



PAPER – OPEN ACCESS

Design of PT Perkebunan Nusantara IV (PTPN IV) Partnership Model with Smallholder Institutions to Support Continuity of Sustainable Fresh Fruit Bunch Supply

Author : I Gde Parinatha, et al
DOI : 10.32734/lwsa.v9i2.2810
Electronic ISSN : 2654-7066
Print ISSN : 2654-7058

Volume 9 Issue 2 – 2026 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).
Published under licence by TALENTA Publisher, Universitas Sumatera Utara



Design of PT Perkebunan Nusantara IV (PTPN IV) Partnership Model with Smallholder Institutions to Support Continuity of Sustainable Fresh Fruit Bunch Supply

I Gde Parinatha, Rulianda Purnomo Wibowo, Wahyu Ario Pratomo

Master of Management Study Program, Postgraduate School, Universitas Sumatera Utara, Medan, 20155, Indonesia

gdeparinatha.gp@gmail.com, rulianda_wibowo@usu.ac.id, wahyu@usu.ac.id

Abstrak

PT Perkebunan Nusantara IV (PTPN IV) sebagai perusahaan kelapa sawit milik negara memiliki ketergantungan yang cukup tinggi terhadap pemenuhan pasokan bahan baku tandan buah segar (TBS) untuk pabrik kelapa sawit (PKS), yaitu lebih dari 30% TBS berasal dari pasokan bahan baku yang dibeli. Kemitraan antara perusahaan kelapa sawit dan lembaga petani swadaya memegang peranan strategis dalam memastikan ketersediaan pasokan TBS yang berkelanjutan dan berkesinambungan. Penelitian ini menganalisis model-model kemitraan yang diterapkan, faktor-faktor yang memengaruhi keberhasilannya, serta dampaknya terhadap stabilitas pasokan TBS. Pendekatan penelitian kualitatif digunakan dengan studi kasus pada beberapa perusahaan kelapa sawit yang bekerja sama dengan koperasi petani swadaya. Temuan penelitian menunjukkan bahwa model kemitraan yang didasarkan pada transparansi harga, bantuan teknis, dan skema insentif yang adil memberikan kontribusi signifikan terhadap keberlanjutan pasokan TBS. Sebagai kesimpulan, kemitraan yang dikelola dengan baik antara perusahaan dan lembaga petani swadaya dapat menciptakan sistem pasokan TBS yang stabil, meningkatkan kesejahteraan, dan mendorong praktik perkebunan yang berkelanjutan.

Kata kunci: Berkelanjutan; Kemitraan; Lembaga KUD; Pasokan; Plasma

Abstract

Partnership in the palm oil plantation business has now become a necessity. PT Perkebunan Nusantara IV (PTPN IV) as a state-owned palm oil company has a reasonably high dependence on the fulfillment of the supply of raw materials for oil palm fruit bunches (FFB) for palm oil mills (PKS), namely more than 30% of FFB comes from the supply of raw materials purchased. The fulfillment of the supply of raw materials purchased comes from FFB owned by PTPN IV's partner plantation institutions and third-party purchases. Since the 1980s, PTPN IV has established partnerships with plantation institutions in the form of Koperasi Unit Desa (KUD) by building more than 219,000 Ha of plasma areas in various regions of Indonesia. However, since the 2000s, the partnership relationship between PTPN IV and KUD in all regions has begun to experience a rift, as indicated by the decreasing supply of FFB from KUD to PTPN IV's PKS. Not a few KUD areas have begun to be managed individually by farmers so that they no longer go through institutional patterns. These could result in the cessation of TBS supply to PTPN IV PKS, thus potentially experiencing idle capacity and unsustainable business processes. The partnership between palm oil companies and smallholder institutions plays a strategic role in ensuring the continuous and sustainable supply of fresh fruit bunches (FFB). This study aims to analyze the partnership models implemented, the factors influencing their success, and their impact on FFB supply stability. A qualitative research approach was used, employing case studies of several palm oil companies collaborating with smallholder cooperatives. The findings indicate that partnership models based on price transparency, technical assistance, and fair incentive schemes significantly contribute to the sustainability of FFB supply. Furthermore, strong smallholder institutions and supportive government policies are key factors in the success of these partnerships. In conclusion, a well-managed partnership between companies and smallholder institutions can create a stable FFB supply

system, improve smallholder welfare, and promote sustainable plantation practices.

Keywords: Partnership; Plasma; Smallholder; Supply; Sustainable

1. Introduction

The palm oil industry is a major contributor to Indonesia's economy, both as a source of export revenue and as a driver of rural employment. PT Perkebunan Nusantara IV (PTPN IV), one of the state-owned enterprises in this sector, plays a strategic role in palm oil production. However, more than 30% of its Fresh Fruit Bunches (FFB) are sourced externally, making the company heavily reliant on independent suppliers, especially smallholder farmers.

Given this dependency, effective partnerships with smallholder institutions are essential for securing a stable and sustainable FFB supply. This study investigates the types of partnerships established between palm oil companies and smallholders, explores the factors that determine their success, and assesses their overall impact on supply chain stability.

Partnerships in agricultural supply chains have become a focal point in development discourse, particularly in the palm oil sector, where collaboration between large companies and smallholder farmers is critical. Vermeulen and Goad (2006) highlight that partnership models such as contract farming and nucleus-plasma schemes can effectively integrate smallholders into commercial value chains. These models are designed not only to secure raw material supplies for companies but also to empower smallholders with access to markets, credit, and technical support. Daemeter (2019) further emphasizes that the success of such partnerships is closely tied to factors like mutual trust, transparency, equitable benefit-sharing, and consistent institutional backing.

Sustainability within these partnerships is another key dimension. McCarthy et al. (2012) argue that a truly sustainable supply chain must address environmental, social, and economic factors simultaneously. When smallholders are equipped with adequate knowledge, resources, and incentives, they can contribute meaningfully to sustainable agricultural practices, thereby improving both productivity and rural welfare. Overall, the literature suggests that well-structured partnerships can bridge systemic gaps in the palm oil industry, enhance supply stability, and promote long-term sustainability through inclusive stakeholder engagement.

2. Research Methods

This study employs a qualitative research design using a case study approach to explore the dynamics of partnerships between PTPN IV and smallholder institutions in the context of fresh fruit bunch (FFB) supply. A qualitative approach is suitable for understanding complex social phenomena, such as institutional collaboration, by capturing the perspectives and experiences of different stakeholders involved in the partnership.

Case studies were selected purposefully to reflect variations in partnership models and levels of maturity. Three partnership cases were chosen to represent a range of collaborative structures, including nucleus-plasma schemes, independent cooperative agreements, and hybrid models. The selection aimed to ensure depth and diversity of insights regarding the implementation, challenges, and outcomes of these partnership arrangements.

Primary data were collected through semi-structured, in-depth interviews with key informants, including company executives, cooperative leaders, and field-level extension officers. These interviews provided rich qualitative data on the nature of the partnerships, decision-making processes, and perceived benefits and challenges. Each interview was recorded, transcribed, and verified for accuracy.

In addition to interviews, the study relied on secondary data obtained from internal company reports, cooperative records, and government publications related to smallholder support and palm oil governance. Field observations were also conducted during site visits to plantation areas and cooperative offices to validate findings and gain contextual understanding.

Thematic analysis was used to analyze the data. This involved coding the interview transcripts and documents to identify recurring patterns, themes, and relationships. Codes were categorized and refined to develop a conceptual understanding of what makes partnerships effective and sustainable. Data triangulation from multiple sources enhanced the validity and credibility of the findings, allowing the study to provide a comprehensive view of partnership dynamics in the palm oil sector.

3. Results and Discussion

3.1. Partnership models implemented

The study identified three distinct partnership models implemented between PTPN IV and smallholder institutions: the nucleus-plasma scheme, independent cooperative agreements, and hybrid partnership models. Each model reflects different levels of integration, support, and autonomy between the company and the smallholders.

In the nucleus-plasma scheme, PTPN IV plays a central role in providing support to smallholders, including land development, supply of agricultural inputs, and ongoing technical assistance. In exchange, smallholders are contractually obliged to sell their FFB exclusively to the company. This model ensures a stable supply of raw materials while allowing smallholders to access guaranteed markets and agronomic expertise. However, this approach also limits the autonomy of smallholders and requires

strong institutional support to maintain compliance and satisfaction.

The independent cooperative agreement model offers a more decentralized approach. Cooperatives maintain complete control over their plantations but engage in sales agreements with PTPN IV based on mutually agreed pricing formulas and delivery standards. This model fosters independence and entrepreneurship among smallholders but requires robust negotiation skills, transparency, and accountability from both parties to be effective.

The hybrid partnership model combines elements of both prior models. While PTPN IV provides technical support and market access, cooperatives retain a degree of managerial autonomy. This flexible approach allows for tailored collaboration based on the capacities and needs of each cooperative. Among the models observed, the hybrid model proved to be the most adaptive, particularly in areas where smallholder institutions vary in organizational maturity and agronomic expertise.

3.2. Success factors of partnerships

Several key factors were found to be critical in determining the success of the partnership arrangements. Price transparency emerged as a fundamental driver of trust. When FFB pricing is based on clear, consistent provincial price indices and communicated openly, both parties benefit from reduced misunderstandings and greater predictability.

Technical assistance provided by PTPN IV—including training in Good Agricultural Practices (GAP), pest and disease control, and efficient harvesting techniques—has proven instrumental in improving smallholder productivity and the quality of FFB produced.

Another essential factor is the implementation of equitable incentive schemes. By rewarding cooperatives for delivering high-quality fruit and adhering to delivery schedules, these schemes not only improve the reliability of supply but also strengthen long-term loyalty among smallholders.

Finally, communication and trust-building mechanisms, such as regular joint meetings and participatory decision-making forums, enhance the relational aspects of the partnership. These practices help prevent conflicts, promote transparency, and foster a sense of shared ownership in the partnership's success.

3.3. Impact on FFB supply stability

The implementation of well-structured partnerships has had a positive impact on the stability of FFB supply for PTPN IV. Companies reported increased predictability in FFB volumes and more consistent delivery schedules, particularly during peak harvesting periods. This has enabled better planning at the mill level and reduced production disruptions.

Moreover, the quality of FFB has improved through ongoing technical support, leading to higher oil extraction rates (OER), which is beneficial to both the company and smallholders. Farmers also reported improved incomes, enhanced access to services, and greater inclusion in formal agricultural markets, contributing to overall rural development and economic resilience.

4. Conclusion

Strategic partnerships between palm oil companies and smallholder institutions, particularly cooperatives, have a transformative impact on the stability and sustainability of the FFB supply chain. At PTPN IV, partnership models that prioritize transparency, capacity building, and fairness result in mutual benefits: secure supplies for the company and improved livelihoods for smallholders.

From now on, replicating and scaling such partnership models across the industry can support broader national goals of sustainable agriculture, rural development, and environmental stewardship.

References

- [1] Anwar, S., Rahadian D., Ekawati, I., Ramadhani, I.K. (2024). *Partnership Models Involving Independent Smallholders in Indonesian Palm Oil Supply Chain: A Brief Review. The International Conference on Agriculture, Engineering, Social Science and Education (ICAESSE)*, 1(1), 358-368.
- [2] Baka, W., K., Rianse, U., Tufalla, M., Rianse, I., S, Zulfikar. (2023). Inovasi Model Kemitraan Usaha Perkebunan Kelapa Sawit Berbasis Budaya Lokal di Konawe Utara. *Jurnal Publicuho*, 6(2), 399-415.
- [3] Himawan, G., C., Mitra., A., F. (2023) *Profitability and Strategy of Palm Oil Partnership: Case Study in PT ABC*. *Akuntabilitas*, 17(1), 140-169.
- [4] Nasution, Z. P. S., Mulatsih, S., Rahma, H. (2023). Penilaian Keberlanjutan Sosial Kemitraan Usaha Perkebunan Kelapa Sawit Rakyat dan Kaitannya terhadap Pencapaian Tujuan Pembangunan Berkelanjutan: Studi Kasus di Provinsi Sumatera Utara. *J. Pen. Kelapa Sawit*, 31(1), 55-69.
- [5] Pasaribu, A., I., Hasanuddin, T., Nurmayasari, I., (2013). Pola Kemitraan dan Pendapatan Usaha Tani Kelapa Sawit: Kasus Kemitraan Usaha Tani Kelapa Sawit antara PT Perkebunan Nusantara VII Unit Usaha Bekri dengan Petani Mitra di Desa Tanjung Jaya Kecamatan Bangun Rejo, Kabupaten Lampung Tengah. *JIIA*, 1(4), 358-367.
- [6] Saputra, I., M., G., D., Anggreni, I., G., A., A., L., Dharma., I., P. (2017). Pola Kemitraan Usaha Tani Kelapa Sawit Kelompok Tani Telaga Biru dengan PT Sawindo Kencana melalui Koperasi di Kabupaten Bangka Barat Provinsi Bangka Belitung. *E-Jurnal Agribisnis dan Agrowisata*, 6(2), 249-258.

- [7] Suharno, Yuprin. A., D. Barbara, B. (2015). Analisis Kinerja Usaha Tani Perkebunan Kelapa Swit Rakyat Melalui Pola Kemitraan di Provinsi Kalimantan Tengah. *Jurnal Agribisnis Indonesia*, 3(2), 135-144.