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How Rural Residents Adapt To Agricultural Development

Muhamad Chairul Basrun Umanailo[1], Hamiru Hamiru[2], Mansyur Nawawi[3], Annisa Retrofilia Umanailo[4], Herwina Bugis[3], Habiba Lesilawang[3], Rhisanda Nitma Tesyawa[5]
[1]Fakultas Pertanian dan Kehutanan, Universitas Iqra Buru, Namlea, Indonesia
[2]Fakultas Ekonomi, Universitas Iqra Buru, Namlea, Indonesia
[3]Fakultas Hukum, Universitas Iqra Buru, Namlea, Indonesia
[4]Fakultas Sains dan Teknologi, Universitas Pattimura, Ambon, Indonesia
[5]Fakultas Hukum, Universitas Wijaya Kusuma, Purwokerto, Indonesia
Email: [1]chairulbasrun@gmail.com, [2]hamiru67.uniqbu@gmail.com, [3]mansyurnawawi071@gmail.com, [4]annisaretroo@gmail.com, [3]herwinabugis8@gmail.com, [3]lesilawanghabiba@gmail.com, [5]rhisandanitma01@gmail.com
Corresponding Author*: Muhamad Chairul Basrun Umanailo, Universitas Iqra Buru, Jalan Prof Bassamalah No 1, Namlea, Indonesia 97571. E-mail: chairulbasrun@gmail.com

ABSTRACT
Downstream innovations in agriculture have enormous promise for creating jobs, reducing unemployment, and raising living standards in rural areas of Buru Regency, Maluku. National food security can be enhanced through efficient agricultural processing that takes advantage of the region's abundant natural resources. This study employed a qualitative approach grounded in an explanatory case study methodology to ascertain the factors that contributed to certain outcomes. Thirty informants were selected at random from seven different villages. Despite economic and social pressures, rural communities are adapting to agricultural downstreaming in ways that preserve their cultural traditions, according to the results. This method integrates the use of social capital, risk management, and value creation. But long-term socio-economic resilience requires backing from accessible resources, inclusive social participation, and technology adoption. Policies of the future should put an emphasis on social capital, community involvement, economic innovation, and local values. Value changes, technical barriers, social capital mapping, and comparisons of adaptation models all necessitate additional research.
KEYWORDS: *development, downstreaming, farming, village, culture*

1. INTRODUCTION

Agriculture provides a living and social support system for many rural Indonesians. However, farmers in Buru Regency still face the issue of low added value due to a lack of downstream processing. The term "agricultural downstreaming" describes the processes that turn raw agricultural materials into valuable finished goods (1). This strategy aims to improve farmers' welfare while reducing their reliance on raw material markets.

Looking at Buru Regency's agricultural system through a sociocultural lens reveals that it has always depended on the first-hand knowledge and expertise of the local population. Traditional agricultural practices, such as cooperation and discussion, remain deeply embedded in farmers' lives. However, the introduction of agricultural downstreaming is likely to cause conflicts between traditional values passed down through generations and modernization. This leads to various changes in farmers' social adaptation patterns due to agricultural downstreaming.

By embracing new technology and building stronger economic networks, some farmers can adapt. But for some, the obstacles come from a lack of information, funds, and social standards that are always evolving (2). Researching how rural communities adjust to agricultural downstreaming is crucial for understanding adaptation patterns, the factors that influence them, and the preservation of local knowledge.

The wide variety of high-quality commodities grown in Buru Regency makes it an ideal location for agricultural development. Rural communities in Buru Regency can achieve their goals with the help of these commodities, which have significant potential. Still, the agricultural sector in this area is dealing with numerous systemic problems, including the low added value of agricultural products and the absence of innovation in agricultural processing (3). The majority of farmers are still following an economic model based on commodities, where crops are sold unprocessed for low and often fluctuating prices. The wages of farmers are negatively impacted and the agricultural sector is unable to realize its full economic growth

potential due to this over-reliance on raw material sales (4). It is possible to build upon this situation through agricultural downstreaming, which aims to increase household incomes in rural communities.
Agricultural downstreaming refers to the practice of trying to process agricultural products in a manner that increases their added value before they reach consumers (5). Downstreaming can help farmers earn more money and lessen their dependence on raw material markets, according to multiple studies (6,7). Downstreaming can only be successful if farming communities are socially and culturally ready to accept change, which is equally important as financial considerations (8). Simply put, "local wisdom" refers to the accumulated understanding of a people's long-established practices, beliefs, and customs. Social cohesiveness among farmers, environmentally friendly farming methods, and resource management are just a few of the many reasons why local knowledge is valuable in agriculture (9,10). This study aims to examine how communities adapt to downstreaming while still upholding socioeconomic values.

2. METHODS AND METHODOLOGY

Using a qualitative model and a case study approach, the authors of this study were able to examine real-life phenomena or events in great detail by focusing on a single or multiple instances. Researchers can examine the dynamics within social, cultural, political, and historical frameworks, as well as other influencing factors, by using case study methodology (11). When selecting study locations, the following rural communities' characteristics were taken into account: Parbulu, Seith, Waegeren, Waitele, Hatawano, Wamlana, and Waeperang.
In this qualitative study, interview methods were used to investigate the informants' experiences (12,13). An integral aspect of gathering data was deciding what the interview would cover and how to frame it. The researcher established rapport with the informants to make them feel at ease and encourage them to open up. Further, the researcher obtained consent before recording any interviewees' statements or information. One research method used to find informants was purposive sampling, which involves selecting individuals from a pool based on predetermined criteria. Experts in agriculture, downstream processing, and food security have been hand-picked by the author to serve as study informants. Local business actors, homemakers, farmer groups, and individual farmers were all considered appropriate informants for this study. The villages of Parbulu, Seith, Waegeren, Waitele, Hatawano, Wamlana, and Waeperang were selected for the study because they are representative of rural communities that consist of farming households.
Data analysis followed a four-stage process: first, collecting categories; second, directly interpreting them; third, creating patterns; fourth, looking for category equivalence; and lastly, creating naturalistic generalizations. The method offers several benefits, including the ability to share research findings with the broader community, conduct in-depth interviews to investigate data sources, and more sensitively detect all symptoms in study subjects within a social setting.

3. RESULTS AND DISCUSSION

More than just a passive response to external pressures, the intricate social adaptation of rural communities to agricultural downstreaming offers a rich case study. The concept of "Social Adaptability," supported by nineteen separate components, serves as the basis for a multi-stage process. What makes this adaptation stand out is the way the two main pillars interact with each other. They complement one another, illustrating how community adaptation practices are fraught with tension and personal preference.
Out of all the adaptation strategies, the first pillar, "Maintaining Traditional Values," was the most widely approved. When asked about their social adaptation, 63 percent of informants stressed the significance of maintaining cultural and traditional values. With its 25 constituent parts, this emphasis is more of an adaptive mechanism than a classic example of anti-modernism or nostalgia. Given the structural changes brought about by downstreaming, these factors show how traditional practices, beliefs, rituals, and norms have been maintained, internalized, and integrated. Communities are better prepared to deal with economic change and its associated difficulties when they adhere to these principles. These enduring values provide the foundation for the community's shared identity and unity, which in turn promotes social resilience (15). By outlining expectations for behaviour, they aid communities in maintaining internal stability and coping with uncertainty without watering down their distinctive identity (16). Having strong principles helps maintain communities and prevent social fragmentation in the context of downstreaming, particularly when people face economic displacement or changes in their way of life. So,

it appears that rural communities can adjust to new circumstances without losing their cultural traditions; on the contrary, they can draw on them for strength in times of need.

"Engagement in Social Networks" is an essential second pillar of adaptation, as 38% of informants have stated, highlighting that the most important ways to adapt to social transformation are through social interaction and connectivity. This pillar, which rests on fifteen separate criteria, highlights the importance of community engagement with internal and external stakeholders, including governments and businesses. Relationships within families, congregations, and other community groups, as well as more informal venues for resource exchange, are all instances of such networks. From a social capitalist point of view, these networks are critical pathways for learning about downstream practices and opportunities (17), such as new agricultural techniques, market access, and government assistance programs. The social and psychological difficulties that accompany change can be better handled when communities have access to the emotional support they need through social networks. Further, they pave the way for new forms of corporate cooperation, such as joint ventures or cooperatives, that can take advantage of opportunities in the future. With the help of these social networks, communities are better able to adapt to outside forces because members are able to share resources, learn new things, and use their combined strengths to overcome obstacles.

This adaptation dynamic, in its whole, shows how people constantly and deftly navigate the tension between embracing change and holding on to cultural traditions that have been passed down through generations. Instead of taking a fixed position, the villagers aim for a constantly shifting balance between the two. On one hand, traditional values act as a filter for novel ideas, and on the other, social networks facilitate the adoption of modern practices that are consistent with long-standing beliefs.

An insightful lens through which to examine this process is Anthony Giddens's Structuration Theory. In this theory, villagers are seen as active participants in the process, shaping social structures as much as they are objects of downstreaming processes, or externally imposed structures (18). They use their agency, which is the ability to act and make choices, to uphold traditional values (as internal structures reproduced and affirmed through daily practices) and shape and reinforce relational structures through their active engagement in social networks. Also, the fact that "social and cultural shifts" were perceived by 77% of respondents shows how dynamic and dialectical this process is. This demonstrates that sociocultural structures are not static and unchangeable but are, on the contrary, transformed through the ongoing negotiation, reproduction, and adaptive behaviour of individuals. Changes like these occur when new standards simplify participation in the downstream economy or when traditional values are rethought to match contemporary realities.

Although there is still a long way to go before technology is widely used and people are actively involved in society, this process of adaptation demonstrates that communities are capable of coping with external pressures. For example, the downstream sector might still have trouble getting its hands on the latest tech or the education and training it needs to succeed. Similarly, not everyone in a society will be an active participant in forums for making decisions or in group projects. It is imperative that the private sector, non-governmental organizations (NGOs), and government agencies collaborate to provide targeted interventions and continuous support to these crucial areas. Increasing access to resources, education, and training is one approach to better community adaptive strategies. There is considerable room for improvement in the efficacy of adaptive strategies through targeted empowerment and innovation, even though adaptation is an ongoing process. During the agricultural downstreaming era, this could lead to long-term socio-economic resilience.

The attached data shows how communities' economic strategies in the agricultural supply chain illustrate "Economic Adaptation," a complex concept with 27 different parts. The adaptation process is being driven by the dynamic interaction between two key pillars: "Increased Revenue" and "Income Diversification." As a result, communities are actively working to attain economic sustainability. Policy and market forces aren't the only ones driving this. Although they are mutually supportive, these two pillars demonstrate that they have different aims and skills in implementing the local strategy.

For the first pillar, Income Increase, 53 percent of informants who experienced an income increase concurred. This shows that the community can see the potential for future economic growth in agricultural pursuits and act accordingly. This 29-element pillar encompasses a broad variety of strategies, from aggressively expanding into new markets to creating new processed products with higher sales value. Other methods include using competitive pricing strategies and maximizing operational efficiency at the primary production level. The value added theory, which posits that a community's farmers and business owners can expect a direct income increase due to the substantial rise in economic value of major products

along the supply chain from raw agricultural produce to finished or processed goods, aligns with this trend (19). What this means is that the economy is shifting from relying on raw materials and other essentials to relying on processed goods with higher value.

On the other hand, income diversification was deemed crucial by nearly half of the respondents, demonstrating the importance of their present efforts in this area. Included in this pillar and supported by 26 separate factors are strategies to reduce reliance, such as entering new markets, developing products or services unrelated to primary agricultural commodities, or reinvesting profits in other areas of the economy. The goal of this approach is to reduce the economic vulnerability of a community to external market shocks, changing climatic conditions, or unpredictable primary commodity price fluctuations (20), which is in accordance with Risk Management Theory. In order to make a community more resistant to uncertainty, diversification is a proactive measure that strengthens economic resilience. Additionally, it protects the community's financial resources.

The economy of a community can be strengthened by implementing both of these pillars simultaneously. In the short term, community members focus on boosting economic production; in the long run, they consider diversifying and enhancing their income sources. This approach is fully in line with the principles of LEDT, which emphasize the importance of community-based initiatives to promote sustainable, long-term economic growth that benefits all segments of society (21). In the long run, this kind of economic adaptation helps communities become more self-sufficient by letting them control their own product value chains and reducing their dependence on raw material market fluctuations.

Furthermore, the data that yielded 57 references had a preponderance of references pertaining to "Ability to Innovate," which is strongly related to the dynamics of this community's economic adaptation. Based on the data, innovators at the community level pay more attention to agricultural product innovation (31 references) than to the adoption of new technologies (14 references). Although communities possess a wealth of creative potential in terms of developing marketable end-products, there is still an opportunity for advancement in the widespread utilization of modern technology in production and marketing processes. New ideas are the true drivers of economic growth, according to Joseph Schumpeter's renowned Economic Innovation Theory. To increase economic competitiveness and take advantage of downstreaming opportunities, communities must innovate agricultural products and adopt new technologies (22).

The interplay between these economic strategies encompasses not only technological or market considerations, but also cultural and social ones, as demonstrated by the code co-occurrence model. You will find a lot of overlap between "Economic Adaptation," "Relations between Social Groups," and "Shifting Social and Cultural Values." This demonstrates that changes in a community's sociocultural values can impact economic strategies, and vice versa. Changes in social structures, power dynamics, or even the fortification of intergroup relations through economic cooperation can result, for instance, from the introduction of new agricultural products that produce more income. Strong traditional values can actually encourage the adoption of innovations when they are perceived as fitting in with community norms.

However, the numbers reveal that several issues require attention, including the slow adoption of technology and the need for more active participation in social activities. Communities have demonstrated complex and progressive adaptation, but to achieve sustainable socio-economic resilience in the era of agricultural downstreaming, it is essential to further strengthen these areas. To illustrate the point, technological gaps can hinder production efficiency and competitiveness in today's market. Similarly, less-than-ideal social engagement can impede the possibility of cooperation and collective innovation. To maximize the effectiveness of current adaptive strategies, it is necessary to implement targeted interventions such as programs that teach specific skills to specific populations, make it easier to get low-cost technology and funding, and create inclusive platforms for collaboration. These strategies require consideration of the local social and cultural environment in order to be accepted and implemented successfully.

Community economic strategies within the context of agricultural downstreaming are thus dynamic, incorporating new ways of thinking about risk management (via income diversification), capitalizing on social and cultural assets (via leveraging), and improving products (through innovation). While much adaptation has already occurred, it will be critical for village communities to identify and strengthen weak spots so they can take advantage of opportunities that will come downstream and build an economy that is more resilient, inclusive, and sustainable. It is essential to have an all-encompassing plan that takes into account the process in its entirety, considering economic, social, cultural, and technological aspects.

4. CONCLUSION

Downstreaming in agriculture and rural communities is an intricate and multi-faceted process predicated on "Social Adaptability." The two most prominent features of this process are "Maintaining Traditional Values," which 63% of respondents saw as a foundation for social adaptation and resilience, and "Engagement in Social Networks," which 38% of respondents saw as a crucial means to tap into social capital, which can result in financial opportunities, emotional support, and knowledge. Communities, according to Giddens' Structuration Theory, do more than simply receive downstreaming; this dynamic reflects the constant struggle between adapting to new circumstances and losing touch with one's past. Although this adaptation is fluid and requires constant pliability and modification, the fact that 77% of sources saw "social and cultural shifts" nonetheless emphasizes this. In terms of money, this change manifests as "Economic Adaptation," which is further broken down into "Increased Revenue" (that 53% of respondents mentioned) and "Income Diversification" (that 47% of respondents mentioned). Agricultural product innovation drove income increases, in line with the Value-Added Theory and economic innovation theory, while diversification is an important risk management strategy. The robust association between economic adaptation and innovation demonstrates the critical importance of product development; nevertheless, technological adoption could be enhanced. The complex web of relationships between economic, social, and cultural variables makes it clear that adaptation is a systemic process; altering one component will have consequences elsewhere.

Even though there are clear barriers to more people actively using technology and participating in society, communities demonstrate incredible resilience and adaptability by relying on traditional values and social networks. Although not fully accomplished, building social resilience through village collaboration is crucial. Because they encourage cooperation and lessen conflict, "Relations between Social Groups" (a form of social capital) are crucial for making the most of future opportunities. It is crucial to adopt a holistic approach and execute focused interventions to build socio-economic resilience that lasts. Education, training, access to resources, and the facilitation of collaboration are all ways these will aid communities in becoming more self-sufficient. In this approach, adapting to change will be about more than simply surviving; it will be about thriving.

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6. Data Availability

Data supporting the findings of this study are available upon reasonable request from the corresponding author.

7. Conflict of interest

The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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