



Analysis of palm oil plantation regional regulation implementation in bangka belitung from an economic law perspective

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Abstract: This study examines the implementation of Regional Regulation Number 19 of 2017 in Bangka Belitung Province, which mandates palm oil farmers to integrate cattle farming into plantation management. The research employs a normative-empirical legal approach, combining analysis of legal frameworks with field research. Primary data was collected through semi-structured interviews with 30 smallholder farmers and 10 local government officials between January-June 2023, focusing on implementation challenges and compliance factors. Secondary data included regional regulations, implementation reports, and official correspondence, analyzed using qualitative content analysis methods. The study reveals several implementation barriers: lack of sanctions, high initial costs, limited technical knowledge, and insufficient government support. Analysis of interview transcripts and documents, conducted through systematic coding and thematic analysis, indicates significant challenges for smallholder farmers, particularly financial constraints and inadequate incentives. The findings demonstrate that weak supervision and policy design compromise the regulation's effectiveness. The study recommends incorporating sanctions, providing financial assistance, implementing technical training programs, and enhancing monitoring mechanisms. These recommendations aim to improve compliance and align the regulation with its objectives of economic growth and environmental sustainability. This research contributes to understanding how legal frameworks can better support sustainable agricultural practices while considering farmers' socio-economic conditions.

Keywords: Palm Oil-Cattle Integration; Sustainable Agriculture; Economic Law

1. Introduction

The Province of Bangka Belitung, as one of the regions with significant potential in the palm oil plantation sector, has endeavored to integrate sustainability principles through the Regional Regulation (Perda) of Bangka Belitung Islands Province Number 19 of 2017 concerning the Management of Palm Oil Plantation Businesses. One of the crucial provisions in this regulation, as stipulated in Article 38 Paragraph (2), (Perda No. 19/2017, 2017) is the obligation for plantation businesses to implement palm oil-cattle integration with a minimum ratio of one cow for every 10 hectares of palm oil plantation land. This policy aims to utilize plantation waste as animal feed, enhance land productivity through organic fertilizer from cattle manure, and create ecological balance between the plantation and livestock sectors.

Although this integration concept offers dual benefits, its field-level implementation still faces various challenges. Many palm oil farmers in Bangka Belitung Province have not complied with these provisions due to various social, economic, and technical factors. Obstacles such as limited funds for purchasing and maintaining cattle, insufficient knowledge about effective integration techniques, and lack of government incentives become the primary reasons for non-compliance. Furthermore, weak supervision and

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enforcement of sanctions against violations also contribute to the suboptimal implementation of this Regional Regulation.

Based on the economic statistics of the Bangka Belitung Islands Province in recent years, it has shown an interesting development despite facing significant challenges, both in terms of economic growth and the sectors affected by external situations, such as the Covid-19 pandemic.(Sunggara & Hariansah, 2023) The data reveals that the economic dynamics of this province from 2018 to 2021 reflect a high dependence on certain sectors, with growth fluctuations influenced by various external and domestic factors. This dependency, including in the mining, agriculture, and manufacturing sectors, provides a clear picture of the strengths and weaknesses of the regional economy, which is highly affected by changes in global markets and prevailing economic policies.

In 2018, the economy of the Bangka Belitung Islands recorded a fairly positive growth rate of 4.45%. Although slightly slower than the previous year's growth of 4.47%, this achievement still showed that the province was able to grow well. The sector that contributed most significantly to economic growth that year was agriculture, forestry, and fisheries, which experienced the largest growth. This reflects the importance of these primary sectors as the main pillars of the regional economy. In that year, the Gross Regional Domestic Product (GRDP) was recorded at IDR 73.07 trillion, with per capita GRDP reaching IDR 50.05 million. The Bangka Belitung Islands contributed around 2.2% to the GRDP of Sumatra and 0.47% to the national GRDP, indicating the province's significant role in the regional economy.(BPS BABEL, 2019)

However, in 2019, the province's economy experienced a significant decline, with a growth rate of only 3.32%. This decline reflected a downturn in several sectors, influenced by various external and domestic factors. Although GRDP was recorded at IDR 75.83 trillion and per capita GRDP was IDR 50.93 million, several sectors contracted.(BPS BABEL, 2020) The decline in the prices of major commodities, such as tin, along with structural challenges in certain economic sectors, led to a general decrease in economic performance. However, the construction sector recorded the largest growth that year, likely driven by increased infrastructure development in the region. Household consumption expenditure remained the main driver of the region's economic growth, although its contribution was not enough to offset the decline in other sectors.

The year 2020 brought even greater impacts on the global economy, including the Bangka Belitung Islands, due to the Covid-19 pandemic. Sectors that had already been affected began to face even more severe challenges. The provincial economy contracted by 2.30% that year, with GRDP recorded at IDR 75.53 trillion and per capita GRDP at IDR 49.77 million.(BPS BABEL, 2021) The pandemic's impact was most strongly felt in sectors hindered by social restrictions, such as mining, trade, and education services. Although the agriculture, forestry, and fisheries sectors showed positive growth, other sectors could not offset the declines in the larger sectors. At the same time, the information and communication sector, as well as agriculture, made positive contributions to the economy, although the impact was insufficient to reduce the overall economic contraction.

In 2021, the economy of the Bangka Belitung Islands began to show signs of recovery, with an economic growth rate of 5.05%. GRDP was recorded at IDR 85.94 trillion, with per capita GRDP reaching IDR 58.34 million. (BPS BABEL, 2022) This recovery was mainly driven by the growth in the manufacturing sector, spurred by an increase in export demand, as well as improvements in other sectors that had been impacted the previous year. The recovery of these sectors demonstrated that Bangka Belitung was able to adapt to the crisis caused by the Covid-19 pandemic. While key sectors like agriculture, palm oil, and mining continued to play an important role in the region's economy, newer sectors more resilient to crises began to show significant contributions. The economic contribution of Bangka Belitung to the GRDP of Sumatra remained stable at around 2.2%, while its contribution to the national GRDP was at 0.48%.

In addition to traditional sectors like agriculture and mining, the plantation sector also plays an important role in the province's economy. In 2022, the area of oil palm

plantations in the Bangka Belitung Islands reached 75,734.17 hectares. (Dinas Pertanian dan Ketahanan Pangan, 2022) South Bangka Regency had the largest oil palm plantation area at 20,953.50 hectares, while East Belitung Regency had the smallest at 5,277.15 hectares. The existence of these plantations makes a significant contribution to the regional economy, especially in terms of creating jobs and generating income for the community. Despite facing challenges related to commodity price fluctuations and environmental issues, the palm oil plantation sector remains a major driver in the province's economy. (Maryano & Hariansah, 2024)

Overall, the economy of the Bangka Belitung Islands shows a high dependence on certain sectors, particularly agriculture, palm oil, and manufacturing. Although these sectors are the main drivers of economic growth, the region's economy remains vulnerable to external factors, such as fluctuations in global commodity prices and the impacts of the pandemic. However, with the recovery seen in 2021, the province has shown its ability to adapt and recover from the crisis's effects. The development of other sectors, such as the creative industries, tourism, and technology, could provide important opportunities to strengthen the region's economic resilience in the future. (Azizah, 2015)

In 2023, despite the weakening of global economic prospects, the economy of the Bangka Belitung Islands maintained a fairly solid stability. External factors, such as geopolitical dynamics, global inflation, and supply chain disruptions affecting commodity prices, continued to present significant challenges. However, with adaptive and responsive fiscal policies, as well as successful regional budget management, the province's economy was able to meet these challenges. Government spending, which was nearly 99% realized from the target set, with significant contributions from the infrastructure and education sectors, positively impacted the strengthening of productive sectors and the welfare of the community. Capital and goods expenditure programs, driven by infrastructure connectivity projects and educational facility rehabilitation, successfully improved the quality of life and stimulated local economic growth.

The regional export and import sectors in 2023 saw a decline, particularly influenced by low tin prices and a reduction in palm oil exports to major countries like China and the Netherlands. Nevertheless, Bangka Belitung's trade balance remained positive, with a surplus recorded in December 2023. Tax revenues also performed well, despite contractions in the trade and mining sectors. This was largely due to more conservative fiscal policies, including the imposition of VAT on tin as a strategic commodity.

Transfers to the regions, which are an integral part of government spending, also played a significant role in supporting regional development. The distribution of the General Allocation Fund (DAU) and Village Funds showed a high realization rate, reflecting the government's success in reducing regional development disparities. These sectors are key in supporting local development and improving the quality of life for the people in the Bangka Belitung Islands. (DJPb, 2024)

Looking into 2024, optimism about economic prospects remains high. Positive projections for domestic economic sectors, along with the continuation of adaptive fiscal policies, offer hope that this year will bring further progress for the economy of the Bangka Belitung Islands. Planned programs, both for strengthening infrastructure and improving social welfare, are expected to have an even greater impact. With better collaboration between the right fiscal policies and responsiveness to global dynamics, the economy of this province is expected to continue to demonstrate remarkable resilience and adapt to the challenges ahead.

The impact of sanctions on farmers in the implementation of the palm oil-cattle integration obligation regulated in Regional Regulation Number 19 of 2017 remains an important issue. Although there are provisions for sanctions in case of violations, many farmers feel that the sanctions imposed are not oppressive enough or are ineffective in encouraging compliance. This is due to several factors, including weak supervision and law enforcement, which make farmers perceive the legal risks as minimal. Additionally, the lack of incentives or support to help farmers meet the obligations has led them to prioritize the survival of their businesses over complying with the regulations. As a

result, the existing sanctions have not been an effective tool in significantly changing farmers' behavior, indicating the need for improvement in sanction enforcement and the provision of more supportive incentives for the sustainability of farmers' businesses.

From an economic law perspective,(Putra, 2021) the palm oil-cattle integration provision requires in-depth analysis to assess the extent to which the provided incentives and disincentives can encourage farmer compliance. Moreover, it is essential to evaluate whether this policy has been designed in accordance with farmers' economic and social capacity, and whether it provides sufficiently significant positive impacts for the sustainability of their plantation businesses.(Satria, 2020) Without a balance between regulatory burden and obtained benefits, this obligation will merely become an additional burden for small farmers, rather than providing solutions for environmental and welfare issues.

On the other hand, non-compliance with this Regional Regulation also reflects weaknesses in the regulatory implementation and supervision system at the regional level. The Bangka Belitung Provincial Government plays a strategic role in ensuring the success of this policy through strengthening supervision mechanisms, providing incentives, and intensive counseling to farmers. Through these measures, it is expected that palm oil-cattle integration can truly become a solution to support environmentally friendly and sustainable integrated agriculture.

This research aims to analyze palm oil farmers' compliance with the cattle-palm integration obligation as regulated in Regional Regulation Number 19 of 2017, using an economic law approach. The main focus of the research is to identify legal, economic, and social factors that influence farmers' compliance levels, as well as challenges faced in implementing this policy. Through this research, it is expected that relevant recommendations can be found to improve the effectiveness of Regional Regulation implementation and create policies that are more adaptive to farmers' needs in Bangka Belitung Province.

2. Materials and Methods

2.1. Empirical Literature Review

The literature review reveals the existence of similar research that serves as a foundation for the current study, specifically the paper titled "Critical Analysis of Bangka Belitung Provincial Regulation Number 19 of 2017 Concerning Palm Oil Plantation Business Management from Richard Posner's Economic Law Perspective," authored by Wira Pratama, M.I., Hariansah, et al., and published in *Jurnal Legalitas* in 2024.(Hariansah et al., 2024) This prior research utilized Richard Posner's economic law theory as a framework for critically analyzing the effectiveness of Regional Regulation Number 19 of 2017. The analysis focused primarily on assessing the economic efficiency of the regulation, evaluating its cost-benefit impact in the context of palm oil plantation business management. The research sought to determine whether the policy achieved its intended economic goals and balanced the interests of various stakeholders, including businesses and consumers, by emphasizing economic law principles.

In contrast, the current research builds upon and extends this prior work by adopting a more comprehensive and nuanced approach to economic law analysis.(Elviandri, 2019) While the previous study focused on the regulation's economic efficiency, the present study incorporates a broader perspective by examining the integration of cattle farming within the palm oil plantation sector. This aspect is vital as it delves into the complexities of land use and sustainable agricultural practices. The study not only evaluates the effectiveness of the regulation from the viewpoint of economic law theory but also shifts focus to the practical implementation of the policy, particularly in relation to the integration of cattle farming with palm oil plantations, a concept that has the potential to improve both economic and environmental outcomes.

One significant difference between the two studies is the emphasis on the real-world implementation of the policy. This current study pays particular attention to the empirical challenges and barriers to implementing the regulation. These include identifying

obstacles faced by farmers and businesses in applying the integration model, as well as evaluating the incentives provided by the regulation. For instance, the study explores how financial or logistical support, market access, and technical assistance influence the success of this policy in practice. To ensure representativeness, stratified purposive sampling was employed to capture the diversity of social, economic, and geographical conditions in Bangka Belitung Province. Farmers were selected based on criteria such as plantation size, financial capacity, geographical location, and exposure to government programs, ensuring that data reflects the spectrum of challenges and opportunities faced by various farmer groups. The qualitative analysis in this study employs thematic analysis to ensure that variations in respondents' perspectives and experiences are adequately captured. By coding interview data into themes such as compliance barriers, economic viability, and environmental outcomes, the analysis highlights commonalities and differences across respondent groups. Special attention is given to divergent viewpoints to understand the spectrum of challenges and motivations. This approach enables the study to uncover underlying factors influencing compliance and to propose tailored solutions that address the unique needs of different farmer segments.

Additionally, this study extends the analysis by investigating the broader implications of palm oil plantation management, particularly its environmental sustainability and the welfare of local farmers. While the earlier research focused on the economic efficiency of the regulation in a general sense, this study assesses the long-term impacts of the cattle-palm integration model on land conservation, biodiversity, and soil health. The integration of cattle farming is seen as a potential solution to mitigate the negative environmental consequences traditionally associated with palm oil plantations, such as deforestation and monoculture farming practices. By incorporating a more comprehensive environmental dimension, the study contributes to the growing body of literature that seeks to reconcile economic development with sustainable environmental practices.

Furthermore, the study emphasizes the importance of farmer welfare, particularly in terms of their income and quality of life. The previous research did not delve deeply into the socio-economic effects of the regulation on farmers. However, the present study explores how the integration of cattle farming can create additional revenue streams for smallholder farmers, improve food security, and enhance their overall livelihood. This aspect of the research is crucial for understanding the practical benefits of the regulation on the ground, ensuring that the policy not only serves economic goals but also addresses social equity and poverty alleviation for local communities. To ensure that the cattle-oil palm integration policy supports the long-term sustainability of agriculture and livestock farming, the study identifies and evaluates actionable strategies. These include providing subsidies for cattle acquisition, infrastructure development, and low-interest credit schemes to reduce initial investment burdens. Regular workshops and on-site demonstrations are proposed to enhance farmers' technical knowledge and skills in integrating cattle farming with palm oil plantations. Robust mechanisms for monitoring and evaluating compliance, identifying barriers, and adjusting policies based on field-level feedback are emphasized. Collaborative frameworks encouraging partnerships between farmers, local governments, and private sector actors are also recommended to promote knowledge-sharing and resource pooling. Additionally, guidelines for sustainable waste management practices and incentives for using organic fertilizers derived from cattle manure are advocated to enhance soil productivity and reduce chemical dependency.

The empirical approach taken in this study distinguishes it from earlier works by providing a more detailed and multifaceted evaluation of the regulation's impact. This empirical analysis is essential for creating evidence-based recommendations for policy reform, ensuring that the policy not only remains aligned with economic law principles but also evolves to meet the changing needs of local communities and the environment. (Adnyani et al., 2022)

In conclusion, while the earlier study focused on the theoretical economic law framework to analyze the effectiveness of the Regional Regulation, the current research expands the analysis by incorporating a broader scope that includes practical imple-

mentation issues, environmental sustainability, and farmer welfare. This approach provides a more holistic view of the regulation's impact and offers valuable insights into how policies in the agricultural and economic sectors can be more effectively integrated to promote sustainable development and improve livelihoods.(Flambonita et al., n.d.) The difference in scope and focus between these two studies underscores the current research's contribution to the literature by bridging theoretical analysis with real-world challenges and opportunities.

2.2. Research Method

This study adopts a normative-empirical legal research approach, which combines two main methods of legal inquiry, normative and empirical.(Hariansah, 2024) The normative approach is employed to analyze the applicable legal norms, particularly the Regional Regulation of the Province of Bangka Belitung No. 19 of 2017, within the context of economic law. Meanwhile, the empirical approach is used to explore the practical implementation of these regulations on the ground, specifically regarding palm oil farmers' compliance with the obligation to integrate cattle with palm oil cultivation as mandated by the regulation.

a. Normative Approach

The normative approach focuses on examining the legislation,(Hariansah & Handini, n.d.) especially the Regional Regulation of the Province of Bangka Belitung No. 19 of 2017. This research will explore the legal norms embedded in this regulation, identify the core principles it upholds, and evaluate whether the regulation adequately accommodates the needs of sustainable agriculture and the welfare of palm oil farmers. This approach also considers the legal governance in place, as well as the relationship between this regional regulation and other relevant policies at the national and local levels.

b. Empirical Approach

The empirical approach aims to gather real-world data on how this regulation is being implemented on the ground, particularly regarding the level of compliance by palm oil farmers with the obligation to integrate cattle into palm oil plantations as stipulated by the regulation.("Challenges and Threats of Cybercrime in Indonesia," 2024) This study will identify barriers faced by farmers in fulfilling these obligations, whether they are technical, economic, or social in nature. Moreover, this approach will shed light on the social and economic impacts of the regulation's implementation on farmers' welfare and the surrounding community.

c. Data Collection

Primary Data, Primary data will be collected through in-depth interviews with two main groups of respondents: (a) Palm oil farmers, To understand the challenges and obstacles they face in complying with the cattle-palm oil integration requirement. These interviews will delve into the farmers' perspectives on the factors influencing their decisions regarding the implementation of the regulation. (b) Local government officials, To obtain information on the policies implemented, evaluations of the regulation's enforcement, and the efforts made by the local government to support the regulation's application.

Secondary Data, Secondary data will include: (a) Regulatory documents, Primarily the Regional Regulation of the Province of Bangka Belitung No. 19 of 2017, along with other related regulations, which will serve as the foundation for normative analysis. (b) Previous research findings, Relevant studies and research will be used to enhance the analysis and provide a broader context on the issues addressed. (c) Relevant literature, Books, academic articles, and other documents that provide information on economic law, environmental sustainability, and policy implementation in the palm oil and livestock sectors.

d. Data Processing and Analysis

The data collected will undergo two main stages: (a) Data Classification : Data from interviews, documents, and literature will be categorized based on its relevance to the research focus. The primary data from interviews will be organized according to key themes such as compliance with the cattle-palm oil integration requirement, challenges encountered, and the impact on farmers' welfare. (b) Qualitative Analysis : After classification, a qualitative analysis will be conducted to assess the extent to which the implementation of Regional Regulation No. 19 of 2017 supports the goals of environmental sustainability and farmers' welfare. The analysis will focus on: (a) Farmers' compliance with the regulation and the barriers they face. (b) Effectiveness of the regulation in achieving its objectives of cattle-palm oil integration, both in economic terms (farmers' welfare) and environmental sustainability. (c) Barriers to implementation, both internal (e.g., farmers' knowledge limitations) and external (e.g., government support and related policies).

e. Research Objectives and Expected Outcomes

The results of both the normative and empirical analysis are expected to provide a comprehensive understanding of the challenges involved in implementing the Regional Regulation of the Province of Bangka Belitung No. 19 of 2017. This study aims to identify recommendations for improving compliance with the regulation, whether through more effective policies or approaches that better support farmers in fulfilling the cattle-palm oil integration requirements. The findings are anticipated to provide constructive input for policymakers and other stakeholders to enhance the sustainability of the palm oil and livestock sectors, as well as to improve the welfare of farmers in the Province of Bangka Belitung.

3. Results and Discussion

3.1. Analysis Results

a. The Impact of Regional Regulations on Palm Oil Plantations on Economic Growth in Bangka Belitung

Palm oil plantations play a strategic role in the economy of Bangka Belitung Province. As one of the primary contributors to the agricultural sector, this subsector provides a positive impact on Bangka Belitung's Gross Regional Domestic Product (GRDP). Regional Regulations (Perda) related to palm oil plantations aim to regulate the governance of this sector to be more integrated, efficient, and sustainable. The implementation of these regulations has generated various impacts on Bangka Belitung's economic growth, although challenges remain to be addressed.

In 2018, Bangka Belitung's GRDP at constant prices reached IDR 52.21 trillion, with the agriculture, forestry, and fisheries sector as the main source of growth. The palm oil plantation subsector became one of the main pillars, accounting for 36.09% of the agricultural sector's contribution to the regional economy. However, economic growth in the same year only reached 4.45%, slightly slower compared to 2017, due to contractions in export components and global impacts on commodity prices. (BPS BABEL, 2019)

One significant impact of the Regional Regulation is the management of smallholder palm oil plantations, which reached an area of 75.7 thousand hectares in 2022, with production of 141,452 tons. South Bangka Regency became the region with the largest production at 39,429 tons. (Dinas Pertanian dan Ketahanan Pangan, 2022) This demonstrates that the palm oil plantation sector not only contributes to the regional

economy but also creates employment opportunities and increases local community income.

In 2021, Bangka Belitung's economy began to recover from the pandemic-induced contraction, with growth of 5.05%. The agricultural sector again became the main support, while the palm oil processing sub-sector provided significant impact on exports. The regional government, through the implementation of Regional Regulations, also supported the development of plasma plantations and business partnerships between independent farmers and palm oil mills. These initiatives help maintain the stability of fresh fruit bunch (FFB) prices and improve farmer welfare.

The implementation of Bangka Belitung Provincial Regulation Number 19 of 2017 concerning palm oil plantation business management can theoretically be analyzed through the perspective of economic law theory. Fundamentally, economic law focuses on analyzing efficiency and economic impacts generated by law implementation. Philosophically, this Regional Regulation aims to increase efficiency in managing palm oil plantations and the livestock sector, while promoting ecological sustainability. On a practical level, economic law theory assesses whether policies through this regulation can create appropriate incentives for business actors to adapt and implement these policies voluntarily, without sacrificing economic efficiency principles. Economic efficiency itself can be defined as resource allocation that produces maximum benefits with minimal costs, and in this case, the Regional Regulation policy must encourage optimal results achievement in both palm oil plantation and cattle farming sectors. (Deakin et al., 2017)

Broadly speaking, economic law theory suggests that law should not only regulate economic actors' behavior but also create incentives that lead to beneficial outcomes for all involved parties. In this case, the Bangka Belitung Provincial Regulation aims to create incentives for palm oil farmers to integrate cattle farming into their plantation practices. By integrating cattle, farmers can utilize palm oil waste as animal feed and cattle manure as organic fertilizer, which in turn increases soil productivity and reduces dependence on chemical fertilizers. However, existing challenges, such as limited funds, knowledge, and weak supervision, indicate problems in creating effective incentives and addressing market failures.

Furthermore, economic law theory views that government policies are often needed to address market failures, where markets cannot produce socially efficient results without intervention. (M. Rizky Mahaputra & Farhan Saputra, 2021) Market failure can be observed in the palm oil plantation sector in Bangka Belitung Province. Many palm oil farmers lack incentives to integrate cattle farming due to high initial costs for purchasing and maintaining cattle, as well as uncertainty about the long-term benefits of this policy.

This market failure is caused by an imbalance between costs and benefits perceived by farmers. Although the palm oil-cattle integration policy has long-term ecological and economic benefits, such as increased soil fertility and reduced chemical fertilizer use, these benefits are often not immediately felt by farmers. The costs of purchasing and maintaining cattle, along with risks associated with this integration, are often more directly felt, while expected long-term benefits such as increased plantation yields and fertilizer cost savings will materialize in the long term. In this case, economic law theory suggests that existing regulations must be able to create incentives that encourage economic actors to implement policies voluntarily, by reducing initial costs and providing compensation for incurred costs.

Furthermore, incentives function as tools to change individual or economic actor behavior. (Putra, 2021) In this case, the Regional Regulation policy mandating palm oil-cattle integration should provide incentives for farmers to implement these provisions. However, field implementation shows that palm oil farmers in Bangka Belitung Province face significant barriers, such as limited funds for purchasing cattle and low technical knowledge regarding palm oil-cattle business integration.

According to economic theory, if incentives provided by policies are inadequate or imbalanced with costs borne by farmers, then such policies tend to fail. One solution that can be considered is providing subsidies or assistance to farmers for purchasing cattle, as

well as technical training on effectively managing palm oil-cattle businesses. These subsidies or assistance will reduce the cost burden borne by farmers, making them more motivated to implement the integration policy. Thus, adequate incentives can create behavioral changes more aligned with policy objectives.

b. The Effectiveness of Bangka Belitung Islands Provincial Regulation Number 19 of 2017 in Promoting Palm Oil Farmers' Compliance with Palm Oil-Cattle Integration Business Obligations

The Bangka Belitung Islands Provincial Regulation Number 19 of 2017 concerning Palm Oil Plantation Business Management has the primary objective of integrating the plantation and livestock sectors through mandatory palm oil-cattle integration. According to Article 38 Paragraph (2), (Perda No. 19/2017, 2017) this regulation stipulates a minimum ratio of one cow for every 10 hectares of palm oil plantation land. The concept behind this policy is to achieve environmental sustainability, where palm oil waste is used as animal feed and cattle manure is utilized as organic fertilizer. Additionally, this policy is expected to increase land productivity, create ecological balance, and improve farmer welfare. However, the effectiveness of this policy is questionable due to the absence of sanction provisions in the Regional Regulation, making its implementation dependent on farmers' awareness and goodwill.

The absence of sanctions in the Regional Regulation becomes a primary factor reducing the regulation's effectiveness in promoting farmer compliance. From a legal theory perspective, a regulation's effectiveness depends not only on legal substance but also on the application of clear sanctions to ensure implementation. (Khalimy et al., 2023) Without sanctions, violations of palm oil-cattle integration obligations carry no legal consequences, providing insufficient impetus for farmers to comply with these rules. Consequently, the policy implementation rate in the field remains very low, with many farmers disregarding these obligations.

Economic factors also present significant barriers to implementing this policy. Many palm oil farmers, especially smallholders, face financial constraints in meeting integration obligations, such as purchasing and maintaining cattle. The substantial initial investment costs, including providing shelters and supplementary feed, become a burden difficult for farmers to bear. The absence of adequate government incentives, such as subsidies or direct assistance, further exacerbates this situation. The policy is more often viewed as an additional burden rather than a sustainability solution.

From a social perspective, farmers' lack of technical knowledge and skills regarding palm oil-cattle integration becomes a primary obstacle in its implementation. Many farmers do not understand the long-term benefits of this policy, both in terms of land productivity and business sustainability. Limited access to intensive training and counseling becomes one of the main causes of farmers' lack of awareness and ability to implement these obligations. Therefore, local governments need to be more proactive in providing better education and counseling programs so that farmers understand the potential benefits of palm oil-cattle integration.

Furthermore, weak monitoring and evaluation mechanisms from local governments affect this policy's effectiveness. Without adequate supervision, it becomes difficult to monitor farmers' compliance levels and identify problems they face. The lack of accurate data regarding the number of farmers who have implemented palm oil-cattle integration also hinders evaluation of this policy's success. In the long term, these weaknesses in monitoring and evaluation can reduce policy legitimacy in the eyes of farmers and the broader community.

From an environmental sustainability perspective, the palm oil-cattle integration policy has the potential to support environmentally friendly natural resource management. However, without effective implementation, these sustainability goals will be difficult to achieve. Palm oil waste that should be utilized as animal feed remains an environmental problem, while chemical fertilizer use continues without organic fertilizer

alternatives from cattle manure. Therefore, the government needs to formulate a more comprehensive strategy for this policy to have a positive environmental impact.

To enhance the Regional Regulation's effectiveness, several strategic steps need to be considered. First, the government must review the Regional Regulation by adding sanction provisions for violations to ensure better compliance. Second, greater incentives for farmers, such as cattle subsidies, shelter facilities, or access to low-interest credit, need to be provided to facilitate policy implementation. Third, counseling programs and technical training must be strengthened so farmers have a better understanding of palm oil-cattle integration benefits. Fourth, strengthening monitoring and evaluation is essential, including more accurate data collection regarding farmer compliance levels.

Without these measures, this Regional Regulation risks becoming an ineffective policy and merely a legal document without real impact in the field. Meanwhile, this policy has great potential to support environmental sustainability and improve farmer welfare.(Syafri Hariansah, 2022) Therefore, policy improvements and adjustments need to be made comprehensively, involving various parties, including farmers, government, and other stakeholders. With a collaborative and adaptive approach, the palm oil-cattle integration policy can provide greater benefits for the Bangka Belitung Province community.(Zulkifli, 2022)

Referring to Soerjono Soekanto's legal effectiveness theory,(Tan, 2022) which encompasses five main factors—legal substance, legal structure, legal culture, resources, and environmental influence—the factors affecting the failure of Regional Regulation implementation can be simply illustrated as follows:

Figure 1: Factors Affecting Regional Regulation Implementation Failure



From this illustration, several factors affecting this regulation's effectiveness can be understood. Generally, the first factor is the incompleteness of legal substance in the Regional Regulation. An effective legal substance should include clear, firm, and enforceable norms. In this case, the palm oil-cattle integration obligation provisions are not complemented by firm sanctions, reducing legal impetus for compliance. Without sanctions, violations of these obligations carry no legal consequences, thus failing to motivate farmers to comply with these rules.

The second indicator is weakness in legal structure, particularly regarding implementing institutions and monitoring mechanisms. Policy effectiveness heavily depends on the legal structure's ability to ensure compliance. In this case, local governments lack sufficient oversight to monitor the implementation of palm oil-cattle integration obligations, reducing the effectiveness of this Regional Regulation's implementation.

Furthermore, the third indicator is low legal culture among farmers. Legal culture relates to community awareness and behavior toward legal norms. Here, many farmers do not understand the importance of this policy or do not see direct benefits from palm oil-cattle integration. Without intensive education and counseling efforts, this policy becomes difficult for farmers to accept and implement properly.

Then, the fourth indicator is the lack of resources supporting Regional Regulation implementation. Palm oil-cattle integration implementation requires substantial investment, such as purchasing cattle and providing shelters. Small farmers who are mostly involved in palm oil plantation businesses often lack financial resources to meet these obligations. Without subsidies or adequate credit access, this Regional Regulation merely becomes an additional burden for farmers.

Finally, the fifth indicator is the influence of social and economic environments themselves that can affect policy success. In this case, palm oil market uncertainty and additional operational costs for cattle maintenance make this policy less attractive to farmers. These external factors indicate that the Regional Regulation has not been designed with consideration of the social and economic conditions faced by farmers.

4. Conclusions

Based on the description and analysis above, it can be concluded that the implementation of Regional Regulation (Perda) Number 19 of 2017 in Bangka Belitung Province regarding the management of oil palm plantations plays a crucial role in supporting regional economic growth, particularly in the agricultural sector, which significantly contributes to the Gross Regional Domestic Product (GRDP). However, despite the policy's great potential to enhance environmental sustainability and improve farmers' welfare through the integration of oil palm and cattle farming, several challenges must be addressed for the policy to be more effective. One of the main obstacles is the lack of sanction provisions in the Perda, which reduces incentives for farmers to comply with the oil palm-cattle integration requirements. Without clear sanctions, farmers' compliance tends to be low, hindering the achievement of the expected sustainability goals. Economic factors, such as high initial costs and limited funding, are also major constraints for farmers, especially smallholder farmers. Additionally, the lack of technical knowledge and skills among farmers, as well as weak monitoring and evaluation mechanisms, further exacerbates the implementation of this policy.

Importantly, oil palm and cattle integration can positively impact long-term environmental aspects by enhancing soil fertility through the use of organic fertilizers derived from cattle manure, reducing dependency on chemical inputs, and promoting biodiversity in plantation ecosystems. By recycling palm oil waste as cattle feed and utilizing the resultant manure to improve soil health, this integration fosters a more sustainable agricultural model. Such practices mitigate the negative effects of monoculture farming and contribute to the ecological balance within plantation areas. Therefore, to enhance the effectiveness of this Perda, strategic measures are required, including the addition of sanctions, the provision of greater incentives for farmers, the improvement of training and extension programs, and the strengthening of monitoring and evaluation. With these improvements, the oil palm-cattle integration policy has the potential to provide greater positive impacts on the economy and environmental sustainability in Bangka Belitung Province.

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