OIL PALM VALUE CHAIN GOVERNANCE

in North Labuhanbatu, North Sumatra, Indonesia

Highlights

- Key governance challenges in North Labuhanbatu district's oil palm sector include high fertilizer costs, oversaturated mills, fresh fruit bunch theft, and delays in the smallholder replanting program.
- The oil palm value chain features diverse governance and relationship patterns, including relational, market-based, modular, and hierarchical interactions among key actors.
- Information transfer across key actors is complex but generally practiced.
- To improve productivity and sustainability, focus should be on promoting certified seeds, organic fertilizers, farmer training, optimizing supply chains, empowering farmer groups, improving financing access, and supporting downstream industry diversification with innovative technologies.

The oil palm sector plays a pivotal role in Indonesia's economy, but its sustainability challenges necessitate focused interventions. In North Labuhanbatu district, the Sustainable Farming in Tropical Asian Landscapes (SFITAL) initiative seeks to empower smallholder oil palm farmers to adopt sustainable management practices and align with globally recognized standards. Concurrently, the district government is encouraged to embed sustainability principles into policy frameworks and development plans, contributing to Indonesia's broader commitment to sustainable commodities. The lessons and strategic policy recommendations derived from this initiative aim to provide actionable insights for advancing sustainable value chains.

Issues in the oil palm value chain governance in North Labuhanbatu district

Four key issues have been identified in the governance of the oil palm value chain in North Labuhanbatu district:

1. **Unaffordable fertilizer prices**
   The high cost of fertilizer has led to suboptimal plantation maintenance, with some oil palm plantations forgoing fertilization entirely. This has further resulted in longer harvest cycles, affecting productivity.

2. **Oversaturation of oil palm mills**
   An excessive number of mills has heightened market competition and widened the gap between the mills' processing capacity and the supply of fresh fruit bunches, particularly during peak harvest periods.

3. **Fresh fruit bunch theft**
   Cases of theft have impacted farmers' incomes, adding to their financial burdens.

4. **Stalled implementation of the smallholder oil palm replanting program**
   The program has yet to be effectively implemented, hindering efforts to improve smallholder productivity and sustainability.

Key actors and their roles in the value chain

Addressing these issues requires a deeper understanding of the key actors involved in the oil palm value chain and their roles in governance. We found that there are at least nine key actors involved in the oil palm value chains, as detailed in the Table 1.

Table 1. Key actors and their role in oil palm value chains

Key actors	Role in oil palm value chains
Harvest worker	Fresh fruit bunch harvester at farmers' oil palm plot
Farmer	Oil palm plot owner
Broker	Small to medium scale fresh fruit bunch collector
Ramp	Large scale fresh fruit bunch collector
Delivery order holder	Provide access for brokers or ramps to the mills
Indonesian Workers Union	Unloading fresh fruit bunches in the ramps or mills
Mills	Processing fresh fruit bunches into crude oil palm s (CPO) and kernels
CPO processing companies	Processing CPO into cooking oils and other products
Local government	Provide investment licensing for mills and community plantations on processing and cultivation

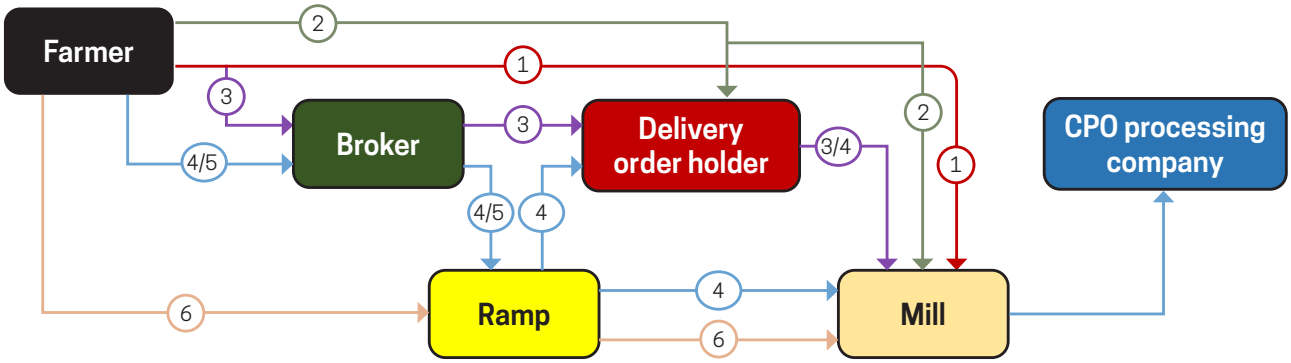

Figure 1. Flow of fresh fruit bunches from farmer to CPO processing companies in North Labuhanbatu district

Four types of oil palm buyers operate in the value chain: brokers, ramps, delivery order holders, and mills. Contracts are primarily between delivery order holders and mills, with a few exceptions for farmers with large, well-maintained plantations. Prices are determined by mills but decrease at each transaction level. Brokers dominate price-setting at the farmer level, and written agreements are uncommon except in delivery order-based transactions. Quality is determined by mills, with brokers and ramps absorbing rejected fruit. Sorting at collection points is avoided to maintain good relations with farmers. The structure of the value chain consists of six flows as shown in Figure 1.

Oil palm value chain governance in North Labuhanbatu district

Referring to Gereffi et al (2005) and Mithöfer et al (2017) which identifies governance and relationships of each key actors in the value chain, it demonstrates variables that play a large role in determining how value chains are governed and change (see Figures 2 and 3). The theory generates five types of global value chain governance – hierarchy, captive, relational, modular, and market – which range from high to low levels of explicit coordination and power asymmetry.

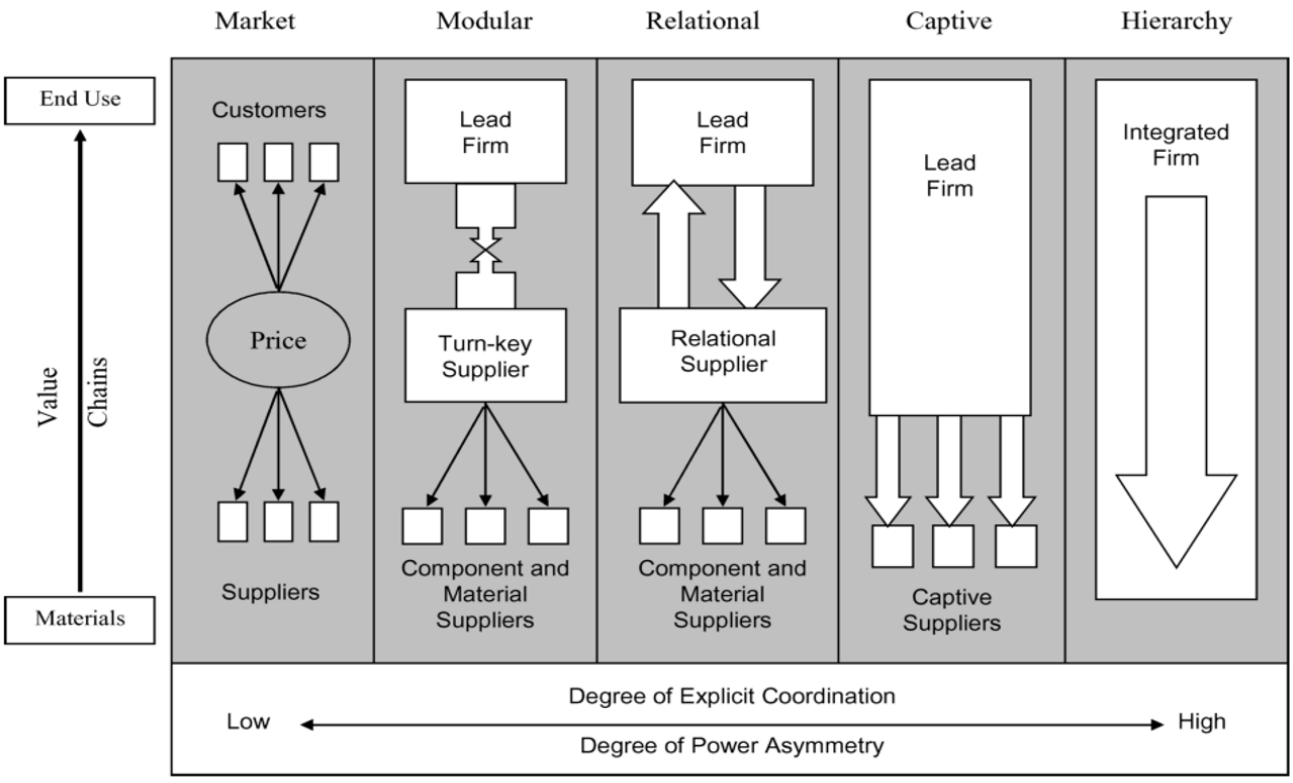

Figure 2. Five global value chain governance types (Gereffi et al, 2005)

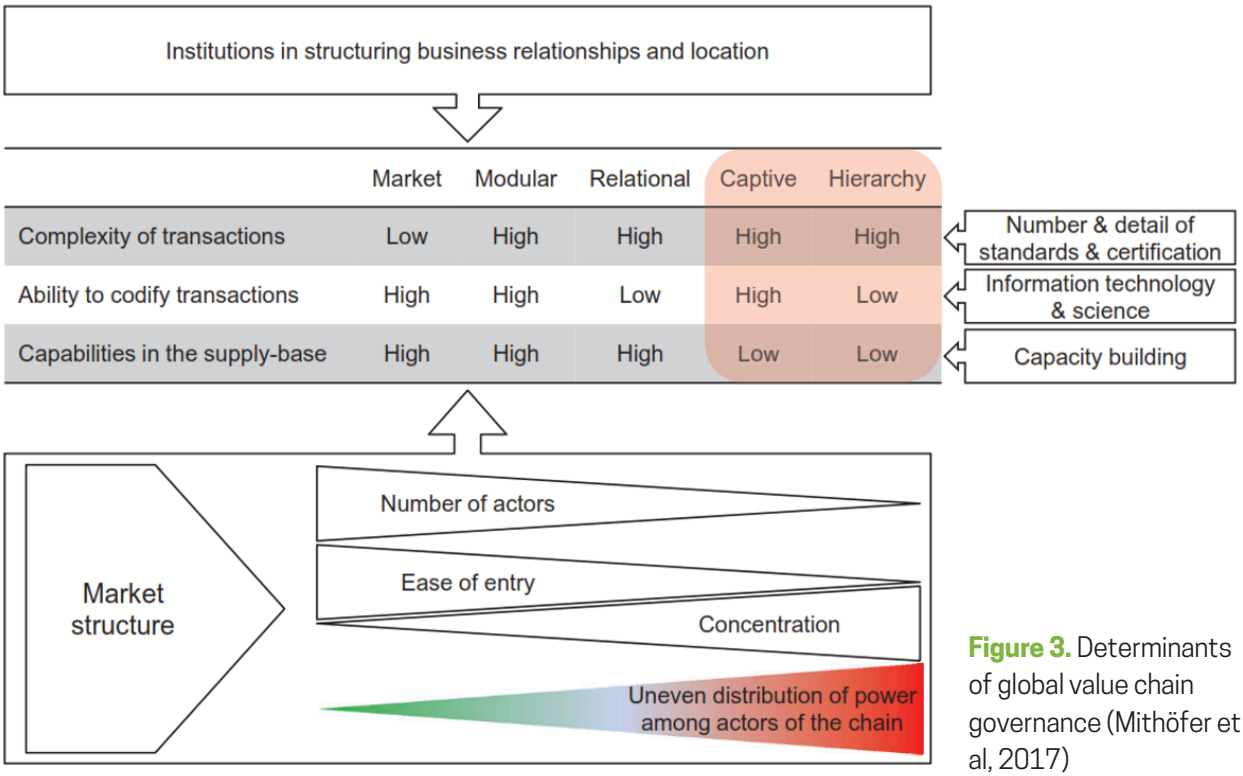

Figure 3. Determinants of global value chain governance (Mithöfer et al, 2017)

In addition, these frameworks encompass several variables such as transaction complexity among key actors in the supply chain, the ability to translate (codify) transactions or transfer knowledge, and the capabilities at the basic supplier level, namely, producer farmers or cultivators.

Based on these frameworks, four governance patterns were identified in the oil palm value chain in North Labuhanbatu District, based on the nature of buyer-seller interactions:

1. **Relational governance**
   This governance type relies on trust-based relationships built on reputation, social and spatial proximity, kinship, ethnicity, and similar ties. Relational governance is prevalent in the following market chain interactions: farmers and brokers, farmers and ramps, farmers and delivery order holders, farmers and mills, brokers and ramps, brokers and delivery order holders, ramps and delivery order holders, ramps and mills.

2. **Market-Based Governance**
   This involves simple transactions where product specifications are easily communicated, and producers require minimal input from buyers. It is observed in market chain interactions between mills and CPO processing companies.

3. **Modular Governance**
   Modular governance occurs when products require complex but easily codifiable transactions. This is evident in the relationship between brokers and mills.

4. **Hierarchical Governance**
   Hierarchical governance is characterized by vertically integrated transactions managed through top-down control, typically from headquarters to subsidiaries. This governance type is observed in:
   a. Relationships between delivery order holders and mills.
   b. Relationships between mills and CPO processing companies.

Complexity in information transfer

The complexity of information transfer at each level of market actors receiving fresh fruit bunches are detailed in Table 2.

Transactions between farmers and brokers are flexible, often based on kinship, friendship, or neighbourhood ties, with trust in weighing, payments, and loan assistance. These long-standing practices, often spanning over 20 years, are straightforward and well-understood.

Table 2. Complexity of information transfer

Parameters	Key actors in oil palm value chains					Notes
	Farmer	Broker	Ramp	Delivery order holder	Mills	
Product and processing specifications						Mills apply stringent product and processing specifications, primarily accepting fresh fruit bunches of the tenera standard to ensure high-quality CPO and kernel production.
Rely on special tools, machines, or technology						Most actors in the oil palm value chain rely on specialized tools, machinery, or technology to facilitate their operations, except for delivery order holders.
Require product standards						Farmers harvest fresh fruit bunches at optimal ripeness to achieve the best quality. Ramps sort the fruit to ensure that a high proportion, approximately 80%, meets the tenera standard. Mills further maintain CPO quality by ensuring low free fatty acid levels.
Share confidential product processing information						Information sharing about fresh fruit bunches production is observed only at the farmer level, focusing on cultivation practices and yield management.
Product shipping specifications are easy to comply with						Brokers sell FFB directly to mills or through ramps, but mostly without contracts. Ramps and delivery order holders fulfill contract quotas to mills. Mills produce CPO to be delivered to buyers.
Product specifications are easy to produce						Farmers produce fresh fruit bunches, which are sorted by ramps to achieve 80% tenera quality. Delivery order holders meet contract quotas with mills, supplying specified quantities, such as 500 tons every 10 days. Mills then process the fresh fruit bunches into CPO with free fatty acid levels below 5%.
Processing is done in-house due to lack of alternatives						Brokers manage rejected fresh fruit bunches by converting it into loose fruit within a month, which is then collected by ramps. Mills enforce strict ripeness standards, returning unripe or under ripe fresh fruit bunches to sellers.

: not practiced : minimally practiced : generally practiced

Brokers itemize transactions, including deductions for dura quality, loans, and transport fees for collecting fresh fruit bunches. Farmers, familiar with year-round fresh fruit bunches sales, are informed about prices, which are transparently documented in receipts or delivery orders after mill deliveries.

Recommendations

The sustainability of the oil palm business in North Labuhanbatu district depends on several key factors: the collaboration between fresh fruit bunch producers and buyers, the gap between fresh fruit bunch supply and mill capacity, and the involvement of the next generation of farmers. Recommendations are based on existing field conditions, addressing challenges to improve the supply chain system. These recommendations consider aspects of the oil palm business stream to ensure a well-functioning supply chain that benefits all stakeholders.

To ensure the sustainability and efficiency of the oil palm value chain in North Labuhanbatu, several recommendations are proposed:

1. **Enhance seed quality and certification**
   Facilitate the provision of high-quality certified seedlings by collaborating with seed producers and monitoring uncertified nurseries to ensure consistent seed quality.

2. **Promote organic fertilizers**
   Encourage the production and use of organic fertilizers from oil palm byproducts by establishing farmer-led units supported by mills and conducting training for independent fertilizer production.

3. **Strengthen farmer capacity**
   Provide continuous training to improve farmers' cultivation practices through farmer-to-farmer programs and field schools, while also forming farmer groups to streamline support and training efforts.

4. **Improve infrastructure and tools**
   Invest in farm roads to enhance harvest transportation and increase the availability of harvesting tools and transport equipment to reduce operational challenges.

5. **Streamline supply chains and standards**
   Coordinate harvesting schedules to ensure consistent mill capacity utilization, adopt uniform quality standards at mills, and implement policies for traceable and transparent fresh fruit bunch marketing.

6. **Support downstream and institutional development**
   Encourage mills to diversify processed products, attract local investments, and strengthen farmer organizations and village-level economic institutions to enhance competitiveness and financial access.

These measures aim to optimize the oil palm supply chain, benefiting all stakeholders while supporting the long-term sustainability of the sector.

Reference

Gereffi G, Humphrey J & Sturgeon T. 2005. The governance of global value chains. *Review of International Political Economy* 12(1):78–104. DOI: 10.1080/09692290500049805 https://doi.org/10.1080/09692290500049805

Mithöfer D, van Noordwijk M, Leimona B & Cerutti PO. 2017. Certify and shift blame, or resolve issues? Environmentally and socially responsible global trade and production of timber and tree crops. *International Journal of Biodiversity Science, Ecosystem Services & Management* 13(1):72–85. DOI: 10.1080/21513732.2016.1238848 http://dx.doi.org/10.1080/21513732.2016.1238848

Citation

Mujio M, Supijatno S, Ermyanyla M, Prawira T, Fauziah PD, Perdana A. 2024. *Oil palm Value Chain Governance in North Labuhanbatu, North Sumatra, Indonesia (Technical Brief)*. Bogor, Indonesia: World Agroforestry (ICRAF) Indonesia Program.

SFITAL or Sustainable Farming in Tropical Asian Landscapes (2020-2025) is action research implemented by World Agroforestry (ICRAF) in collaboration with Rainforest Alliance and Masyarakat Agroforestri Indonesia with the support of the International Fund for Agriculture Development (IFAD).

More information:
b.lusiana@cifor-icraf.org

CIFOR-ICRAF Program Indonesia
Jl. CIFOR, Situ Gede, Sindang Barang, Bogor 16115
[PO Box 161, Bogor 16001] Indonesia
Tel: +(62) 251 8625415 | Fax: +(62) 251 8625416
Email: icraf-indonesia@cifor-icraf.org
www.cifor-icraf.org/locations/asia/indonesia

Layout: Riky Mulya Hilmansyah

#PekebunLestari
darikebunkelanskapsehat.id