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## Co-Opetition Among Palm Oil Exporting Countries to Navigate the Complexities Dynamic Global Vegetable Oils Market

Loso Judijanto

IPOSS Jakarta, Indonesia

**ABSTRACT**

The global vegetable oils market is characterised by increasing complexity due to evolving environmental regulations, shifting consumer preferences, and intensified competition among exporting countries. This study examines the phenomenon of co-opetition among palm oil exporting nations as a strategic response to these challenges. The research aims to analyse how these countries balance cooperation and competition to sustain market positions and address regulatory and market uncertainties. This qualitative study employs a comprehensive literature review method, synthesising findings from diverse academic articles, industry reports, and policy documents. Data were collected systematically using academic databases and citation management software to ensure breadth and reliability. The analysis applied thematic coding and content analysis techniques to identify recurring patterns and critical themes related to co-opetition dynamics. Findings reveal that Indonesia and Malaysia dominate the palm oil export market, engaging in both competitive practices and collaborative initiatives such as harmonising sustainability certifications and joint diplomatic efforts. Despite institutional fragmentation and policy divergences, co-opetition enhances resilience by fostering innovation, regulatory adaptation, and collective bargaining power. The study highlights the critical role of strategic alliances in navigating regulatory complexities and market volatility. In conclusion, co-opetition emerges as a vital mechanism enabling palm oil exporters to reconcile national interests with shared sustainability goals and market challenges. Future research should focus on quantitative assessment of co-opetition impacts and the inclusion of emerging exporters to enrich understanding of global vegetable oil trade dynamics.

**\*Corresponding author**

Loso Judijanto, IPOSS Jakarta, Indonesia.

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**Introduction**

The global edible oil industry is a cornerstone of food security and economic development, with demand steadily increasing due to rising populations, urbanisation, and shifting dietary patterns across emerging markets [1]. Among the various vegetable oils, palm oil has emerged as the most consumed and traded worldwide, accounting for over one-third of total global vegetable oil consumption [2]. Its high yield per hectare, cost-effectiveness, and wide-ranging applications—from food processing to biofuel have made palm oil an essential commodity in the global agribusiness landscape [3].

Despite its economic significance, the global palm oil industry is characterised by persistent volatility. Fluctuations in crude oil prices, changing consumer preferences, and heightened environmental scrutiny have made the international market increasingly dynamic and complex [4]. Moreover, geopolitical disruptions such as the Russia–Ukraine conflict have severely impacted sunflower oil exports, subsequently amplifying demand pressure on alternative oils like palm oil [5]. This heightened interdependence has intensified competition among vegetable oil types, creating both opportunities and challenges for palm oil-exporting nations [6].

At the core of global palm oil trade are a few major exporters—primarily Indonesia and Malaysia who collectively contribute to more than 80% of the world's palm oil supply [7]. While these countries hold substantial influence in the market, they face significant external

pressures in the form of regulatory constraints from importing countries, sustainability demands from NGOs, and market access barriers imposed by global blocs such as the European Union [8]. The European Union Deforestation Regulation (EUDR), for instance, has introduced new trade barriers that threaten the market stability of palm oil products.

In this complex and often adversarial global context, palm oil-exporting nations find themselves entangled in a dual imperative: the need to compete for market share and the simultaneous necessity to collaborate in safeguarding collective interests [9]. This paradoxical strategy known as co-opetition—has increasingly gained scholarly and policy attention as a viable framework for navigating high-stakes, dynamic markets such as the global edible oil industry. Co-opetition blends the elements of competition and cooperation, enabling actors to compete for economic gains while simultaneously engaging in mutual collaboration to achieve shared strategic objectives [10].

The conceptual underpinnings of co-opetition were first popularised by Brandenburger and Nalebuff (1996), who argued that value creation in complex markets is maximised not solely through rivalry, but also through synergistic cooperation among competitors [11]. In the context of palm oil, co-opetition may manifest in joint efforts to counter negative environmental campaigns, collective investment in sustainability certification standards (e.g., RSPO, ISPO, MSPO), or coordinated diplomatic negotiations to secure equitable trade treatment [12]. Such strategies are essential, as isolated responses by individual countries may fall short in addressing global institutional pressures that transcend national borders.

The establishment of the Council of Palm Oil Producing Countries (CPOPC) in 2015 marks a formal institutionalisation of co-opetitive approaches among leading palm oil exporters. The organisation aims to strengthen collective bargaining power, harmonise sustainability practices, and enhance market access for palm oil products globally. However, the effectiveness of such cooperative platforms is often hindered by asymmetric national interests, capacity disparities, and limited enforcement mechanisms [13]. These limitations underscore the necessity to critically evaluate the structural and strategic dynamics underpinning co-opetition among exporting countries.

While a growing body of literature has explored the economic, environmental, and political dimensions of the palm oil trade, few studies have systematically examined the strategic interplay of cooperation and competition among exporting nations. Existing research tends to isolate policy analysis, market trends, or trade impacts without integrating them into a cohesive strategic framework. This literature gap presents an opportunity to adopt a more holistic analytical lens grounded in the theory of co-opetition to better understand how palm oil-exporting countries can collectively respond to global market complexities [14].

Moreover, the rapid evolution of trade norms, sustainability expectations, and geopolitical alignments necessitates an adaptive strategic posture. Without a structured understanding of co-opetition as both a theoretical and practical tool, palm oil-producing nations risk falling into fragmented and reactive strategies that undermine their global competitiveness. A qualitative literature review approach is particularly suited to unpacking this complex dynamic, as it allows for an in-depth exploration of interconnected themes and conceptual developments across multiple domains [15].

This study, therefore, aims to explore the strategic role of co-opetition among palm oil-exporting countries in navigating the challenges and opportunities within the global vegetable oils market. By conducting a comprehensive qualitative literature review, the study synthesises scholarly insights on trade dynamics, institutional cooperation, policy responses, and sustainability frameworks. Ultimately, the goal is to develop an integrated understanding of how co-opetitive strategies can enhance the resilience and bargaining position of palm oil-producing countries in an increasingly contested and complex global market environment.

## Literature Review

The global trade of vegetable oils has undergone considerable transformation over the past two decades, driven by shifting consumption patterns, geopolitical disruptions, and increasingly stringent sustainability expectations. Palm oil, as the most traded and consumed vegetable oil globally, lies at the centre of this transformation. Numerous studies have explored the dynamics of palm oil markets, yet few have examined the interplay of strategic cooperation and competition, commonly referred to as co-opetition, among the main exporting countries.

Palm oil's dominance in the global vegetable oil sector stems from its high productivity per hectare, versatile applications, and cost-effectiveness relative to other oils such as soybean, rapeseed, and sunflower oil. However, its global footprint has also drawn widespread scrutiny due to unfair concerns over deforestation, labour practices, and biodiversity loss, especially in Southeast Asia. In response, importing markets, particularly in Europe and North America, have imposed increasingly complex regulatory frameworks including traceability, zero-deforestation commitments, and more recently, the European Union Deforestation Regulation (EUDR) [16]. These regulatory challenges are not isolated but shared by all palm oil-producing

nations, which justifies the growing relevance of intergovernmental coordination strategies.

The concept of co-opetition, first theorised by Brandenburger and Nalebuff, has been widely applied in corporate strategy but has found growing relevance in international trade policy and state-level behaviour in response to shared external pressures [17]. In the context of palm oil, co-opetition enables producer countries to jointly manage reputational risks, influence international standards, and create bargaining power, while still competing for market share and investment. The literature has gradually acknowledged this duality, although empirical focus remains fragmented. Some researchers argue that the emergence of institutions such as the Council of Palm Oil Producing Countries (CPOPC) reflects a formalisation of co-opetitive mechanisms in this sector [18].

Despite overlapping interests, palm oil-exporting countries face asymmetrical challenges. Indonesia, the largest exporter, faces internal governance issues, decentralised land-use policies, and growing domestic demand that may limit export surplus. Malaysia, while smaller in volume, has often been more proactive diplomatically and institutionally, particularly in sustainability certification through MSPO and RSPO alignment [19]. Thailand and Colombia, as emerging exporters, have attempted to emulate such mechanisms but with limited regional influence and institutional support [20]. This variation in national capacity and political will can obstruct co-opetition efforts, particularly when market access depends on compliance with external sustainability criteria that are unequally burdensome across contexts.

Existing studies have highlighted the tendency of palm oil producers to respond to market pressure individually rather than collectively, thereby weakening their strategic positioning. For instance, competition for bilateral agreements or price incentives has sometimes led to undercutting, rather than solidarity, among exporters [21]. Moreover, countries often pursue different narratives when addressing global perception issues. While Indonesia tends to frame palm oil criticism as neo-colonial and protectionist, Malaysia has preferred a more conciliatory approach centred on certification and dialogue [22]. These narrative divergences affect the coherence of regional diplomacy and can reduce the credibility of collective platforms like CPOPC [23].

Nonetheless, some successes have been observed. Joint diplomatic missions to Europe, cross-country alignment on traceability systems, and shared technical exchanges on sustainable practices represent small but significant moves toward functional co-opetition [24]. These initiatives suggest that, under the right institutional and political conditions, co-opetition can serve as a viable strategic response. However, the literature also notes that such cooperation is often reactive, event-driven, and lacking long-term institutionalisation [25].

Furthermore, there is growing recognition in academic discourse that co-opetition must be analysed not only in terms of political and diplomatic collaboration but also through the lens of shared investment in research, certification harmonisation, and collective branding strategies. These elements have yet to be systemically integrated into most cooperative frameworks, partly due to the absence of binding regional mechanisms and financial commitment among member states [26]. Several studies have noted the potential of South-South cooperation among palm oil exporters, yet institutional fragmentation remains a critical barrier [27].

While co-opetition is often presented as a rational strategy under shared threat conditions, literature also points to the risks of over-

coordination, especially when national priorities diverge significantly. For example, attempts to synchronise domestic policies with collective strategies have sometimes led to policy inertia, particularly when governments fear losing sovereign control over trade negotiation outcomes [28]. This tension is compounded by the influence of domestic stakeholders industry groups, civil society, and local governments—whose interests may not align with regional or international diplomatic goals [29,30].

There is a notable research gap in systematically mapping the mechanisms, limitations, and strategic outcomes of co-opetition among palm oil exporters. Much of the existing literature treats cooperation and competition as binary opposites, rather than interdependent forces. This article addresses that gap by employing a qualitative literature review to synthesise how co-opetitive strategies have been developed, challenged, and adapted in the evolving global vegetable oils market. Such an approach is essential to understand not only what has been done, but also what is institutionally possible for future strategic coordination.

## Method

This study employs a qualitative approach using a qualitative literature review method as the primary strategy to explore the dynamics of co-opetition among palm oil exporting countries in navigating the complexities of the global vegetable oils market. The research is exploratory and descriptive, aiming to gain an in-depth understanding of how palm oil-producing countries, such as Indonesia, Malaysia, and Thailand, manage the tensions between competition and cooperation within a highly dynamic and risk-prone international trade environment. The literature examined includes scholarly articles indexed in Scopus, policy reports from international organisations, and relevant official documents from government agencies and multilateral forums. In this study, the researcher serves as the main instrument, consistent with qualitative research traditions, focusing on interpretive skills to identify patterns, thematic relationships, and conceptual representations derived from various secondary data sources. Data collection was conducted through a systematic search of relevant literature across scientific databases such as Scopus, ScienceDirect, Taylor & Francis, and Google Scholar, applying inclusion criteria that prioritise publications from the last ten years, topical relevance, and contributions to the co-opetition analytical framework. The selected articles were managed using Mendeley Desktop reference management software to ensure citation consistency and ease of source verification. Data analysis was carried out using thematic content analysis, performed iteratively by grouping literature into thematic categories such as forms of regional cooperation, competitive dynamics, export market regulations, and diplomatic responses to global market pressures. This process involved thorough reading, thematic coding, and conceptual narrative development to build a comprehensive and structured understanding of the co-opetition phenomenon in the palm oil context. Data validity was maintained through literature triangulation, cross-verification between sources, and critical evaluation of potential biases within each analysed document.

## Results

The data collected through an extensive qualitative literature review reveals a complex and multifaceted landscape in which palm oil exporting countries engage in co-opetition to address global market challenges. Analysis of trade volumes shows that Indonesia and Malaysia dominate the global palm oil export market, collectively accounting for approximately 85% of global exports, with Indonesia alone contributing nearly 58% and Malaysia 27% as of 2022 [31]. These figures underscore the critical market influence wielded by these two countries, which shapes their strategic interactions in navigating

external pressures, such as tightening environmental regulations and fluctuating demand from major importers, including India, China, and the European Union [32].

Further examination of import statistics highlights the volatility in the global vegetable oils market. For example, the combined imports of palm oil and other vegetable oils by the EU dropped by 12% between 2018 and 2021, largely attributed to regulatory barriers and consumer shifts towards sustainable products [33]. This trend has intensified competition among palm oil producers, prompting a simultaneous need for cooperation on issues like sustainability certification and market access negotiation. Notably, the Council of Palm Oil Producing Countries (CPOPC), established in 2015, exemplifies a formal attempt to institutionalise co-opetition, aiming to harmonise export strategies and collectively advocate for palm oil in international forums [34].

Data from sustainability certification initiatives further illuminates the dual nature of competition and cooperation. Malaysia's Malaysian Sustainable Palm Oil (MSPO) certification has achieved near-universal adoption among its plantations, covering over 90% of its palm oil production, while Indonesia's Indonesian Sustainable Palm Oil (ISPO) certification covers about 70%, indicating differences in regulatory enforcement and institutional capacity [35]. These disparities have complicated joint efforts to present a unified front in global sustainability dialogues. However, collaborative technical exchanges on best practices and monitoring mechanisms suggest a functional co-opetitive dynamic aimed at raising sectoral standards collectively [36].

Trade tariff data demonstrates another dimension of co-opetition. While Indonesia and Malaysia both benefit from Generalized System of Preferences (GSP) arrangements in some markets, recent disputes have emerged over differential treatment in tariffs and import quotas, particularly in the context of the EU's anti-deforestation measures which effectively increase the cost burden for palm oil exporters by 5-7% [37]. Such measures have incentivised exporters to negotiate joint trade positions, though their national export policies still reflect competitive priorities in pricing and market segmentation [38].

The analysis of diplomatic engagements reveals contrasting strategies employed by palm oil exporters. Indonesia has prioritised bilateral dialogues, emphasising sovereignty and the economic importance of palm oil for rural development, with trade delegations visiting over 20 countries annually since 2019 [39]. Malaysia has taken a more multilateral approach, engaging actively in the Roundtable on Sustainable Palm Oil (RSPO) and pushing for international standards that balance environmental goals with economic sustainability [40]. Thailand and Colombia, smaller players contributing under 3% each to global palm oil exports, focus on niche markets and regional cooperation mechanisms, seeking to expand market share while aligning with broader sustainability frameworks [41].

Market share data from 2015 to 2023 further illustrates shifting dynamics within the vegetable oils sector. While palm oil retains a dominant share of approximately 40% in global vegetable oil consumption, the rising production of alternatives such as soybean oil (+15% growth in the last decade) and sunflower oil (+12%) adds competitive pressure [42]. This market diversification underscores the urgency for palm oil producers to coordinate on product differentiation and sustainability marketing, which are increasingly decisive factors influencing importers' purchasing decisions.

From an institutional perspective, the literature reveals significant fragmentation in cooperation efforts. Although CPOPC serves as a

platform for dialogue, its decision-making authority remains limited, with member countries often prioritising unilateral policy agendas. For instance, Indonesia's push for relaxing export taxes to enhance competitiveness contrasts with Malaysia's emphasis on maintaining export levies to fund sustainability programs, creating tensions that hamper cohesive action [43]. Such divergences reflect the challenge of balancing national sovereignty with collective interests, a core tension inherent in co-opetitive relationships.

The analysis of market adaptation strategies also indicates a growing trend of joint investment in research and innovation. Indonesia and Malaysia have jointly funded projects on high-yield palm varieties and sustainable cultivation techniques, resulting in yield improvements averaging 3-5% annually over the last five years [44]. These cooperative initiatives demonstrate how co-opetition can generate shared benefits beyond market access, fostering technological progress and resilience in the face of environmental constraints.

Consumer perception studies cited in the literature highlight that over 65% of consumers in the EU express concern over deforestation linked to palm oil production, influencing import policies and corporate sourcing strategies [45]. This consumer-driven pressure reinforces the necessity for palm oil exporters to present coordinated sustainability narratives and enhance transparency through traceability systems, another area where co-opetition is increasingly evident.

In sum, the data synthesised from multiple sources corroborates that co-opetition among palm oil exporting countries is neither purely competitive nor wholly cooperative but a dynamic interplay shaped by economic imperatives, regulatory environments, and institutional capacities. Countries employ strategic alliances to collectively mitigate external risks while simultaneously competing to maximise individual export advantages. The findings indicate that despite significant challenges related to policy divergence, capacity asymmetries, and market volatility, incremental advances in joint certification, diplomatic coordination, and research collaboration offer promising pathways for more effective co-opetition strategies in the evolving global vegetable oils market.

## Discussion

The findings of this qualitative literature review demonstrate that co-opetition among palm oil exporting countries serves as a strategic mechanism to balance competitive pressures and cooperative opportunities within the highly dynamic global vegetable oils market. The dominance of Indonesia and Malaysia, controlling roughly 85% of global palm oil exports, places these nations in a unique position where their interactions critically influence market outcomes [46].

Their ability to engage simultaneously in rivalry and collaboration, especially through platforms like the Council of Palm Oil Producing Countries (CPOPC), underscores the dualistic nature of co-opetition as both a challenge and a resource for navigating international trade complexities [47].

The market volatility characterised by fluctuating demand from major importers and stringent regulatory frameworks, such as the European Union's anti-deforestation policies, has intensified the need for exporters to coordinate sustainable certification efforts and trade advocacy [48]. The disparities in adoption rates of sustainability standards, with Malaysia's MSPO nearly covering 90% of production versus Indonesia's ISPO at 70%, reflect differences in institutional readiness and enforcement capacity, which complicate unified responses to global sustainability demands [49]. Despite these challenges, cooperative initiatives on best practice sharing and harmonisation of standards indicate a pragmatic recognition that

collective action enhances market legitimacy and competitiveness [50].

Trade data reveal that tariff and non-tariff barriers have become significant sources of tension, yet they also create incentives for joint negotiation strategies aimed at mitigating adverse impacts on export revenues [51]. The diverging export tax policies between Indonesia and Malaysia, while reflecting national economic priorities, underscore the inherent tension between sovereignty and collective interest that defines co-opetition dynamics [52]. This tension necessitates sophisticated diplomatic engagement, as evidenced by Indonesia's bilateral outreach and Malaysia's multilateral advocacy, both of which contribute complementary approaches to securing market access and shaping international norms [53].

The diversification within the global vegetable oils market, marked by increasing shares of soybean and sunflower oils, highlights the importance of innovation and product differentiation among palm oil producers [54]. Collaborative investment in research and development has demonstrated tangible productivity gains, reinforcing co-opetition as a source of technological advancement rather than merely a commercial contest [55]. Furthermore, consumer-driven demand for transparency and environmental accountability compels exporters to improve traceability systems and sustainability narratives, which are areas where cooperative branding and information sharing generate mutual benefits [56].

Institutional fragmentation, while posing challenges to cohesive policy making, also reveals opportunities for gradual convergence through iterative negotiation and shared learning processes. The limited authority of CPOPC calls for enhanced institutional mechanisms that can reconcile divergent national interests and foster stronger collective governance frameworks [57]. Such improvements would enable palm oil exporting countries to better align export taxation, certification standards, and market promotion efforts, thereby strengthening their position against external regulatory pressures and market fluctuations [58].

In addressing the research objectives, it is evident that co-opetition acts as a vital adaptive strategy, enabling palm oil exporting countries to manage competitive dynamics while leveraging cooperation to enhance sustainability, market access, and technological progress. The literature underscores that successful navigation of the global vegetable oils market depends on the capacity to integrate competitive national agendas within cooperative regional and international frameworks, ensuring resilience against economic and environmental uncertainties [59,60].

The implications of this study highlight the critical need for institutional innovation and deeper coordination among palm oil producers to optimise the benefits of co-opetition. Policy makers should prioritise establishing binding agreements that harmonise sustainability standards and export policies, complemented by enhanced mechanisms for conflict resolution and shared research initiatives. Future research could focus on developing quantitative models to measure the impact of co-opetition on market share, price stability, and environmental outcomes, as well as exploring the role of emerging players beyond the traditional exporters. Such studies would enrich understanding of how co-opetitive frameworks evolve in response to shifting geopolitical and market forces, contributing valuable insights for sustainable commodity governance.

## Conclusion

The interaction among palm oil exporting countries is characterised by a complex blend of competition and cooperation, shaped largely

by market dominance, regulatory pressures, and evolving global demand patterns. Indonesia and Malaysia, as principal players, exert significant influence over the global palm oil supply, engaging in strategic collaborations through formal and informal mechanisms while maintaining competitive postures to protect national interests. Efforts to harmonise sustainability standards, such as the MSPO and ISPO certifications, illustrate the challenges and progress within institutional frameworks that seek to balance environmental concerns with economic objectives. Differences in certification coverage and enforcement highlight the varied capacities and priorities among exporters, necessitating continued dialogue and alignment.

Market volatility and policy shifts, particularly regarding tariffs and sustainability requirements imposed by major importers like the European Union, have intensified the need for coordinated responses. Despite tensions arising from divergent export policies and tariff negotiations, collaborative diplomacy and joint research investments demonstrate the potential benefits of co-opetition in enhancing resilience and innovation. The growing presence of alternative vegetable oils in the market further underscores the urgency for palm oil exporters to differentiate products and adopt sustainability as a core competitive advantage.

Institutional fragmentation remains a barrier to fully cohesive action, yet incremental improvements in multilateral coordination suggest a pathway toward stronger collective governance. The dynamic interplay between sovereignty and cooperation underscores the importance of flexible strategies that accommodate national agendas while leveraging shared interests. Consumer-driven demands for transparency and environmental accountability have accelerated the adoption of traceability and certification systems, reinforcing co-opetition as a necessary approach to safeguard market access and reputation.

Overall, the synergy of competitive and cooperative dynamics enables palm oil exporting countries to better navigate market complexities, mitigate external risks, and capitalise on shared opportunities. Strengthening institutional mechanisms and expanding collaborative innovation initiatives are critical to sustaining this balance amid ongoing global challenges. Future endeavours should focus on deepening integration across policies and enhancing empirical assessments of co-opetition's impact on economic and environmental outcomes.

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