

NAVIGATING THE CHALLENGES OF GLOBALIZATION (THE SOCIO-ECONOMIC DYNAMICS OF SALT FARMERS)

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Abstract. This study examines the socio-economic dynamics of salt farmers in the northern coast of Probolinggo Regency under the pressures of globalization. Farmers face structural vulnerabilities such as weak bargaining power, dependence on middlemen, and limited access to technology and markets, raising questions about how they sustain livelihoods while maintaining cultural identity. The novelty lies in integrating economic ethnography with cultural theme analysis, showing that economic practices are deeply embedded in cultural frameworks. An economic ethnography approach was applied through participatory observation, in-depth interviews, and documentation, supported by qualitative analysis with ATLAS.ti. Snowball sampling involved fifty farmers with diverse age, experience, land ownership, and production orientation. The findings reveal five main domains: production strategies, distribution and marketing, socio-cultural values, institutional relations, and attitudes toward technology. Taxonomic analysis grouped these into survival, social values, and global adaptation, while componential analysis highlighted six contrasting dimensions. Cultural theme analysis emphasized two guiding principles blessings and heritage. Modernization and sustainability of salt agribusiness require aligning innovation and policy with local cultural values to ensure inclusivity and resilience.

Keywords: cultural values, globalization, rural agribusiness, Salt farmers, socio-economic dynamics.

I. INTRODUCTION

Globalization has marked a new era in rural socio-economic dynamics, including in salt farming communities on Indonesia's coasts. This transformation has occurred not only in trade and the mobility of goods, but also in how local communities interpret production, distribution, and consumption. In the context of salt production, globalization presents both opportunities and pressures: local salt must compete with imported salt, which offers more consistent quality standards, more competitive prices, and wider distribution access. On the other hand, Indonesian salt farmers, particularly those on the north coast of Probolinggo Regency, still rely heavily on traditional practices passed down through generations. Through the lens of economic ethnography, this phenomenon cannot be seen simply as a technical failure or underdevelopment, but rather as the result of the interaction between tradition, social structure, and global market forces.

Recent literature reviews indicate that salt production is not merely a technical matter of producing a commodity but is also closely linked to everyday economic practices involving household decisions, social relations, and strategies for adapting to uncertainty (Habermehl, 2021; Yarker, 2017). Salt farmers on the coast of Probolinggo, for example, often find themselves in a dilemma: they want to improve quality and productivity, but limited capital, access to technology, and ties to middlemen networks limit their mobility (Basak et al., 2022; Fauziyah et al., 2023). Therefore, understanding the dynamics

of salt farmers in the era of globalization requires an economic ethnographic framework that connects local practices with global structures and highlights how the economy operates not only as a material activity but also as a social and cultural activity.

The main problem in this context is the paradox between the vast resource potential of coastal Probolinggo and the socio-economic vulnerability of salt farmers. Theoretically, globalization should open up broader market opportunities, but in reality, it places salt farmers in an increasingly subordinate position. In the northern coastal region of Probolinggo, farmers' dependence on middlemen is not merely an economic relationship, but also a social network involving debt, patronage, and loyalty. This demonstrates that the economy of salt farmers cannot be reduced to the rational logic of the market alone but is instead part of the embedded economy as theorized by Polanyi (Ament et al., 2022; Szelényi & Mihályi, 2021). Amidst climate change affecting harvest seasons, seawater intrusion, and global price fluctuations, these social relations increasingly determine farmers' survival strategies.

Common solutions offered include modernizing production, improving infrastructure, and establishing formal institutions such as cooperatives. However, this approach often overlooks the socio-cultural dimensions of farmer life on the coast of Probolinggo. Economic ethnography highlights that technical solutions that do not consider the social context tend to fail to take root at the local level (Killick, 2022). For example, the

distribution of geomembrane technology does increase productivity, but its adoption is limited because some farmers in Probolinggo still consider traditional methods more appropriate to their environmental conditions, work rhythms, and community traditions. This means that any external intervention must be tailored to local habits and socio-economic structures.

A more specific solution offered in the literature is a hybrid approach between technology and local wisdom. Syarif et al., (2025); Wiwoho & Prasada, (2024) assert that the use of geomembranes can improve salt quality, but its effectiveness is only achieved when combined with collective management based on farmer groups. On the other hand, research by (Fatihudin et al., 2022; Wismanu et al., 2023) shows that salt farmer cooperatives based on the value of mutual cooperation (gotong royong) are more successful in improving their bargaining position than cooperatives formed top-down by the government. In the context of Probolinggo, traditional salt farmer groups often possess strong social ties, despite facing limited managerial capacity. This emphasizes that institutional strengthening strategies cannot be separated from the local socioeconomic logic that governs the practice of mutual cooperation, patron-client relationships, and inter-farmer relations on the north coast.

Another relevant approach is optimizing social capital. Honorita & Yazid, (2022); Royali et al., (2024) emphasize that trust, kinship, and informal networks are crucial assets for farmers in navigating market uncertainty. Social capital serves not only as a social resource but also as an economic strategy for negotiating prices, sharing risks, and maintaining business continuity. From an economic ethnography perspective, this social capital functions as a "cultural currency" that enables farmers to survive in the vortex of globalization despite limited material resources. In Probolinggo, kinship networks among salt farmers and ties with local patrons play a crucial role in maintaining business sustainability despite global pressures. However, challenges arise when local social capital must confront a more individualistic and efficiency-oriented global market structure.

A literature review shows that previous research has focused on two key issues: first, the technical transformation of salt production; and second, the importance of formal institutions in strengthening farmers' positions. However, studies that combine technical perspectives with economic ethnography, examining how technology, institutions, and social capital interact in the daily practices of farmers in specific coastal areas like Probolinggo, are rare. Most studies remain trapped in the modern-traditional or local-global dichotomy, thus failing to capture the real dynamics of "hybridity" in the lives of salt farmers. This research gap provides an important foundation for this study, which examines how salt farmers navigate globalization through economic strategies embedded in their social and cultural relations.

Therefore, the purpose of this study is to deeply understand the socio-economic dynamics of salt farmers amidst the challenges of globalization using an economic ethnography approach, focusing on the coastal communities of northern

Probolinggo Regency. The novelty of this study lies in its attempt to connect the theory of economic globalization with the daily economic practices of coastal communities, thereby producing a more contextual and holistic understanding. The proposed hypothesis is that the success or failure of salt farmers in facing globalization is largely determined by their ability to integrate the logic of market economics with local socio-cultural logic. The scope of the study focuses on coastal villages in northern Probolinggo, which are centers of traditional salt production, with an ethnographic approach that allows for data collection through participatory observation, in-depth interviews, and analysis of daily practices. Thus, this study is expected to provide theoretical contributions to the development of local political economy studies in the era of globalization, as well as practical contributions to the formulation of policies that are sensitive to the socio-cultural context in coastal areas.

II. RESEARCH METHODS

This research uses an economic ethnography approach, a qualitative strategy that emphasizes the exploration of economic practices as an integral part of social and cultural life. This approach was chosen because the socio-economic dynamics of salt farmers on the north coast of Probolinggo Regency cannot be understood solely from quantitative data, but also from their daily practices, patron-client relationships, and strategies for adapting to the global market. Balmaceda, (2022) emphasized, ethnography allows for dense descriptions that reveal the meaning of economic actions, while (Cai, 2024) emphasizes the close relationship between economics and social networks in the context of globalization.

The research location was centered in the villages on the north coast of Probolinggo Regency, specifically Paiton, Gending, Dringu, and Tongas, which are centers of traditional salt production. These areas were chosen because they represent a diversity of production methods, from traditional techniques to limited adoption of modern technology, while also demonstrating the complexity of farmers' relationships with middlemen, cooperatives, and processing industries.

The research sample was obtained through snowball sampling (Au, 2022; Kubiciel-Lodzińska, 2021). This technique allows researchers to reach relatively closed social networks by starting with key informants such as farmer group leaders or local patrons and expanding based on their recommendations. Fifty respondents were interviewed and observed in-depth, comprising smallholder farmers, medium-scale pond managers, and distribution actors such as middlemen. This composition provided a varied picture in terms of experience, age, pond ownership status, and education level.

Data were collected through participant observation, in-depth interviews, and documentation studies. Observations were conducted over three months, during which researchers were directly involved in production activities, harvesting, and market interactions. Semi-structured interviews were used to explore farmers' narratives regarding survival strategies, patron-client relationships, and views on policy and globalization. Documentation in the form of official reports and

cooperative archives was used to strengthen the analytical framework.

Data analysis used ATLAS.ti software (Friese, 2019) through open coding, axial coding, and selective coding. In the initial stage, inductive codes such as "dependence on middlemen" or "mutual cooperation in production" were identified. The next stage grouped the codes into broad themes, such as distribution structures and community social capital. The final stage integrated the themes into a conceptual narrative explaining farmers' strategies in navigating globalization, using an economic ethnography framework as a foundation for interpretation.

To ensure validity, triangulation of sources and methods (Smit & Scherman, 2021) was used, comparing information from farmers, middlemen, and village officials, as well as combining observations, interviews, and documents. Member checking was conducted by asking several informants to review the analysis results. Reliability was maintained with an audit trail that recorded all stages of the research, allowing for retracement. Ethical aspects were addressed by obtaining verbal and written consent from respondents prior to data collection. Respondent identities were anonymized to protect privacy and mitigate social and economic risks.

III. RESULTS AND DISCUSSION

Domain analysis

Domain analysis is the initial stage in an economic ethnography approach, aiming to identify the categories of meaning and concepts used by salt farmers in interpreting their daily activities. Domains are understood as conceptual units that organize experiences and practices, both social and economic. Based on field research and data triangulation, five main domains shape the behavior of salt farmers on the north coast of Probolinggo Regency: (1) production strategies, (2) distribution and marketing, (3) sociocultural values, (4) institutional relations, and (5) attitudes toward technological interventions. Each of these domains is interconnected and forms a complex framework that influences the farmers' economic decisions and social interactions.

Table 1. Main Domains of Salt Farmer Behavior on the North Coast of Probolinggo Regency

Domain	Description	Empirical
Production Strategies	Refers to how farmers manage their salt ponds, either using traditional methods or semi-modern approaches. Choices are influenced by capital, experience, and family heritage.	Most farmers use soil-based ponds and family labor. A small number have tried geomembrane, but face financial constraints. A farmer in Paiton stated, "Using plastic sheets makes the salt whiter, but the cost is too high; I cannot afford it."
Distribution and Marketing	Covers the mechanisms of salt sales, patron-client relations, and access to markets. Middlemen dominate the distribution chain.	Farmers prefer selling to middlemen because of immediate cash payment and market certainty. A farmer in Dringu remarked, "Selling directly to the market is risky; it might not sell, so

Domain	Description	Empirical
		<i>it's better to go through middlemen even if the price is lower."</i>
Socio-Cultural Values	Shows that salt production is perceived as ancestral heritage and a means of obtaining blessings, not merely as an economic activity. Mutual cooperation is also strong.	Farmers in Gending call salt "our parents' legacy." Harvest season becomes a communal event, where extended families and neighbors help each other without formal wages.
Institutional Relations	Explains the relationship between farmers and formal institutions such as cooperatives, as well as informal networks with patrons, families, and local communities.	Cooperatives are often seen as ineffective and merely administrative. A farmer in Tongas said, "The cooperative rarely helps; it's better to rely on middlemen because they provide cash immediately."
Attitudes Toward Technological Interventions	Describes farmers' responses to technological innovations and modernization policies. Attitudes range from resistance to adaptation.	Younger farmers experiment with price and weather apps or product diversification, while older farmers trust traditional methods. A senior farmer stated, "Good salt is made the way our ancestors did, not by machines."

Source: Processed Primary Data (2025)

Table 1 shows that production strategy is the most fundamental domain in the lives of salt farmers. Salt production on the coast of Probolinggo is generally still based on traditional techniques using soil ponds. The majority of farmers utilize family labor, including involving children during the harvest season. This practice reflects a subsistence pattern where production is not solely aimed at the market but is also seen as a family obligation to maintain the continuity of tradition. A small number of farmers have begun using modern technologies such as geomembranes. This technology has been proven to improve salt quality to meet industrial standards (Prihantini et al., 2024; Tansuchat, 2023). However, adoption remains low due to high investment costs and limited access to capital and training. Smallholder farmers with limited land area tend to stick to traditional methods, which are considered safer and more appropriate to their resource conditions. Thus, farmers' production strategies are not solely technical but also reflect the choices of bounded rationality, as explained by Simon (Petracca, 2021; Schwarz et al., 2022). This phenomenon indicates that the production domain is in a tug-of-war between traditional heritage and the demands of modernization. Farmers consider not only the technical and economic aspects, but also the cultural meaning and social sustainability of the practices they undertake.

The distribution and marketing of salt production demonstrates the dominance of the patron-client relationship between farmers and middlemen. Middlemen not only act as buyers of their crops but also as capital providers, lenders, and risk guarantors. This relationship makes farmers economically and socially dependent on their patrons, thus weakening their bargaining position in the market. This bond is also closely linked to the dimension of trust. For most farmers, selling to middlemen is a safe option because payment is made directly and reliably. Conversely, selling directly to markets or

industries is considered risky because it requires transportation costs, negotiation skills, and quality assurance that are often difficult to achieve. This is consistent with Ferdous & Nunan, (2025); Samah et al., (2023) findings that patron-client relationships in coastal communities serve as both an economic mechanism and a social safety net. However, this pattern also creates a paradox: on the one hand, farmers are protected by an established distribution network, but on the other, they lose the opportunity to obtain better prices. Dependence on patrons shows that distribution behavior is not only an economic calculation, but also the result of an embedded social network (embedded economy) as explained by Polanyi (Szelényi & Mihályi, 2021).

Salt production in Probolinggo is not only an economic activity but also a meaningful cultural practice. Farmers view salt as an ancestral heritage that must be preserved and passed down through generations. This is evident in farmer narratives that refer to salt production as a "way of life" or "inheritance from parents." Technical knowledge such as predicting the seasons, managing ponds, and regulating water levels are considered part of inherited local wisdom. Furthermore, salt production is also understood within the framework of blessings. Many farmers believe that hard work in the ponds, even if not always economically profitable, will bring blessings to their families. This spiritual value motivates them to maintain traditional methods rather than simply pursuing efficiency. This finding aligns with (Bi & Yang, 2023; Gan et al., 2022) study, which showed that traditional farmers often value production not just about profit but also about morality and sustainability.

The domain of socio-cultural values is also evident in the practice of mutual cooperation (gotong royong). During the harvest season, families and neighbors help each other without formal wage calculations. This solidarity strengthens community social cohesion and serves as an important asset in navigating market uncertainty and climate change.

Formal institutions such as cooperatives have actually been introduced by the government as an instrument to strengthen farmers' bargaining power. However, field results indicate that many salt cooperatives in Probolinggo are ineffective. Farmers perceive cooperatives as merely administrative channels for distributing aid, but unable to provide better market access or capital. In contrast, informal networks through middlemen, family groups, and local patrons are more trusted because they have been proven to provide practical solutions to daily needs. This demonstrates the contradiction between weak formal institutions and strong informal ones. Formal institutions are often top-down, while informal institutions are rooted in everyday social relations. This situation reinforces Ostrom's J. Li et al., (2021); S. Li & Chen, (2024) thesis regarding the importance of local institutions in managing shared resources. The failure of formal cooperatives emphasizes that institutions can only function if they align with local norms and values.

Farmers' attitudes toward modern technology are ambivalent. The younger generation tends to be open to innovation, such as using weather apps or geomembrane technology, while the older generation prefers traditional methods. Resistance to technology stems not solely from

ignorance but also from considerations of values and experience. Many farmers believe that new technology is not necessarily beneficial and could even disrupt long-standing traditional work rhythms. However, adaptive attitudes are also beginning to emerge. Some farmers are trying to diversify their businesses, such as processing salt into derivative products or utilizing social media to expand their marketing network. This indicates a negotiation process between traditional values and global market demands.

The five identified domains demonstrate that the behavior of salt farmers in Probolinggo cannot be understood solely through rational economic logic. Every decision made in production, distribution, and technology adoption is always bound by social values, cultural norms, and complex institutional networks. This domain analysis confirms that the salt farmers' economy is an embedded economy, where economic choices are never neutral but are always influenced by community morality, traditions, and beliefs.

Taxonomic analysis

Taxonomic analysis was conducted to establish hierarchical relationships between domains identified in the domain analysis stage. The goal was to examine how the categories of meaning held by salt farmers on the north coast of Probolinggo Regency are systematically structured and interconnected, thus forming collective behavioral patterns in the face of the global consumption cycle. Data processing revealed three broad categories encompassing these domains: (1) survival strategies, (2) social values and norms, and (3) adaptation to the global market.

The first category, survival strategies, organizes household production, distribution, and consumption patterns. Production strategies are divided into two subcategories: traditional (land, family labor, seasonal cycles) and semi-modern (geomembranes, product diversification, use of non-family labor). Distribution is also divided between direct to the market and through patrons/middlemen. Most farmers choose the patron route because it guarantees transaction security, despite the potential price disadvantage. Household consumption exhibits a subsistence orientation, with most profits used to meet daily needs, with little surplus for accumulation. This taxonomic pattern demonstrates that survival strategies are driven not only by economic calculations but also by attachment to social structures. (Gorbachev, 2021; Harrison, 2023) pointed out, farming households prioritize a balance between family labor and consumption needs over maximizing profit accumulation.

The second category, social values and norms, encompasses ancestral heritage, the concept of blessings, mutual cooperation, and communal solidarity. The ancestral heritage subcategory positions salt production as a cultural identity that must be preserved across generations. Knowledge of seasonal reading techniques for draining seawater, and social rituals around fishponds are passed down from parents to children. The blessing subcategory emphasizes that production is not solely for profit, but also for gaining moral and spiritual legitimacy. Gotong royong is another important subcategory, demonstrating that despite the control of market distribution by middlemen, internal community solidarity is maintained. In this

context, the taxonomy of social values demonstrates the existence of moral economic principles Bataille et al., (2021); Mathews et al., (2022), where community norms limit exploitation and maintain social justice, although not always in line with the logic of market efficiency.

The third category is adaptation to the global market. This category organizes farmer response patterns to globalization into three subcategories: resistance, limited adaptation, and transformation. Resistance arises among farmers who reject modern technological interventions and continue to rely on traditional methods. Limited adaptation is seen among young farmers who have begun using digital applications to check salt prices or weather forecasts. Transformation, while still limited, is demonstrated by several groups attempting to diversify their products premium consumer salt or processed derivatives to reach a wider market. This taxonomic structure shows that salt farmer behavior is not homogeneous, but rather layered according to factors such as age, capital, and social networks. Older farmers tend to cling to inherited values, while the younger generation tends to negotiate with global market demands. These differences demonstrate intergenerational dynamics that can influence the direction of community transformation.

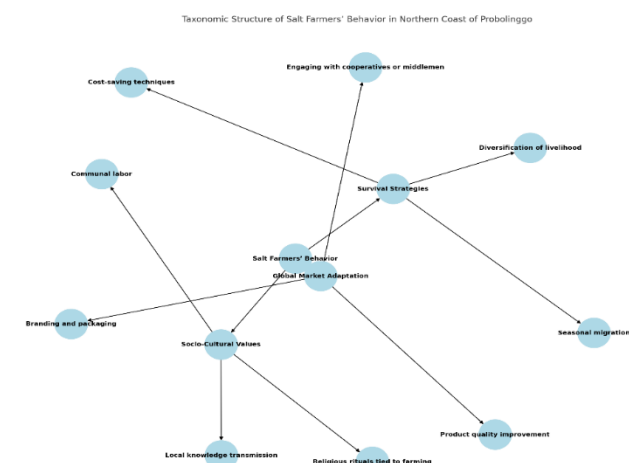


Figure 1. Taxonomic Structure of Salt Farmers' Behavior in Northern Coast of Probolinggo

Source: Processed Primary Data (2025)

Figure 1. illustrates the taxonomic structure of salt farmers' behavior on the northern coast of Probolinggo, emphasizing three core categories: survival strategies, socio-cultural values, and global market adaptation. At the center of their behavioral orientation are survival strategies such as livelihood diversification, cost-saving techniques, and seasonal migration, which reflect their response to economic vulnerability and environmental uncertainty. Socio-cultural values, including local knowledge transmission, communal labor, and religious rituals, highlight how traditional norms and collective practices sustain their identity and farming routines. Meanwhile, global market adaptation is marked by efforts to improve product quality, enhance branding and packaging, and engage with

cooperatives or intermediaries to access broader markets. These interconnected domains form a dynamic behavioral network, showing how traditional practices coexist and evolve alongside modern economic demands.

The results of the taxonomic analysis demonstrate a close relationship between survival strategies, social values, and global market adaptation. These three categories influence each other: production and distribution strategies are inextricably linked to inherited values and blessings, while global market adaptability is largely determined by the extent to which traditional values can be reconciled with the logic of modernization. Thus, this taxonomic structure confirms Polanyi's (Ament et al., 2022) assertion that local economies are always embedded in socio-cultural structures, while also highlighting the dilemmas facing coastal communities in the face of globalization.

Componential analysis

Componential analysis aims to identify the differentiating dimensions that explain the variations in salt farmers' behavior on the north coast of Probolinggo Regency in facing the global consumption cycle. While domain analysis emphasizes primary categories and taxonomic analysis shows their hierarchical structure, componential analysis focuses on the oppositions or contrasts that exist within the community. The results of field research reveal at least six interconnected differentiating dimensions: (1) traditional vs. modern, (2) spiritual vs. rational, (3) collective vs. individual, (4) subsistence vs. accumulative, (5) local vs. global, and (6) resistance vs. technological adaptation.

Table 2. Matrix of Contrasting Dimensions of Salt Farmers' Behavior in the Northern Coast of Probolinggo

Contrasting Dimension	Description	Empirical Illustration
Traditional vs. Modern	Contrast between farmers who rely on inherited soil-based methods and those experimenting with semi-modern technologies such as geomembrane.	A traditional farmer stated, "We still use soil ponds because it's what our parents taught us." Meanwhile, a semi-modern farmer explained, "Geomembrane produces whiter salt, but it requires larger investment."
Spiritual vs. Rational	Production is seen either as a source of spiritual blessing (rezeki, keberkahan) or as an economic activity requiring cost-benefit calculations.	A farmer in Gending said, "Salt is a blessing, not just a business." Conversely, younger farmers calculate input costs and expected profits before deciding production strategies.
Collective vs. Individual	Some rely on community solidarity and mutual cooperation, while others prioritize individual efficiency with hired labor.	During harvest, families and neighbors help each other without wages, showing collective norms. However, younger farmers in Tongas increasingly employ paid workers for faster and more efficient production.
Subsistence vs. Accumulative	Farmers differ between producing for household subsistence and pursuing	Subsistence farmers sell just enough to cover daily needs, often avoiding debt. Accumulative

Contrasting Dimension	Description	Empirical Illustration
Local vs. Global	accumulation of surplus for reinvestment. Some farmers are bound to local patrons and markets, while others explore broader networks and digital platforms.	farmers attempt to expand pond areas or save profits for future investments. One farmer noted, <i>"It's safer to sell to local middlemen."</i> Others diversify into premium salt and use social media to connect with industries or urban consumers.
Resistance vs. Adaptation to Technology	Farmers either resist innovation to preserve tradition or adapt by integrating new tools and knowledge.	Senior farmers resist change, saying, <i>"Good salt is made the way our ancestors did."</i> Meanwhile, younger farmers adopt weather apps and market information systems to optimize production.

Source: Processed Primary Data (2025)

The first dimension is traditional versus modern. Most farmers still adhere to traditional methods based on land, family labor, and seasonal knowledge. They consider these methods more suitable for limited resource conditions and aligned with their ancestral heritage. In contrast, a small number of farmers, especially those with greater capital or access to government programs, are shifting to semi-modern methods such as the use of geomembranes. This contrast is not merely a technical issue but also reflects value orientations: for traditional farmers, the continuation of old methods is a form of identity, while for semi-modern farmers, adopting technology is seen as a path to increased productivity and competitiveness.

The second dimension, spiritual versus rational, shows how salt production is understood differently. The first group emphasizes the blessings and morality of work. They believe that the harvest is a predetermined blessing, so efficiency is not the sole goal. Meanwhile, the other group has begun to use rational calculations, such as calculating input costs and projected profits. This contrast demonstrates a shift in economic orientation from moral logic to market efficiency, although the two often coexist in daily practice.

The third dimension, collective versus individual, emerges in how farmers manage labor and social relations. Collective patterns still dominate, especially during harvest time, where neighbors and extended family members participate without formal wage calculations. This pattern reflects social solidarity and strengthens community cohesion. However, individualistic patterns are becoming stronger among younger farmers who prefer to rely on wage labor. This is influenced by lifestyle changes, the need for efficiency, and the weakening of kinship networks in the context of modernization.

The fourth dimension is subsistence versus accumulative. Subsistence farmers produce salt primarily to meet household needs, and the surplus is sold to meet daily needs. This orientation makes them reluctant to take large investment risks. Conversely, farmers with an accumulative orientation seek to generate larger surpluses to expand their ponds or save capital. This dimension explains why there are variations in welfare

levels within the same community, despite relatively similar ecological conditions.

The fifth dimension, local versus global, demonstrates how farmers navigate production identities in the context of globalization. Some farmers remain strongly tied to local markets and distribution through middlemen. They view the global market as distant and fraught with risk. In contrast, more progressive farmers are beginning to connect with broader networks, for example, selling premium salt to the food industry or using social media to market their products. This difference demonstrates the interplay of experiences: locality as the basis of identity, and globality as new opportunities.

The sixth dimension is resistance versus adaptation to technology. Many farmers, especially the older generation, are resistant to new technology. They perceive innovation as a threat to long-standing traditions. However, the younger generation demonstrates a more adaptive attitude. They use digital applications to check salt prices, utilize weather forecasts, or explore product diversification. These differences in attitudes reflect intergenerational dynamics and indicate possible directions for community transformation.

Taken together, these six differentiating dimensions form a spectrum that demonstrates the heterogeneity of salt farmers' behavior. No farmer falls entirely on one end of the spectrum, but rather on points in between. For example, a farmer may be traditional in production methods but rational in pricing. Or, a farmer may be subsistence-oriented in consumption but simultaneously adapt to digital technology. This demonstrates that salt farmers' behavior is the result of a complex negotiation between tradition, values, social capital, and global market demands.

Thus, componential analysis confirms that the behavior of salt farmers on the north coast of Probolinggo Regency cannot be simplified into a single category. Variations among farmers reflect diverse adaptation strategies in the face of globalization. This analysis also reveals the structural tensions between tradition and modernity, spirituality and rationality, and locality and globality. These tensions are both a source of dynamics and a challenge in formulating policies relevant to the local context.

Cultural theme analysis

Cultural theme analysis aims to uncover the deeper meanings underlying the economic and social practices of salt farmers on the north coast of Probolinggo Regency. While domain, taxonomic, and componential analyses describe categories, structures, and distinguishing dimensions, cultural theme analysis focuses on the organizing principles that unite all farmers' practices and beliefs. From field exploration, in-depth interviews, and coding using ATLAS.ti, two central themes emerged that form the core of the salt farmers' worldview: blessings and inheritance. These two themes are interconnected, mutually reinforcing, and form a moral framework that determines farmers' economic behavior in the face of the global consumption cycle.

The theme of blessing emphasizes that salt production is not merely an economic activity, but rather part of a process of gaining moral and spiritual legitimacy. Many farmers refer to the harvest as a divinely ordained blessing, so their focus is not solely on profit, but also on maintaining harmony with religious

and social values. This attitude explains why some farmers persist in traditional methods, despite their inefficiencies: for them, working according to tradition is considered more blessed than pursuing profit through methods that do not necessarily align with community values. Blessing is also related to the concept of social justice within the community. Mutual cooperation during the harvest season is not only a means of efficiency but also a social ritual considered to bring collective blessings. The more people involved, the greater the blessings are believed to result. Thus, blessing serves as a normative principle that constrains economic practices to maintain alignment with moral values. Carrier, (2018); Palomera & Vetta, (2016) calls this pattern a moral economy, an economic orientation that is not solely rational but also guided by norms and solidarity.

The theme of heritage emerges strongly in farmers' narratives regarding the origins and significance of salt production. For them, salt is not simply a commodity, but a cultural identity passed down through generations. Technical knowledge, such as reading natural signs to determine the seasons, regulating water levels, and performing specific rituals before opening a pond, are considered part of their ancestral heritage that must be preserved. Heritage is not only technical but also social. Many farmers describe being a salt farmer as part of a "life path" passed down from parents to children. Therefore, leaving this profession is often seen as betraying the family identity. In fact, some young people who migrate still return to the salt ponds during harvest season as a sign of their attachment to their family heritage. This theme of heritage demonstrates that economic practices are inseparable from collective memory and social identity.

These two themes are not mutually exclusive; they are interconnected. Ancestral heritage provides cultural legitimacy, while blessings provide spiritual legitimacy. The combination of the two forms a moral framework that guides farmers in making economic decisions. For example, the adoption of new technology will be accepted only if it is seen as not destroying the heritage and still bringing blessings. If the technology is perceived as threatening these values, it will be rejected, even if it is economically more efficient. This relationship also explains why government interventions are often ineffective. Modernization programs such as the distribution of geomembranes or the formation of formal cooperatives fail to gain widespread acceptance because they do not align with the community's cultural themes. Farmers often perceive new technologies as "foreign" and inconsistent with tradition, making them unlikely to bring blessings. Thus, the success of external interventions depends on the extent to which they can be integrated into local value systems.

In the context of globalization, the themes of blessing and heritage face significant challenges. Global market mechanisms demand efficiency, consistent quality, and high production standards. This often conflicts with traditional practices based on cultural values. For example, farmers who emphasize blessings may be reluctant to use chemicals to accelerate salt crystallization, even though this method increases productivity. However, cultural themes can also be a source of resilience. Blessings provide moral motivation for

farmers to persevere under difficult conditions, while heritage strengthens collective identity and encourages regeneration. Many young people continue to choose to participate in salt production because they see it as part of their family and community identity. In other words, despite the pressures of globalization, cultural values continue to serve as the foundation for community sustainability.

Analysis of cultural themes shows that the behavior of salt farmers on the north coast of Probolinggo Regency is driven by two main principles: blessings and inheritance. These two themes are not merely abstract categories, but are lived out in daily practice and guide every economic decision. Within the framework of economic ethnography, these themes can be understood as organizing principles that unite the domains of production, distribution, social values, institutional relations, and attitudes toward technology. Thus, analysis of cultural themes provides a deeper understanding of how farmers navigate the maelstrom of global consumption without losing their local identity.

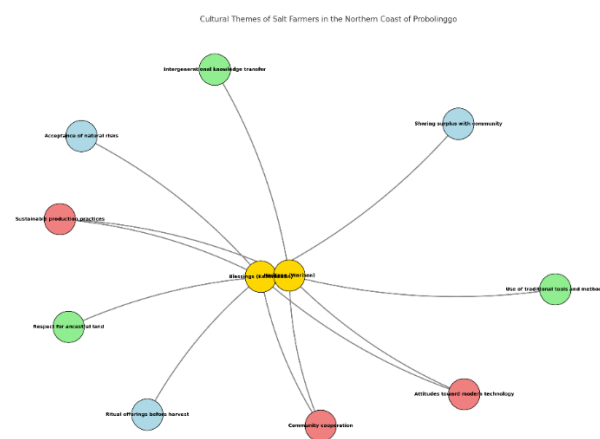


Figure 2. Cultural Themes of Salt Farmers in the Northern Coast of Probolinggo
Source: Processed Primary Data (2025)

Figure 2, visualizes the cultural themes that shape the worldview and practices of salt farmers in the northern coast of Probolinggo. The mind map highlights two central and interrelated cultural constructs: Blessings (Keberkahan) and Heritage (Warisan). These themes function not merely as belief systems, but as guiding principles embedded in daily practices. The notion of blessings is expressed through ritual offerings before harvest, acceptance of natural uncertainties, and communal sharing demonstrating a spiritual orientation rooted in gratitude and harmony with nature. Meanwhile, heritage is reflected in the intergenerational transmission of knowledge, adherence to traditional tools and techniques, and deep respect for ancestral land. These themes converge on shared practices, such as sustainable production, strong community cooperation, and cautious yet adaptive responses to technological innovations. The network illustrates how salt farmers negotiate modern challenges by drawing upon cultural values that sustain both social cohesion and ecological balance. This structure

reveals a dynamic cultural logic that integrates tradition with selective modernity.

Main Findings and Interpretation

The findings indicate that salt farmers' behavior in Probolinggo cannot be understood solely through the logic of market economy, but rather as part of an embedded economy Szélenyi & Mihályi, (2021), where economic practices are deeply embedded in social relations, cultural values, and community norms. Table 1. identified five key domains shaping farmers' behavior: production strategies, distribution and marketing, socio-cultural values, institutional relations, and attitudes toward technology. Empirical data showed that most farmers still rely on traditional production methods involving soil-based ponds and family labor, and sell their harvests through patrons or middlemen. However, behavioral variations exist, particularly among younger farmers, who have begun experimenting with modern technology and exploring digital market networks.

This result confirms heterogeneity in production strategies, as also found by Tansuchat, (2023); Wiwoho & Prasada, (2024), who observed that geomembrane technology improved salt quality but had limited adoption due to cost constraints. The dominance of patrons in distribution, as reflected in the marketing domain, also shows the persistence of patron-client relationships, consistent with (Malik et al., 2025; Setiawan, 2024), who highlighted their role in coastal communities as both economic mechanisms and social safety nets. Thus, distribution practices cannot be understood merely in terms of profit but also as outcomes of trust and transaction security.

Hierarchical Structure and Category Relations

Figure 1. illustrates the taxonomic structure of salt farmers' behavior, divided into three major categories: survival strategies, socio-cultural values, and global market adaptation. The diagram shows that production and distribution strategies are inseparable from the social values underpinning them. For instance, even though selling through middlemen yields lower prices, many farmers continue doing so because patrons are considered part of their protective social networks. This finding resonates with Scott's Palomera & Vetta, (2016) notion of moral economy, where farmers' economic behavior is guided by community norms of fairness rather than pure market rationality.

The taxonomy also highlights adaptation to global markets as a layered process. Some farmers resist globalization and new technologies, others show limited adaptation, and a small group attempts transformation by producing premium salt or diversifying products. This heterogeneity demonstrates that globalization is not uniformly accepted but negotiated according to social contexts and individual capacities. Similar patterns were observed by Tan et al., (2022) among cocoa farmers, who showed diverse forms of adaptation within global value chains.

Contrasting Dimensions in Farmers' Behavior

The componential analysis summarized in Table 2. identified six contrasting dimensions: traditional vs modern, spiritual vs rational, collective vs individual, subsistence vs accumulative, local vs global, and resistance vs adaptation to technology. This matrix demonstrates that salt farmers'

behavior is shaped by ongoing negotiations between different orientations and values.

For example, the spiritual vs rational dimension shows contrasts between farmers who view salt production as a source of blessings and those who treat it as an economic activity requiring cost-benefit calculations. In practice, however, these orientations often overlap. A farmer may choose traditional methods for their perceived blessings while simultaneously calculating production costs to sustain household livelihoods. This aligns with Simon's (Petra, 2021; Schwarz et al., 2022) notion of bounded rationality, which explains that economic decisions are often made under limited information, moral values, and social conditions.

Similarly, the local vs global dimension underscores tensions between strong ties to local markets and the need to engage with broader networks. While many farmers continue to sell through local patrons for security, others are diversifying into premium salt and using social media to reach urban or industrial buyers. This finding supports Appadurai's concept of global ethnoscape, which highlights that globalization is always locally negotiated in diverse ways (Appadurai, 2023; Yalçın, 2024).

Cultural Themes: Blessings and Heritage

The cultural theme analysis, visualized in Figure 2, revealed two core organizing principles of farmers' behavior: blessings and heritage. The theme of blessings emphasizes that salt production is not merely an economic activity but also a means of achieving spiritual and social legitimacy. The theme of heritage underscores that salt production is a cultural identity passed down across generations.

The mind map shows how these two themes are connected to norms of mutual cooperation, production practices, and responses to technology. For instance, blessings motivate farmers to involve family and neighbors in production even when it is economically inefficient. Meanwhile, heritage strengthens resistance to new technologies perceived as threats to tradition, yet it also encourages regeneration, as younger generations remain attached to their family's livelihood.

These findings are consistent with Granovetter's concept of cultural embeddedness, which posits that economic actions are deeply rooted in social structures and cultural values. Thus, the success of modernization programs in the salt sector depends on the extent to which they can be integrated into the local cultural framework (Choi et al., 2023; Wigren-Kristoferson et al., 2022).

Theoretical and Practical Implications

The findings of this study have both theoretical and practical implications. Theoretically, they reinforce arguments that farmers' behavior must be understood through the lens of economic ethnography, which emphasizes the interplay of social values, cultural identity, and market demands. They also contribute to the literature on rural globalization by showing that adaptation to global markets is heterogeneous and negotiated through local cultural themes.

Practically, this study provides insights for policy-making. Modernization programs such as geomembrane distribution or cooperative development will be more successful if aligned with local values of blessings and heritage. For example,

introducing new technology through community-based mechanisms like gotong royong (mutual cooperation) could increase acceptance, as it embeds innovation within social solidarity rather than presenting it as external enforcement. Additionally, distribution policies should account for the role of patrons, as they are not merely economic intermediaries but also part of farmers' social safety nets.

Despite offering in-depth insights, this study has limitations. First, it focused on salt-farming communities in northern Probolinggo, making generalizations to other regions cautious. Each coastal community has distinct social and cultural contexts. Second, the ethnographic approach emphasizes depth over breadth, meaning that quantitative generalization of the findings is limited. Future studies using mixed methods could complement this research. Third, the focus on socio-cultural dimensions leaves technical aspects of salt production and broader industrial value chain dynamics less explored.

This discussion demonstrates that the behavior of salt farmers in northern Probolinggo is shaped by the complex interplay of survival strategies, socio-cultural values, institutional relations, and attitudes toward technology. Through domain, taxonomic, componential, and cultural theme analyses, blessings and heritage emerged as the core cultural principles guiding farmers' economic practices. The findings confirm that modernization and globalization can only succeed when integrated with local cultural values. Therefore, this study not only contributes theoretically to rural globalization literature but also offers practical guidance for inclusive and sustainable salt agribusiness policies.

IV. CONCLUSIONS

This study found that the behavior of salt farmers on the northern coast of Probolinggo is shaped by the interplay of survival strategies, socio-cultural values, institutional relations, and attitudes toward technology. Five key aspects production strategies, distribution patterns, cultural values, institutional roles, and acceptance of innovation emerged as interconnected foundations guiding farmers' economic choices. These aspects are organized into three broader categories: survival practices, social norms, and adaptation to global markets. The findings also revealed variations among farmers that appear in six contrasting dimensions, ranging from production methods and value orientations to labor organization and market engagement. Ultimately, two cultural principles blessings and heritage serve as guiding forces in farmers' decision-making, preserving traditions while simultaneously negotiating the demands of globalization. The results highlight that modernization and competitiveness in salt farming cannot rely solely on technical approaches but must align with local values and identities. Innovations are more readily accepted when integrated into existing social practices, while policies become more effective when they recognize and engage local actors who have long played key roles in production and distribution systems. The main contribution of this research lies in presenting an analytical framework that unites social, cultural, and economic dimensions in understanding the dynamics of salt farmers. Although limited to a specific region and qualitative in nature,

this study provides an important basis for future research to broaden the scope, apply mixed methods, and explore more deeply the role of digital technologies in strengthening farmers' bargaining power. In conclusion, the study emphasizes that the success of development and the sustainability of the salt agribusiness can only be achieved by respecting and integrating cultural values embedded in local communities. Blessings and heritage are not merely symbolic but living principles that continue to guide farmers in navigating the currents of global change.

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