



Towards collaborative EU-Indonesia bargaining on palm oil policy: deconstructing the public discourse

Erja Kettunen¹ · Ayu Pratiwi¹

Received: 30 June 2024 / Revised: 15 April 2025 / Accepted: 31 May 2025
© The Author(s) 2025

Abstract

Palm oil, one of the most contested commodities, has caused a trade dispute between the EU and Indonesia due to its heavy impact on deforestation, biodiversity loss, and social problems while providing a livelihood for millions of people. Discussing EU-Indonesia bargaining on palm oil policy, this paper investigates the positions of the EU and Indonesia in the public discourse and aims to unpack the ‘good and bad’ narratives of palm oil. To do this, we explore international online news and examine the perceptions, sentiments, and emotions reflected in the discourse. Both qualitative and quantitative approaches are employed to (1) examine a narrative account of the recent evolution of formal opinions between the EU and Indonesia and (2) perform clustering, sentiment, and emotion analyses on the perceived positive and negative facets, and positions of palm oil-related stakeholders in news articles published in Indonesian and English language. The paper makes three main contributions. First, the findings indicate that the EU, despite its marginal role in Indonesia’s large palm oil industry, has stronger bargaining power as exemplified in its deforestation regulation. Second, the debate in Indonesia is wrapped in perceptions of global trade and hints at new market opportunities in China and India, since the EU position is seen as a challenge to national autonomy. Third, the narrative has spurred not only uniform but polarized sentiments amongst the Indonesian public, particularly on trade discrimination and the ensuing problems to smallholders. Indonesia, being the more vulnerable ‘norm taker’ in the bargaining with the EU, may increase exports to markets without sustainability standards, which would have adverse effects on global sustainability.

✉ Erja Kettunen
erja.kettunen-matilainen@utu.fi

Ayu Pratiwi
ayu.pratiwi@utu.fi

¹ Economic Geography, Dept. of Marketing and International Business, Turku School of Economics, University of Turku, Turku, Finland

Abbreviations

ASEAN	Association of Southeast Asian Nations
CEPA	Comprehensive Economic Partnership Agreement
CPO	Crude Palm Oil
CPOPC	Council of Palm Oil Producing Countries
EU	European Union
EUDR	European Union Deforestation Regulation
FTA	Free trade agreement
ISPO	Indonesian Sustainable Palm Oil
NGO	Non-governmental organization
SAF	Sustainable aviation fuel
SDG	Sustainable Development Goals
RSPO	Roundtable on Sustainable Palm Oil
WTO	World Trade Organization
WWF	World Wildlife Fund

Introduction

The European Union (EU) is a major importer of palm oil from Indonesia, the world's largest palm oil producer with more than half of its cultivated area managed by smallholders. Over the past few decades, palm oil production has multiplied and has become the primary source of livelihood for over 16 million farming households (FAO 2023). Palm oil is one of Indonesia's primary export commodities, used in food and non-food consumer products, as well as in biofuels. A typical cooking oil in Asia and an ingredient in global food industry, palm oil is an essential part of global food chains. However, food supply chains were disrupted in 2022 after Russia's invasion in Ukraine, both countries being major food exporters (European Parliament 2022; FAO 2022). This also led Indonesia to ban palm oil exports, a decision that was reversed in May 2022 due to global price volatility (DW 2022a) and the necessity to build resilience in agri-food systems as was emphasized in the G20 meeting hosted by Indonesia (Cattaneo et al. 2022).

Before these geopolitical crises, European public debate had voiced severe concerns about Indonesia's oil palm monoculture and the risks posed on the progress toward Sustainable Development Goals (SDG). The perceived problems include widespread forest clearing, declining biodiversity, socio-economic challenges, and human rights violations such as indigenous land grabbing (Qaim et al. 2020). The critique was evident in European media that frequently listed consumer products containing palm oil in order to raise general awareness on the risks to the environment. For example, the World Wildlife Fund (WWF) held up the quest for joint responsibility concerning Europe's contribution to tropical deforestation (WWF 2024). The discussion in Europe was thus centered on limiting palm oil use, held up by governments, non-governmental organizations (NGO), and the general public (e.g. Oosterveer 2020). This led to the European parliament decision in 2018 to prohibit palm oil in EU biofuel production. In turn, Indonesia lodged a complaint against the EU in the World Trade Organization (WTO) dispute settlement

mechanism (Reuters 2019), the work of the panel having been suspended several times since then (WTO 2024). However, arguments were subsequently raised, suggesting that the European parliament decision was influenced not only by consumer and NGO critique but also by local vegetable oil producers (e.g. Kobo 2019). The EU then seemed to shift its stance and instead of banning palm oil, appeared to anticipate inclusive partnership with the Global South (Ahmed 2020; Roozen 2021). Given the limited availability of vegetable oil from Ukraine, the EU may have sought to reevaluate its opinions and policies on Indonesian palm oil (Gaikwad 2022). Yet, the dispute affected EU-Indonesia relations leading to a slower progress in free trade agreement (FTA) negotiations compared to several other FTA talks (European Commission 2024a). The palm oil controversy thus remains a topic of intense debate.

In this study, we aim to consolidate the different perspectives of stakeholders to understand how the trade dispute, ongoing war, and global food crisis are changing the opinions, context, and discourse on palm oil. The EU's previously harsh stance on palm oil has softened due to the Russian war in Ukraine (DW 2022b). Thus, rapidly changing geopolitical contexts and actions of major global powers have an impact on stakeholders' perceptions and narratives. Trade patterns are changing, too; while the EU uses palm oil in consumer products and fuels, fast growing importers China and India use it for food industry and household consumption, respectively (Rum et al. 2022), being part of the geopolitical context and narrative. These multifaceted and evolving perceptions have the power to influence current policies on palm oil and induce changes in multilateral relations amidst global crises.

Prior studies often overlook power relations and negotiations amongst global, regional, and local actors (Newell 2008). Therefore, this paper examines the positions of the EU, the Indonesian state and Indonesian general public, and their opinions, relative power, and sentiments in the public discourse. Our aim is to identify the 'good and bad' aspects of palm oil in the arguments in EU-Indonesia bargaining and to delineate the development of the viewpoints of participating stakeholders on palm oil. To achieve this, we analyze two sets of online news archives: one featuring English-language international news that reflect both the EU and the Indonesian state perspectives, and another comprising articles in English and Indonesian and capturing public sentiments on palm oil. Employing multi-method approaches, this paper presents a narrative of how EU-Indonesia formal opinions have recently evolved, and a clustering, sentiment, and emotion analysis of the Indonesian and English news discourse, reflecting stakeholders' stance—both negative and positive—on the issue. This helps us understand how public views are influenced by new information on environmental and social challenges and Agenda 2030 SDGs. For instance, recent research concludes that dismantling oil palm farming could accelerate deforestation if replaced by other vegetable oils, such as rapeseed or sunflower, which require more land, water, and fertilizers (Parsons et al. 2020). Consequently, Western consumers' boycotting of palm oil may indicate hypocritical double standards: why not boycott coffee, cocoa, and chocolate too, as their farming has comparable effects (Meijaard and Sheil 2019).

The paper proceeds as follows. We first discuss prior literature on multi-stakeholder bargaining, followed by a description of the methods used in the paper. Then, we present the findings of the study, followed by a discussion of the results vis-a-vis

extant research and the contributions of the study. We conclude with final remarks and ideas for future research.

Multi-scalar bargaining on palm oil

Prior research is relatively abundant on the expansion of oil palm cultivation, particularly its impact on local communities (e.g. Lounela 2020; Obidzinski et al. 2012) and contradiction with Indonesia's aim for 'green growth' (Anderson et al. 2016), and the ensuing stakeholder relations between farmers, environmental NGOs and Roundtable on Sustainable Palm Oil (RSPO), the global private partnership that certifies sustainable production (e.g. Hospes 2014; Köhne 2014; Moreno-Peñaranda et al. 2015; Ramdani and Lounela 2020). The discussion on palm oil largely revolves on the mapping area between palm oil plantations and forests. However, these studies are mainly conducted as standalone case studies on the local and provincial level. Our study, instead, takes a multi-scalar approach to study the positions of the EU, Indonesia, and public opinion.

Bargaining is a negotiation that may take place between different types of actors, such as states, firms, and NGOs. In policymaking, bargaining refers to a process where states formally discuss and negotiate issues for potentially making a joint agreement, while having both conflicting and common interests (Elko-McKibben 2015). The parties pursue their interests with differential power and capabilities; their competencies serving as bargaining power that they use in the negotiations (Eden et al. 2005; Wagner 2013). The bargains are structurally conditioned by the power resources and institutionally conditioned by the societal contexts of each party (Oinas and Kettunen 2018). However, in multilateral settings such as in WTO negotiations, the parties are formally equal (Hirst et al. 2009). The literature distinguishes between two main bargaining strategies: 'integrative bargaining', where states strive to identify shared and mutually beneficial interests to address common challenges, and 'distributive bargaining', which focuses on resolving outright conflicts of interest (Elko-McKibben 2015). The various interests are represented as the goals or policy objectives of the central stakeholders (Oatley 2018).

Civil society opinions are expressed in public sentiment that may reveal support or opposition towards a policy and therefore have a significant impact on how a formal or informal negotiation evolves (Georgiadou et al. 2020). Public sentiments express collective preferences regarding a negotiation. While states are the final decision-makers on policy, they seek the opinions of domestic stakeholders, and thus bargaining evolves in a dynamic multi-party process (cf. Müllner and Puck 2018; Nebus and Rufin 2010). The participation of societal interest groups in bargaining strengthens the legitimacy of the multi-stakeholder governance (Fransen 2012), as NGOs and other expert organizations are often central in governance over specific issues (Abbott and Snidal 2021).

The EU-Indonesia palm oil bargaining involves the state, industry, NGOs, and the general public as stakeholders in a multi-scalar structure. In formal negotiations, the Partnership and Cooperation Agreement from 2014 provides a foundation for regular political engagement and sectoral cooperation (European Commission 2024a)

and a legal framework for collaboration in policy fields, such as trade, political dialogue, and human rights. Free trade negotiations since 2016 aim to deepen trade and investment relations through a Comprehensive Economic Partnership Agreement (CEPA) that would cover tariffs and non-tariff barriers, trade in services, intellectual property rights and provisions for sustainable development (European Commission 2024b), also considering palm oil. By endorsing sustainable development issues, the EU presents itself as a norm promoter in the bargaining relation (e.g. Poletti and Sicurelli 2018; Sicurelli 2020) both in the CEPA talks and the dialogue on palm oil policy. As the world's leading palm oil producer, Indonesia grapples with the adverse impacts of oil palm monoculture on both local and global scales.

Materials and methods

Data and materials

This study draws on two distinct sets of online news data as its primary source of empirical material. The first set consists of English language news articles on formal EU-Indonesia opinions, focusing on the commentaries upon recent developments and mapping the current state of bilateral exchanges. We collected ca. 20 international news pieces on EU-Indonesia state level formal opinions from the timeframe of September 2022 to September 2023 (see Appendix 1).

The second set comes from online news archives published in both English and Indonesian, aiming to capture the positive and negative perception of the issues as well as the stance of various stakeholders in Indonesia, as well as the views of general public. We employed web mining techniques to compile the top 50 pages of online news articles in both Indonesian and English language from the Bing search engine (<https://www.bing.com/news/search>). The queries used were 'Indonesia Eropa Sawit' ('sawit' meaning oil palm in Indonesian) as of September 2023, and 'Indonesia European Union Palm Oil' for the English articles as of November 2023. The Indonesian language search retrieved 492 articles, narrowed down to 142 unique items after filtering out duplicates and less relevant materials. The English-language search returned 233 articles, which were reduced to 57 unique items through the same pre-processing steps. The dataset is available as supplementary material.

While fewer articles were identified in English under the themes of EU-Indonesia formal opinions and web mining, a substantially larger volume emerged from Indonesian news outlets. The latter provided both a broader quantity and a more nuanced, dynamic array of discussions circulating around these topics.

Methodology

Based on the first English-language dataset, we employed qualitative content analysis to capture the evolving narratives on the EU-Indonesia formal opinions. Analyses are primarily undertaken using the framework on multi-stakeholder negotiations and governance, such as 'distributive bargaining' processes where

states aim to resolve conflicts of interest (e.g. Elko-McKibben 2015; Hirst et al. 2009). We then coded the material by relevant keywords for content analysis and organized it into emerging themes along the timeline, presented as a narrative.

Subsequently, the second dataset (encompassing both English- and Indonesian-language articles) was employed to study the perspectives of Indonesian stakeholders and the broader public, including those captured in the English-language sources. For this purpose, we examined the focus and sentiment expressed in EU-Indonesia palm oil debates, investigating agenda framing and identifying positive and negative aspects of palm oil issues from both Indonesian and English news articles (cf. van Atteveldt et al. 2008). Furthermore, to capture the interactions among various actors and their concerns, we investigated polarization, subjectivity, and emotion classification reflected in public discourse (see Laver et al. 2003). Several steps were undertaken to conduct these analyses.

First, we analyzed the most prominent issues in public debates and generated a wordcloud to visualize the recurring themes. The keywords in Indonesian language were translated to English. Next, we performed clustering analyses based on predefined keywords (cf. Balahur et al. 2013; Burscher et al. 2016). Text clustering groups similar articles, reviews, and documents into ‘clusters’. In this study, we used the K-means algorithm as an unsupervised text analytics approach, which partitions the dataset into random segments and produces spherical clusters (see Appendix 2).

Second, to understand the polarization of the issues, we performed sentiment analysis on the news article titles (see Balahur et al. 2013; Burscher et al. 2016). We used the *TextBlob* library in Python to generate both polarity and subjectivity scores from the text (see Loria 2018). Polarity score commonly ranges from -1 to 1 , where values closer to -1 indicate negative sentiment and those nearer 1 suggest positive sentiment. A score of 0 signifies neutral or objective sentiment. The polarity score helps to quantitatively understand the prevailing sentiments in the text to derive insights and patterns.

To gain a more comprehensive insight into the discourse, we also calculated a subjectivity score in the sentiment analysis. High subjectivity in articles or text might indicate an emphasis on personal beliefs, emotional expression, or individual perspectives rather than purely factual information. Conversely, low subjectivity suggests a more factual, unbiased, and neutral presentation. The subjectivity score ranges from 0 to 1 : a score of 0 denotes a highly objective text (fact-based and neutral), whereas a score of 1 signifies exceedingly subjective text (laden with opinions or emotional statements). Generally, a score from 0 to 0.5 reflects a text that is objective, factual, and/or neutral; while a score from 0.5 to 1 indicates a subjective piece, conveying personal opinions, emotions, or judgements.

Finally, to obtain better insights into the sentiment generated from article titles and summaries reflected in the search engine, we conducted additional analyses to identify the emotions expressed by specific words in the text using the emotion classifier library *NRCLexicon* developed by Bird et al. (2009) and Bailey (2019). Likewise, the Indonesian language keywords were translated to English. Both the data and the code are included as supplementary materials.

Findings

EU-Indonesia formal opinions

The international news in English on the formal opinions of the EU and Indonesia on palm oil policy show a timeline of opinions from both sides. From the material, three themes are identified in the dialogue: (1) EU decision on the deforestation regulation (EUDR) and Indonesia's concerns; (2) sudden progress in CEPA talks; (3) Indonesia-Malaysia jointly bargaining with the EU. These form a narrative as follows:

- 1) The EU decision on the EUDR and Indonesia's concerns. The EU decision to ban the imports and production of any product causing deforestation appears to be central and was a starting point that led to reactions by the Indonesian side. The EU remained confident however about the continuation of the CEPA negotiations despite the dispute on palm oil and also on nickel. This was expressed by the EU Trade Commissioner who in September 2022 participated in the G20 meeting hosted by Indonesia and also met with Indonesian officials to brief them about the planned law on deforestation, yet reported being hopeful to conclude the CEPA agreement by 2024 (AFP 2022). The pan-European agreement for the deforestation law was reached in December 2022 and covered palm oil and other products such as cattle, cocoa, coffee, soya, and wood (Taylor 2022).

Subsequently, Indonesia's president Joko Widodo expressed his concern about the regulation when attending the EU-ASEAN summit in Brussels a week after (Jong 2023a). This also caused a comment from the Malaysian Minister of Commodities saying that they could stop the exports altogether. The Indonesian and Malaysian heads of state, President Joko Widodo and PM Anwar Ibrahim were to discuss the matter together, and agreed to 'fight discrimination against palm oil' and intensify the partnership through the Council of Palm Oil Producing Countries (CPOPC) (Euractiv 2023). Consequently, the Indonesian and Malaysian governments strengthened their objections to the EU trade policies, characterizing them as discriminatory against palm oil. The CPOPC announced that the EU regulation is unjust because it 'will create an unfair level playing field for the palm oil industry in the EU, particularly against locally produced rapeseed oil'. (Jong 2023a). Still, in January 2023 analysts were expecting that Indonesia-EU relations were 'safe' despite the ongoing trade disputes over palm oil and nickel. They also suspected that the Indonesian President Joko Widodo's perseverance to succeed in the dispute could be useful for advancing Indonesia's agenda, yet it had to be managed well since the two parties are strategic trade partners to each other (Tanamal 2023).

- 2) Sudden progress in CEPA talks. A new opportunity for a breakthrough was expected in February 2023 when the EU and Indonesia held the 13 th round of negotiations for the CEPA, the EU-Indonesia FTA, where the main obstacle for Indonesia was the EU's deforestation initiative (Hutt 2023). The media, however,

noted significant progress in other fields, such as the completion of the CEPA Chapter on Good regulatory practice and the section on Geographical indications in the Chapter on Intellectual property rights (VNA 2023). In contrast, the Chapter on Trade and sustainable development that the EU wants to include in all ‘new generation’ FTAs, was expected to be difficult for Indonesia. Yet some kind of signal or commitment was expected from Indonesia as the CEPA would be a ‘long-lasting legacy’ for Joko Widodo’s presidency. In particular, the Indonesian footwear and apparel industry considered the conclusion of the agreement crucial for job creation and investments in Indonesia. The CEPA would also be an ideal follow-up to Indonesia’s recent FTAs with South Korea and Australia (Sudarman 2023).

Further, in late March 2023, media reported about leaked notes from the European Commission indicating that the Commission sought to reject the proposal due to fears of escalating disputes at the WTO. There were also strong suspicions that the Commission was concerned about jeopardizing free trade negotiations with Mercosur, where countries like Argentina were pushing to protect their exports of soy biodiesel to the EU (T&E 2023). Soon after, German Chancellor Olaf Scholz met with Indonesian president Joko Widowi and expressed his will to push for EU-Indonesia CEPA negotiations to ‘get over the finish line’ in order to make the bloc less dependent on raw materials from China (Stratfor 2023). The 14 th round of CEPA talks was held in early May with progress in concluding some Chapters, such as that on Transparency. Soon, Indonesia and Malaysia announced their decision to postpone further trade negotiations with the EU as they seek more equitable treatment for small producers impacted by the EU regulation. Indonesia stated it would not advance the talks until the new EU rules provide greater leniency to palm oil producers (Hancock and Ruehl 2023). However, the 15 th round of CEPA negotiations was held in July 2023. The talks may have been eased by separate consultations over the deforestation issue.

- 3) Indonesia-Malaysia jointly bargaining with the EU. Indonesia and Malaysia had been planning to dispatch a joint delegation to the EU to address the bloc’s new deforestation law and its impact on palm oil industries. The respective ministers of both countries met and decided to send an envoy and communicate to the EU the need to mitigate the unintended impacts of the deforestation regulation on palm oil industry, and to explore potential collaborative solutions (Reuters 2023; Karyza 2023). Also, an analyst argued that Indonesia and Malaysia had a point in criticizing trade policies that penalize sustainable producers, and that some of the producers’ arguments were reasonable. This was backed by the WWF saying that oil palm plantations have impressively heavy yields, and replacing them with other vegetable oils such as soya bean, coconut or sunflower would require 4–10 times as much land, leading to environmental degradation elsewhere (Beattie 2023).

In August 2023, the EU, Indonesia and Malaysia demonstrated progress by signing a tripartite agreement to establish an ad hoc task force to address the

implementation of the EU regulation on deforestation. The three parties decided upon terms of reference on various issues, including the treatment of smallholders within supply chains, the mandates of national certification schemes, and the collection of scientific data on deforestation and forest degradation (Kondalamahanty 2023). The discussions addressed concerns including risk classifications for producer nations and the contribution of certification schemes such as the RSPO in fulfilling the EU requirements. Indonesian representatives were primarily concerned on the EU deforestation regulation unfairly targeting smallholder farmers, who cultivate 41% of the nation's plantation area and would encounter significant challenges in complying with the requirements. Further, the government was concerned about Indonesia being labeled a high-risk country, since that would restrict palm oil exports into the EU. Indonesia also requested the EU to formally acknowledge the RSPO, as well as the Indonesian Sustainable Palm Oil (ISPO) as certification schemes within its deforestation regulation (Jong 2023b).

In sum, the EU-Indonesia policy bargaining was ongoing related to the palm oil dispute, and there were clear signs of interest on the EU side to conclude an FTA with Indonesia in the coming years. Whereas Indonesia claims the EU regulation on deforestation being discriminatory towards palm oil industry, the EU critique mostly circulates around the perceived problems, i.e., the threat of oil palm farming to local communities and the environment, and more broadly to global climate crisis.

Public discourse in news in English and in Indonesian

In the second stage of analysis comprising both English and Indonesian news archives, we first show the most frequent words depicted in public discourse, represented in word cloud in Fig. 1. Aside of the primary keyword of 'European Union Indonesia Palm Oil', in English language, 'export', 'smallholder', and 'EUDR' (European Union Deforestation Regulation) are pronounced in the word cloud. In the analysis of Indonesian language news (translated into English, bottom figure), the use of words is more nuanced, with terms like 'discrimination', 'farmers', 'market', 'government', and 'industry' prevalent in the discourse.

We then identify five imminent clusters from the collected articles using the Elbow method, with the Elbow point at $k=5$, as shown in Fig. 2. The results of the article summary categorized by cluster are exhibited in Table 1. For the English news articles, the majority were placed in Cluster 4, which mainly reports the recent innovation of Indonesian palm oil, such as oil-blended jet fuel and strengthening smallholder engagement, while advocating for fair recognition by the EU along with Malaysia and Thailand amidst market fluctuations and sustainability challenges. The second most prominent narratives are in Cluster 0, which highlights Indonesia's strategies and challenges related to its palm oil industry, including efforts to balance environmental commitments with economic interests. More minor reports relate to the enforcement of Indonesia's economic autonomy at the expense of trade relations with the EU (Cluster 1), the roles of Indonesian palm oil export in bioenergy (Cluster 3), and the EU's commercial relations with Indonesia, which are affected by the contested deforestation issues (Cluster 2).

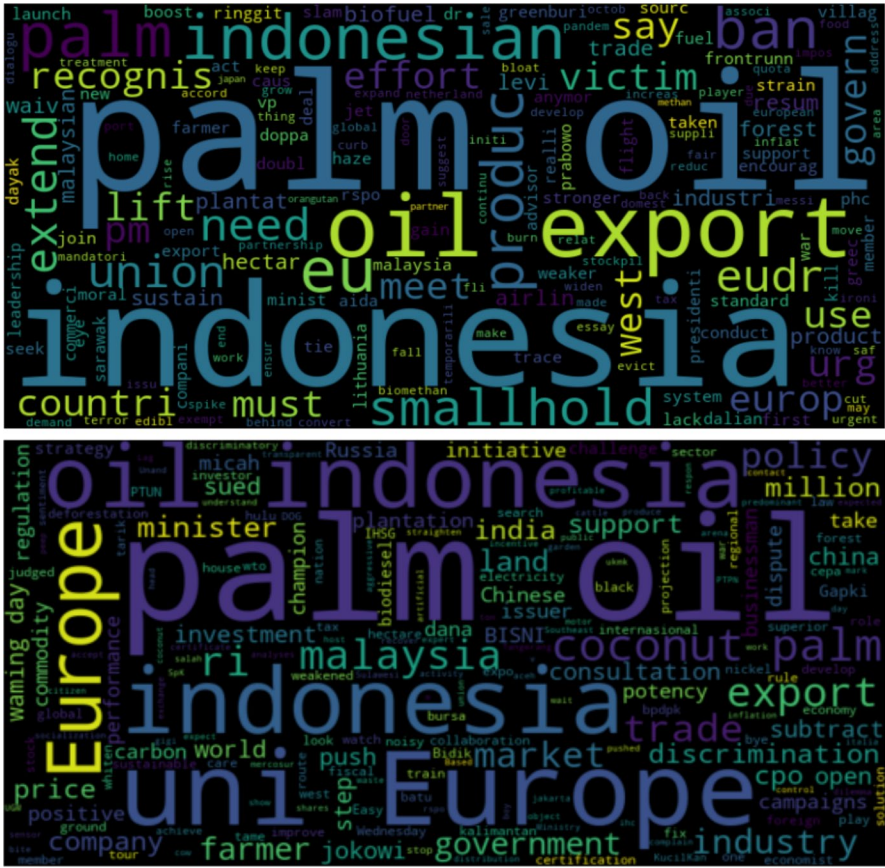


Fig. 1 Word cloud of the most frequent words in English news articles (top) and Indonesian news articles (bottom)

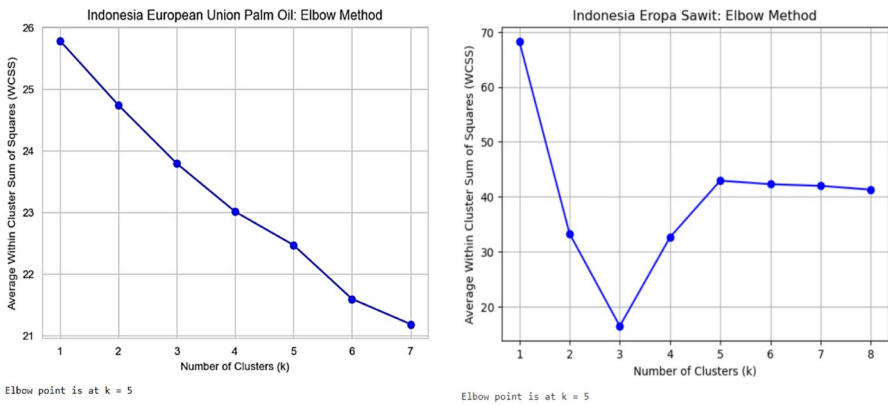


Fig. 2 Results from the Elbow methods from English news articles and Indonesian news articles

Table 1 Framing of the article themes based on the cluster in English and Indonesian language news articles

No	English news articles		Indonesian news articles	
	Framing	No of articles	Framing	No of articles
1	Cluster 0 Indonesia's dynamic strategies and challenges regarding its palm oil industry, including efforts to balance environmental commitments with economic interests	16	Indonesia's attempts, together with Malaysia, to fight trade discrimination and strengthen the market for palm oil export , also highlighting the intermediating roles played by China and India	77
2	Cluster 1 Indonesia asserts its economic autonomy by challenging European ties and adjusting palm oil trade policies , including export levies and bans to manage market dynamics	9	Provincial government's appeal for revised policies in the palm oil sector, highlighting the needs for a harmonized policy framework and sustainable practices across commodity sectors (palm oil included), aiming to foster favorable trade relations and sustainable economic growth	23
3	Cluster 2 Centered around European Union's commercial relations , also citing that smallholders were also considered important as they too were affected by peatland burning and haze	3	Increase or decrease in Crude Palm Oil price , macro-economic situation, macro-level trade and investment, accusation of black campaign on palm oil	15
4	Cluster 3 Roles of Indonesian palm oil export in bioenergy , including sustainable aviation fuel (SAF), biofuel, is undermined by a lack of domestic infrastructure as well as deforestation risks	5	Positive campaigns surrounding palm oil led by the Indonesian government to improve palm oil's image and promising outlook on the future of palm-oil	18
5	Cluster 4 Indonesia is innovating with initiatives like oil-blended jet fuel and strengthening smallholder engagement, while advocating for fair recognition by the EU altogether with Malaysia and Thailand amidst market fluctuations and sustainability challenges	24	The EU biodiesel ban has raised concerns among smallholders , while separate initiatives advocate for more equitable trade and business practices	9
		57		142

For the Indonesian news articles, the majority fall into Cluster 0, focusing on recent campaigns related to perceptions of palm oil. Within this cluster, the dominant narratives are related to the efforts of the Indonesian and Malaysian governments to combat the EU's 'discrimination' against palm commodities. These narratives highlight efforts to strengthen the export market and engage India and China as bargaining chips in rehabilitating the negative image of palm oil. The second cluster with the most news is Cluster 1, where narratives underscore programmes at the local and provincial levels for the promotion of good practices within the palm oil sector. These narratives also urge the national government and the policymakers to streamline existing policies and regulations, especially those that could stabilize fluctuating Crude Palm Oil (CPO) prices and increase trade competitiveness. A more minor framing, e.g. Cluster 3, highlights the Indonesian government's positive campaigns to enhance palm oil's image, especially in Spain and France, along with selected responses from the European Union. The latter, emphasized by the EU Ambassador to Indonesia, affirmed that the European Union is—and will continue to be—the most open market for Indonesian palm oil. Meanwhile, Cluster 2 narrates the macroeconomic situation reflected in global CPO prices, and Cluster 4 presents the apprehension of smallholders related to the Indonesian biodiesel export ban by the EU.

Figure 3 displays the mean value of the polarity scores in each cluster from both Indonesian and English news articles, with scores closest to 1 being the most positive and those closest to -1 being the most negative. For the English news articles, Cluster 2, which summarized the EU's commercial relations and also considered the interests of smallholders, generates most positive response on average. Cluster 4, with palm oil innovation, also yielded generally positive sentiment. On the opposite

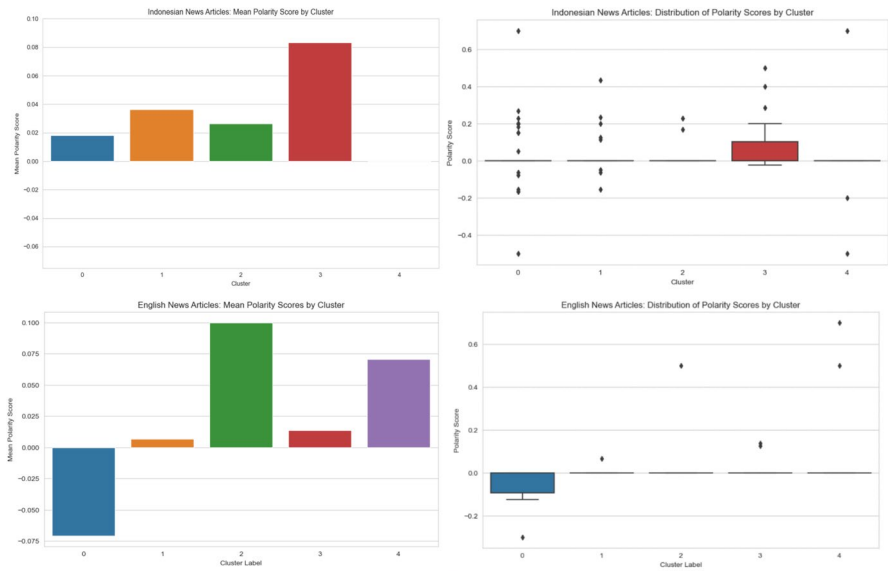


Fig. 3 Mean and distribution of polarity scores by cluster in Indonesian and English news articles

side, Cluster 0, which highlight Indonesia’s strategies and challenges related to palm oil is being the most negative.

For the Indonesian news articles, the results reveal that Cluster 3, which covered Indonesian government’s campaigns surrounding palm oil generates more positive sentiment on average, while Cluster 4 on Indonesian biodiesel trading with the EU, tends to be the most neutral. Upon closer examination of the polarity score distributions in Fig. 3 (right side), Cluster 0 demonstrates the most polarized sentiments, followed by Cluster 1 and Cluster 4, while Cluster 2 and 3 predominantly exhibit positive sentiments. This polarization in Cluster 0 arises as it tackles narratives of Indonesia’s (and Malaysia’s) resistance to trade discrimination and includes both explicit and latent messages about aligning with China and India. Cluster 1 mainly explores narratives from local and provincial governments advocating for more harmonized policy frameworks and links global trade with local concerns, whereas Cluster 4 delves into the pleas and consequences of oil palm trade for smallholders. Looking at the distribution, narratives concerning multilateral trade discrimination and its implications for smallholders have elicited the most polarized sentiments within Indonesian public discourse. Conversely, narratives about the general trade and macroeconomic situation have been perceived more neutrally, fostering a more positive outlook for the Indonesian public.

To further substantiate our findings, we examine the subjectivity score by cluster in Fig. 4. For both English and Indonesian news articles, the mean score is less than 0.5 on average, indicating that the discourse tends to be fact-based and generally objective. Indonesian news articles nevertheless tend to score higher in subjectivity on average compared to the English news articles. However, the distribution of the scores shows more nuanced narratives, with certain news articles

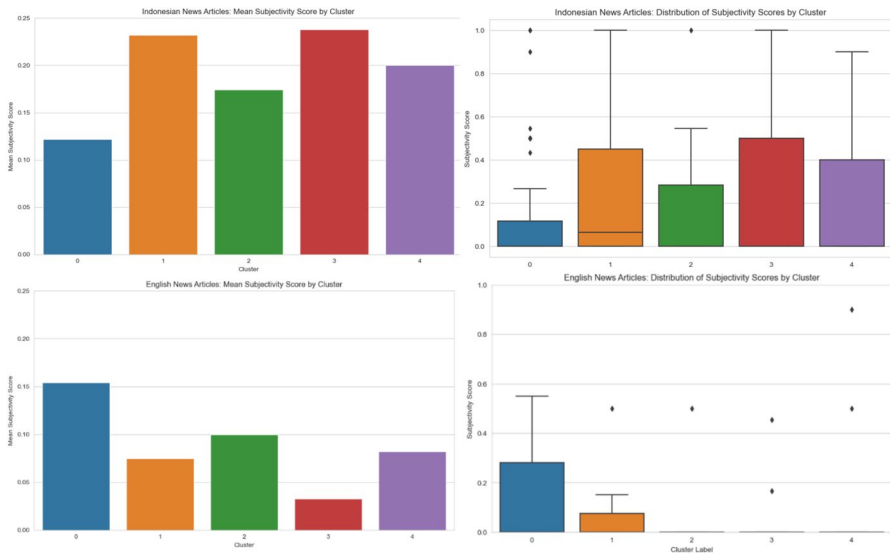


Fig. 4 Mean and distribution of subjectivity scores by cluster, Indonesian and English news articles

in Cluster 0 and 2 in Indonesian language news exhibiting a more subjective tone, particularly in news related to possible trade discrimination for palm oil exports as well as fluctuations in CPO prices to smaller extent. For English articles, a smaller number of news in Cluster 4 presents a subjective tone, which is associated with the attempts for fair recognition of Indonesian and Malaysian palm oil for the EU market. All in all, despite the polarization in the distribution for certain news clusters, the majority of the articles are still perceived to be largely fact-based.

Finally, we present the emotion classification results in the Indonesian (top) and English (bottom) news articles in Fig. 5. The majority of both Indonesian and English news exhibit more positive sentiment. However, the second most common sentiment is trust in Indonesian news, and negative sentiment in English news. These three emotions are the most common in both sets of articles. Indonesian news articles also tend to exhibit more nuanced mixed feelings, with fear and anticipation being the next most common sentiments in terms of frequency.

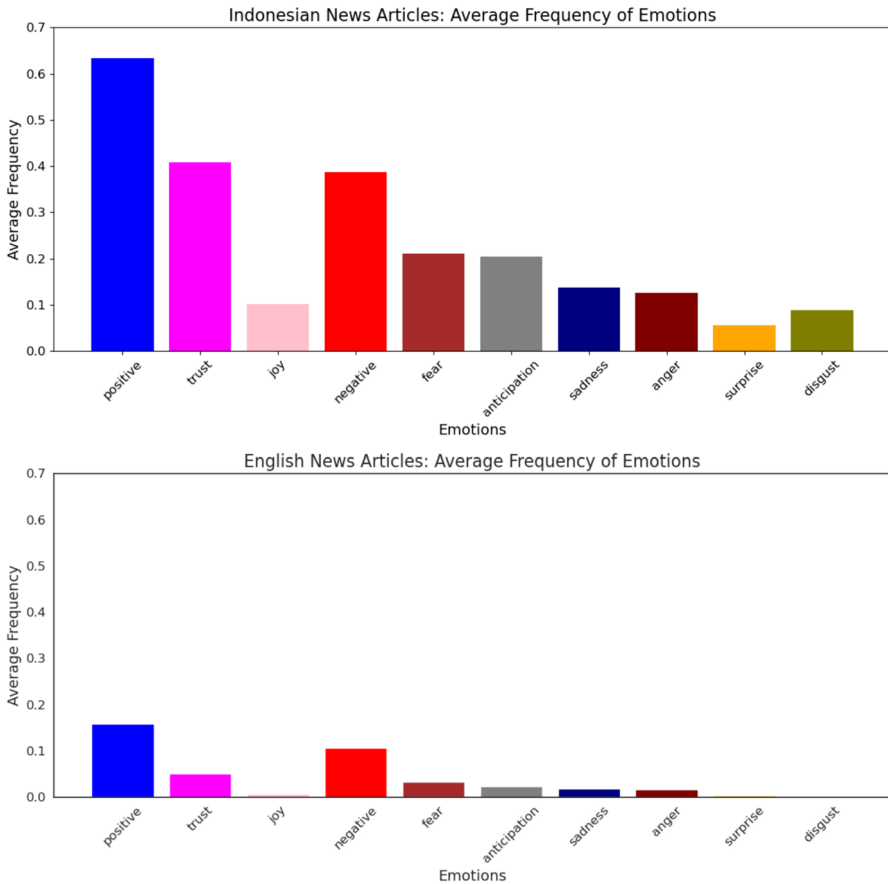


Fig. 5 Average frequency of emotion, Indonesian and English news articles

Discussion

This paper focused on EU-Indonesia bargaining, opinions and Indonesian public sentiments on palm oil policy and the related CEPA talks. Theoretical framework combines literatures on state-market bargaining and governance (Elko-McKibben 2015; Hirst et al. 2009) in a dynamic multi-party setting (Müllner and Puck 2018; Nebus and Rufin 2010) in developed and developing economy contexts (Abbott and Snidal 2021; Lounela 2020) where parties have relative bargaining power (Eden et al. 2005; Wagner 2013). The bargaining is affected by public sentiment that may support or oppose a policy and thus impact the negotiation (Georgiadou et al. 2020). The case was explored by analyzing palm oil opinions from online news in English and Indonesian that reported both formal and informal views on the contested topic.

Our study has three main contributions. First, the findings suggest that the EU-Indonesia distributive bargaining relation focuses on resolving a conflict of interest (Elko-McKibben 2015) on palm oil policy where the EU has relative bargaining power by announcing the deforestation law as a focal issue in the dispute. The EU decision to ban the imports and production of any product causing deforestation led to reactions on the Indonesian side, including a threat to stop palm oil exports altogether. This dispute affected the EU-Indonesia CEPA negotiations which progressed but only in issues beyond palm oil. As a major importer of palm oil, the EU wields significant bargaining power (cf. Eden et al. 2005) and can influence the types of palm oil it imports. As the world's biggest exporter of palm oil, Indonesia holds substantial power as producer but also faces vulnerability. The EU deforestation law threatens the livelihood of Indonesian smallholders who rely on palm oil cultivation. While the EU positions itself as a norm promoter in international trade policy (cf. Poletti and Sicurelli 2018; Sicurelli 2020) by emphasizing sustainable development to fight deforestation, Indonesia appears as a norm taker in this context.

Second, public discourse wraps the EU-Indonesia palm oil debate in the broader context of world trade where the public sentiment may impact the overall negotiation (cf. Georgiadou et al. 2020). The public discourse in Indonesia debates not only the EU but also Malaysia, China and India. In the palm oil dispute, Malaysia is a 'brother in arms' for Indonesia to have jointly filed a lawsuit against the EU for banning palm oil. In comparison, China and India offer new market opportunities to compensate for the potential decrease in palm oil exports to the EU. The news also indicate an attempt by the Indonesian government to convey that the EU ban might only marginally impact overall trade. Yet the declining reputation of palm oil is a concerning aspect that might impact exports to other global markets, reflected in the public sentiment expressing civil society opinions (cf. Georgiadou et al. 2020) thus making the bargaining a multi-stakeholder issue (Nebus and Rufin 2010).

Third, the Indonesian public sentiment is not uniform but polarized as well. The multifaceted issues of palm oil trade are extensively dissected in the discourse. The most salient messages are trade discrimination and an apparent 'black campaign' by the EU. These, albeit tangentially related to the livelihoods of smallholders, spur

polarized sentiments among the Indonesian public. The discourse in Indonesian is more polarized and subjective in nature, whereas the news in English exhibit more positive and neutral views. In contrast, the discourse in English holds the most negative sentiment regarding Indonesia's strategies to balance environmental commitments with economic interests. However, new scientific evidence claims other vegetable oils may have even worse environmental impacts (Parsons et al. 2020) which may change public sentiments and have an impact on how the negotiations will progress.

Conclusions

The EU has raised concerns about the effects of oil palm monoculture in Indonesia on achieving SDGs due to deforestation and human rights problems and has introduced the deforestation regulation that may restrict the imports of many commodities, including palm oil from Indonesia. This study highlights these changes and their impacts on EU-Indonesia palm oil debate and policy negotiations in order to identify the positions taken by different stakeholders both in the EU and in Indonesia on the 'good and bad' of palm oil.

Since oil palm cultivation and palm oil industry are essential for Indonesian smallholders and workers, understanding the stakeholders' interests is critical to ensure that the policies are both politically realistic and sustainable, and in line with the Agenda 2030 sustainability requirements. The foreseen restrictive policy of the EU on palm oil does not directly address the global deforestation problem due to the marginal role of the EU market in Indonesia's huge palm oil industry. Although it is positioned as a measure to combat deforestation, it might also inadvertently reshape global market dynamics, creating new trade opportunities elsewhere. The ban could jeopardize future trade and diplomatic relations between Indonesia and the 'West', particularly in the shadow of potential trade hegemony by China and, to a lesser degree, India. Potential Indonesian business deals with other countries exhibiting scant concern for human rights and environmental issues could in fact exacerbate deforestation problems. Bolstering ties with China and other non-Western entities could serve as Indonesia's initial bargaining point to counteract the EU palm oil ban.

At the same time, while the impact of the EU deforestation law might be modest, compliance with it could significantly recalibrate the palm oil industry in Indonesia, especially when coupled with the adoption of sustainable practices. This compliance could not only meet international standards and ensure product sustainability but also potentially increase investments in sustainable production, thereby potentially eliciting positive sentiments in Indonesian public discourse. A possible concession from the EU, such as slightly relaxing deforestation standards and granting a grace period for the phased adoption of sustainable technologies could serve as a secondary bargaining point. Adherence to global standards might also elevate Indonesia's international reputation as a conscientious and responsible palm oil producer. Consequently, this could potentially boost trade revenue, aligning with the government's ultimate goals. The possible future paths will be

dependent not only on the domestic context but largely on how the international situation evolves. While this study uncovered the perspectives of different stakeholders on the opinions, context, and discourse on palm oil, further research is needed at international, national and local levels in order to find solutions to support policymaking for sustainable oil palm farming and palm oil production.

Appendix 1 List of international online news on EU-Indonesia palm oil and CEPA negotiations

AFP (2022) EU hopes for trade pact with Indonesia within two years (rfi.fr) Radio France Internationale. AFP Jakarta 20 Sep 2022.

Beattie (2023) Rich nations are not looking good in the palm-oil dispute | Financial Times (ft.com)

Euractiv (2023) Malaysia says it could stop palm oil exports to EU after new curbs – EURACTIV.com Euractiv with Reuters, 13 Jan 2023.

Hancock, A. & M. Ruehl (2023) Indonesia and Malaysia freeze trade talks with EU over palm oil | Financial Times (ft.com)

Hutt, D. (2022) EU races to strengthen ties with Indonesia – DW – 10/07/2022

Hutt, D. (2023) Can the EU succeed on closing Indonesia trade deal? – DW – 02/08/2023

Jong, H.N. (2023a) Indonesia and Malaysia assail new EU ban on ‘dirty commodities’ trade (mongabay.com)

Jong, H.N. (2023b) Palm oil giants Indonesia, Malaysia start talks with EU over deforestation rule (mongabay.com)

Karyza, D. (2023) Malaysia seeks intense cooperation with Indonesia on EU palm oil dispute - Regulations - The Jakarta Post

Kondalamahanty, A. (2023) Indonesia, Malaysia and EU form task force to negotiate palm oil trade under EUDR | S&P Global Commodity Insights (spglobal.com)

Reuters (2023) Indonesia, Malaysia to send palm oil envoys to EU over deforestation law | Reuters February 9, 2023

Stratfor (2023) EU, Indonesia: Germany Pushes for FTA With Indonesia to Reduce EU’s Dependency on China (stratfor.com)

Sudarman, S. (2023) EU-Indonesia CEPA and Diplomatic Pathways for Beneficial Trade (jakartaglobe.id) February 21, 2023

T&E (2023) 900k football pitches of forest at risk as EU chooses free trade over the environment - Transport & Environment (transportenvironment.org)

Tanamal, Y. (2023) For now Indonesia-EU ties ‘safe’ despite ongoing trade disputes - Thu, January 19 2023 - The Jakarta Post

Taylor, K. (2022) EU agrees new law to kick deforestation out of supply chains – EURACTIV.com

VNA (2023) EU-Indonesia FTA negotiations see progress | World | Vietnam+ (VietnamPlus)

Appendix 2 Description of content and clustering analysis

Automatic content analysis

For our dataset we use the following pre-processing. First, we removed the numbers and common Indonesian stop words using the Python natural language toolkit (Bird, 2006) and translated the results into English –for Indonesian News. Afterwards, we generated document vectors by applying TF.IDF weighting to the word frequencies within the news articles of our dataset. For each term, we calculated its term frequency (TF) –the count of its occurrences in a specific document— and multiplied this by the inversed document frequency (IDF), which reflects how common the word is across all documents in the dataset. The purpose of TF.IDF weighting is to assess a word’s ability to distinguish between different articles. Words that appear less frequently are considered more distinctive, and are therefore given higher weight.

Bird, S., Klein, E., & Loper, E. (2009). Natural language processing with Python: analyzing text with the natural language toolkit."O’Reilly Media, Inc."

Clustering analysis

The number of clusters is predetermined, and in this paper, we used the Elbow method (cf. Ketchen and Shook, 1996; Thorndike, 1953), which plots the explained variation against the number of clusters and selects the elbow point as the optimal number of clusters to use. The objective of the K-means algorithm, denoted as J , is to minimize the sum of the squared distances between data points and the centroid of their respective clusters (the within-cluster sum of squares). The objective function is:

$$J(C, \mu) = \sum_{i=1}^n \min_{\mu_j \in C} \|x_i - \mu_j\|^2 \quad (1)$$

where $J(C, \mu)$ quantifies the total variance (or “inertia”) within the cluster, C represents the set of clusters, μ represents the set of center points (mean) of the clusters, x_i represents each data point in the dataset, μ_j is the center of the corresponding cluster to which data point x_i has been assigned.

The Elbow method plots the values of within-cluster sum of squares (WCSS) for different values of K (e.g., $K = 1, 2, 3, \dots, n$) and selects the “elbow” of the plot as the number of clusters to use. The elbow point occurs where the slope of the decrease noticeably shifts, indicating that adding more clusters results in minimal further reductions in variance. The Within-Cluster Sum of Squares (WCSS) is as follows:

$$WCSS = \sum_{k=1}^K \sum_{i=1}^{n_k} \|x_i - \mu_k\|^2 \quad (2)$$

where K denotes the total number of clusters, n_k represents the number of data points within cluster K , x_i refers to an individual data point in cluster K , and μ_k signifies the centroid of cluster K .

Ketchen, D. J., & Shook, C. L. (1996). The application of cluster analysis in strategic management research: an analysis and critique. *Strategic management journal*, 17(6), 441-458.

Thorndike, R. L. (1953). Who belongs in the family?. *Psychometrika*, 18(4), 267-276.

Acknowledgements Funding from KONE Foundation (grant 202205436) is gratefully acknowledged.

Author contribution All authors contributed to the study design, material preparation, data collection and analysis. The first draft of the manuscript was written by both Erja Kettunen (introduction, framework, qualitative analysis) and Ayu Pratiwi (quantitative analysis, discussion). Both authors revised previous versions of the manuscript, and read and approved the final manuscript.

Funding Open Access funding provided by University of Turku (including Turku University Central Hospital). This study was funded by KONE Foundation (grant 202205436).

Data availability All data employed in the study are publicly available via internet searches and attached in the supplementary materials.

Declarations

Ethics approval and consent to participate This study did not involve humans as research subjects.

Consent for publication All authors approve the manuscript and give their consent for publication.

Competing interests The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Abbott KW, Snidal D (2021) The governance triangle: regulatory standards institutions and the shadow of the state. In: Woods N (ed) Mattli W. Princeton University Press, *The Politics of Global Regulation*, pp 44–88
- AFP (2022) EU hopes for trade pact with Indonesia within two years (rfi.fr) Radio France Internationale. AFP Jakarta
- Ahmed N (2020) The EU has quietly done a U-turn on its palm oil ban policy. Here's Why. GP opinion. *Global Policy*. <https://www.globalpolicyjournal.com/blog/03/07/2020/eu-has-quietly-done-u-turn-its-palm-oil-ban-policy-heres-why>. Accessed 29 June 2024
- Anderson ZR, Kusters K, McCarthy J, Obidzinski K (2016) Green growth rhetoric versus reality: insights from Indonesia. *Glob Environ Chang* 38:30–40. <https://doi.org/10.1016/j.gloenvcha.2016.02.008>
- Bailey M (2019) NRCLex 4.0. <https://pypi.org/project/NRCLex/>. Accessed 29 June 2024
- Balahur A, Steinberger R, Kabadjov M, Zavarella V, Van Der Goot E, Halkia M et al (2013) Sentiment analysis in the news. arXiv preprint [arXiv:1309.6202](https://arxiv.org/abs/1309.6202)

- Beattie (2023) Rich nations are not looking good in the palm-oil dispute. *Financial Times* ([ft.com](#))
- Bird S, Klein E, Loper E (2009) Natural language processing with Python: analyzing text with the natural language toolkit. O'Reilly Media, Inc
- Burscher B, Vliegenthart R, Vreese CHD (2016) Frames beyond words: applying cluster and sentiment analysis to news coverage of the nuclear power issue. *Soc Sci Comput Rev* 34(5):530–545. <https://doi.org/10.1177/0894439315596385>
- Cattaneo A, Sadiddin A, Torero M, Vaz S (2022) A global perspective on how to improve agrifood system resilience from farm to fork. In: Policy Brief T20 Indonesia G20 Presidency, Task Force 4: Food Security and Sustainable Agriculture. https://www.global-solutions-initiative.org/policy_brief/a-global-perspective-on-how-to-improve-agrifood-system-resilience-from-farm-to-fork/. Accessed 29 June 2024
- European Commission (2024b) EU-Indonesia agreement: documents. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/indonesia/eu-indonesia-agreement/documents_en. Accessed 29 June 2024
- European Commission (2024a) Indonesia. EU trade relations with Indonesia. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/indonesia_en. Accessed 29 June 2024
- Euractiv (2023) Malaysia says it could stop palm oil exports to EU after new curbs. Euractiv with Reuters ([EURACTIV.com](#))
- DW (2022a) Indonesia to resume palm oil exports. <https://www.dw.com/en/indonesia-ends-export-ban-on-palm-oil/a-61875147>. Accessed 29 June 2024
- DW (2022b) What are EU's options in palm oil row with Malaysia and Indonesia? <https://www.dw.com/en/what-are-eus-options-in-palm-oil-row-with-malaysia-and-indonesia/a-62564129>. Accessed 29 June 2024
- Eden L, Lenway S, Schuler DA (2005) From the obsolescing bargain to the political bargaining model. In: Grosse R (ed) *International Business and Government Relations in the 21st Century*. Cambridge University Press, Cambridge, pp 251–271
- Elko-McKibben H (2015) State strategies in international bargaining: play by the rules or change them? *Cambridge Studies in International Relations*, Book 134. Cambridge University Press, Cambridge
- FAO (2022) The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the current conflict. https://www.fao.org/fileadmin/user_upload/faoweb/2022/Info-Note-Ukraine-Russian-Federation.pdf. Accessed 29 June 2024
- FAO (2023) Indonesia. Working towards sustainable oil-palm crops. Indonesia | World Agriculture Watch | Food and Agriculture Organization of the United Nations ([fao.org](#)).
- Fransen L (2012) Multi-stakeholder governance and voluntary programme interactions: legitimation politics in the institutional design of Corporate Social Responsibility. *Socio-Econ Rev* 10:163–192. <https://doi.org/10.1093/ser/mwr029>
- Gaikwad S (2022) Indonesia commodity stocks benefits from high prices. *Asia Fund Managers*. <https://www.asiafundmanagers.com/gbr/indonesia-commodity-stocks-benefits-from-high-prices/>. Accessed 29 June 2024
- Georgiadou E, Angelopoulos S, Drake H (2020) Big data analytics and international negotiations: sentiment analysis of Brexit negotiating outcomes. *Int J Inf Manage* 51:102048. <https://doi.org/10.1016/j.ijinfomgt.2019.102048>
- Hancock A, Ruehl M (2023) Indonesia and Malaysia freeze trade talks with EU over palm oil. *Financial Times* ([ft.com](#))
- Hirst P, Thompson G, Bromley S (2009) *Globalization in question*. Polity Press, Cambridge
- Hospes O (2014) Marking the success or end of global multi-stakeholder governance? The rise of national sustainability standards in Indonesia and Brazil for palm oil and soy. *Agric Hum Values* 31:425–437. <https://doi.org/10.1007/s10460-014-9511-9>
- Hutt D (2023) Can the EU succeed on closing Indonesia trade deal? – DW – 02/08/2023
- Jong HN (2023a) Indonesia and Malaysia assail new EU ban on 'dirty commodities' trade ([mongabay.com](#))
- Jong HN (2023b) Palm oil giants Indonesia, Malaysia start talks with EU over deforestation rule ([mongabay.com](#))
- Kobo Y (2019) Anti-palm oil lobbies bending the EU's will. *The parliament magazine*. <https://www.theparliamentmagazine.eu/partner/article/antipalm-oil-lobbies-bending-the-eus-will>. Accessed 29 June 2024

- Karyza D (2023) Malaysia seeks intense cooperation with Indonesia on EU palm oil dispute – regulations. The Jakarta Post
- Ketchen DJ, Shook CL (1996) The application of cluster analysis in strategic management research: an analysis and critique. *Strategic management journal*, 17(6), 441–458.
- Kondalimahanty A (2023) Indonesia, Malaysia and EU form task force to negotiate palm oil trade under EUDR. S&P Global Commodity Insights ([spglobal.com](https://www.spglobal.com))
- Köhne M (2014) Multi-stakeholder initiative governance as assemblage: roundtable on sustainable palm oil as a political resource in land conflicts related to oil palm plantations. *Agric Hum Values* 31:469–480. <https://doi.org/10.1007/s10460-014-9507-5>
- Laver M, Benoit K, Garry J (2003) Extracting policy positions from political texts using words as data. *American Political Science Review* 97(2):311–331. <https://doi.org/10.1017/S0003055403000698>
- Loria S (2018) Project description. TextBlob documentation. Release 0.15.2. <https://pypi.org/project/textblob/0.15.2/>. Accessed 29 June 2024
- Lounela A (2020) Contested values and climate change mitigation in Central Kalimantan. *Indonesia Social Anthropology* 28(4):862–880. <https://doi.org/10.1111/1469-8676.12790>
- Meijaard E, Sheil D (2019) The Moral Minefield of Ethical Oil Palm and Sustainable Development. *Frontiers in Forests and Global Change* 2:22. <https://doi.org/10.3389/ffgc.2019.00022>
- Moreno-Peñaranda R, Gasparatos A, Stromberg P, Suwa A, Pandiyaswargo AH, Puppim de Oliveira JA (2015) Sustainable production and consumption of palm oil in Indonesia: what can stakeholder perceptions offer to the debate? *Sustainable Production and Consumption* 4:16–35. <https://doi.org/10.1016/j.spc.2015.10.002>
- Müllner J, Puck J (2018) Towards a holistic framework of MNE-state bargaining: a formal model and case-based analysis. *J World Bus* 53:15–26. <https://doi.org/10.1016/j.jwb.2017.07.003>
- Nebus J, Rufin C (2010) Extending the bargaining power model: explaining bargaining outcomes among nations, MNEs, and NGOs. *J Int Bus Stud* 41:996–1015. <https://doi.org/10.1057/jibs.2009.43>
- Newell P (2008) Lost in translation? Domesticating global policy on genetically modified organisms: comparing India and China. *Glob Soc* 22(1):115–136. <https://doi.org/10.1080/13600820701740761>
- Oatley T (2018) *International Political Economy*, 6th edn. Routledge, London and New York
- Obidzinski K, Andriani R, Komarudin H, Andrianto A (2012) Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia. *Ecology and Society*, 17(1):25. <http://www.jstor.org/stable/26269006>
- Oinas P, Kettunen E (2018) Realities of responsible business: institutional and structural conditions in MNE-local government bargaining. In: Fuchs M, Franz M, Henn S, Mudambi R (eds) *Managing culture and interspace in cross-border investments: building a global company*. Routledge, London, pp 135–145
- Oosterveer P (2020) Sustainability of palm oil and its acceptance in the EU. *Journal of Oil Palm Research* 32(3):365–376. <https://doi.org/10.21894/jopr.2020.0039>
- Parsons S, Raikova S, Chuck CJ (2020) The viability and desirability of replacing palm oil. *Nature Sustainability* 3:412–418. <https://doi.org/10.1038/s41893-020-0487-8>
- Poletti A, Sicurelli D (2018) *The political economy of normative trade power*. Palgrave Macmillan, Cham
- Qaim M, Sibhatu KT, Siregar H, Grass I (2020) Environmental, economic, and social consequences of the oil palm boom. *Annual Review of Resource Economics* 12:321–344. <https://doi.org/10.1146/annurev-resource-110119-024922>
- Ramdani R, Lounela AK (2020) Palm oil expansion in tropical peatland: distrust between advocacy and service environmental NGOs. *Forest Policy Econ* 118:102242. <https://doi.org/10.1016/j.forpol.2020.102242>
- Reuters (2019) Indonesia files WTO palm oil suit as tensions with EU grow. <https://www.reuters.com/article/us-indonesia-palm-eu-idUSKBN1YJ0DG/>. Accessed 29 June 2024
- Reuters (2023) Indonesia, Malaysia to send palm oil envoys to EU over deforestation law. Reuters
- Roozen N (2021) Changing the palm oil narrative: EU seems willing to turn the page. The Solidaridad Network. <https://www.solidaridadnetwork.org/news/changing-the-palm-oil-narrative-eu-seems-willing-to-turn-the-page/>. Accessed 29 June 2024
- Rum IA, Tukker A, de Koning A, Yusuf AA (2022) Impact assessment of the EU import ban on Indonesian palm oil: using environmental extended multi-scale MRIO. *Sci Total Environ* 853. <https://doi.org/10.1016/j.scitotenv.2022.158695>
- European Parliament (2022) Russia's war on Ukraine: impact on food security and EU Response. [https://www.europarl.europa.eu/RegData/etudes/ATAG/2022/729367/EPRS_ATA\(2022\)729367_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2022/729367/EPRS_ATA(2022)729367_EN.pdf). Accessed 29 June 2024

- Sicurelli D (2020) External conditions for EU normative power through trade. The case of CEPA negotiations with Indonesia. *Asia Europe Journal* 18(1):57–73. <https://doi.org/10.1007/s10308-019-00537-3>
- Taylor K (2022) EU agrees new law to kick deforestation out of supply chains – [EURACTIV.com](https://www.euractiv.com)
- Tanamal Y (2023) For now Indonesia-EU ties ‘safe’ despite ongoing trade disputes - Thu, January 19 2023 - The Jakarta Post
- T&E (2023) 900k football pitches of forest at risk as EU chooses free trade over the environment. *Transport & Environment* (transportenvironment.org)
- Thorndike RL (1953) Who belongs in the family?. *Psychometrika*, 18(4), 267-276.
- Stratfor (2023) EU, Indonesia: Germany pushes for FTA with Indonesia to reduce EU’s dependency on China (stratfor.com)
- Van Atteveldt W, Kleinnijenhuis J, Ruigrok N, Schlobach S (2008) Good news or bad news? Conducting sentiment analysis on Dutch text to distinguish between positive and negative relations. *J Inform Tech Polit* 5(1):73–94. <https://doi.org/10.1080/19331680802154145>
- VNA (2023) EU-Indonesia FTA negotiations see progress. *World | Vietnam+ (VietnamPlus)*
- Wagner SM (2013) Why do MNEs engage in MNE-government relations? Empirical evidence from the European Union and the Automotive Industry. In: Cook G, Johns J (eds) *The Changing Geography of International Business*. Palgrave Macmillan, Basingstoke, pp 54–76
- WTO (2024) European Union—certain measures concerning palm oil and oil palm crop-based biofuels. WTO dispute settlement DS593. https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds593_e.htm. Accessed 29 June 2024
- WWF (2024) Palm Oil. What is Palm Oil? Facts about the palm oil industry. <https://www.worldwildlife.org/industries/palm-oil>. Accessed 29 June 2024

Publisher’s note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.