

**ECONOMIC ANALYSIS OF PROCESSING AND MARKETING OF CASHEW  
PRODUCTS AMONG SMALL HOLDER FARMERS IN KAMBIA DISTRICTS, NORTH-  
WEST OF SIERRA LEONE**

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## **ABSTRACT**

The cashew industry presents significant opportunities for economic growth and poverty alleviation among smallholder farmers in Sierra Leone. This study focuses on the economic analysis of cashew processing and marketing among smallholder farmers in Kambia District, North-West Sierra Leone.

The study employed a mixed-methods approach, combining qualitative and quantitative data collection. Findings reveal that cashew processing is primarily manual, with limited access to modern technologies. Most smallholder farmers process raw cashews into kernels, but value addition remains minimal due to constraints such as inadequate processing equipment and lack of technical skills. Despite these challenges, cashew processing contributes significantly to household income, serving as a critical source of livelihood diversification.

Marketing strategies are largely informal, relying on local markets and small-scale traders, with limited access to regional or international markets. Farmers face challenges such as low bargaining power, inadequate market information, and price volatility. These constraints hinder their ability to maximize returns from cashew production and processing.

To address these challenges, the study recommends investments in modern processing equipment, training programs to improve processing skills, and the establishment of cooperative networks to strengthen market access and bargaining power. Additionally, enhancing infrastructure, providing financial support, and linking farmers to export markets could significantly improve the economic outcomes of cashew farming. These strategies hold the potential to enhance income generation and overall livelihoods for smallholder farmers in Kambia District.

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## **1.0.Introduction**

Cashew farming is a vital economic activity in Sierra Leone, particularly in Kambia District. Despite global demand for cashew products, smallholder farmers often sell raw nuts at low prices due to limited processing and marketing capabilities. This study aims to analyze the economic viability of cashew processing and marketing, identify challenges, and propose strategies to enhance farmers' incomes and market access.

### **1.1. Problem Statement**

Smallholder farmers in Kambia District lack access to processing infrastructure and market linkages, resulting in low returns from cashew sales. This limits their ability to benefit from value-added products.

### **1.2. Research Questions**

1. What is the current state of cashew processing among smallholder farmers?
2. What are the economic benefits of cashew processing?
3. What marketing strategies are used, and what challenges exist?
4. How can processing and marketing systems be improved?

### **1.3. Aim**

To conduct an economic analysis of cashew processing and marketing among smallholder farmers in Kambia District.

### **1.4. Specific Objectives**

- I. Assess current processing practices.
- II. Analyze economic feasibility and income contribution.
- III. Investigate marketing strategies and challenges.
- IV. Recommend improvement strategies.

### **1.5. Justification**

The study addresses gaps in local processing and marketing, offering insights for policymakers, NGOs, and farmers to enhance profitability and sustainability.

## **2.0. LITERATURE REVIEW**

### **2.1. Global and Regional Context**

Cashew is a key cash crop globally, with West Africa producing 60% of raw nuts. However, over 90% are exported to Asia for processing. Countries like India and Vietnam dominate processing, while African farmers miss out on value addition. Challenges include lack of infrastructure, finance, and technical knowledge. Initiatives like the African Cashew Alliance (ACA) have shown success in improving local processing in countries like Ghana and Burkina Faso.

### **2.2. Review Sierra Leone Context**

In Sierra Leone, cashew farming is concentrated in Kambia District. Most farmers sell raw nuts due to limited processing capacity. Studies indicate that local processing could increase incomes by up to 45%. Key barriers include poor infrastructure, lack of training, and limited access to credit and markets.

## **3.0. METHODOLOGY**

### **3.1. Research Design**

Mixed-methods approach (quantitative and qualitative).

### **3.2. Study Area**

District, Sierra Leone.

### **3.3. Sample Size**

100 smallholder farmers from 10 communities.

### **3.4. Data Collection**

Structured questionnaires via Kobo Toolbox.

### **3.5. Data Analysis**

Descriptive and inferential statistics using SPSS.

### **3.6. Ethical Considerations**

Informed consent, confidentiality, and voluntary participation.

## **4.0. RESULTS**

### **4.1. Demographics**

- 62% male, 38% female
- 59% no formal education
- 95% rely on cashew farming as primary occupation
- 94% are not part of any cooperative

### **4.2. Processing Practices**

- 80% use traditional methods
- 87% shell nuts manually
- 94% rely on sun-drying
- 97% face quality issues during processing
- 92% have no formal training in processing

### **4.3. Marketing and Economic Feasibility**

#### **Marketing**

- 92% sell in local markets
- 50% use market-based pricing
- 40% face price instability as main challenge
- 88% do not add value before sale
- 85% do not actively seek new markets

### **4.4. Economic Feasibility**

- 90% find processing profitable
- 54% spend 25–50% of earnings on processing costs
- 41% earn around 1,500 LE monthly from cashew processing
- Primary expenses: transport (82%), labor (14%)

## **5.1. Recommendations and Conclusion**

1. **Training and Capacity Building:** Provide technical training on modern processing techniques.
2. **Access to Finance:** Introduce microcredit schemes and low-interest loans for equipment.
3. **Formation of Cooperatives:** Encourage collective marketing and resource sharing.
4. **Infrastructure Development:** Improve roads, electricity, and processing facilities.
5. **Market Linkages:** Facilitate connections with regional and international buyers.
6. **Gender Inclusion:** Support women farmers with targeted resources and training.
7. **Value Addition:** Promote processing into kernels, oil, butter, and other products.
8. **Policy Support:** Implement policies that incentivize local processing and reduce export taxes.

### **5.2.1. Conclusion**

Cashew processing has significant potential to improve smallholder farmers' incomes in Kambia District. However, challenges related to processing methods, market access, and financial constraints must be addressed through coordinated efforts from government, NGOs, and the private sector.

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**APPENDIX B**  
**SURVEYQUESTIONNAIRE ON**  
**ECONOMIC ANALYSIS OF PROCESSING AND MARKETING OF CASHEW**  
**PRODUCTS AMONG SMALLHOLDER FARMERS IN THE KAMBIA DISTRICT**

Dear Respondent, [https://kc.kobotoolbox.org/x/jay\\_man1](https://kc.kobotoolbox.org/x/jay_man1)

This questionnaire is part of a research study titled "**Economic Analysis of Processing and Marketing of Cashew Products Among Smallholder Farmers in Kambia District, North-West of Sierra Leone.**" This study aims to investigate the current state of cashew processing, its economic feasibility, and marketing strategies employed by smallholder farmers and to identify strategies for improving processing and marketing in the Kambia District.

Participation, in this study is voluntary, and your responses will remain confidential and used solely for academic purposes. completing this questionnaire, means you have provided consent to participate in this study.

**Section A: Demographic Information**

**1. What is your age group?**

- ☐ 18–25
- ☐ 26–35
- ☐ 36–45
- ☐ 46–55
- ☐ 56+

**2. Gender:**

- Male
- Female

**3. Marital Status:**

- Single
- Married
- Divorced
- Widowed

**4. Educational Level:**

- No formal education
- Primary education
- Secondary education
- Tertiary education

**5. Household Size:**

- 1–3
- 4–6
- 7–9
- 10+

**6. Years of Experience in Cashew Farming:**

- 1–5
- 6–10
- 11–15
- 16–20
- 21+



**7. Do you have formal training in cashew processing?**

- ☐ Yes
- ☐ No

**8. What is your primary occupation?**

- ☐ Cashew farming
- ☐ Other crops
- ☐ Livestock farming
- ☐ Other (please specify)

**9. Are you part of any cooperative or association related to cashew farming?**

- ☐ Yes
- ☐ No

**10. What is your monthly income from cashew farming?**

- Less than SLL 500,000
- SLL 500,000–1,000,000
- SLL 1,000,000–2,000,000
- More than SLL 2,000,000

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## **Section B: Processing of Cashew Nut Products**

**11. What methods do you primarily use for processing cashew nuts?**

- ☐ Traditional
- ☐ Semi-mechanized
- ☐ Fully mechanized

**12. How do you shell cashew nuts?**

- Manually
- Mechanically

**13. Do you sun-dry or use other drying methods?**

- Sun-dry
- Artificial drying

**14. How many times per month do you process cashews?**

- 1–2
- 3–5
- More than 5

**15. Where do you conduct the processing?**

- At home
- On the farm
- Processing facility

**16. How many laborers do you use for processing?**

- None (self-labor)
- 1–3
- 4–6
- 7+

**17. What is the average cost of processing per batch?**

- Less than SLL 100,000
- SLL 100,000–200,000
- SLL 200,000–300,000
- More than SLL 300,000

**18. How long does it take to process a batch of cashew nuts?**

- Less than a day
- 1–2 days
- 3+ days

**19. Do you face any quality issues in processing?**

- Yes (specify)
- No

**20. What improvements are needed in the cashew processing methods?**

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### **Section C: Marketing Channels for Cashew Products**

**21. Where do you primarily sell cashew nuts?**

- Local markets
- Regional markets
- Export

**22. Who are your main buyers?**

- Direct consumers
- Wholesalers
- Cooperatives

**23. What pricing strategy do you use?**

- Market-based
- Negotiation
- Cooperative-fixed

**24. How often do you sell cashews?**

- Weekly
- Monthly
- Seasonally

**25. What challenges do you face in reaching markets?**

- Transport costs
- Limited buyers
- Price instability

**26. What marketing platforms do you use?**

- In-person
- Online
- Agent-based

**27. Do you offer any value addition before sale?**

- Yes
- No

**28. How do you find new buyers or markets?**

- Referrals
- Market research
- Online

**29. What is your average transportation cost to the market?**

- Less than SLL 50,000
- SLL 50,000–100,000
- SLL 100,000–150,000

- More than SLL 150,000

**30. What incentives would encourage you to sell more cashews?.....**

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#### **Section D: Costs and Returns Analysis**

**31. What is the total production cost per month?**

- Less than SLL 500,000
- SLL 500,000–1,000,000
- More than SLL 1,000,000

**32. What are your monthly labor costs?**

- Less than SLL 100,000
- SLL 100,000–200,000
- More than SLL 200,000

**33. What are your primary expenses?**

- Labor
- Transport
- Processing

**34. How would you estimate your monthly earnings from cashew processing?**

- Less than SLL 500,000
- SLL 500,000–1,000,000
- More than SLL 1,000,000

**35. What is your main source of non-cashew income?**

- Other crops

- Livestock

**36. Do you have fixed or fluctuating processing costs?**

- Fixed
- Fluctuating

**37. What percentage of your earnings goes to processing costs?**

- Less than 25%
- 25–50%
- More than 50%

**38. Do you find cashew processing profitable?**

- Yes
- No

**39. What would you need to increase profitability? (Open-ended)**

**40. Do you use any financial records for tracking profits?**

- Yes
- No

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**Section E: Problems in Processing and Marketing**

**41. What is your biggest processing challenge?**

- Equipment access
- Labor costs

**42. What is your biggest marketing challenge?**

- Limited buyers
- Market access

**43. Are there issues with market pricing?**

- ☐ Yes
- ☐ No

**44. How do you handle cashew waste/by-products?**

- ☐ Reuse
- ☐ Dispose

**45. Do you face storage issues?**

- ☐ Yes
- ☐ No

**46. Do you feel supported by the government or NGOs?**

- ☐ Yes
- ☐ No

**47. What solutions would help you improve your processing? (Open-ended)**

**48. What is the most common complaint from buyers?**

- ☐ Price
- ☐ Quality

**49. How often do you experience product spoilage?**

- ☐ Never
- ☐ Rarely
- ☐ Often

**50. What are the biggest barriers to expanding your business?.....**