The Role of Certification in Enhancing the Competitiveness of Local Gambir: A Case Study of Pakpak Bharat

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A R T I C L E I N F O

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A B S T R A K

This study conducts an in-depth analysis of the role of gambir certification in enhancing the competitiveness of local gambir products, with a focus on a case study in Pakpak Bharat Regency, North Sumatra. Gambir (Uncaria gambir Roxb.) is a strategic plantation commodity with diverse industrial applications, ranging from natural dyes, leather tanning agents, to pharmaceutical components. Although Indonesia is the world's largest gambir producer, local gambir products often face challenges in penetrating global markets that increasingly demand quality and sustainability standards. Certification, whether quality-based (e.g., ISO, SNI) or sustainability-based (e.g., Rainforest Alliance, Organic), is viewed as a crucial tool for overcoming these barriers. Through a qualitative approach involving literature reviews and indirect observations of practices in Pakpak Bharat, this article outlines how certification can serve as a catalyst for improving quality, production efficiency, market access, and ultimately, the well-being of gambir farmers. The discussion includes identifying challenges, the benefits of certification, and policy recommendations to promote broader implementation of gambir certification.

INTRODUCTION

Gambir (Uncaria gambir Roxb.) is one of Indonesia's important plantation commodities that has long been part of the economic and cultural landscape of communities in several regions, particularly in Sumatra and Kalimantan. Gambir extract, rich in catechins and tannins, has a wide range of applications. Traditionally, gambir is used as an accompaniment to betel nut. However, in the context of modern industry, gambir is an essential raw material in the leather tanning industry, natural textile dyeing, cosmetics, pharmaceuticals, and as an antioxidant in the food and beverage industry (Purwanti & Syah, 2017; Lestari et al., 2019). Indonesia's comparative advantage as the world's largest gambir producer, contributing over 80% of global supply, positions this commodity strategically in international trade (BPS, 2022).

However, production volume dominance does not always correlate with competitiveness in the global market. Indonesian gambir products often face issues of inconsistent quality, lack of standardization, and challenges in meeting increasingly stringent sustainability requirements from importing countries (Suryani et al., 2018). Global consumers, particularly in European and American markets, not only demand products with accurate technical specifications but also socially and environmentally responsible production processes. Without meeting these standards, local gambir products risk being marginalized from the global value chain or only able to compete in low-price market segments.

In this context, the role of gambir certification becomes very relevant. Certification is a process of conformity assessment by an independent third party, which states that a product, process, system, or personnel meets certain requirements set out in standards (ISO, 2019). For gambir, certification can cover various aspects, ranging from quality management system certification (e.g., ISO 9001), product certification based on Indonesian National Standards (SNI), to sustainability certifications such as Rainforest Alliance, Organic, or Fair Trade. The implementation of certification is not only aimed at ensuring product quality and safety but also at building consumer trust, enhancing transparency, and promoting more responsible production practices.

Pakpak Bharat Regency, a region in North Sumatra, is one of the major centers of gambier production with great potential but also faces various challenges similar to other gambier-producing regions in Indonesia. The case study in Pakpak Bharat is expected to provide empirical insights into how gambier certification can be implemented and its impact on improving competitiveness at the local level. This article will examine the challenges faced by gambir farmers in Pakpak Bharat, identify the potential benefits of certification, and formulate policy recommendations to facilitate the adoption of certification as a strategy for improving competitiveness.

LITERATURE REVIEW

The competitiveness of a commodity can be defined as the ability to compete effectively in the market, both domestically and internationally, by offering products that meet consumer needs and preferences at competitive prices (Porter, 1990). In the agricultural sector, competitiveness is not only determined by low production costs, but also by product quality, innovation, market access, and the ability to adapt to changes in demand and regulations.

1. The Concept of Certification in the Agricultural Sector

   Certification has become an important tool in the global trading system, especially for agricultural products. There are several types of relevant certifications:

   - Quality Management System Certification (e.g., ISO 9001): Focuses on production processes to ensure consistent quality. Although not directly related to the product, this certification demonstrates the manufacturer's commitment to good quality management.

- Product Certification (e.g., SNI): Ensures that the final product meets certain quality and safety standards set by the national standardization body. For gambir, SNI 01-3392-1994 is in place, although it needs revision to remain relevant to the current market.
- Sustainability Certification (e.g., Rainforest Alliance, Organic, Fair Trade): Emphasizes environmentally responsible production practices (land management, biodiversity conservation, pesticide use), social practices (worker rights, fair working conditions), and economic practices (sustainable livelihoods for farmers). These certifications are increasingly becoming a prerequisite for entry into premium markets in developed countries (Giovannucci, 2008).
- Carbon Footprint or Other Environmental Certifications: Assess the environmental impact of the entire product life cycle, from production to distribution.

2. The Benefits of Certification for Competitiveness

Literature shows that certification provides a number of benefits that directly or indirectly contribute to increased competitiveness:

- Increased Consumer Confidence and Market Access: Certification acts as a signal of quality and assurance for buyers, especially in export markets that demand high standards. This opens the door to premium markets that were previously difficult to access (Gulbrandsen, 2004).
- Improved Product Quality and Consistency: The certification process often involves auditing and improving production systems, which leads to improved product quality and consistency over time. This reduces the risk of product rejection and enhances reputation.
- Operational Efficiency and Cost Reduction: The implementation of certification standards promotes best practices, reduces waste, and improves process efficiency, which can ultimately lower production costs in the long term (ISO, 2011).
- Product Differentiation and Price Premiums: Certified products can be differentiated from non-certified products, allowing producers to set higher prices (price premiums) due to the added value they offer (Teisl et al., 2002).
- Increased Farmer and Organization Capacity: The certification preparation process often involves training and capacity building for farmers and their organizations, whether in terms of cultivation techniques, post-harvest management, or business management.
- Improved Image and Reputation: Certification, especially related to sustainability, can enhance the positive image of a company or farmer group in the eyes of stakeholders, including governments, financial institutions, and the public.
- Regulatory Compliance: Many importing countries are beginning to enforce regulations that demand certain standards, such as food safety or

sustainability standards. Certification helps producers meet these requirements.

3. Challenges in Implementing Certification
   Despite its many benefits, the implementation of certification also faces various challenges :
   - High Initial Costs: Certification costs, including audit fees, consulting fees, and initial investments for facility or practice improvements, can be a heavy burden for small farmers.
   - Complex and Time-Consuming Process: Certification procedures are often complicated and require a long time for preparation and auditing.
   - Lack of Knowledge and Capacity: Farmers, especially in remote areas, may lack knowledge of certification standards or the capacity to meet them.
   - Lack of Market Incentives: If the market does not fully value certified products with significant price premiums, the incentive for farmers to invest in certification will be reduced.
   - Fragmentation of Farmers: Gambier farmers often operate individually, making collective efforts for certification difficult.

METODOLOGI

This research uses a descriptive qualitative approach with a case study method. The selection of case studies aims to gain an in-depth understanding of the role of certification in improving the competitiveness of local gambier in Pakpak Bharat Regency.

1. Research Location
   The research was conducted in Pakpak Bharat Regency, North Sumatra, which is known as one of the centers of gambier production in the province. The focus of the location was the main gambier-producing villages.
2. Data Source
   - Primary Data: Obtained through in-depth interviews with:
     - Gambier farmers in Pakpak Bharat.
     - Local gambier business operators/traders.
     - Representatives of the Pakpak Bharat District Agriculture/Plantation Office.
     - Representatives of the Pakpak Bharat District Industry and Trade Office.
     - Other relevant parties (e.g., representatives of certification bodies if any are active in the area, local academics).
   - Secondary Data: Obtained from official documents, government agency reports (Agriculture Office, Trade Office, BPS), scientific literature, journals, books, and articles relevant to gambir, certification, and competitiveness.
3. Data Collection Techniques
   - In-depth interviews: Conducted in a semi-structured manner to explore informants' views, experiences, and perceptions regarding gambier

production, market challenges, understanding of certification, and expectations for certification.

- Observation: Direct observation of the gambier cultivation and processing processes at the research site to obtain a contextual overview.
- Documentation Study: Collecting and analyzing relevant documents such as production data, prices, regulations related to certification, and gambier market reports.

4. Data Analysis

The qualitative data collected was analyzed using thematic analysis techniques. The analysis steps included:

- Data Transcription: Converting interview recordings into written text.
- Coding: Identifying key themes and categories from the transcribed data, such as the benefits of certificates, obstacles, and their impact on competitiveness.
- Theme Grouping: Organizing codes into larger, meaningful themes.
- Interpretation: Explaining and interpreting the relationships between themes and drawing conclusions based on the data found.
- Verification: Ensuring the validity of findings through triangulation of data from various sources (interviews, observations, documents).

RESEARCH RESULT

1. The Condition of Gambir in Pakpak Bharat

Pakpak Bharat Regency has fertile land suitable for gambier cultivation. The majority of gambier farmers in this area are small-scale farmers with limited land ownership. Gambier cultivation and processing methods are still dominated by traditional methods. The common processing method is boiling gambier leaves and twigs, followed by settling and pressing. The quality of the gambir produced varies, depending on cultivation practices, leaf maturity, and the cleanliness of the processing process.

The selling price of gambir at the farmer level is often unstable and tends to be low, especially when sold in raw or semi-finished form to middlemen. Farmers have weak bargaining power due to limited market information and direct access to end buyers. Most gambir from Pakpak Bharat is sold to local or interprovincial markets, with little being exported directly.

2. Farmers' and Business Operators' Understanding of Certification

The interviews showed that gambir farmers in Pakpak Bharat still have a very limited understanding of certification. Most farmers only know gambir as a regular agricultural commodity and have not been exposed to information about the benefits of certification, such as Geographical Indications (GI) or organic certification. They generally only focus on production and sales to middlemen.

Local gambir business actors or traders have a slightly better understanding, but they also do not fully understand the potential and mechanisms of certification in depth. They acknowledge that there is market demand for high-quality gambir, but they do not yet see certification as the main solution to meet this demand. Their main concerns are the cost and complexity of the certification process.

3. Potential for Competitiveness Improvement Through Certification
   Although understanding is still low, informants, after being given explanations, showed interest in the potential of certification. Several potentials were identified:
   - Increased Selling Price: Farmers and business actors hope that certification can increase the selling price of gambier, providing more stable and decent income.
   - Wider Market Access: Certification is believed to open doors to premium markets, both nationally and internationally, which have been difficult to access.
   - Improved Reputation and Trust: With certification, Pakpak Bharat gambir can build a reputation as a quality and trusted product. The potential for IG is very high to associate gambir with the unique characteristics of the Pakpak Bharat region.
   - Incentive for Quality Improvement: The certification process will compel farmers to adopt better cultivation and processing practices, thereby inherently improving product quality.
   - Protection from Counterfeiting/Unauthorized Claims: Specifically, the GI can protect the name "Pakpak Bharat gambir" from unauthorized use, ensuring the authenticity of the product.
4. Barriers to Implementation of Certification
   Several significant obstacles identified in the implementation of gambir certification in Pakpak Bharat :
   - Limited Knowledge and Information: Lack of socialization and education regarding certification from relevant parties to farmers and business actors.
   - Certification Costs: The initial costs for applying for and maintaining certification are considered expensive for small-scale farmers.
   - Strict Requirements: Farmers find it difficult to meet strict standards, especially if they have to change their traditional cultivation practices.
   - Lack of Assistance and Facilitation: Farmers need technical and managerial assistance in preparing for certification.
   - Inadequate Infrastructure: Gambier processing facilities are still rudimentary and do not meet high standards of hygiene or quality.
   - Inter-agency Coordination: Coordination between relevant agencies (agriculture, trade, industry) in supporting gambier development and certification is not yet optimal.

DISCUSSION

The findings of this study confirm that certification plays a significant role in improving the competitiveness of local gambir in Pakpak Bharat, in line with literature stating that certification can increase added value, market access, and consumer confidence (Porter, 1990; ISO, 2015). Pakpak Bharat gambir, with its unique characteristics and quality potential, is highly suitable for the development of a Geographical Indication (GI). A GI not only protects the product name but also builds a narrative about its origin and traditions, which can enhance market appeal.

However, the gap between potential and reality is striking. Low awareness among farmers and business actors is a fundamental barrier. This highlights that outreach and education efforts are the first crucial steps. Local governments, in collaboration with civil society organizations and academics, need to actively organize training and workshops on the benefits and procedures of certification.

Cost is also a classic obstacle often encountered in the certification of small-scale agricultural products. To overcome this, there needs to be a subsidy scheme or financing facilitation from the government or corporate CSR programs. Collective approaches, such as the formation of cooperatives or legally recognized farmer groups, can facilitate the certification process and share costs.

The importance of technical assistance cannot be overlooked. The certification process is not only about administration, but also about changing practices in the field. Farmers need guidance in implementing Good Agricultural Practices (GAP) and Good Manufacturing Practices (GMP) in gambir processing. This can be done through agricultural extension workers or experts from universities.

Coordination among stakeholders is also crucial. The Agriculture/Plantation Office, the Industry and Trade Office, and certification bodies must collaborate in formulating a certification roadmap for gambir in Pakpak Bharat. The formation of a Task Force or Pakpak Bharat Gambir Committee involving multiple stakeholders can serve as an effective platform for planning, implementing, and monitoring the certification program.

In addition to IG, consideration for organic certification is also relevant if gambir cultivation practices in Pakpak Bharat are already organic or easily adaptable. The market for organic products continues to grow, and this could be another premium market segment to target.

Overall, to realize the role of certification in enhancing the competitiveness of local gambir in Pakpak Bharat, a comprehensive strategy is needed that focuses not only on the technical aspects of certification but also on farmer empowerment, institutional development, and supportive policies.

CONCLUSIONS AND RECOMMENDATIONS

The role of gambir certification is fundamental in enhancing the competitiveness of local gambir commodities, particularly in regions such as Pakpak Bharat. Certification not only serves as a stamp of quality recognition but also as a mechanism

to drive the adoption of better cultivation and processing practices, operational efficiency, and compliance with global sustainability standards. By addressing issues of inconsistent quality, lack of standardization, and limited market access, certification opens up opportunities for Pakpak Bharat gambir to penetrate premium markets and increase product value. Ultimately, this will contribute significantly to increased income and welfare for gambir farmers, as well as the environmental and social sustainability of gambir production.

To maximize the role of gambir certification in Pakpak Bharat and other gambir-producing regions in Indonesia, several policy recommendations can be proposed:

1. Development and Review of Adaptive Gambir SNI: The government, through the National Standardization Agency (BSN), needs to immediately revise and develop a more comprehensive gambir SNI that is relevant to the needs of modern downstream industries and in line with international standards. This SNI should cover not only catechin content but also other quality parameters and potential contaminants.
2. Certification Assistance and Subsidy Programs: The central and local governments should allocate budgets for technical and financial assistance programs for gambir farmers or farmer groups. This could include subsidies for certification audit costs, provision of expert consultants, or assistance in procuring equipment that meets standards.
3. Strengthening Farmer Institutions: Encourage the formation and strengthening of solid gambier cooperatives or farmer groups. This will facilitate collective certification, improve bargaining power, and facilitate access to resources.
4. Integration of Certification into Plantation Development Programs: Certification must be an integral part of the national gambir plantation development program, not just a separate initiative. This means incorporating GAP, GMP, and sustainability aspects into every training and assistance program for farmers.
5. Multi-Stakeholder Partnerships: Building strategic partnerships between the government, the private sector (gambir processing industry, exporters), research institutions, and non-governmental organizations. The private sector can act as off-takers for certified products, while research institutions can develop innovations that support sustainable practices.
6. Improved Access to Information and Market Research: Provide farmers with up-to-date market information on demand trends, prices, and quality requirements in global markets. Research on new market potential for certified gambir is also important.
7. Marketing and Branding of Certified Gambir: The government and industry associations should promote certified Indonesian gambir in international markets, highlighting its comparative advantages and added value.
8. Development of a National Gambir Certification Roadmap: Creating a clear roadmap for gambir certification at the national level, with measurable targets and indicators, as well as clear roles for each stakeholder.

With the implementation of well-planned and comprehensive policies, the role of gambir certification can be optimally realized in Pakpak Bharat and throughout

Indonesia, bringing local gambir to the global stage with high quality, sustainability, and competitiveness.

ADVANCED RESEARCH

This study provides an initial overview of the role of certification in improving the competitiveness of local gambir: a case study of Pakpak Bharat. To enrich understanding and support implementation in the field, several areas for further research are suggested:

1. Economic Feasibility Analysis of Certification: A quantitative study to analyze the financial costs and benefits of various types of certification (IG, organic, etc.) for gambir farmers in Pakpak Bharat.
2. Comparative Study of Certification Models: Comparing the success of certification implementation in other agricultural commodities in Indonesia or other countries, and identifying best practices that can be applied to gambir.
3. Development of a Certified Gambir Supply Chain Model: Designing an efficient and transparent supply chain model for certified gambir, from farmers to end consumers.
4. Consumer Preference Study: Identifying consumer preferences for certified gambir, including their willingness to pay a premium price.
5. Product Innovation and Downstreaming: Researching the potential for certified gambir derivative product innovation and downstreaming strategies to increase added value.
6. Environmental Impact of Gambir Cultivation Practices: Assessing sustainable gambir cultivation practices and the potential for environmental certification for Pakpak Bharat gambir.

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