



Social media as economic capital: A qualitative study on the digital strategies of fishing communities in Kupang City

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ABSTRACT

The advancement of digital technology has opened new opportunities for traditional fishing communities to improve household livelihoods through social media. This study, conducted in Kampung Nelayan Oesapa, Kupang City, examines how social media is utilized as an economic strategy by local fishers. Using a qualitative descriptive approach, the research involved five purposively selected participants who actively use Facebook and WhatsApp to market their catch. Data was collected through observation, in-depth interviews, and documentation, and analyzed using descriptive and triangulation techniques. The findings show that social media plays an important role in disseminating weather information for fishing planning, providing market price information that strengthens fishers' bargaining positions, and expanding distribution networks beyond the local community. However, several challenges remain, including limited digital literacy, unstable internet connectivity, and social resistance among community members unfamiliar with technology. The study concludes that social media functions not only as a communication medium but also as a form of economic capital that transforms traditional fish marketing practices. This research contributes to the understanding of social media use in maritime communities and offers practical insights for promoting digital-based economic empowerment in coastal areas.

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Introduction

Over the past decade, digital transformations have drastically altered the way individuals work, relate to one another, and afford to sustain life as a member of society. This further affects the traditional fishing communities that historically comprised a subsistence lifestyle with face-to-face interactions. This can be noted in RT 031, RW 011, Kampung Nelayan, Oesapa Village, Kelapa Lima District, Kupang City, where the existence of digital transformation can be seen to affect the daily life of local fishermen. Observation and initial interviewing of local fishermen indicate that Facebook and WhatsApp have been crucial to the local fishermen's daily activities. This can be noted since Facebook and WhatsApp are being used by local fishermen for weather observations with access to the Meteorology, Climatology, and Geophysics Agency (BMKG), knowledge of market orders for fish at a reduced price, and reaching out to a broader pool of customers to cover neighboring areas. Nonetheless, this was not a straightforward or homogeneous process for fishermen to enhance their livelihood by making Facebook and WhatsApp a part of their activities. This was due to a lack of understanding of applying technology to benefit their livelihoods and an inability to erase existing conventional means of trading with middlemen to continue with mistrust between old procedures and digital technology utilization (Al. Jumroh et al., 2024; Asirin & Argo, 2017; Pratiwi et al., n.d.; Ridha et al., 2023; Saville et al., 2015; Sukma et al., 2025; Susri et al., 2018).

For the fishing community, using social media is not only a choice of technology; it is also a way to adjust to economic and environmental unpredictability. Field interviews show that when bad weather threatens their catch, fishers use WhatsApp groups to get real-time updates on the height

of the waves and the direction of the wind. For marketing, they take pictures of their catch and post them to their personal statuses or customer groups instead of waiting for customers at the Oesapa fish market like they used to. This is a new kind of maritime job that is speedier, more flexible, and connected to digital networks. However, this change also creates a new digital hierarchy based on age and education: younger fishers are "technology operators," while older fishers still have the last say on decisions about going to sea. This shows that digital transformation in coastal communities is not just about changing technology; it is also a highly social process that affects power dynamics, solidarity, and the flow of money among fishers.

This dynamic can be theoretically analyzed within the framework of *social media use theory*. Kaplan and Haenlein (2010) underscore that social media serves not just as a conduit for interpersonal connection but also as a strategic platform for information retrieval, social network development, and the augmentation of economic potential for individuals and groups. This viewpoint corresponds with boyd (2014), who emphasizes the social aspect of digital media as a novel domain of interaction that surpasses physical limitations. In this context, the digital practices of Oesapa fishers demonstrate that technology functions not merely as a technical tool but as a dynamic social environment that cultivates new forms of knowledge, relationships, and economic value. Other researchers (Aricat & Ling, 2018; Ismail & Khalid, 2015; Saville et al., 2015) have contended that social media can convert conventional economic relationships into more participative and decentralized modes of exchange. In the coastal towns of Kupang, social media functions as a domain where technology and local culture converge and negotiate, resulting in hybrid forms of

digital economic behavior that reconciles modernity and tradition

Recent developments in the literature indicate a growing interest in the social implications of work digitalization; however, most studies remain concentrated in urban settings, micro-entrepreneurship, or digital education. Research focusing on coastal communities in eastern Indonesia remains scarce and largely descriptive, often overlooking the experiential and subjective dimensions of those directly involved. Yet, fishers inhabit a distinctive social ecology—one that is dependent on weather conditions, operates in open public spaces, and is sustained by a fragile economic structure. Several studies (Budiwitjaksono et al., 2023; Putranto et al., 2022; Putri et al., 2024; Saville et al., 2015; Sukma et al., 2025; Susri et al., 2018) have examined the relationship between digitalization and local economies, but few have explored how social media is employed by fishers themselves to navigate uncertainty—whether related to weather, prices, or markets. This gap presents an opportunity to reconceptualize digitalization not merely as a technological process but as a lived social experience imbued with emotion, risk, and creativity.

The urgency of this research becomes increasingly evident when situated within the global context of post-pandemic labor transformation and the accelerating digital economy. The *International Telecommunication Union* (2024) reports a significant rise in social media use across the informal sector as a response to supply-chain disruptions and global economic fluctuations. Yet, in peripheral regions such as East Nusa Tenggara, access to digital infrastructure remains limited, and technological literacy among local populations is relatively low. This situation creates a paradox: while digitalization promises greater efficiency and connectivity, it simultaneously risks widening social and economic disparities

between communities. By focusing on the lived experiences of fishers in Oesapa, this study provides a micro-level lens for understanding how digital transformation in the world of work unfolds unevenly yet through ongoing social negotiation. The qualitative approach adopted here enables a nuanced exploration of how fishers interpret, appropriate, or even resist technology in their everyday lives.

This study explicitly aims to analyze how social media functions as a form of economic capital among fishing communities in Kupang City. The research focuses on three main aspects: (1) the role of social media in providing weather information relevant to planning fishing activities, (2) its contribution in facilitating access to market price information, and (3) its function in expanding marketing networks for marine products. By examining these three dimensions, the study seeks to offer a phenomenological account of fishers' digital experiences—how they construct the meanings of “work,” “risk,” and “security” within newly emerging online spaces.

This research makes a dual contribution. Theoretically, it expands the framework of social media use theory by incorporating the setting of coastal communities—an area that has been significantly under-represented in global discourse on the digital economy. The research indicates that digital connection improves economic efficiency while simultaneously cultivating novel forms of social solidarity and redefining the concept of labor in the networked age. The findings offer an empirical basis for the development of digital economic empowerment programs for fishing communities, especially in Indonesia's frontier, outermost, and underdeveloped regions (*3T areas*), by enhancing digital literacy, improving infrastructure access, and providing online marketing training. This work addresses a scholarly gap and advances theory and

policy that better reflects the experiences of coastal communities in the context of global technology changes.

Method

This study employed a qualitative approach with a case study design, aimed at gaining an in-depth understanding of the meanings and social experiences of fishers in utilizing social media as both economic and social capital within coastal environments. This approach was chosen because it aligns with the contextual and dynamic nature of the phenomenon under investigation—specifically, the everyday practices of digital media use embedded in the lived realities of fishing communities. The case study design enabled the researcher to observe the phenomenon in its natural setting and to explore the social processes that underpin the actions and interactions of the actors involved (Yin, 2018). In this context, the digital practices of fishers in RT 031, RW 011, Kampung Nelayan, Oesapa Village, Kelapa Lima District, Kupang City, are not treated as static data but as representations of an ongoing process of social adaptation to technology.

A qualitative approach was employed as it allows the researcher to develop an interpretive understanding (*verstehen*) of social reality from the participants' perspectives (Schud, 1967). This study is grounded in the premise that the use of social media is not merely a rational economic act but also a cultural practice shaped by interpretation, lived experience, and the negotiated meanings constructed by individual fishers and their communities. Accordingly, a naturalistic case study design was chosen to focus on the social context, interactions, and digital communication practices embedded in the everyday life of the fishing community in Oesapa.

The study was conducted in Kampung Nelayan, Oesapa Village, a coastal area located in Kelapa Lima District, Kupang City, East Nusa Tenggara. This area is recognized as one of the centers of traditional fisheries-based economies, yet in recent years it has undergone notable transformation due to the increasing penetration of digital technology. The site was selected because social media has been actively utilized by a segment of the local fishing community as a tool for economic communication and marketing of their catch, despite ongoing challenges related to limited infrastructure and low levels of digital literacy.

The research involved five active fishers selected through purposive sampling, based on the following inclusion criteria: (1) having worked as an active capture fisher for at least five years, (2) regularly using social media—particularly Facebook and WhatsApp—to support economic activities such as promoting catches or communicating with buyers, and (3) being willing to share information openly through in-depth interviews. Participant selection also took into account diversity in age and educational background to capture a broader range of digital experiences. All participants resided in RT 031, RW 011, with their primary economic activities centered around the coastal area and the Oesapa fish market.

Data was gathered through three principal methods: (1) participant observation, (2) semi-structured in-depth interviews, and (3) digital documentation. Participant observation was performed in the port area and fishing hamlet to examine work habits, mobile device utilization, and digital interactions among fishers. The researcher participated minimally in community events to acquire a more profound comprehension of informal communication dynamics.

Comprehensive interviews were conducted with five key informants utilizing

a semi-structured guide to examine their experiences with social media usage, opinions of its advantages and limitations, and alterations in their household economic plans. All interviews were recorded with participants' informed consent using a digital audio recorder and transcribed verbatim for analysis.

Simultaneously, digital documentation encompassed the compilation of WhatsApp group screenshots, Facebook posts pertaining to fish captures, and field notes featuring images of digital marketing endeavors. The non-verbal data corroborated and validated the conclusions from both observations and interviews.

Data were examined with the theme analysis methodology established by Braun and Clarke (2019). The analytical procedure was executed in multiple consecutive phases:

1. Transcription and familiarization - all interview transcripts and field notes were meticulously reviewed to attain a thorough comprehension of the contextual significances within the data.
2. Open coding - preliminary labels were allocated to pertinent segments of the data, including “access to meteorological information,” “marketing strategies,” and “digital social support.”
3. Theme classification - analogous codes were grouped into overarching topics,

such as “digital transformation of fishing labor” and “online community solidarity.”

4. Interpretation and theme validation – the identified themes were further linked to the Social Media Use (SMU) theory and qualitative literature concerning digital economy in coastal settings to guarantee conceptual consistency and theoretical congruence.

The researcher utilized NVivo 12 Plus software to streamline data administration and topic tracking, aiding in the coding process, pattern identification, and visualization of inter-theme linkages.

Results and Discussion

This study aims to comprehend the lived experiences of fishers in RT 031, RW 011, Kampung Nelayan Oesapa, regarding their utilization of social media as a component of their household economic strategy. In-depth interviews, participant observation, and digital documentation revealed many narratives that illustrate the intricate relationships among technology, economy, and the social identity of fishers in the digital age. Thematic analysis identified three principal themes that encapsulate the social dynamics and significances inherent in participants' experiences:

Table 1. Thematic mapping of research findings

Main Theme	Subthemes	Emergent Key Meanings
1. Social media as a means of navigating safety and maritime knowledge	a. WhatsApp as a “social radar” for weather and wind direction. b. Collective sense of security through information sharing.	Digital technology functions as an instrument of risk mitigation and community solidarity.
2. Digital networks as arenas of bargaining and economic transformation	a. Price negotiation and marketing of fish catches. b. Household economic independence and the rise of the “digital fisher”.	Social media transforms traditional patron–client relationships into horizontal economic networks.
3. Social challenges and tensions in the process of coastal digitalization	a. Digital literacy as a generational dividing line. b. Social resistance to emerging work models.	Technology generates new hierarchies and reshapes community values.

1. Social media as a tool for enhancing safety and maritime expertise
2. Digital networks as platforms for negotiation and economic change
3. Societal issues and strains in the coastal digitalization process

Social media as a means of navigating safety and maritime knowledge

A day can begin for residents of the Oesapa fishing village with a gentle chiming of notifications from the WhatsApp group entitled “Nelayan Kupang Timur” (“East Kupang Fishers”). This community of dozens of members shares information on a minute-by-minute basis about the state of the sea. Although the messages are quite innocuous – a snapshot from a Meteorology, Climatology, and Geophysics Agency (BMKG) messaging app, a picture of the eastward horizon, or a warning for the westerly winds – for the fishermen, this information can be a lifesaver.

One participant (R1) said:

“When the weather starts going poorly, the group gets to work immediately. ‘Waves are big around the cape; don’t go there’ – somebody may say. Formerly, we did it by guessing the winds; nowadays, we wait for the updates that arrive as messages on WhatsApp.”

In this context, for this community of fishers, WhatsApp has turned into a communication device where it acts as a kind of ‘social radar’, a technology that transmits information that goes beyond being only meteorological information; instead, it signifies a kind of solidarity and vigilance on the part of the community members. During adverse weather conditions, members of the group access each other’s location by making use of the ‘share location’ function.

This example clearly shows the integration of digital technology with local knowledge systems. On a phenomenological level, this kind of subjective experience

has several existential undertones. This technology does not displace the embodied knowledge of the fishermen at sea; instead, it expands their horizon of knowledge. Their feelings of safety are generated not only from technology-related information but from a kind of togetherness that takes place through digital technology.

Digital networks as platforms for negotiation and economic transformation

Upon the boats’ return to land, the fishermen’s labor is far from complete. Contemporary post-fishing activities also occur in the digital realm. Fishers capture shots of their catch—mackerel, Spanish mackerel, or lobsters—and submit these photographs to their WhatsApp status or the Facebook group Pasar Ikan Kupang (Kupang Fish Market). Messages arrive within minutes: “I’ll take two kilos,” or “Can you deliver to Lasiana?” What is the cost?

One participant (R3) elucidated:

“Historically, we merely awaited buyers at the market, occasionally resulting in price declines.” We now publish on Facebook, attracting shoppers to our platform. We simply communicate with frequent consumers via WhatsApp.

Fishers utilize social media not only to sell products but also to foster and maintain relationships with their customers. WhatsApp functions as a conduit between maritime activities and commerce, as well as between manual labor and digital networks. A novel sort of trust is emerging, no longer reliant on direct interactions but rather on swift responsiveness and price transparency.

A notable subtheme that has evolved is the proliferation of “digital fishers,” especially among younger demographics. The offspring of fishermen, more adept with mobile devices, aid their parents in administering

Facebook accounts, retouching images of their catches, and addressing consumer enquiries.

One participant (R4) stated:

“My father can’t read the prices on Facebook, so I help him. I transmit the information to purchasers and post the images.

The engagement of younger family members demonstrates how digital revolution creates novel avenues for familial involvement in the maritime sector. Social media streamlines distribution channels, enhances profit margins, and concurrently transforms traditional hierarchical economic relationships into more participatory structures. This approach generates conflict; while technology enhances efficiency

and broadens options, it necessitates alterations in thinking, work practices, and intergenerational collaboration.

This schematic model illustrates how social media platforms—primarily WhatsApp and Facebook—mediate the circulation of information and economic value among fishers in Oesapa. Weather updates and market data flow through digital communication channels, shaping fishers’ decisions about when to go to sea and how to market their catch. Social media thus acts as both an *informational infrastructure* and an *economic network*, connecting traditional livelihoods with digital market systems while reinforcing community trust and adaptive capacity in coastal economies.

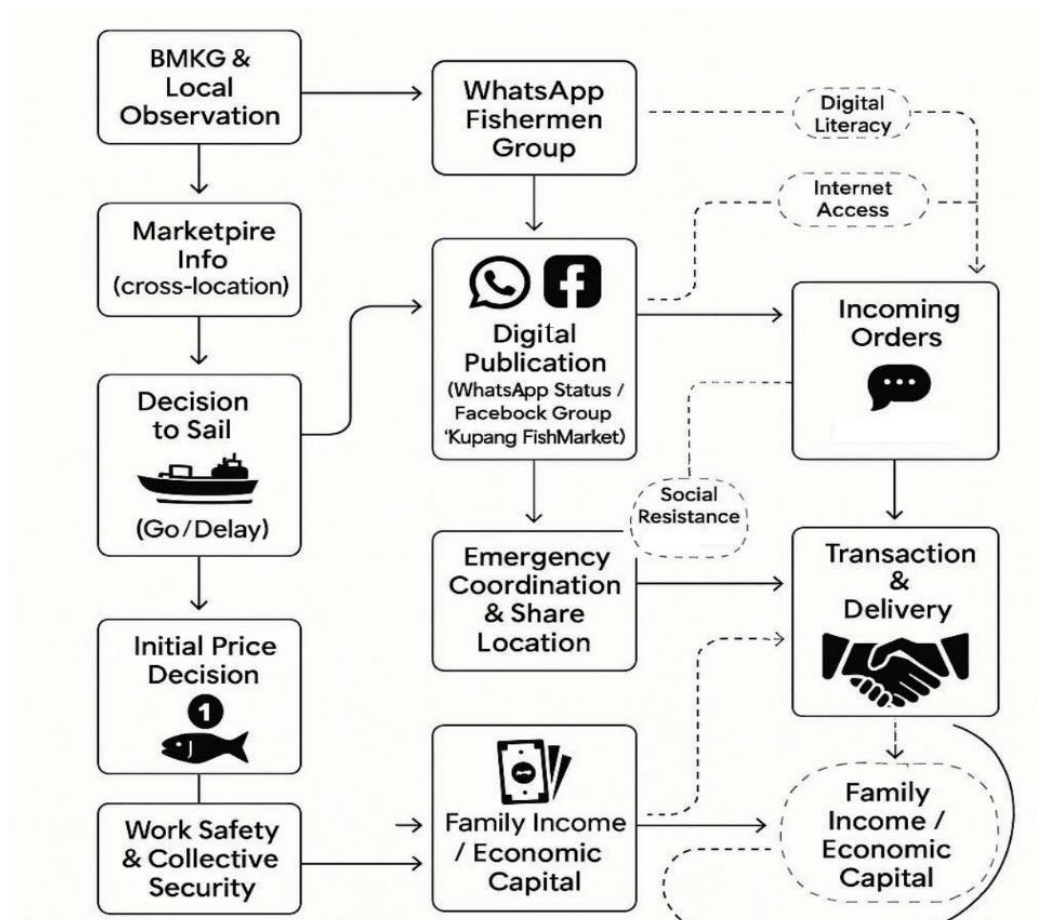


Figure 1. Schematic model of the relationship between social media, information, and economic capital

Social challenges and tensions in coastal digitalisation

Underneath the visible achievements of digitalization exists a nuanced and significant layer of social conflict. Access to technology among fishers is not uniform. Certain senior fishers report a growing sense of alienation from the new system. One participant (R2), a 57-year-old fisherman, acknowledged:

“Using a mobile phone confuses me. The children manage the situation; however, when the signal is lost, the appropriate location for waiting remains unclear. Financial losses may occur as a result of that.”

The lack of digital literacy has resulted in a generational divide in the fishing community. Younger fishers exhibit faster adaptation yet bear the extra social responsibility of serving as “digital intermediaries” for their families. Older fishers persist in utilizing traditional methods, prioritizing trust-based relationships rather than technological efficiency. This scenario presents a social paradox: technology improves connectivity while concurrently reinforcing social differentiation.

The second subtheme addresses social resistance to the digital transformation of the local economy. Some fishers view online sales systems as a potential threat to established social relationships with traditional buyers or intermediaries.

Another participant (R5) observed:

If all transactions are conducted via phone, it may alienate traditional buyers. They may perceive that we have lost trust in them.

This statement highlights a moral dilemma in economic transition: the conflict between preserving social relationships and achieving economic efficiency. These experiences highlight that digital adaptation involves not only the adoption of technology but also the negotiation of values and social identity within the community.

This theme reveals that grassroots digitalization is inherently connected to social and cultural values. Technology offers both opportunities and challenges to communal harmony, with the success of digital transformation hinging on the effectiveness of local values in engaging with emerging digital systems.

The three themes outlined indicate that, for the fishers of Oesapa, social media serves not only as a communication tool but also as a novel social space that connects traditional and modern experiences. WhatsApp functions as an early warning system that enhances collective security, whereas Facebook acts as an economic platform where social relationships are transformed into financial capital. This process of digitalization presents an inherent ambiguity, as it both expands opportunities and exacerbates social divides, thereby

Table 2. Matrix of digital social dynamics within the fishing community

Social Dimension	Digital Practice	Emergent Social Meaning
Solidarity	WhatsApp groups as spaces for mutual care and weather information sharing	Collective sense of security; strengthened community cohesion
Economy	Price negotiation and product marketing via Facebook and WhatsApp	Reinforcement of economic autonomy; emergence of the “digital fisher”
Literacy & Generation	Intergenerational transfer of digital knowledge	Cross-generational collaboration; formation of a technological hierarchy
Values & Relationships	Resistance to online buying–selling patterns	Tension between economic efficiency and the preservation of trust-based values

challenging established values of communal solidarity.

The experience of Oesapa's fishers in utilizing social media illustrates a hybrid social process, marking a transition from a work culture based on personal familiarity to a more rational and open digital network. New forms of identity and social resilience are emerging among coastal communities within the tension between tradition and modernity.

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The findings of this study reveal that social media—particularly Facebook and WhatsApp—functions as a new form of both economic and social capital for fishing communities in Kupang City. Through daily digital interactions, fishers not only access information on weather conditions and market prices but also cultivate spaces of solidarity and collective economic strategies. Their experiences

demonstrate that social media operates as a “technology of everyday life,” mediating work, knowledge, and a sense of security amid rapid social transformation. In this context, the use of social media represents a new mode of cultural adaptation among coastal communities to the digital economy, illustrating how technology is reinterpreted through local values, social relationships, and the lived economic experiences of fishing households.

The second theme demonstrates the transformation of traditional economic relations due to social media, moving from a patron-client system to a more horizontal, network-based economy. Fishers have reduced their reliance on middlemen by utilizing WhatsApp and Facebook for price negotiations and direct sales of their catches to consumers. This transformation represents a fundamental shift in the logic of production and distribution, transitioning from an economy based on personal trust to one organized around digital visibility. The findings support the assertions of Ismail and Khalid (2015) and Suciati and Susilowati (2022) regarding social media's role in enhancing distribution networks and increasing the bargaining power of small-scale entrepreneurs.

This study presents a new dimension: the interrelation between weather information and marketing strategies as integral components of maritime economic practice. This relationship indicates that the digitalization of the fishing economy encompasses not only market considerations but also the management of ecological and social risks. This interdependence enables fishers to adapt to climate variability and market fluctuations, thereby improving the long-term sustainability of their livelihoods. Furthermore, digitalization promotes the implementation of sustainable practices, consistent with the findings of Ikhwan et al. (2022), which indicate that environmental

adaptability may facilitate success in addressing market challenges.

The second theme demonstrates that social media has shifted traditional economic relations from a patron–client framework toward a horizontal, network-based economic model. Fishers are no longer fully dependent on middlemen; instead, they utilize WhatsApp and Facebook to negotiate prices and sell their catches directly to consumers. This transformation signifies a change in the logic of production and distribution—from an economy rooted in personal trust to one driven by digital visibility. These findings reinforce the arguments of Nugroho and Syarif (2020) and Putri (2021), who assert that social media can expand distribution networks and strengthen the bargaining position of small-scale entrepreneurs. However, the present study adds a new dimension by highlighting the interconnectedness between weather information and marketing strategies as two inseparable components of maritime economic practices. This interrelation suggests that the digitalization of the fishing economy is not merely market-oriented but also entails the management of ecological and social risks.

Within the framework of *networked economy theory* (Castells, 2010; Graham et al., 2019), digital networks generate new forms of power grounded in access to information. In the context of Oesapa’s fishers, this power is distributed more equitably: those with higher digital literacy serve as primary intermediaries who disseminate information to others. This role has given rise to a new social figure—the *community digital broker*—who bridges the gap between the physical and digital realms. These findings enrich *Social Media Use Theory* by introducing the dimension of a *social–economic connecting function* based on community solidarity rather than solely on individual economic rationality.

From the perspective of *networked economy theory* (Castells, 2010; Graham et al., 2019), digital networks generate new forms of power grounded in access to information. In the context of Oesapa’s fishing community, this power is distributed more equitably: fishers with higher levels of digital literacy act as primary intermediaries who channel information to other groups. This role gives rise to a new social figure—the *community digital broker*—who bridges the gap between the physical world and online spaces. These findings enrich *Social Media Use Theory* by introducing the dimension of a *social–economic connective function* rooted in community solidarity rather than individual economic rationality.

Theoretically, this study expands the scope of *Social Media Use Theory* by introducing the context of traditional, ecologically vulnerable communities as a new domain for examining social media engagement. Whereas classical perspectives tend to conceptualize social media primarily as a tool for participation or mass communication, the findings of this research position it as a form of *hybrid socio-economic capital* operating within a liminal space between tradition and modernity. In this regard, social media functions as an epistemological bridge linking two systems of knowledge—local ecological wisdom and global digital information—which together construct an *ecology of knowledge* (Santos, 2018).

Conceptually, this study contributes to the discourse on *digital inclusion* by demonstrating that technological adaptation in marginalized communities is determined not solely by the availability of infrastructure but by the community’s social capacity to negotiate its values and identity within new digital frameworks. In this sense, the digital transformation of Oesapa’s fishing community can be interpreted as a form of *cultural resilience*—the ability of a community to preserve its collective values amid the

pervasive influence of market logics and global algorithms.

Practically, the findings offer direction for more context-sensitive policy formulation. Local governments and community empowerment agencies may draw on these insights to design initiatives that strengthen community-based digital literacy, enhance coastal internet infrastructure, and develop online marketing training programs that remain responsive to local social values. Thus, technology should not be viewed merely as a productive tool, but as a social space capable of fostering economic sustainability while mediating the tensions between modernity and tradition in the coastal regions of Eastern Indonesia.

Conclusion

This study concludes that social media—particularly Facebook and WhatsApp—has become a new social and economic sphere for fishing communities in Oesapa, Kupang City. Through practices such as sharing weather information, negotiating prices, and promoting catches, social media functions not merely as a communication tool but as a form of *hybrid socio-economic capital* that integrates communal solidarity (*gotong royong*), maritime work ethics, and the logic of the digital economy. The digital transformation taking place is not only technological but also cultural, as community solidarity and digital networks intertwine in navigating economic and ecological uncertainties. Theoretically, this study extends the scope of *Social Media Use Theory* by demonstrating that social media can operate as an ecosystem of knowledge and social resilience within traditional communities, while practically offering direction for coastal digital literacy policies and technology-based economic empowerment.

The findings further reveal that digitalization is not a homogeneous process;

it is always mediated by culture, social relations, and local capacities. Practically, the results of this study can inform public policies on coastal digital literacy, online entrepreneurship training, and the development of internet infrastructure in frontier, outermost, and underdeveloped regions (*3T areas*). The study's limitations lie in its narrow geographic focus, relatively homogeneous participant group, and limited fieldwork duration, leaving aspects such as gender roles and digital power dynamics insufficiently explored. Future research is therefore encouraged to broaden the geographical scope and employ approaches such as *digital ethnography* or *mixed methods* to gain deeper insights into how digital technologies reshape social relations, identities, and the economic sustainability of coastal communities amid ongoing digital transformation.

Declaration of Ownership

This article is our original work.

Conflict of Interest

There is no conflict of interest to declare in this article.

Ethical Clearance

This study was approved by the institution.

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