack the ability to register on digital platforms, upload products, and process payments, market and business viability constraints become significant. This challenge calls for the closure of community education gaps, and ongoing instruction, training, and mentoring. This service program addresses the training gap by providing B2C e-commerce training to cooperative leaders and members. This training helps them acquire the knowledge and skills needed to manage and operate digital business platforms, extend their market reach to foster the competitiveness of their business, and address the economic viability issues of their cooperative members which has arisen as the economy shifts towards digitalisation.

In relation to the gradual assimilation of e-commerce into cooperatives, the foundational instruction for the cooperative leaders and members on the use of social media, the establishment of marketplace accounts, and basic product photography should be helpful. The next step is strong advocacy to guarantee the lasting incorporation of technology into the daily operational routines of the cooperative business. Finally, partnering with local governments and universities can greatly guarantee that cooperatives acquire necessary resources and grow their networks (Ramadhan et al., 2025).

The consequences that e-commerce integration has to ascertaining the growth of turnover as well as the growth in the number of customers necessitates continuous evaluation. These analyses also relate to the non-financial aspects: customer satisfaction, net membership sustainability of the business, competence in the digital platform, and all the non-financial indicators of business sustainability. This guarantees that the business cooperatives will fully capitalize the benefits of enduring digital transformation. Finally, prioritizing the Pegon's cultural identity and its novelty as the main attraction of the MSME products has economic benefits in terms of enhancing the local brand. Local products characterized with a distinctive local identity are cheaper and easier to market and are also priced higher.

Considering all options, results of the e-commerce challenges posed by the pandemic demonstrate that the Mitra Karsa Selaras Cooperative is determined to view challenges in e-commerce integration for the Cooperative as an opportunity to develop digitally. Admittedly, there are risks of pursued growth being unsustainable. However, the Cooperative is aware of the possibilities for positive digital growth to be pursued sustainably. With the right strategy in e-commerce, Cooperatives are in a position to enhance the competitiveness of MSMEs, new e-empowerment of community economies, and new market opportunities in the immediate future and beyond. Cooperatives undertaking these practices digitally □ integrated with the e-ecosystem could be an example to others in the country. Their focus would be the digital economy.

IMPLEMENTATION METHOD

This service activity was carried out at the Mitra Karsa Selaras Cooperative located at Pondok Pekayon Indah, Jl. Mahoni D12/6, Pekayon Jaya Village, South Bekasi District. This cooperative was founded by the Environmental Care Movement Foundation (GPL) which has four administrators who are retirees. The Mitra Karsa Selaras Cooperative houses 4 RWs in Pekayon Jaya with a total of 52 MSMEs. These MSME products as a whole are consumable consumer products and household products. The target of this service activity is the administrators of the Mitra Karsa Selaras Cooperative and cooperative members who are the founders of 48 MSMEs.

The approach used in this service program is a combination of *Asset Based Community Development* (ABCD) and *Participatory Action Research* (PAR). The ABCD approach was chosen because the service activities focus on developing the assets and potential of MSMEs fostered by the cooperative, which already have a variety of products such as culinary,

handicrafts, and household needs. Meanwhile, PAR was chosen because the entire series of activities involves the active participation of partners, starting from the stage of problem identification, solution formulation, implementation of activities, to the evaluation process. Thus, the program not only develops the digital capacity of partners but also fosters a sense of ownership and sustainability of e-commerce practices. The flowchart of the service implementation method is presented in Figure 1.



Figure 1. Method of Implementation of Service

The implementation of the community service program followed a structured sequence of stages designed to align with the needs of the Koperasi Mitra Karsa Selaras and its MSME members. The process began with program socialization and direct observation through meetings, interviews, and participatory discussions to identify problems and potentials. This initial step provided accurate field data, which became the basis for selecting the most appropriate method, namely community education, considered suitable due to the characteristics of the participants. Community education sequentially unfolded across three interconnected dimensions: education, training, and mentoring. For the purpose of advocacy and motivation toward digitalisation, preliminary instruction, anchored within the basics, worth, and pointers of e-commerce, was given. During training, e-commerce practitioners engaged in hands-on activities of creating online store accounts, uploading stocked products, performing transactions, and exercising some level of digital marketing. Afterward, ample mentoring was vital to aid the self-reliance of the participants in the application of the skills and the resolution of automation difficulties that were challenges of control and self-confidence in management of e-commerce platforms. During mentoring, the final stage of implementation, evaluation of the stage was noted to enhance the effectiveness of the activities. Worksheets and observations yielded data while several indicators of participants were used to evaluate understanding, command of technology, and attitude. Based on the evaluation data, the intended outcomes of mentoring, training, and education integrated were met: there was unparalleled improvement in digital literacy, business capacities increased, and e-commerce was safely adopted by empowered MSME actors.

RESULT

During the months of June to August, the focus of the community service planning phase was to ensure the program was responsive to the needs of Koperasi Mitra Karsa Selaras. This involved the signing of a memorandum of understanding (MoU) and discussions with partners, field visits and observations, as well as the initial meetings with the management of the cooperative. The observations and interviews revealed that low digital literacy, limited market access, and poor product innovation are the primary problems MSMEs face. Weak business networks, a lack of continuous training, and restricted access to capital were among the other structural constraints that were observed.

Thus, the planning stage serves as an important foundation for the overall program. Careful planning is expected to be able to produce relevant, effective, and solution-oriented service activities according to the needs of partners. Furthermore, this stage not only establishes an implementation strategy, but also plays a role in building trust between the service team and the cooperative, so as to create a solid collaboration. The results of this planning are then used as the basis for designing MSME empowerment programs through the digital transformation process with the use of e-commerce as the main instrument for increasing capacity and income.

This service program was attended by 52 participants, consisting of 4 cooperative administrators and 48 fostered MSME actors. Participants were dominated by women aged 35–60 years, most of whom were housewives and retirees who ran micro and small-scale businesses. In terms of education, the majority of participants have a secondary education background (junior high and high school), only a small percentage of them have higher education. This has an impact on the level of digital literacy which is still relatively low, especially in the mastery of technology devices and internet-based applications.

The types of businesses run by participants are quite diverse, including the culinary sector (such as snacks, home catering, and processed drinks), handicrafts (bags, wallets, and decorative trinkets), and household products (such as laundry soap, herbal oils, and homewear). Most businesses are still traditional with conventional marketing systems, which rely on direct sales around the neighborhood where they live or through limited social networks. This condition explains why the community education method was chosen as a strategy in the service program. This method is considered appropriate because it is able to bridge the limitations of participants in terms of technology with a simple, applicative, and gradual approach. In addition, the participants predominantly consist of women who manage households and run businesses, thus necessitating the development of more straightforward and adaptable approaches.

Table 1. Respondent Characteristics

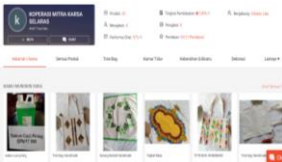
Characteristics	Category/Description	Frequency	%
Total Participants	Total participants	52	100%
Participant Status	Cooperative administrators	4	8%
	Fostered MSME actors	48	92%
Gender	Male	0	0%
	Female	52	100%
Age	35–50 years	45	87%
	51–65 years	7	13%
Type of Business	Culinary (snacks, home catering, processed drinks)	26	50%
	Handicrafts (bags, wallets, decorative trinkets)	13	25%
	Household products (laundry soap, herbal oils, homewear)	13	25%
Key Characteristics of Partner	Dominated by home-based enterprises, retired women, and those with comparatively low levels of digital literacy	-	

Source: Data processed, 2025

Understanding these participants' characteristics is invaluable when structuring relevant training, mentoring, and educational programs, especially ones that address the needs of the partners. Having an accurate and holistic view of the participants' profiles enables the service

team to assess the impact of the program via various benchmarks around acquired competencies, digital literacy, and the entrepreneurial drive to advance their e-commerce businesses.

Table 2. Description of Activities

Documentation Photo	Description
	Observation Activities with Partners
	E-Commerce Introduction Educational Activities
	E-Commerce Results from the Karsa Selaras Partner Cooperative

The implementation of the community service program at the Mitra Karsa Selaras Cooperative was carried out through three main stages education, training, and mentoring—with an additional evaluation process. Each stage was designed to address the specific needs of participants and gradually build their digital capacity. At the education stage, participants (52 people consisting of cooperative administrators and MSME actors) were introduced to the definition, concept, and benefits of e-commerce. Delivered by expert speakers, this stage successfully fostered awareness and motivation. Participants who were initially hesitant about using technology became more confident, with many expressing readiness to create online stores.

The training stage focused on practical mastery using a hands-on method. Participants learned to create store accounts on digital platforms, upload products with descriptions and prices, manage promotions, provide customer service, and handle transactions. As a result, 100% of participants successfully created e-commerce accounts, with most uploading 5–10 products, and some even completing digital catalogs containing more than 10 items. The main challenge was limited digital literacy, especially among older participants, which required repetitive explanations and one-on-one mentoring. Despite this, training effectively improved both technical skills and participants' confidence in managing online stores.

Table 3. Summary of Implementation Stages and Achievements

Stage	Main Activities	Key Achievements	Challenges
Education	Delivery of basic concepts and benefits of e-commerce by expert speakers.	Participants understood e-commerce as a strategic tool; motivation increased to open online stores.	Initial hesitation to adopt technology; limited familiarity with digital platforms.
Training	Hands-on sessions on store creation, product upload, pricing, promotion, service, and transactions.	100% participants created online stores; most uploaded 5–10 products; some developed full catalogs (>10 products).	Low digital literacy, especially among older members; required repetitive and personalized support.
Mentoring	Face-to-face and online assistance on stock management, logistics, complaints, and product optimization.	Most participants managed stores independently; some received real customer orders; social collaboration emerged.	Limited internet access, low-spec devices, limited creativity in promotional content.

Stage	Main Activities	Key Achievements	Challenges
Evaluation	Surveys, interviews, and observations to assess outcomes and satisfaction.	All participants understood e-commerce; 100% created online stores; satisfaction rate reached 90%; clear social transformation noted.	Remaining constraints in product innovation, networking, and access to capital.

Source: Processed data, 2025

The mentoring stage ensured that acquired skills were translated into practice. Conducted both face-to-face and online, mentoring addressed issues such as stock management, shipping costs, consumer complaints, and optimization of product displays. Most participants succeeded in independently operating their stores, and several received real orders from customers outside Bekasi. Importantly, mentoring also sparked social transformation, where participants began helping each other and some emerged as local leaders supporting their peers.

Finally, the evaluation process, conducted through surveys, interviews, and field observations, confirmed strong outcomes. All participants gained a clear understanding of e-commerce, 100% created online stores, most developed digital product catalogs, and the overall program satisfaction rate reached 90%. Beyond technical outcomes, the program also produced significant social changes—participants became more open to digital business, showed higher motivation, and strengthened their awareness of the importance of digital marketing for sustainability.

Evaluation and Social Change

The evaluation process was carried out at the same time as the mentoring stage through the distribution of questionnaires, brief interviews, and field observations. This evaluation aims to measure the extent to which service activities have succeeded in achieving the predetermined achievement indicators. The results of the evaluation showed several significant achievements, including:

1. Increased Understanding of E-Commerce

Based on the pre–post test with 10 questions about the understanding and use of e-commerce, there was a significant improvement in participants' knowledge and skills. At the pre-test stage, the average understanding was only 18%, while 82% admitted not understanding. After the program, the post-test showed that 95% of participants demonstrated understanding across all aspects tested, while only 5% remained in the “not yet fully understood” category.

Table 4. Tabulation of Pre-Test and Post-Test Results on E-Commerce Understanding

Question	Pre-Test: Understand (%)	Pre-Test: Do Not Understand (%)	Post-Test: Understand (%)	Post-Test: Do Not Understand (%)
1. Understanding the meaning of e-commerce	20 %	80 %	96 %	4 %
2. Knowing the benefits of e-commerce for MSMEs	25 %	75 %	95 %	5 %
3. Knowing the steps to create an online store account	15 %	85 %	94 %	6 %
4. Understanding how to upload products to e-commerce	12 %	88 %	93 %	7 %
5. Knowing how to manage online transactions	18 %	82 %	95 %	5 %
6. Understanding how to withdraw sales balance	10 %	90 %	92 %	8 %
7. Knowing how to use promotions/discounts	8 %	92 %	90 %	10 %
8. Understanding the importance of product photo quality	30 %	70 %	97 %	3 %
9. Knowing how to provide customer service via e-commerce chat	22 %	78 %	94 %	6 %
10. Understanding the advantages and challenges of using e-commerce	18 %	82 %	95 %	5 %

Question	Pre-Test: Understand (%)	Pre-Test: Do Not Understand (%)	Post-Test: Understand (%)	Post-Test: Do Not Understand (%)
Average Total	18 %	82 %	95 %	5 %

Source: Processed data, 2025

These results confirm that the method of education, training, and mentoring was highly effective in improving digital literacy. Participants not only gained theoretical understanding but also demonstrated technical competence by creating online store accounts, uploading product catalogs, and managing transactions.

2. Satisfaction with the Program

The program also received very positive feedback from participants. Based on the satisfaction survey distributed at the end of the program, 57.7% of participants stated they were very satisfied, 40.4% were satisfied, and only 1.9% stated dissatisfaction.

Table 5. Participant Satisfaction Results

Satisfaction Category	Number of Respondents (n)	Percentage (%)
Very Satisfied	30	57.7 %
Satisfied	21	40.4 %
Dissatisfied	1	1.9 %
Total	52	100 %

Source: Processed data, 2025

This shows that more than 98% of participants expressed satisfaction, confirming that the program was highly relevant to their business needs and provided tangible benefits.

3. Social and Behavioral Impact

In addition to its technical accomplishments, the program significantly changed society. Participants who previously struggled with technology began to adapt and confidently use digital platforms, with some successfully conducting online transactions independently. The significance of digital marketing for business continuity and competitiveness in the digital economy has come to light. A number of participants even rose to the position of local cooperative leaders, offering their services to help colleagues handle product variations or create marketing plans. This demonstrates the development of horizontal knowledge transfer among participants, which is essential to the program's long-term viability. Additionally, the program encouraged the cooperative to establish a digital learning community. Previously less tech-savvy retiree women became change agents by starting frequent peer-learning sessions to exchange knowledge and advice on running online stores.

The assessment demonstrates that this community service program promoted behavioural and cultural change in addition to meeting technical goals like enhancing comprehension, account creation, and product catalogue development. The combination of improved knowledge, increased skills, high participant satisfaction, and strengthened social capital indicates that the program has created sustainable transformation, fully aligned with the main objective of empowering MSMEs in the digital era.

Yield Limitations

The results presented above are objective descriptions of field facts obtained through observation, interviews, questionnaires, and documentation during the process of implementing community service activities at the Mitra Karsa Selaras Cooperative. This section only presents what is found in real life in the field without providing a theoretical interpretation or more in-depth analysis.

Table 6. Partner Constraints

Aspects	Obstacles Encountered	Indicators in the Field
Product Innovation	Low development of new products or product variations	MSME products tend to be uniform, the quality and packaging have not adjusted to digital market standards
Access to Capital	Limited access for MSMEs to formal financial institutions and business capital	The majority of participants rely on personal capital, difficulty meeting credit administration requirements
Business Networking	Weak collaboration between MSMEs and with external parties	Lack of joint marketing cooperation, limited distribution chain in local areas
Advanced Digital Literacy	Participants' skills in operating advanced e-commerce features are still low	Participants still need intensive assistance when managing product variations, digital promotions, or resolving technical issues
Program Sustainability	Dependence on service team assistance	Some participants are still hesitant to manage an online store consistently without a companion

Source: Data processed, 2025

Although the service program has achieved a number of significant achievements, there are several obstacles and limitations that are still faced by partners, including one of the important findings in this program is the identification of several structural challenges faced by MSMEs under the Mitra Karsa Selaras Cooperative. First, product innovation is still relatively low, as most MSMEs continue to rely on old product lines without developing new variants or improving quality, which weakens competitiveness in the increasingly competitive digital market. Second, limited access to capital remains a major obstacle, since many MSME actors do not have adequate access to formal financial institutions. This restricts the ability to produce and grow a business because of limited awareness regarding the available financing options and the gasping administrative requirements that tend to be cumbersome. Thirdly, the absence of collaboration among members also contributes to fragile business networks for the MSMEs served by the cooperative. Collectively, business networks are crucial for accessing new markets, reducing costs associated with logistics, and acquiring greater negotiating power with customers and vendors. The evaluation indicates that this community service activity achieved technical objectives of improving understanding, account creation, and developing a product catalog while also facilitating the desired change in behavior and culture.

DISCUSSION

Implementing business-to-consumer (B2C) e-commerce systems at the Mitra Karsa Selaras Cooperative shows that community educational interventions are valuable for increasing MSME capability in the digital age. Participants in the community educational intervention gained fundamental skills such as insight into the principles of e-commerce, the ability to set up and manage online store accounts, the capacity to upload product pictures, and the ability to perform fundamental online transactions. While these skills indicate progress in digital literacy, the more 'real' success metrics of the program deal with the strengthening of high-tier digital literacy, the availability of financial resources, the enhancement of business networks, the innovation of products, program sustainability via peer tier system, and satisfaction of the participants. The results indicate the extent to which the program is valuable in helping cooperative members to upskill, as well as strengthening their resilience and competitiveness in the digital economy.

One important development is product innovation. Because they typically ignored packaging quality and relied on similar product types with few variations, MSMEs found it more difficult to compete in the market prior to the program. After being exposed to e-commerce, participants reassessed their product strategies and experimented with new variations that might appeal to a wider range of consumers, better packaging, and more aesthetically pleasing presentation. This finding aligns with Innovation Theory, which emphasizes that both incremental and radical innovation are essential for sustaining growth and gaining competitive advantage (Evangelista et al., 2023). Practically, these changes improved customer perceptions and

expanded opportunities, while theoretically, they confirmed that innovation is a necessary process in ensuring business adaptability.

Access to capital also emerged as an important issue. Many MSMEs within the cooperative had long depended on personal savings or informal lending, limiting their ability to expand production and reach new markets. The program introduced the practice of maintaining digital transaction records, preparing simple financial reports, and separating personal and business finances, which laid the groundwork for financial credibility. When viewed through the Resource-Based View (RBV), these skills represent intangible resources that enhance the internal strength of MSMEs, supporting competitiveness and sustainability pandemic (Ausat & Suherlan, 2021). Theoretically, this demonstrates that strengthening internal resources such as financial literacy and administrative capability can turn structural limitations into strategic advantages, while practically, it opens opportunities for MSMEs to build trust with financial institutions and access more formal funding.

Business networking also showed meaningful progress. Prior to the program, MSMEs under the cooperative tended to operate in isolation, depending only on their immediate surroundings for sales. Through the activities, however, the cooperative began to serve as a platform for collaboration, where members exchanged supplier information, discussed logistics solutions, and supported each other in promotions pandemic (Suminah et al., 2022). This reflects the role of Social Capital Theory, which underlines the importance of trust, networks, and reciprocity in creating collective strength. Practically, this networking reduced operational burdens and created stronger bargaining power, while theoretically, it illustrates how digital transformation, when combined with cooperative structures, can enhance social capital and resilience within a community of entrepreneurs.

The issue of advanced digital literacy presented both challenges and opportunities. While participants became proficient in basic activities such as creating accounts and uploading products, they initially struggled with more complex features, including managing product variations, optimizing online visibility, and responding effectively to customer inquiries. Through continuous mentoring, they gained the confidence to explore and gradually master these functions. From an RBV perspective, these emerging skills can be considered valuable and hard-to-imitate resources, while from Innovation Theory, they demonstrate the role of ongoing learning and adaptation in developing marketing and process innovations. Theoretically, this underscores that digital literacy is not static but evolves through repetitive practice and experiential learning, while practically, it shows that sustained mentoring is vital for building confidence and capability in adopting digital tools to (Azhari et al., 2025).

Program sustainability was also demonstrated through the emergence of peer-to-peer mentoring and local leadership within the cooperative. Some participants who adapted more quickly became informal leaders, assisting others in solving technical issues and sharing strategies. Social Capital Theory and participatory approaches like ABCD and PAR, in which communities mobilise their own resources and actively participate in problem-solving, are both reflected in this development. Practically, this reduced dependency on external facilitators and nurtured a culture of mutual support, while theoretically, it demonstrates that sustainable empowerment requires not only technical knowledge but also strong social ties and shared responsibility.

The outcomes of the program can, in the end, be viewed through an integrated theoretical framework. Product and market innovations underscore the need for ongoing change while the RBV considers new skills and knowledge as intangible resources that aid MSME competitiveness. The Social Capital Theory regards the strengthened ties and peer learning as social capital that facilitates enduring sustainability. These outcomes, in theory, reinforce the idea that to empower participants in the digital economy, social capital, resources, and innovative strategies must also be integrated.

From a sustainable development perspective, the results of this community service program directly contribute to several Sustainable Development Goals (SDGs). The improvement of financial literacy, business innovation, and e-commerce skills among women-led MSMEs aligns with SDG 1 (No Poverty) and SDG 5 (Gender Equality) by reducing economic vulnerability and empowering women through entrepreneurship. The increase in productivity and competitiveness

supports SDG 8 (Decent Work and Economic Growth) by fostering inclusive economic participation and job creation, while the integration of digital tools and innovation reflects SDG 9 (Industry, Innovation, and Infrastructure) by advancing technological adaptation and digital transformation among micro and small enterprises. Collectively, these achievements highlight that community-based digital empowerment can serve as a strategic pathway to realizing the global agenda for sustainable, inclusive, and resilient economic growth.

CONCLUSION

The community service activities undertaken by the Karsa Selaras Partner Cooperative indicate that the introduction of business-to-consumer (B2C) e-commerce activities is an innovative strategy for improving the revenues and the scaling up of the MSMEs. Education, training and mentoring provided participants with not only theoretical constructs, but also practical tools and the necessary confidence to operate and control various digital platforms. For community educators, this positive outcome attests to the efficacy of community education initiatives in enabling digital transformation and for populations that for the most part, have only basic digital literacy. Other positive outcomes of the initiative include a heightened sense of technology and changed attitudes towards entrepreneurship and the emergence of socially transformative activities in the Cooperative community. The program is effective in sustaining positive social change, indicating that behavioral issues can be addressed in unison with providing technical interventions. More work is necessary to provide the initiative with the necessary sustainability, particularly with the improvement of the product presentation, the application of marketing visuals, and the expansion of access to financial and business networks. e-Commerce, with strategic design and collaboration, has the potential to provide MSMEs with the required competitiveness and agility within the digital economy. The initiative can also serve as a model for other cooperatives in Indonesia.

STATEMENTS ON ETHICS

The ethical principles and considerations that place a high value on respecting the participants' rights, privacy, and dignity guided the conduct of this community service program. Prior to the implementation of activities, the program team obtained informed consent from the cooperative administrators and MSME members involved. Participation in all stages of the program, including education, training, and mentoring, was voluntary, and participants were informed of the objectives, benefits, and potential impacts of the program. All data collected during the activities, including responses to interviews, questionnaires, and evaluation forms, were treated with strict confidentiality and used solely for academic and program development purposes. No sensitive personal data was disclosed in any form of publication, and anonymity was maintained throughout the reporting process. Furthermore, the implementation of this program adhered to the institutional ethical guidelines of the authors' affiliated university, as well as the general principles of community-based research ethics, namely beneficence, non-maleficence, autonomy, and justice. The program did not cause harm to participants; instead, it was designed to provide direct benefits in the form of increased knowledge, skills, and empowerment in digital literacy and e-commerce adoption.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the implementation and publication of this community service program. All activities were carried out based on mutual collaboration between the authors, the affiliated university, and the partner institution, namely Koperasi Mitra Karsa Selaras. Every stage of planning, implementation, and evaluation was conducted transparently, and all decisions were made through a consensus that had been agreed upon by all parties involved. Therefore, the outcomes of this program solely reflect academic contributions and the genuine efforts of collaboration without any influence of personal or institutional conflicts.

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