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Copra Value Chain Analysis in Dipaculao, Aurora: Its Impact on Local Economic Growth as a Basis for an Operational Sustainable Plan

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Abstract: This study investigates the copra value chain in Dipaculao, Aurora, and examines its impact on local economic growth to develop an operational sustainable plan. Utilizing a descriptive mixed-methods approach, the research engaged 45 copra farmers through surveys and in-depth interviews. Findings reveal that copra farming remains a critical economic activity for the community, contributing to household income and employment generation. However, the industry is hindered by persistent challenges such as fluctuating prices, inadequate infrastructure, limited access to modern technology, and a lack of institutional support. The study also highlights the absence of downstream integration, which restricts income growth and economic diversification.

Despite these barriers, farmers demonstrate resilience and a willingness to adopt sustainable practices if provided with adequate training and support. Thematic analysis of interviews further underscores the need for infrastructure improvements, cooperative development, and stronger market linkages. Based on the findings, this paper proposes strategic recommendations that include modernizing processing techniques, establishing farmer cooperatives, and enhancing government interventions in capacity building and infrastructure development. Strengthening the copra value chain in Dipaculao is essential to improving local livelihoods and ensuring the long-term sustainability of the industry.

Keywords: *Copra Value Chain, Local Economic Growth, Dipaculao Aurora, Coconut Farmers, Sustainability, Agricultural Development, Rural Economy, Cooperative Strategy, Infrastructure, Policy Support*.

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I. INTRODUCTION

The copra industry is a significant economic lifeline in many rural communities across the Philippines, especially in Dipaculao, Aurora. Coconut farming and copra processing serve as a primary source of income for local families and underpin the broader rural economy through employment generation and trade facilitation. However, the local copra value chain remains vulnerable to a variety of constraints, including price volatility, outdated production techniques, and insufficient infrastructure.

The primary concern for farmers in Dipaculao lies in unstable copra prices that frequently fluctuate due to global market dynamics. These price swings disrupt financial planning and discourage reinvestment into farm operations. Additionally, most farmers rely on traditional drying and harvesting practices, often leading to poor product quality that diminishes market value. A fragmented distribution network, marked by the dominance of middlemen, further erodes profitability by limiting farmers' direct access to processors and buyers.

The theoretical underpinning of this study is rooted in Michael Porter's Value Chain Model, which highlights the need for efficiency across all stages of production— from input acquisition to final product delivery—to enhance competitiveness and profitability. Complementing this is the Input-Process-Output (IPO) model, which helps in mapping the structural flow of copra production in Dipaculao.

This study aims to critically examine the copra value chain in Dipaculao, identify key constraints, assess its socio-economic implications, and propose an operational sustainable plan to ensure long-term viability and equitable growth for all stakeholders involved.

II. METHODOLOGY

A. Research Design

A descriptive research design was employed to assess the practices, challenges, and outcomes within the copra value chain. The study combined both quantitative and

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qualitative approaches to gather comprehensive insights. Quantitative data were collected through structured questionnaires, while qualitative insights were derived from semi-structured interviews with copra farmers.

B. Locale of the Study

The research was conducted in Dipaculao, Aurora—a municipality recognized for its rich coconut farming heritage and active copra trade. The locality provided a suitable context for understanding rural-based copra operations.

C. Respondents and Sampling Procedure

A total of 45 respondents were selected using purposive sampling, consisting solely of coconut farmers directly involved in copra production. This sampling approach ensured that participants had firsthand experience with the value chain processes and associated challenges.

D. Research Instruments

The study utilized a standardized questionnaire complemented by an interview guide. The questionnaire included both Likert-scale and open-ended items focusing on production practices, financial aspects, and perceived socio-economic outcomes. Interview questions explored deeper experiences, community sentiments, and policy perceptions.

E. Validation and Data Collection

The instruments were pre-tested and validated by field experts and faculty advisers from NEUST. Data collection was facilitated through in-person visits and formal requests to barangay officials for authorization. Respondents were briefed on the study objectives, and consent was obtained prior to participation.

F. Data Analysis

Quantitative responses were processed using descriptive statistics—frequency, percentage, mean, and standard deviation. Weighted mean was computed to interpret responses to Likert- scaled items. Qualitative interview data were subjected to thematic analysis, which involved coding, categorization, and pattern recognition to extract meaningful themes.

III. RESULTS

A. Profile of Copra Farmers

Most respondents (33.33%) fell within the 26–35 age bracket, indicating a relatively youthful workforce. A significant number of participants had 5–10 years of experience in copra farming, suggesting growing engagement from newer generations. The industry remains male-dominated (77.78%), although anecdotal data point to women's participation in post-harvest processes.

Income from copra farming was modest—80% of farmers earned PHP 5,001– 10,000 monthly. The reliance on farming as a primary source of income was high, but few farmers were involved in value-adding activities or downstream segments such as trading or processing.

B. Value Chain Practices

Respondents indicated strong agreement on having sufficient resources for production and confidence in traditional drying techniques. However, access to modern technology received only moderate support (mean = 3.67), reflecting a gap in modernization. Farmers largely bypass middlemen, yet transportation challenges persist, pointing to infrastructure limitations.

C. Challenges in Production and Trade

Price fluctuations (mean = 4.80) and climate variability (mean = 4.73) were identified as the most critical challenges. Farmers also cited poor infrastructure, weak market linkages, and lack of technical training as additional barriers. Access to financing, while a concern, did not elicit as strong a response, indicating mixed experiences among farmers.

D. Socio-Economic Impacts

The copra industry was deemed a stable livelihood source (mean = 4.87), contributing significantly to household income and community well-being. Respondents noted a decline in employment opportunities, particularly for seasonal workers, and observed youth migration as a consequence of limited prospects. The industry's contribution to economic growth, however, remained widely acknowledged.

E. Recommendations for Sustainability

Respondents strongly endorsed improving processing techniques, forming cooperatives, and building better infrastructure. Direct trade with processors and adoption of sustainable farming methods were also seen as essential to the industry's future. Government support through training and financial assistance was emphasized as a key enabler of systemic change.

IV. DISCUSSION

The findings reveal a complex interplay between traditional practices and emerging challenges in the copra value chain. While Dipaculao's copra farmers demonstrate resilience and strong community involvement, the industry remains constrained by external market forces, inadequate infrastructure, and limited institutional support.

Price volatility—tied to global coconut oil markets—remains the single most destabilizing factor. Its unpredictability erodes income stability and deters long-term planning. Despite this, the industry continues to be viewed as a pillar of the local economy, suggesting that even incremental improvements could yield significant benefits.

Traditional drying methods, though still widely used and respected for their cultural continuity, represent a key area for modernization. Introducing cost-effective mechanical dryers and storage facilities could boost product quality and open up higher- value markets.

Infrastructure emerged as a cross-cutting concern, with poor road access inflating transport costs and limiting market reach. Investment in farm-to-market roads would not only support agriculture but also enable broader rural development through improved mobility and access to services.

The absence of downstream involvement—such as

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processing or cooperative marketing— indicates missed economic opportunities. Encouraging vertical integration and capacity-building through farmer cooperatives could redistribute value more equitably and reduce reliance on intermediaries.

Environmental sustainability is another crucial area. Farmers expressed strong willingness to adopt eco-friendly practices, provided there is sufficient training and incentive. Policies that promote organic farming, reforestation, and climate resilience will be essential to long-term viability.

V. CONCLUSION AND RECOMMENDATIONS

This study affirms the central role of the copra industry in sustaining livelihoods in Dipaculao, Aurora. Despite enduring challenges, copra farming remains a viable economic activity. However, enhancing its long-term profitability and sustainability will require coordinated interventions across multiple fronts.

➢ *Recommendations Include:*

- **Technological Modernization:** Provide subsidies or microloans for mechanical dryers and improved storage facilities.
- **Market Linkages:** Facilitate partnerships with coconut oil companies and export markets to improve pricing structures.
- **Cooperative Development:** Strengthen or establish farmer cooperatives to enable bulk selling, input procurement, and knowledge-sharing.
- **Infrastructure Investment:** Prioritize road improvements and logistics hubs to streamline trade and reduce transaction costs.
- **Policy Support:** Expand government programs focused on training, sustainability and financial access tailored to coconut farmers.
- **Environmental Strategies:** Encourage climate-smart agriculture through farmer education, incentives, and environmental safeguards.

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