

Nutmeg as a medium of social solidarity between indigenous and migrant communities in the Banda islands

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Abstract

Nutmeg (*Myristica fragrans* Houtt.), the flagship commodity of the Banda Islands, possesses high economic value and has attracted considerable scholarly attention in numerous studies. However, its role as a medium for fostering social solidarity among the inhabitants of the Banda Islands has received little academic attention. This study aims to analyze the harmonious social solidarity that exists between indigenous and migrant communities in the Banda Islands and to explain the role of nutmeg in sustaining this relationship. This study employed a qualitative descriptive approach through field research and literature review. Primary data were collected from key informants, including traditional leaders, village chiefs, religious leaders, and community members selected through purposive and random sampling from major nutmeg-producing islands in the Banda archipelago, as well as Banda migrants who relocated outside the islands following the Maluku conflict. The findings reveal that social solidarity in the Banda Islands is deeply rooted in nutmeg cultivation and trade. Community members, whether as landowners or employees in nutmeg plantations and enterprises, share similar economic responsibilities and life challenges. These shared experiences foster mutual trust, common moral values, collective social consciousness, and shared life aspirations. Over time, this has generated a strong sense of togetherness and mutual responsibility, creating enduring associative social bonds. Continuous interaction and integration have gradually diminished ethnic distinctions among migrant communities, allowing them to become fully integrated into Banda society. Overall, the study demonstrates that nutmeg has functioned as an important social institution through which the people of the Banda Islands have practiced both mechanical solidarity and organic solidarity, consistent with the sociological theory proposed by Durkheim.

Keywords: Nutmeg; Social Solidarity; Indigenous Communities; Migrant Communities; Banda Islands

1. Introduction

For centuries before the Common Era, the Maluku Islands were renowned as the world's primary center of the spice trade, particularly for cloves (*Syzygium aromaticum*) and nutmeg (*Myristica fragrans* Houtt.). The extraordinary value of these spices established Maluku as one of the most strategic regions within the international trading network linking Asia, the Middle East, and Europe. Historical records indicate that Arab, Chinese, Portuguese, Dutch, and other foreign merchants traveled to the Maluku Islands to obtain spices, which at that time were highly prized for medicinal purposes, food preservation, perfumery, and religious rituals. These long-standing commercial interactions transformed the Maluku Islands into not only a global economic hub but also a dynamic arena of interaction among diverse ethnic groups, cultures, religions, and social systems over several centuries. Beyond its historical significance, nutmeg possesses considerable pharmaceutical and economic value due to its rich composition of bioactive compounds. The essential oil of nutmeg contains several major constituents, including camphene, elemicin, eugenol, isoelemicin, isoeugenol, and methoxyeugenol (Asgarpanah and Kazemivash, 2012). Nutmeg oil produced in Indonesia and Papua New Guinea exhibits a chemical composition distinct from that of other *Myristica* species. In particular, Indonesian nutmeg oil

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contains approximately 22.6% pinene, 15.8% sabinene, and 13.2% myristicin. Previous studies have shown that the medicinal quality of nutmeg oil tends to decline as the concentration of myristicin increases (Saputro et al., 2016). Nutmeg is one of the world's most valuable spice commodities, with approximately 85% of global production originating from Indonesia. Within Indonesia, the Maluku Islands remain the principal production center, while South Aceh Regency represents the country's second-largest nutmeg-producing region. Despite its economic importance, nutmeg production has gradually declined in recent years. One of the primary causes is branch dieback disease, which is characterized by leaf wilting, yellowing, and eventual branch mortality, ultimately reducing tree productivity (Ulfah et al., 2020). As an archipelagic province consisting of numerous small islands, Maluku continues to play a strategic role in Indonesia's nutmeg industry. Nevertheless, fluctuations in climatic conditions have increasingly affected nutmeg productivity. A recent study by Leatemia et al. (2025) reported that the average annual rainfall in the Banda Islands increased by approximately 13% during the period 1994–2023 compared with the period 1964–1993. During the same period, the frequency of El Niño events declined from eight to four occurrences, whereas La Niña events increased from four to eight occurrences. Correlation analyses further demonstrated that nutmeg production is positively associated with annual rainfall and relative humidity but negatively correlated with air temperature and sunshine duration. These findings indicate that nutmeg production tends to be higher under humid conditions with abundant rainfall and lower under conditions characterized by elevated temperatures and prolonged solar radiation.

Nutmeg is an iconic commodity of the Maluku Islands and holds a prominent place in the global history of the spice trade. A study by Audrey et al. (2017) reported that nutmeg productivity on Ambon Island remains relatively low, averaging 0.58, 0.77, and 0.39 t ha⁻¹ in the districts of Leihitu, West Leihitu, and Salahutu, respectively. The major pests and diseases affecting nutmeg plantations include stem borers, dry fruit rot, wet fruit rot, stem canker, leaf curl, shoot dieback, and thread blight, all of which substantially reduce crop productivity. Despite these production constraints, nutmeg remains one of the region's leading agricultural commodities, playing a significant role in both land utilization and rural livelihoods. Harvested nutmeg is marketed in several forms, including nutmeg seeds, mace (the aril surrounding the seed), and fruit flesh, thereby generating additional economic value through a wide range of processed products. In Morella Village, for example, nutmeg cultivation has become a major economic activity and contributes substantially to the regional supply of nutmeg. Beyond its importance as a commercial commodity, nutmeg farming in Morella Village creates employment opportunities for rural communities while improving household income and local economic welfare (Raihan et al., 2024). Although nutmeg possesses considerable economic value and serves as a strategic commodity for regional development, its value chain in Morella Village continues to be dominated by a traditional marketing system involving farmers, traders, and processors. Within this system, farmers generally occupy the weakest bargaining position due to their limited negotiating power. This situation is influenced by several factors, including inadequate technical capacity in crop cultivation, limited farm management skills, and the relatively weak institutional capacity of farmer organizations. Furthermore, price fluctuations, restricted access to profitable markets, and insufficient institutional support have increased farmers' dependence on intermediary traders. Consequently, the economic benefits received by producers remain disproportionately low compared with the high market value of nutmeg products. Therefore, improving farmers' welfare requires more than increasing agricultural productivity alone. It also demands strengthening the entire nutmeg value chain through capacity building for farmers, the adoption of post-harvest processing technologies, improved access to fair and transparent markets, and supportive institutional and policy frameworks capable of enhancing farmers' bargaining power and ensuring a more equitable distribution of economic benefits (Ijassi et al., 2025; Paays et al., 2026).

The Banda Islands are located approximately 2,000 kilometers east of Java and comprise seven small islands, including an active volcanic island known as Gunung Api. Today, the archipelago is regarded as one of the more remote regions of the Republic of Indonesia. Historically, however, the Banda Islands occupied a highly strategic position within the international spice trade. Together with the Maluku and Ambon Islands, this region—widely known as the Spice Islands—formed an integral part of the Asian maritime trading network for centuries, linking Java, the Philippine archipelago, and the South China Sea. Merchants from the trading ports along the northern coast of Java regularly sailed to the Banda Islands to exchange commodities such as rice from Java and textiles from the Indian subcontinent for nutmeg and mace, the region's most valuable export products. In addition to commercial exchange, these trading networks also facilitated the spread of Islam throughout the Banda Islands. As in many other parts of Southeast Asia, the formation and evolution of political authority and governance in the Banda Islands occurred gradually over an extended historical period (Ittersum, 2016). Among all nutmeg-producing regions worldwide, the Banda Islands hold exceptional historical and biological significance because they are recognized as the natural center of origin of *Myristica fragrans*. From this archipelago, nutmeg was subsequently introduced to numerous tropical regions, including Grenada, India, Sri Lanka, Mauritius, South Africa, the United States, and several other countries through colonial expansion and international trade (Sasikumar, 2021). To this day, Banda nutmeg continues to be widely recognized for its superior quality compared with nutmeg produced in other regions, making it one of Indonesia's most valuable agricultural export commodities. Numerous studies have demonstrated that the global dissemination of nutmeg from the Banda Islands

not only contributed significantly to the expansion of international trade but also played a pivotal role in the history of European colonialism and the development of the global economy (Rodianawati et al., 2021; Ashokkumar et al., 2022).

Long before the arrival of European powers, the Banda Islands had already emerged as an important hub within the international maritime trading network. Archaeobotanical evidence and historical records indicate that nutmeg had been used for centuries in both India and the Roman Empire (Zumbroich, 2012). Chinese historical documents also record maritime expeditions to the Maluku Islands to acquire valuable spices (Xu, 2020). Beginning in the sixth century, Arab and Indian merchants incorporated nutmeg into extensive interregional trade networks. During the Middle Ages, nutmeg became one of the most highly prized luxury commodities in European markets, where it was widely regarded as a symbol of wealth, prestige, and social status (Freedman, 2015). At the same time, Javanese and Arab merchants regularly visited the Banda Islands to exchange rice, textiles, and gold for nutmeg and other spices while simultaneously introducing Islam and various associated cultural practices to the local population (Ittersum, 2016). These long-standing commercial and cultural interactions demonstrate that nutmeg had become an integral component of a cosmopolitan maritime trading system long before European colonial powers gained control of and fundamentally transformed the political and economic landscape of the Banda Islands (Adianto et al., 2026). The Portuguese were the first Europeans to reach the Banda Islands in the early sixteenth century in search of the source of the highly valuable spice trade. Their accounts described the Banda Islands as the principal center of nutmeg production, suggesting that nutmeg cultivation was concentrated in the archipelago during that period. However, this interpretation differs somewhat from the account presented by Rumphius in *Herbarium Amboinense*. Rumphius explained that although nutmeg trees were distributed throughout much of the Maluku archipelago, the Banda Islands constituted their true place of origin. In E. M. Beekman's English translation of the original Latin phrase *verus tamen ejus locus fixus est Banda*, Banda is explicitly identified as the authentic homeland of nutmeg. Nevertheless, Rumphius's statement remains open to multiple interpretations. The term "center of origin" may refer to the natural habitat in which nutmeg first evolved and was domesticated, namely the Banda Islands. Alternatively, it may denote the principal cultivation and production center of the period, implying that although nutmeg had spread to other parts of Maluku, Banda remained the most prominent and internationally recognized source of the commodity (Kusuma et al., 2023). The English, however, were equally determined to secure a share of the lucrative spice trade. Whenever opportunities arose, they exploited the deteriorating relationship between the indigenous population and the Dutch. Unlike the Dutch, whose strategy relied heavily on territorial occupation and political control, the English primarily pursued commercial interests through trade-based engagement. The early seventeenth century therefore became a decisive period for both the English and Dutch East India Companies, as it ultimately determined the future control of the global spice trade. Neither company was willing to relinquish its ambitions, resulting in intense political and commercial rivalry throughout the Banda Islands and the wider Maluku region (Shngreiyu, 2017).

Located in the Maluku Archipelago, approximately 120 nautical miles southeast of Ambon, the Banda Islands were the only place in the world where nutmeg (*Myristica fragrans*) grew naturally until the nineteenth century. The islands were first reached by Portuguese explorers during their 1512 expedition, and nearly a century later, in 1609, the Dutch East India Company (VOC) established its first fortifications in the archipelago (Cattaneo, 2022). The extraordinary commercial value of nutmeg prompted the VOC to pursue complete control over the Banda Islands and their spice trade in order to maximize corporate profits. To achieve this objective, the Company appointed Jan Pieterszoon Coen to lead a military expedition to the Banda Islands (Jordan, 2015). The policies implemented by the VOC culminated in the 1621 Banda Massacre, during which a large proportion of the indigenous population was killed, many survivors were enslaved, and enslaved laborers from various regions were forcibly relocated to work on nutmeg plantations. This event transformed the Banda Islands into one of the most significant symbols of European colonialism, characterized by violence, economic exploitation, and territorial conquest (Donkersgoed, 2023; Ubaidillah et al., 2025). Beyond its historical significance, nutmeg possesses substantial economic value because nearly every part of the fruit can be commercially utilized. The seed, mace (the aril surrounding the seed), and fruit flesh are processed into essential oils, pharmaceutical ingredients, cosmetic products, food additives, and a wide range of value-added products, including syrups, confectioneries, jams, and candied nutmeg. Advances in agricultural processing technologies have further enhanced the economic value of nutmeg, generating employment opportunities, increasing household incomes, and strengthening local economies. Numerous studies have demonstrated that the development of the nutmeg agro-industry offers considerable potential for promoting sustainable economic development, particularly in island regions whose economies depend heavily on spice-based plantation agriculture (Dhont, 2022).

The substantial economic value of nutmeg has stimulated extensive research on its cultivation, productivity, phytochemical properties, bioactive compounds, essential oils, processing technologies, and the development of value-added products. Nevertheless, most existing studies continue to conceptualize nutmeg primarily as a biological and economic commodity (Anripa and Lone, 2024). Comparatively little attention has been devoted to examining nutmeg as a medium for fostering social relationships, generating social capital, and strengthening community solidarity. This

represents an important gap in the literature, given that numerous studies have demonstrated that economic development does not necessarily translate into stronger social cohesion. Development strategies that prioritize economic growth without reinforcing social capital may instead exacerbate social conflict, deepen inequality, and erode trust among community members (Muller and Coetzee, 2012; Palchuk, 2025; Vu et al., 2026). This issue has become increasingly relevant in the era of globalization, during which societies are experiencing rapid social transformation driven by digitalization, population mobility, community fragmentation, and the growing influence of identity politics. These changes have the potential to weaken interpersonal relationships, resulting in declining social trust, increasing individualism, and diminishing social cohesion (Forrest et al., 2001; Santos et al., 2017; Delhey et al., 2018). From Durkheim's sociological perspective (1951), such conditions are described as *anomie*, a state in which social norms lose their capacity to regulate collective life, leaving individuals vulnerable to social disorientation and alienation. Contemporary research further emphasizes that strengthening social capital, interpersonal trust, and collective identity constitutes a critical foundation for enhancing community resilience in the face of rapid social change (Ntontis et al., 2020; Erfurth et al., 2021; Farny and Dentoni, 2025).

Within the Banda Islands, the cultivation, processing, and trade of nutmeg have brought indigenous and migrant communities into sustained interaction for centuries. These economic activities have generated not only material benefits but also enduring social networks, mutual trust, shared experiences, and a collective identity that together constitute the foundation of social solidarity. This phenomenon is consistent with Émile Durkheim's theory of social solidarity, which distinguishes between mechanical solidarity and organic solidarity. Mechanical solidarity emerges from shared values, cultural traditions, and common life experiences, whereas organic solidarity develops through the division of labor and the interdependence of individuals within increasingly complex social systems (Schiermer, 2014; Burelli and Camboni, 2023). Although research on nutmeg has expanded considerably over recent decades, existing studies have focused predominantly on its agronomic, economic, pharmacological, and processing-related dimensions. Comparatively little scholarly attention has been devoted to understanding how nutmeg functions as a medium for fostering social solidarity between indigenous and migrant communities in the Banda Islands. This study therefore offers a novel perspective by examining nutmeg not merely as an economic commodity but also as a social institution that facilitates the development of solidarity within a multicultural society. Accordingly, this study aims to analyze the forms of social solidarity that have evolved among nutmeg-producing communities in the Banda Islands and to explain how nutmeg-related activities contribute to the emergence of both mechanical and organic solidarity between indigenous and migrant populations.

2. Research methods

This study employed a qualitative research approach to gain an in-depth understanding of how nutmeg functions as a medium for the formation, maintenance, and reinforcement of social solidarity between indigenous and migrant communities in the Banda Islands. A qualitative approach was considered appropriate because social solidarity is a complex and context-dependent phenomenon that is constructed through lived experiences, social interactions, cultural values, and the social practices embedded within community life. In the context of the Banda Islands, nutmeg is not merely regarded as a high-value economic commodity but also as a social arena that brings together people from diverse ethnic, cultural, religious, and migratory backgrounds within a shared social system. Continuous interaction through nutmeg-related economic activities has generated dynamic social networks that contribute to the development and maintenance of social cohesion. Through this qualitative approach, the study sought to understand social reality from the perspectives of community members who actively participate in the cultivation, processing, and trade of nutmeg. This perspective made it possible to explore participants' experiences, perceptions, cultural values, social norms, and the strategies they employ to establish and sustain harmonious social relationships within a multicultural society. Furthermore, qualitative inquiry enabled the researcher to capture naturally occurring social phenomena in their real-life context, thereby providing a comprehensive understanding of the processes through which social solidarity has evolved within Banda society. Consequently, the data generated in this study not only describe patterns of social interaction but also reveal the meanings underlying various forms of cooperation, mutual trust, reciprocity, and interdependence emerging from nutmeg-based economic activities. Qualitative research is inherently interdisciplinary, transdisciplinary, and, in some cases, even counter-disciplinary, making it difficult to formulate a single universally accepted definition (Jovanovic, 2011; Aspers and Corte, 2019). Rather than focusing solely on objectively observable behavior, qualitative research seeks to understand the subjective meanings that shape human actions and social interactions. Accordingly, this approach emphasizes how individuals interpret their attitudes, motivations, experiences, actions, and everyday realities. It also examines what people think, express, and do within particular social settings and institutional contexts while taking into account the cultural, social, spatial, and temporal conditions that influence the construction of meaning (Goodwin and Horowitz, 2002; Tracy, 2010).

The study was conducted in several nutmeg-producing villages in the Banda Islands, Central Maluku Regency, Maluku Province, Indonesia. The research sites were selected purposively because the Banda Islands are widely recognized as the natural center of origin of nutmeg (*Myristica fragrans*) and have a long history of interaction between indigenous and migrant communities through nutmeg cultivation, processing, and trade. These characteristics make the Banda Islands an appropriate setting for examining the dynamics of social solidarity shaped by a locally significant commodity. Research participants were selected using the snowball sampling technique, whereby informants were identified progressively through recommendations from previous participants until no new information emerged and data saturation was achieved. The participants included village heads (Raja), customary leaders, religious leaders, nutmeg plantation owners, plantation workers, nutmeg traders, and community members with extensive knowledge of the historical development and contemporary social dynamics of Banda society. Informants were selected based on their experience, level of involvement, and ability to provide rich and relevant information concerning the phenomenon under investigation. Data were collected through in-depth interviews, field observations, and document analysis. The in-depth interviews followed a semi-structured interview guide, allowing participants to describe freely their experiences and perspectives regarding social relationships within the Banda community. Field observations focused on nutmeg cultivation and plantation management practices, patterns of social interaction among community members, and the physical characteristics of the plantation environment. Document analysis included the examination of historical archives, customary records, government documents, scholarly publications, and other documentary sources related to the history of nutmeg and the social development of the Banda Islands. The integration of these three data collection methods enabled the researcher to obtain a comprehensive and contextualized understanding of the phenomenon under investigation.

The trustworthiness of the data was ensured through source triangulation, methodological triangulation, and member checking. Source triangulation was conducted by comparing information obtained from different groups of participants, whereas methodological triangulation involved cross-validating findings derived from in-depth interviews, field observations, and document analysis. In addition, preliminary findings were returned to several key participants through a member-checking process to verify that the researchers' interpretations accurately reflected the participants' experiences and the social realities they described. The application of these procedures enhanced the credibility, dependability, and confirmability of the research findings. Data were analyzed using the interactive model of qualitative data analysis developed by Miles and Huberman (1994), which consists of four interconnected stages: data collection, data condensation, data display, and drawing and verifying conclusions. Data analysis was conducted iteratively throughout the research process, beginning with data collection and continuing until the completion of the study. This iterative approach enabled newly emerging information to be continuously examined and verified through subsequent interviews, observations, and document reviews. Consequently, the analysis provided an in-depth understanding of the processes through which mechanical solidarity and organic solidarity are constructed and maintained within nutmeg-producing communities in the Banda Islands. This study also adhered to established ethical principles for social research. Before data collection commenced, all participants received a clear explanation of the study's objectives and voluntarily provided informed consent to participate. The confidentiality and anonymity of all participants were strictly maintained, and the information obtained was used solely for academic and research purposes in accordance with accepted ethical standards for social science research.

3. Results and Discussion

3.1. Tracing the Historical Development of Banda Nutmeg

3.1.1. Consistent with the focus of this study, information obtained from key informants and handwritten historical records maintained by the Customary Leader of Lonthor Village compiled from the oral accounts of previous generations and other historical sources provides valuable insights into the historical significance of nutmeg in the Banda Islands. According to one of the key informants

"Spices, particularly nutmeg and cloves, have been sought after by traders since ancient times, both before and after the Common Era. These spices were highly valued as prestigious gifts among nobles and were widely used for medicinal purposes. Through the abundance of nutmeg, our ancestors established relationships with foreign peoples, including Arab and European traders. However, their presence eventually became problematic because they sought to monopolize the nutmeg trade and purchase our products at very low prices. This led to armed conflicts between our ancestors and the Europeans, especially the Dutch, resulting in the deaths of many Banda people."

This historical account is consistent with the findings of Sarjiyanto and Marwoto (2019), who reported that numerous historical documents written in Chinese, Arabic, Portuguese, Dutch, and several local languages demonstrate that the Banda Islands and their natural resources—particularly nutmeg—had been widely recognized for centuries. Nutmeg served as the principal attraction that motivated Arab and European merchants to undertake long-distance maritime voyages to the Banda Islands, the world's original source of this highly valuable spice.

3.1.2. The key informants shared a common understanding regarding the historical development of nutmeg cultivation and the establishment of nutmeg plantations in the Banda Islands. After synthesizing their accounts, the central narrative can be summarized as follows

"According to the stories passed down by our elders, nutmeg trees originally grew naturally throughout the Banda Islands, much like other native vegetation. Once their economic and medicinal value became widely recognized, indigenous communities began cultivating nutmeg in privately owned gardens using their local ecological knowledge. When the Portuguese and later the English arrived, they introduced more organized plantation practices. Subsequently, the Dutch greatly expanded commercial nutmeg plantations by bringing laborers from various regions, including Java, Sumatra, Kalimantan, the Bugis region, Southeast Sulawesi—particularly Buton—as well as other parts of Maluku and the Banda Islands themselves. The workers were organized into specialized labor groups responsible for clearing forests, preparing land, planting, maintaining plantations, harvesting nutmeg, and processing the fruit by separating the mace and seeds from the flesh. The seeds and mace were then dried, packed into jute sacks, stored in warehouses while awaiting shipment, and eventually transported by porters to ships for export. At that time, the fruit flesh was generally discarded."

This account is consistent with the observations of Carlson and Jordan (2015), who argued that the plantation landscape of the Banda Islands differed substantially from plantation systems found elsewhere in the world. Consequently, the mechanisms of labor organization and social control operating within Banda's colonial plantations were likely distinct from those characterizing plantation economies in the Caribbean and the southeastern United States. The authors further contend that investigating the colonial plantation landscape of the Banda Islands and its role within colonial society provides valuable insights not only into the history of colonial Southeast Asia but also into the broader understanding of plantation systems and colonial labor organization worldwide.

3.1.3. Another key informant explained the historical transformation of the Banda Islands during the Dutch colonial period as follows

"Armed conflict erupted between the Banda people and the Dutch because the local population resisted Dutch domination under the Dutch East India Company (VOC), resulting in the deaths of many indigenous residents. The situation intensified after the English withdrew from Run Island and Ay Island, allowing the VOC to assume full control of these territories. During the colonial period, plantation labor was organized under a strict disciplinary system, and resistance among workers was minimal because their activities were closely supervised. The plantation areas were divided into administrative blocks, comprising 595 blocks in Lonthor Village (Banda Besar Island), 292 blocks in Selamon Village (Banda Besar Island), 210 blocks in Ay Village (Ay Island), 144 blocks in Waer Village (Banda Besar Island), 31 blocks in Rajawali Village (Banda Naira Island), and 14 blocks in Merdeka Village (Banda Naira Island). No archival records were available regarding plantation blocks on Hatta Island or Run Island. In 2015, the total area of nutmeg plantations across the Banda Islands was estimated at approximately 3,719 hectares, with an annual reduction of around 25 to 35 hectares."

These findings illustrate the highly structured organization of the colonial plantation system in the Banda Islands, where strict labor discipline and spatial management were implemented to maximize nutmeg production. The division of plantations into administrative blocks reflects the systematic nature of colonial plantation governance, while the continuing decline in plantation area suggests ongoing challenges to the sustainability of nutmeg cultivation in the archipelago.

3.1.4. Another informant reflected on the socioeconomic conditions experienced by the Banda community during the Dutch colonial period

"Although Dutch colonial rule is often portrayed as a period of hardship, many nutmeg plantation workers and local residents recalled that there was a sense of economic security because workers received regular wages at predetermined rates. This was made possible by the exceptionally high value of nutmeg in international markets. According to local accounts, the price of nutmeg once exceeded that of gold. Half a kilogram of nutmeg was said to be equivalent in value to seven healthy cattle, making plantation wages sufficient to meet household needs. Workers spent their earnings at local shops operated by Banda residents, creating a healthy circulation of money within the local

economy. Consequently, the community benefited economically from the nutmeg trade during the VOC period and later under Dutch plantation companies. According to our elders, living conditions at that time were relatively prosperous because the European authorities emphasized discipline, public order, and economic stability. When individuals were punished, it was generally because they resisted colonial authority or had committed serious criminal offenses, such as murder or other major crimes."

These narratives suggest that local perceptions of the colonial plantation economy are more nuanced than conventional historical accounts often imply. While the Dutch colonial system was characterized by political domination and coercive control, some community members recalled that the plantation economy also provided relatively stable employment, regular wages, and a functioning local market that contributed to household livelihoods. These findings highlight the importance of considering local historical memories when examining the complex social and economic legacy of the colonial nutmeg industry in the Banda Islands.

3.1.5. Another informant described the profound socioeconomic changes experienced by the Banda community following the outbreak of the Second World War

"The prosperity enjoyed by the Banda community changed abruptly with the outbreak of the Second World War. Suddenly, the ships that transported nutmeg to international markets stopped arriving, causing all nutmeg-related activities to cease. The plantations were abandoned, and workers no longer received the weekly wages on which they depended. Neither the workers nor the wider community were prepared for such a sudden economic collapse. As a result, many families experienced severe hardship because the primary source of household income disappeared and no alternative employment opportunities were available. People struggled to support their families, but opportunities were extremely limited due to widespread unemployment and the scarcity of productive land. Consequently, cases of theft and other social problems began to emerge. Many residents turned to farming and fishing for their livelihoods; however, these activities produced only enough for household consumption, with very limited opportunities to sell surplus products. This difficult situation persisted through the period of Indonesian independence and continued for several years thereafter. During the 1950s, news spread that the Indonesian government had taken over the nutmeg plantations. The community welcomed this announcement with great optimism, believing that plantation operations would resume and that their economic suffering would come to an end. However, the anticipated improvements never materialized, and the community continued to experience economic hardship."

This testimony illustrates how global political events profoundly affected local livelihoods in the Banda Islands. The interruption of international trade during the Second World War disrupted the plantation economy that had sustained the local community for generations, creating long-term economic insecurity. Although the transfer of plantation management to the Indonesian government generated expectations of economic recovery, the continuation of financial hardship suggests that institutional transition alone was insufficient to restore the socioeconomic stability previously supported by the nutmeg plantation system.

3.1.6. The historical transition of nutmeg plantation management after Indonesian independence was further described by one of the key informants

"During the 1980s, the Central Maluku Regency Government assumed responsibility for managing the nutmeg plantations through a regional enterprise, which was later reorganized as PT Banda Permai. However, these changes brought little improvement to the welfare of the local community. According to public perception, many company leaders prioritized the interests of their own families, and several corruption cases eventually reached the courts. In our view, the government did not manage the nutmeg industry with the same commitment shown by the former foreign plantation companies, whose operations provided substantial economic benefits for the community. Today, the government has returned the management of the nutmeg plantations to local residents. Families whose ancestors worked on the plantation blocks established during the Dutch colonial period have inherited the rights to manage those same blocks. Nevertheless, many owners lack the financial resources, technical capacity, and market access needed to manage and commercialize nutmeg effectively. Consequently, numerous plantation blocks have been abandoned, and the number of productive plantation blocks and nutmeg trees continues to decline. If this trend persists, the once-renowned reputation of Banda nutmeg which was a source of pride for the people of Banda, Maluku, and Indonesia—may eventually survive only as part of history."

The narratives above reveal that changes in plantation governance following Indonesian independence did not necessarily produce the socioeconomic improvements expected by local communities. Although the transfer of plantation ownership restored local control over nutmeg production, limitations in capital, management capacity, and market access have constrained the sustainable development of the sector. These findings suggest that institutional change alone is insufficient to ensure community welfare unless it is accompanied by effective governance, transparent

management, and adequate support for local producers. Moreover, the continued decline in productive plantation areas raises concerns regarding the long-term sustainability of both the nutmeg industry and the cultural heritage associated with the Banda Islands.

The information provided by the key informants was not merely based on collective memory but was corroborated by historical evidence and official records.

First, the informants' accounts regarding the historical importance of nutmeg and cloves as highly sought-after commodities in the global spice trade are strongly supported by numerous historical sources. Their statements are further substantiated by tangible physical evidence that remains visible today, including centuries-old nutmeg plantations that have been preserved as cultural heritage and tourist attractions, as well as Dutch colonial fortifications constructed after the dissolution of the Dutch East India Company (VOC) on 31 December 1799.

Second, the informants' description of the impact of the Second World War is also historically verifiable. The defeat of the Netherlands by Japan in the Asian theater of the war led to the collapse of Dutch colonial administration and the destruction or abandonment of many colonial economic assets, including the nutmeg plantations in the Banda Islands. As plantation operations ceased, wage payments to plantation workers were abruptly discontinued, causing widespread economic hardship among local communities. These events are well documented in the historical record and cannot reasonably be disputed.

Third, the informants' account concerning the nationalization of Dutch-owned plantation companies during the late 1950s is fully consistent with Indonesian legal history. The process was formalized through Law No. 86 of 1958 concerning the Nationalization of Dutch-Owned Enterprises within the Territory of the Republic of Indonesia, commonly referred to as the Nationalization Law. Under this legislation, all Dutch-owned enterprises, including those operating in the Banda Islands, became the property of the Indonesian state. The implementation of this law was further regulated through Government Regulation No. 29 of 1960 concerning the Determination of Dutch-Owned Agricultural and Plantation Enterprises Subject to Nationalization. Article 2, paragraph (7), of the regulation specifies that twenty-five Dutch-owned plantation enterprises in the Banda Islands were nationalized. These included Beneden Dender, Boven Dender, Kezerstorren, Lautaka, Lackuy, Lust, Orang Datang/Boyauw, Simonwel, Takarmoro, Verwachting, Weltevreden Ay, Weltevreden-Lonthoir, the *N.V. Drie Gebroeders* plantation, the *N.V. Lautang* plantation, the plantations owned by Evren M. C. Kam (including *Varken Neemt een Bad*, *Banco Batu*, *Welvaren*, and *Zoeten Inval*), the plantation owned by *Firma Kok* (*Groot en Klein Waling*), the plantations of *N.V. Mij. Matalenco* (including *Everts*, *Matalenco/Kleinzaad*, *Spantjeby*, and *Tutra*), the plantation of *Mij. Landerijen Oei Soe Tjoan* (*Butong*), the plantation of the Estate of J. W. Hoeke (*Burang*), the plantation of the Estate of Lans Cs (*Zevenbergen/Hersteller*), the plantation owned by E. M. Ch. Mast de Maeght, the plantation of *N.V. Engelen* (*Ranning*), the plantation of *N.V. Combir* (*Combir*), the plantation of *N.V. Namulu* (*Namulu*), as well as the administrative offices of *N.V. Crediet and Handels Vereniging Banda*, *W. V. S. Van den Broeke*, and *Ch. Hoeke*. These historical documents provide strong evidence supporting the narratives shared by the key informants. They demonstrate that the transformation of ownership and management of the Banda nutmeg plantations was not merely a matter of local memory but constituted a significant legal and institutional process in Indonesia's post-colonial economic restructuring. Collectively, these findings reinforce the credibility of the oral histories presented by the participants and illustrate the close correspondence between community narratives and documented historical evidence.

Further in-depth interviews revealed that the informants were unable to identify documented evidence indicating that, following Indonesian independence, government management of the Banda nutmeg industry had generated substantial economic benefits or significantly improved the welfare of local communities. According to their accounts and historical records preserved within the community, the transition of the Dutch-owned plantations into state-owned enterprises—including the State Plantation Company (*Perusahaan Negara Perkebunan*, PNP), the Banda Nutmeg Company, and subsequently PT Banda Permai did not produce socioeconomic outcomes comparable to those experienced by previous generations during the operation of Dutch plantation companies.

3.1.7. One key informant expressed this perception as follows

"Based on the stories passed down by our elders, life during the Dutch colonial period was considered better than the period after Indonesian independence. During Dutch rule, workers had certainty regarding their wages and salaries, which were sufficient to support their families. Labor was organized in a disciplined manner, and social problems such as theft were rarely encountered. However, after independence, when the plantations were taken over by the Indonesian government, local communities did not experience the expected benefits. Workers' wages were often reduced or delayed for several months, and in many cases the outstanding payments were never fully received. More

recently, we have heard that officials responsible for managing the nutmeg company faced criminal prosecution for corruption. As a consequence, the community continued to experience economic hardship until the company eventually ceased operations, after which the nutmeg plantations were returned to local families according to the plantation blocks that had historically been assigned to them."

These testimonies reflect the collective memories and perceptions of local communities regarding the changing governance of the Banda nutmeg industry. They suggest that, from the participants' perspective, the transition from colonial to state management did not produce the anticipated improvements in community welfare. Instead, the informants associated this period with administrative inefficiency, financial uncertainty, and governance problems that ultimately contributed to the decline of the plantation enterprise and the transfer of plantation management back to local communities.

3.2. Nutmeg as a Medium of Social Solidarity Between Indigenous and Migrant Communities in the Banda Islands

The prolonged hardships experienced by the people of the Banda Islands as a consequence of their historical dependence on the nutmeg industry have fostered strong emotional and moral bonds among community members. These shared experiences have strengthened relationships among individuals and social groups through mutual trust, resulting in a collective sense of purpose, shared aspirations, and a profound commitment to mutual support and collective responsibility. Such characteristics constitute the foundation of social solidarity. The findings of this study indicate that communities in the Banda Islands, particularly those residing in villages where nutmeg plantations remain an integral part of local livelihoods, continue to practice the two forms of social solidarity conceptualized by Émile Durkheim. These forms of solidarity have been embedded in community life for generations and have been transmitted across successive generations through everyday social interactions, shared economic activities, and common historical experiences. The two forms of solidarity identified in this study are described in the following sections.

3.3. Mechanical Solidarity

Communities in the Banda Islands, particularly those residing in villages with long-established nutmeg plantations, recognize that their ancestors did not originate from a single ethnic or cultural group. Rather, the present-day population consists of indigenous Banda communities as well as descendants of migrants from Arab communities, Java, Sumatra, Kalimantan, the Bugis region, Southeast Sulawesi especially Buton and several other parts of Maluku. Many of these migrants initially arrived as laborers employed in the nutmeg industry. Their responsibilities included cultivating nutmeg plantations, processing the harvested fruit by separating the seeds and mace from the fruit flesh, transporting harvested products, and undertaking other plantation-related activities. The arrival of workers from diverse ethnic backgrounds introduced a wide range of cultural traditions into the Banda Islands, creating a multicultural social environment that might have been expected to generate intercultural tensions or conflict. However, the findings of this study indicate that such conflicts rarely occurred. Instead, the prolonged experience of working under similar conditions fostered a strong sense of collective identity among workers. Regardless of their ethnic origins, they shared comparable occupational responsibilities, received wages from the same plantation enterprises, worked within the same highly disciplined labor system, and continuously interacted through their everyday experiences over extended periods. These long-term interactions enabled them to share both the hardships and the rewards of plantation life while gradually developing close interpersonal relationships. As these interactions continued across generations, individuals increasingly perceived themselves as sharing a common destiny and collective responsibility. The findings further suggest that this process facilitated cultural assimilation, whereby ethnic distinctions became progressively less significant in everyday social life. Because these shared experiences extended not merely over decades but across several centuries, successive generations gradually ceased to distinguish between indigenous and migrant populations. Instead, they came to regard themselves as members of a single social community united by common emotional attachments, shared moral values, and a collective sense of mutual obligation. Through this long historical process of harmonious social solidarity, the multicultural composition of Banda society evolved into a culturally integrated community characterized by strong mechanical solidarity in the Durkheimian sense.

Although residential settlement patterns on Banda Naira Island still exhibit some degree of ethnic clustering, such as neighborhoods historically inhabited by descendants of Arab, Butonese, and Javanese communities, the social structure on the other islands has undergone a significant transformation from multicultural coexistence to cultural assimilation. According to the findings of this study, this transformation has been facilitated by the long-standing social solidarity that has developed within nutmeg-producing communities. Several indicators illustrate this process.

First, leadership positions within village governments are no longer reserved exclusively for indigenous Banda residents. Instead, village heads are elected through community-based democratic processes, with leadership determined by individual competence, integrity, and public trust rather than ethnic background.

Second, ownership and management rights over nutmeg plantation blocks are no longer based on the original ownership of the land. Instead, these rights have been inherited by the descendants of workers who were assigned responsibility for specific plantation blocks during the Dutch colonial period. Consequently, the identity of the original landowners has largely disappeared from public memory, while hereditary responsibility for managing particular plantation blocks has become the primary basis of ownership.

Third, ethnic markers that once distinguished migrant communities from one another have largely disappeared. Traditional forms of address commonly used in migrants' places of origin are no longer maintained. For example, the Javanese honorifics *Mas* for men and *Mbak* for women are rarely used. Likewise, the Butonese prefixes *La* for men and *Wa* for women have virtually disappeared. Instead, individuals generally bear personal names derived from respected ancestors, prominent public figures, or contemporary naming practices, without retaining traditional ethnic prefixes. As a result, a person's ancestral origin can no longer be readily identified through their name. Rather than being recognized according to ethnic affiliation, individuals are simply identified as Banda people associated with the village in which they reside.

Fourth, everyday social life continues to reflect a strong culture of mutual assistance and collective responsibility. Community members voluntarily help one another during house construction, often joining building activities as soon as they become aware that a neighbor has begun constructing a home. Similar patterns of cooperation are evident during periods of bereavement. Community members routinely provide assistance to grieving families, initially in the form of food and other basic necessities and, more recently, through financial contributions. It is uncommon for a household not to contribute to a bereaved family. According to the participants, these practices are motivated not by social pressure or concern about public opinion, but by a deeply rooted sense of togetherness, mutual responsibility, and shared destiny.

The key informants further explained that, although Banda communities particularly those in nutmeg-producing villages do not formally maintain communal institutions commonly found elsewhere in Maluku, such as *masohi* (collective mutual assistance), *badati* (reciprocal social support), *saniri* (traditional village council), and other customary institutions (Titaley et al., 2018; 2023), the underlying values embodied in these traditions continue to be practiced. These values are expressed during important community events and social occasions, demonstrating that although the institutional forms may no longer exist in their traditional structure, the principles of cooperation, reciprocity, and social solidarity remain deeply embedded in the social life of Banda society.

3.4. Organic Solidarity

According to Durkheim, organic solidarity develops in societies characterized by a high degree of occupational differentiation, where social cohesion is no longer founded upon shared values or similarities among individuals but instead emerges through the division of labor, functional specialization, and relationships of mutual interdependence among members of society (Pope and Johnson, 2015; Herzog and Herzog, 2017). In such societies, individuals perform different roles while remaining dependent upon one another, thereby creating a highly integrated social system. The findings of this study indicate that the nutmeg industry has long served as the foundation for the development of organic solidarity within Banda society. Since the time of their ancestors, the people of the Banda Islands have experienced social relationships characterized by functional specialization and economic interdependence through their involvement in the nutmeg industry. Organic solidarity was reflected in the relationship between plantation owners and workers, where community members both indigenous residents and migrants were employed in nutmeg plantations and received wages from plantation owners or management companies. From the arrival of the Portuguese, followed by the English and subsequently the Dutch, through the establishment of the Dutch East India Company (VOC) and later Dutch plantation enterprises until the outbreak of the Second World War, Banda society experienced a labor system based on a clear division of responsibilities. Plantation workers were required to perform specific tasks in accordance with established regulations and strict labor discipline determined by plantation management. At the same time, plantation owners possessed the authority to organize work assignments and enforce labor regulations, while also bearing the responsibility to provide wages in accordance with agreed employment arrangements. The relationship between employers and workers was essentially professional rather than familial. Social interactions were primarily structured around economic responsibilities rather than personal or kinship relationships.

3.4.1. One key informant described these experiences as follows

"Although Dutch colonial rule is often portrayed as a period of hardship, many nutmeg plantation workers and local residents recalled that there was a sense of economic security because workers received regular wages at predetermined rates. This was made possible by the exceptionally high value of nutmeg in international markets. According to local accounts, the price of nutmeg once exceeded that of gold. Half a kilogram of nutmeg was said to be equivalent in value to seven healthy cattle, making plantation wages sufficient to meet household needs. Workers spent their earnings at local shops operated by Banda residents, creating a healthy circulation of money within the local economy. Consequently, the community benefited economically from the nutmeg trade during the VOC period and later under Dutch plantation companies. According to our elders, living conditions at that time were relatively prosperous because the European authorities emphasized discipline, public order, and economic stability. When individuals were punished, it was generally because they resisted colonial authority or had committed serious criminal offenses, such as murder or other major crimes." These findings demonstrate that organic solidarity in the Banda Islands was not only expressed through the division of labor but also through reciprocal economic relationships between employers and workers. Despite differences in authority, occupational roles, and social status, both parties depended upon one another to sustain the productivity of the nutmeg industry. This mutual dependence created a stable economic system that supported community livelihoods for generations and became an important foundation for social integration within the multicultural society of the Banda Islands.

The accounts provided by the key informants suggest that a relatively harmonious form of organic solidarity existed between nutmeg plantation workers and plantation managers during the colonial period. The benefits of this relationship extended beyond the workers themselves to their families and the broader local community. While plantation owners profited from the labor of their employees and the exceptionally high international value of nutmeg, workers benefited from stable employment and regular wages, which supported household livelihoods and stimulated the local economy. This pattern of social and economic interdependence was disrupted by the outbreak of the Second World War, when plantation activities came to a complete halt. Following Indonesian independence, Dutch-owned plantation enterprises were nationalized, and from 1958 onward the Banda nutmeg plantations were transferred to state ownership. In 1985, plantation management was reorganized under a regional government enterprise, PT Pala Banda, and was subsequently transferred to PT Banda Permai before the company was ultimately declared bankrupt. According to the participants, however, the harmonious form of organic solidarity that had previously characterized labor relations in the nutmeg industry was no longer evident during the period of state management. The informants associated this decline with administrative problems, including corruption, wage deductions, delayed salary payments, and other forms of managerial inefficiency. They further noted that several company officials were eventually prosecuted and imprisoned following court decisions related to corruption cases.

3.4.2. One key informant described these changes as follows

"According to the stories passed down by our elders, life during the Dutch colonial period was considered better than it was after Indonesian independence. During Dutch rule, workers had certainty regarding their wages and salaries, which were sufficient to support their families. Labor was organized in a disciplined manner, and social problems such as theft were rarely encountered. However, after independence, when the plantations were taken over by the Indonesian government, local communities did not experience the expected benefits. Workers' wages were often reduced or delayed for several months, and in many cases the outstanding payments were never fully received. We later heard that several officials responsible for managing the nutmeg company were prosecuted in court for criminal offenses. As a consequence, the community continued to experience economic hardship until the company ceased operations, after which the nutmeg plantations were returned to local families according to the plantation blocks they had historically managed." Taken together, these findings indicate that, from the perspective of the participants, the organic solidarity that had previously characterized the relationship between Banda communities and plantation management became considerably weaker following Indonesian independence. The transition from Dutch plantation companies to state-owned enterprises, and later to PT Pala Banda and PT Banda Permai, was perceived as having diminished the reciprocal relationships of trust, responsibility, and economic interdependence that had previously sustained the nutmeg industry. Consequently, the weakening of institutional governance was accompanied by a decline in the quality of organic solidarity within Banda's nutmeg-based social and economic system.

4. Conclusion

Social solidarity constitutes a fundamental element in maintaining harmonious community life through shared values, mutual support, and a sense of collective belonging. By fostering social solidarity, communities are better able to achieve sustainable development and collective progress. According to Émile Durkheim, social solidarity can be distinguished into two forms: mechanical solidarity and organic solidarity. The findings of this study demonstrate that the nutmeg-

producing communities of the Banda Islands exhibit the characteristics of both forms of solidarity. On the one hand, shared values, cultural traditions, and a common identity as nutmeg producers reflect the existence of mechanical solidarity. On the other hand, the cooperative relationships established through the division of labor and economic activities associated with nutmeg cultivation, processing, and trade represent the characteristics of organic solidarity. These findings indicate that nutmeg functions not only as an economic commodity but also as a social institution that strengthens social bonds both within the indigenous Banda community and between indigenous and migrant populations. Mechanical solidarity has evolved through the shared experiences of individuals who have worked within the nutmeg industry over many generations. People from diverse ethnic and cultural backgrounds have experienced similar working conditions, wage systems, and social environments over an extended period. These common experiences have fostered a strong sense of mutual responsibility and shared destiny, reinforced emotional and moral ties, and facilitated processes of cultural assimilation that have gradually diminished social boundaries between indigenous residents and migrants. As a result, a strong collective identity has emerged, contributing to social cohesion within Banda society. Organic solidarity, meanwhile, is reflected in the interdependent relationships that developed through the economic organization of nutmeg plantations, particularly during the period of Dutch colonial administration. A clearly defined division of labor, stable employment, and an organized management system created social and economic stability that supported community well-being. However, following the transfer of plantation management to the state, a range of challenges including irregular wage payments, corrupt administrative practices, and declining managerial effectiveness contributed to the deterioration of community welfare. These problems ultimately led to the collapse of the plantation enterprise and the return of plantation management to local communities. Overall, this study demonstrates that nutmeg has played a far more significant role than merely serving as a valuable economic commodity. Throughout the historical development of the Banda Islands, it has functioned as a critical social institution that has shaped, sustained, and reinforced social solidarity across different historical periods. By highlighting the social dimension of a globally significant spice commodity, this study contributes a new perspective to the literature on social solidarity, demonstrating how locally embedded economic activities can foster social cohesion within multicultural communities.

Compliance with ethical standards

Disclosure of conflict of interest

The authors state that there is no conflict of interest in connection with the preparation, conduct, analysis, or publication of this research.

References

- [1] Adianto, J., Hermawan, R., Isnaeni, H., Geros, C. L., Muafiroh, S., Kersapati, M. I., Iriyanto, N., and Atqa, M. (2026). "Para - Para Api": Vernacular architecture of nutmeg farmers' settlements in the Banda Islands, Maluku, Indonesia. *Nakhara: Journal of Environmental Design and Planning*, 25(2), 1–24. <https://doi.org/10.54028/NJ202625612>
- [2] Anripa, N., and Lone, V. F. (2024). Preserving nutmeg: historical significance, medicinal benefits, and climate change threats to Indonesian nutmeg. *International Journal of Islamic and Complementary Medicine*, 5(2), 158–167. <https://doi.org/10.55116/ijicm.v5i2.79>
- [3] Asgarpanah, J., and Kazemivash, N. (2012). Phytochemistry and pharmacologic properties of *Myristica fragrans* Hoyutt: A review. *African Journal of Biotechnology*, 11(65), 12787–12793. <https://doi.org/10.5897/AJB12.1043>
- [4] Aspers, P., and Corte, U. (2019). What is qualitative in qualitative research. *Qualitative Sociology*, 42(2), 139–160. <https://doi.org/10.1007/s11133-019-9413-7>
- [5] Audrey, L. E. J., Herman, R. E., Riadh, U. L. M., and S, M. A. A. (2017). Productivity of nutmeg (*Myristica* spp.) in agroforestry system (Dusung) in Ambon Island. *Occasional Papers*, 58, 69–76.
- [6] Burelli, C., and Camboni, F. (2023). The function of solidarity and its normative implications The function of solidarity and its normative implications. *Ethics and Global Politics*, 16(3), 1–19. <https://doi.org/10.1080/16544951.2023.2241678>
- [7] Carlson, D. R., and Jordan, A. (2015). Social control on a bandanese plantation compound, eastern Indonesia. *Asian Perspectives*, 52(2), 213–243. <https://doi.org/10.1353/asi.2013.0013>
- [8] Cattaneo, A. (2022). Shaping the space and places of Portuguese and Dutch global trade: the Carte di Castello of Cosimo III de' Medici. *Journal of European Economic History*, 51(3), 9–46.

- [9] Delhey, J., Boehnke, K., Dragolov, G., Ignácz, Z. S., Larsen, M., Lorenz, J., and Koch, M. (2018). Social cohesion and its correlates: a comparison of western and asian societies. *Comparative Sociology*, 17(3–4), 426–455. <https://doi.org/10.1163/15691330-12341468>
- [10] Dhont, F. (2022). Of nutmeg and forts: Indonesian pride in the Banda Islands' unique natural and cultural landscape. *ETropic: Electronic Journal of Studies in the Tropics*, 21(1), 83–98. <https://doi.org/10.25120/etropic.21.1.2022.3864>
- [11] Donkersgoed, J. Van. (2023). Shifting the historical narrative of the Banda Islands; From colonial violence to local resilience Shifting the historical narrative of the Banda Islands. *Wacana*, 24(3), 500–514. <https://doi.org/10.17510/wacana.v24i3.1657>
- [12] Durkheim, E. (1951). *Suicide: A Study in Sociology*. New York: Free Press.
- [13] Erfurth, L. M., Hernandez, A. S., and Carin, B. (2021). “If worse comes to worst, my neighbors come first”: social identity as a collective resilience factor in areas threatened by sea floods. *SN Social Sciences*, 1(11), 1–24. <https://doi.org/10.1007/s43545-021-00284-6>
- [14] Farny, S., and Dentoni, D. (2025). Social identity and place-based dynamics in community resilience building for natural disasters: an integrative framework. *Ecology and Society*, 30(2), 1–14. <https://doi.org/10.5751/ES-15998-300212>
- [15] Forrest, R., Kearns, A., Forrest, R., and Kearns, A. (2001). Social Cohesion, Social Capital and the Neighbourhood. *Urban Studies*, 38(12), 2125–2143. <https://doi.org/10.1080/00420980120087081>
- [16] Freedman, P. (2015). Health, wellness and the allure of spices in the Middle Ages. *Journal of Ethnopharmacology*, 167, 47–53. <https://doi.org/10.1016/j.jep.2014.10.065>
- [17] Goodwin, J., and Horowitz, R. (2002). Symposium on methodology in qualitative sociology introduction: the methodological strengths and dilemmas of qualitative sociology. *Qualitative Sociology*, 25(1), 33–47. <https://doi.org/10.1023/a:1014300123105>
- [18] Herzog, L., and Herzog, L. (2017). Durkheim on social justice: the argument from “organic solidarity.” *American Political Science Review*, 112(1), 1–13. <https://doi.org/10.1017/S000305541700048X>
- [19] Ijassi, W., Evrard, D., and Zwolinski, P. (2025). Characterizing value chain patterns of urban factories: A case study in the grenoble urban area. *Journal of Cleaner Production*, 520, 1–25. <https://doi.org/10.1016/j.jclepro.2025.146061>
- [20] Ittersum, M. J. Van. (2016). Debating natural law in the banda islands: a case study in anglo-dutch imperial competition in the east indies, 1609–1621. *History of European Ideas*, 42(4), 459–501. <https://doi.org/10.1080/01916599.2015.1101216>
- [21] Jordan, A. (2015). Spice island stew: creolization of foodways on colonial era nutmeg plantations, Maluku Province, Indonesia. *Journal of Indo-Pacific Archaeology*, 37, 33. <https://doi.org/10.7152/jipa.v37i0.14746>
- [22] Jovanovic, G. (2011). Toward a social history of qualitative research. *History of the Human Sciences*, 24(2), 1–27. <https://doi.org/10.1177/0952695111399334>
- [23] Kusuma, J., Scarcelli, N., Navascu, M., Couderc, M., and Gerard, P. (2023). Retracing the center of origin and evolutionary history of nutmeg *Myristica fragrans*, an emblematic spice tree species. 1–16. <https://doi.org/10.22541/au.169114679.94713644/v1>
- [24] Leatemia, J. A., Laimeheriwa, S., and Rehatta, H. (2025). Impact of climate variability on nutmeg production in the Banda Islands, Maluku, Indonesia. *Journal of Agrometeorology*, 27(2), 144–147. <https://doi.org/10.54386/jam.v27i2.2827>
- [25] Miles, M. B., and Huberman, A. M. (1994). *Qualitative data analysis* (pp. 1–337).
- [26] Muller, J., and Coetzee, T. (2012). Social capital and socio- economic development in developing political economies. *African Journal of Public Affairs*, 5(1), 117–131.
- [27] Ntontis, E., Drury, J., Aml, R., Rubin, G. J., Williams, R., and Saavedra, P. (2020). Collective resilience in the disaster recovery period: Emergent social identity and observed social support are associated with collective efficacy, well-being, and the provision of social support. *British Journal of Social Psychology*, 60(3), 1075–1095. <https://doi.org/10.1111/bjso.12434>

- [28] Paays, V. G., Munizu, M., and Aarsal, A. (2026). Value chain and nutmeg farmers' welfare in Morella, Central Maluku, Indonesia. *Asian Journal of Agriculture*, 10(1), 1–8. <https://doi.org/10.13057/asianjagric/g100120>
- [29] Palchuk, O. (2025). The expanding concept of capital: the role of social and human capital. *Green Blue and Digital Economy Journal*, 6(1), 51–58. <https://doi.org/10.30525/2661-5169/2025-1-7>
- [30] Pope, W., and Johnson, B. D. (2015). Inside organic solidarity. *American Sociological Review*, 48(5), 681–692. <https://doi.org/10.2307/2094927>
- [31] Raihan, A., Tanchangya, T., Rahman, J., and Ridwan, M. (2024). The influence of agriculture, renewable energy, international trade, and economic growth on India's environmental sustainability. *Journal of Environmental and Energy Economics*, 3(1), 37–48. <https://doi.org/10.56946/jeee.v3i1.324>
- [32] Santos, H. C., Varnum, M. E. W., and Grossmann, I. (2017). Global Increases in Individualism. *Psychological Science*, 28(9), 1–12. <https://doi.org/10.1177/0956797617700622>
- [33] Saputro, M. A., Andarwulan, N., and Faridah, D. N. (2016). Physical characterization and essential oil properties of West Sumatra mace and nutmeg seed (*Myristica fragrans* Houtt) at different ages at harvest. *Journal of Pharmacognosy and Phytochemistry*, 5(6), 371–376.
- [34] Sarjiyanto, and Marwoto, I. (2019). Workers in nutmeg plantations and the town of neira in the banda islands during the 17-19th century (a disciplinary panopticon model). *International Review of Humanities Studies*, 4(2), 857–873.
- [35] Sasikumar, B. (2021). Nutmeg - Origin, diversity, distribution and history. *Journal of Spices and Aromatic Crops*, 30(2), 131–141. <https://doi.org/10.25081/josac.2021.v30.i2.7250>
- [36] Schiermer, B. (2014). Durkheim's concept of mechanical solidarity –where did it go? *Durkheimian Studies*, 20(1), 64–88. <https://doi.org/10.3167/ds.2014.200104>
- [37] Shngreiyo, A. S. (2017). The beginning of dutch and english conflict in banda and moluccas in the early seventeenth century. *IRA-International Journal of Management and Social Sciences*, 8(2), 162–174. <http://dx.doi.org/10.21013/jmss.v8.n2.p4>
- [38] Titaley, E. (2023). Sustainable ecotourism development in Negeri Lumoli, Maluku-Indonesia: sociology studies. *Khazanah Sosial*, 5(1), 53–64. <https://doi.org/10.15575/ks.v5i1>
- [39] Titaley, E., Kanto, S., Wisadirana, D., and Mardiyono, M. (2018). Poverty and local potentials. *Ecology, Environment and Conservation*, 24(3), 1092–1103.
- [40] Tracy, S. J. (2010). Qualitative inquiry qualitative quality: eight “big-tent” criteria for excellent qualitative research. *Qualitative Inquiry*, 16(10), 837–851. <https://doi.org/10.1177/1077800410383121>
- [41] Ubaidillah, Lintang, J., Anuraga, Y., and Fathy, R. (2025). Religion, custom and identity Conflict transformation in Banda Neira Islands. *Journal of Indonesian Islam*, 19(01), 161–187. <https://doi.org/10.15642/JIIS.2025.19.1.161-187>
- [42] Ulfah, Hardjomidjodjo, and Anggraeni. (2020). Nutmeg determination as the main commodity in South Aceh; a literature review. *IOP Conf. Series: Earth and Environmental Science*, 1–10. <https://doi.org/10.1088/1755-1315/472/1/012040>
- [43] Vu, V. K., Vu, K. H., Thu, T., and Vu, N. (2026). Social capital and its influence on sustainable economic development and natural resource management among ethnic minorities in Phu Tho province, Vietnam. *PLoS ONE*, 21(4), 1–21. <https://doi.org/10.1371/journal.pone.0347481>
- [44] Xu, G. (2020). Junks to Mare Clausum: China-Maluku Connections in the Spice Wars, 1607-1622. *Itinerario*, 44(1), 196–225. <https://doi.org/10.1017/S016511531900055X>
- [45] Zumbroich, T. J. (2012). From mouth fresheners to erotic perfumes: The evolving socio-cultural significance of nutmeg, mace and cloves in South Asia. *Ejournal of Indian Medicine*, 5, 37–97.