



Local Government Strategies to Address Cooking Oil Shortages: A Case Study from South Konawe District in Southeast Sulawesi

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ABSTRACT

Cooking oil shortages in Indonesia have led to higher market prices, disrupted household consumption, and pressured local governments to enact effective policy responses. This study, conducted in Konawe Selatan District from March to April 2023, applied the Analytical Hierarchy Process (AHP) to evaluate and prioritize local government strategies for mitigating these shortages. Source of information were five key informants selected for their official roles and expertise. Pairwise comparisons of expert judgments via AHP yielded weights for key decision criteria: Urgency (0.331), Stability and Long-term Sustainability (0.233), Policy Alignment (0.171), Budget and Resource Availability (0.142), and Economic Impact (0.123). Based on these criteria, five policy strategies were prioritized: Providing Subsidies and Social assistance (0.311), Increasing Local Cooking Oil Production (0.271), Ensuring Adequate Stock and Distribution (0.155), Monitoring and Controlling Inflation (0.148), and Boosting Coconut Production (0.116). Subsidies and Social Assistance emerged as the highest priority strategy, followed by Expanding Local Production Capacity. These findings provide empirical guidance for local governments by indicating which interventions should be prioritized, and they demonstrate the value of a structured decision-making framework for ensuring effective and timely policy responses during commodity crises.

INTRODUCTION

Cooking oil is a fundamental edible oil used in daily cooking, especially for frying and sautéing. It is an essential household item for preparing meals, valued not only as a cooking medium but also for the flavor and texture it imparts to food. In Indonesia, cooking oil (mostly derived from palm oil) is classified as one of the nine staple commodities (*sembilan bahan pokok* or *sembako*) vital for basic needs. Its availability is crucial for all segments of society, both urban and rural. Because of its central role in Indonesian diets and food culture, cooking oil is considered a strategic commodity in the national economy (Anita, 2022). Indonesia's status as the world's largest palm oil producer, with over 15 million hectares of oil palm plantations as of 2021, further underlines the importance of cooking oil, as the commodity is intertwined with livelihoods, food security, and trade (Alrasyid et al., 2022; Pratiwi et al., 2023; Ramadan & Kurniawan, 2022).

Towards the end of 2021 and early 2022, Indonesia experienced a severe cooking oil shortage that affected communities nationwide. This crisis was driven by a confluence of domestic and global factors. Global prices of crude palm oil (CPO), which is the raw material for most Indonesian cooking oil, surged to record highs (Nangoy, 2022), making many producers opted to export palm oil rather than sell domestically (Sutrisno et al., 2023). At the same time, the Indonesian government's B30 program biodiesel mandate (requiring 30% palm oil blending in diesel fuel) had incentivized producers to divert CPO into biofuel production, inadvertently contributing to the drop in edible oil supply (Afrizal et al., 2022; Priwiningsih & Abidin, 2022). These issues were exacerbated by the COVID-19 pandemic's disruption of agricultural output and supply chains, as well as the war in Ukraine, which strained global supplies of alternative oils (Cahya, 2022). On the demand side, panic buying and hoarding behavior emerged as consumers scrambled to secure this essential commodity, further tightening availability (Anita, 2022; Saadati & Haryono, 2023).

The national impact of the shortage was profound and immediate. Retail cooking oil prices more than doubled in some areas, and by early 2022, the average price reached about Rp 26,000 (US\$1.80) per liter nationally, which was an increase of over 40% within a few months (Nangoy, 2022). Because cooking oil carries a significant weight in Indonesia's Consumer Price Index, its scarcity and price inflation also pushed up overall inflation (Alrasyid et al., 2022). The discontent over the crisis sparked public outcry and even street protests in several cities (Nangoy, 2022), pressuring authorities to take swift action.

The Indonesian government reacted to the cooking oil shortage with a series of interventions. Initially, authorities attempted to stabilize supply and prices through market mechanisms. In early 2022, the Ministry of Trade issued regulations to subsidize packaged cooking oil and to impose a price ceiling (*Harga Eceran Tertinggi*, HET) for palm-based cooking oil (Afrizal et al., 2022; Priwiningsih & Abidin, 2022). The government also enforced a Domestic Market Obligation (DMO) that requires palm oil companies to sell a portion of their product domestically at capped prices to ensure local availability (Afrizal et al., 2022; Priwiningsih & Abidin, 2022). Despite these measures, by March 2022, the

policy impacts were limited. Affordable cooking oil was still scarce in many provinces, and consumers often lined up in long queues to buy limited stock.

As the crisis intensified, the national government took more drastic action. In late April 2022, President Joko Widodo banned the export of palm oil and its derivatives entirely to flood the domestic market with supply and bring down prices (Cahya, 2022). However, the ban did not immediately lower prices, and therefore, the government replaced it with revised export quotas and higher export taxes, alongside a renewed DMO to oblige producers to allocate sufficient oil for local consumers. Throughout this period, the central government also deployed market operations and strengthened the role of state logistics agencies (such as BULOG) to distribute cooking oil to regions in need (Nur et al., 2022; Sutrisno et al., 2023). Law enforcement units were instructed to monitor warehouses for illicit stockpiling, and a corruption probe was launched that led to the arrest of several officials involved in circumventing export restrictions (Nangoy, 2022). These national-level policies eventually helped increase supply and moderate prices by mid-2022 as compliance improved and global conditions eased.

At the local government level, efforts to address the cooking oil shortage were tailored to community needs and available resources, while aligning with the national policies. Regional authorities across Indonesia worked to implement the central directives, such as ensuring the HET was honored in local markets and facilitating the distribution of subsidized cooking oil shipments to retailers. Many local governments organized their own emergency market days and distribution drives, where cooking oil was sold directly to residents at a regulated price to reach vulnerable households and prevent panic buying. These interventions provided temporary relief even though supplies remained limited.

To systematically evaluate the effectiveness of different policy options, this study employs the Analytic Hierarchy Process (AHP). AHP is a multi-criteria decision-making method introduced by Thomas Saaty designed to help decision-makers deal with complex choices by breaking them down into a hierarchy of criteria and alternatives (Saaty, 1994). Through pairwise comparisons, decision criteria are weighted, and each policy alternative is assessed with respect to those criteria, yielding a prioritized ranking of options. AHP provides a rigorous yet flexible framework for group decision-making, and it has been widely used in government, business, and resource management to guide decisions that must account for multiple factors (Geo & Saediman, 2019; Saediman, 2015). Based on this background, the objective of the study is to identify and analyze the optimal strategies for local government in mitigating cooking oil shortages, using Konawe Selatan as a case study.

LITERATURE REVIEW

The Indonesian government has long recognized the importance of ensuring food security and maintaining the stability of strategic commodities such as rice, cooking oil, and sugar (Erfin et al., 2024; Nurniati et al., 2024; Saediman, Gafaruddin, et al., 2021). Food security policy in Indonesia is guided by a multidimensional approach that includes increasing domestic production,

stabilizing prices, and ensuring equitable distribution (Irfayanti et al., 2026; Suryana, 2014). Local governments, as part of the decentralized governance structure, are expected to implement and adapt these national policies to their respective regional contexts (Ariany et al., 2025). Strategic commodity policies have often included price ceilings, export restrictions, and subsidies, especially during periods of crisis. However, their effectiveness depends largely on the capacity of local institutions to respond quickly and appropriately (Hendrix & Brinkman, 2013; Pinstrup-Andersen, 2014).

Indonesia experienced severe cooking oil shortages between late 2021 and early 2022, largely triggered by a surge in global crude palm oil (CPO) prices, speculative behavior in domestic markets, and delays in the distribution of subsidized products (Chazni & Miladiyanto, 2025). These disruptions not only increased household spending but also sparked public unrest and undermined confidence in food governance systems. The crisis revealed structural weaknesses in Indonesia's food supply chains, particularly the dependence on palm oil-based products and the limited capacity of local governments to independently secure and distribute essential goods during emergencies.

In the short term, the cooking oil shortage created acute disruptions in society. Rapid price increases for a basic necessity had an immediate effect on food security and livelihoods in which lower-income households struggled to afford sufficient cooking oil, and vendors of fried foods saw their margins evaporate (Cahya, 2022). The shortage also fueled social unrest and led to a loss of confidence in market stability and government management (Cahya, 2022; Nangoy, 2022). Localized incidents of panic buying and hoarding were reported (Anita, 2022; Saadati & Haryono, 2023). In addition, the cooking oil crunch contributed to a broader inflationary trend. This surge in the cost of basic goods threatened to increase poverty rates and slow the economic recovery from the pandemic in the immediate term.

Over the long term, the 2021–2022 cooking oil crisis highlighted structural vulnerabilities and prompted critical policy evaluations. The crisis demonstrated that aggressive biofuel programs (like B30) and export-driven growth, if not balanced with domestic needs, can undermine food commodity availability. The shortage also underscored the need for better regulation of supply chains to prevent profiteering and ensure stability. The government launched investigations into possible corruption and cartel practices in the cooking oil industry during the crisis (Nangoy, 2022). Internationally, Indonesia's export restrictions rattled global edible oil markets, which could have lasting implications for its trade relationships and reputation as a reliable supplier (Nangoy, 2022). Overall, the episode has acted as a wake-up call that sustaining domestic food security requires holistic strategies and coordination across sectors. It has catalyzed discussions on building resilience, such as diversifying sources of cooking oil and maintaining strategic reserves, to mitigate future shocks (Pratiwi et al., 2023).

The Analytic Hierarchy Process (AHP) has been widely applied in agricultural and public policy research to support complex decision-making involving multiple criteria and stakeholders. AHP allows decision-makers to

systematically compare policy options based on qualitative and quantitative judgments, making it particularly useful in resource allocation, program prioritization, and strategy selection (Saaty, 2008; Saediman et al., 2015). In the agricultural sector, AHP has been used to prioritize extension programs, assess sustainability practices, and evaluate regional development alternatives (Bintoro et al., 2012; Laloi et al., 2024; Saediman, 2015). Its structured framework is especially relevant in decentralized governance settings where local governments must reconcile national policy objectives with local needs and resource constraints.

METHODOLOGY

This research was conducted as a case study in Konawe Selatan District, located in Southeast Sulawesi Province, Indonesia. The district was chosen due to its experience with cooking oil supply challenges, making it a pertinent context for analyzing local government response strategies. The study's respondents were five experts selected through purposive sampling. These consisted of four local government decision-makers (heads of departments in agriculture, food security, trade, and development planning) directly involved in managing the cooking oil issue, and one academic subject-matter expert in food policy. The inclusion of these key informants was intended to ensure that both practical governmental perspectives and expert insights informed the analysis.

Multiple data collection techniques were employed to gather comprehensive input for the study. First, expert interviews were conducted with the five selected respondents to obtain qualitative information on the cooking oil shortage and to inform the criteria and alternatives used in the analysis. Second, field observations in Konawe Selatan were carried out to directly observe market conditions, distribution channels, and local responses related to cooking oil availability. Third, a document review was performed to examine relevant government reports, policy documents, and statistical data to provide background context and support the development of the AHP framework. Fourth, a structured AHP questionnaire was administered to the same five experts. This questionnaire facilitated the collection of quantitative data by capturing each expert's pairwise comparisons of the defined criteria and strategic alternatives. Together, these techniques ensured data triangulation, combining qualitative insights with quantitative judgments for a robust analysis.

Based on interviews with selected respondents, field observation, and document reviews, five criteria and five alternatives were defined. The five criteria were (1) Urgency: How pressing or time-sensitive the issue is; (2) Stability and Long-Term Sustainability: Ensuring solutions are stable and viable over the long run, (3) Policy Alignment: Consistency with government policies and plans; (4) Economic Impact: Effects on the local economy (e.g. prices, household income, inflation); and (5) Availability of Budget and Resources: Feasibility given financial, human, and material resources. The five alternatives were (1) Subsidies and Social Assistance: Providing subsidized cooking oil or financial aid to affected communities; (2) Local Cooking Oil Production: Increasing local production of cooking oil to boost supply; (3) Stock and Distribution Assurance:

Securing adequate stock levels and smoothing distribution channels; (4) Inflation Monitoring: Monitoring and controlling inflation related to cooking oil prices; and (5) Coconut Production: Enhancing coconut cultivation/processing as an alternative oil source.

The Analytic Hierarchy Process (AHP) was applied to determine priority strategies for alleviating the cooking oil shortage. The decision problem was structured into a hierarchical model consisting of an overall goal, five evaluation criteria, and five alternative strategies (Fig. 1). Using the standard AHP pairwise comparison approach, each expert provided judgments by comparing elements in a pairwise fashion. The individual pairwise comparison matrices from the five experts were then aggregated into a single group judgment matrix by using the geometric mean for each comparison.

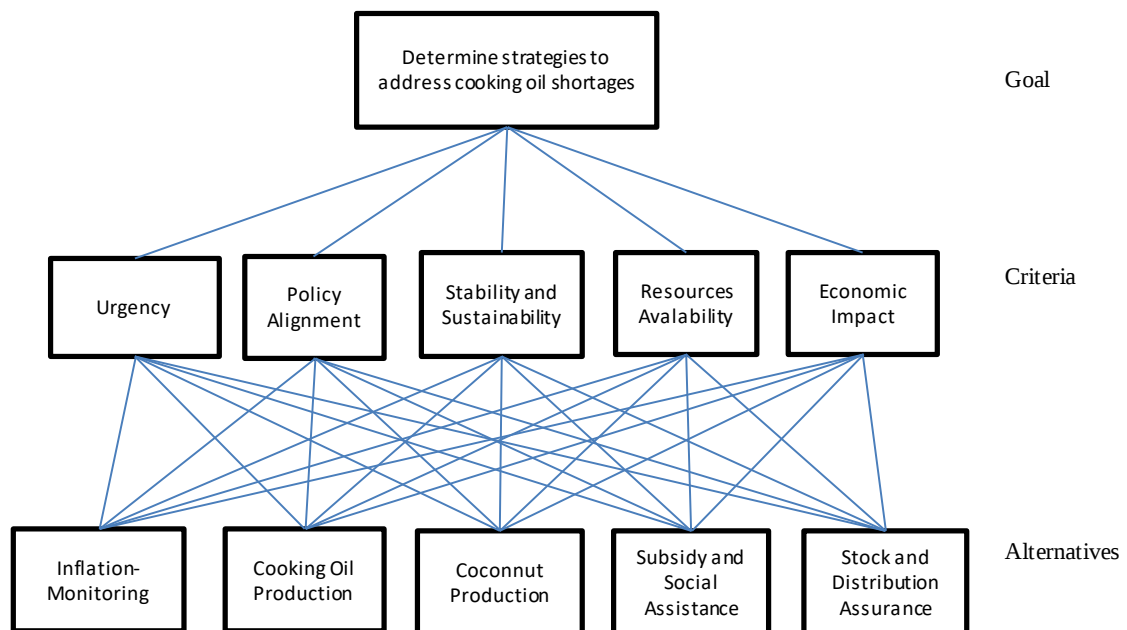


Figure 1. Hierarchical Structure in Cooking Oil Strategy Prioritization

All AHP calculations were conducted with Microsoft Excel to compute the priority weight of each criterion and alternative from the aggregated matrix and to automatically check the consistency of the comparisons. The consistency ratio (CR) of each pairwise comparison matrix was examined to ensure the experts' judgments were acceptably consistent. In all cases, the CR values remained below the standard threshold of 0.1, indicating a satisfactory level of consistency in the pairwise evaluations. This meant that none of the questionnaires required revision for inconsistency, and the derived priority rankings of strategies could be considered reliable and robust.

RESULTS AND DISCUSSION

Priority of Criteria

Fig. 2 shows priority weights of five decision criteria. The AHP results revealed that Urgency was the most influential (0.331), reflecting the pressing need for swift action amid the crisis. Cooking oil prices had doubled within a

year and bulk oil disappeared from markets, leading to panic buying and long queues in early 2022 (Anita, 2022). Unsurprisingly, the speed of implementation and immediate effectiveness of policies were highly valued to quickly get oil back on shelves and ease public anxiety.

The second-highest criterion was Stability and Long-Term Sustainability (0.233). This indicates that local decision-makers prioritized strategies that would not only resolve the immediate cooking oil shortage but also ensure a durable supply to prevent future crises. In other words, they adopted a forward-looking approach focused on resilience rather than just short-term fixes.

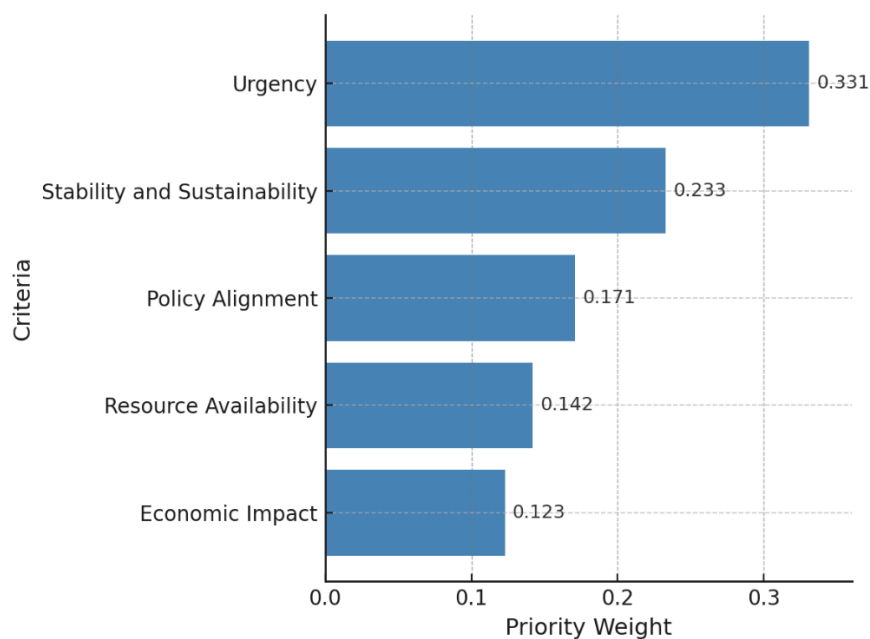


Figure 2. Priority Weights of Five Decision Criteria

The other three criteria in the order of priority were Policy Alignment, Resource Availability, and Economic Impact. This suggests that while consistency with broader policies, practical feasibility, and economic outcomes were considered, they were secondary to the urgent need for quick relief and the overarching goal of a sustainable solution. Policy Alignment with national initiatives was crucial because the central government had introduced measures like export bans, domestic market obligations, and cash assistance during the crisis (Ismiralda, 2022; Setkab, 2022b), so local strategies needed to complement those efforts. In terms of Resource Availability, officials were willing to mobilize extra funds or seek provincial/national support if a strategy was otherwise highly effective. Indeed, the national government provided special funding (such as direct cash transfers for cooking oil) to assist citizens (Setkab, 2022b), which likely eased local resource concerns. Economic Impact was important given cooking oil's role in the local economy and inflation (Alrasyid et al., 2022), but economic considerations did not outweigh the imperative of policy alignment and availability of budget and resources.

Priority of Alternatives

After establishing the criteria weights, the AHP analysis compared five policy alternatives. Fig. 3 shows the priority weights of the five alternative strategies as determined by the AHP analysis. Subsidies and Social Assistance is the top-ranked option with a weight of 0.311, followed by Local Cooking Oil Production (0.271). The next highest alternatives are Stock and Distribution Assurance (0.155) and Inflation Monitoring (0.148), while Coconut Production has the lowest priority (0.116). These weights (which sum to 1.0) reflect each strategy's relative importance in mitigating the cooking oil shortage.

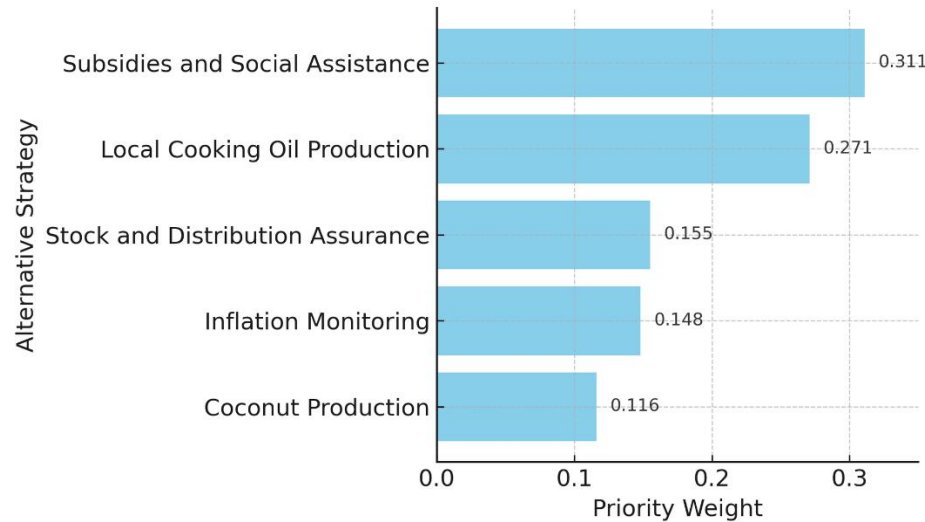


Figure 3. Bar Chart of Alternative Strategy Priorities

Subsidies and Social Assistance

Subsidies and Social Assistance (e.g. price subsidies, market operations selling oil at below-market prices, and direct cash or in-kind aid) emerged as the top-ranked strategy. Its primacy is largely due to excellent performance on the two criteria, namely Urgency and Economic Impact. In terms of Urgency, subsidies and direct assistance can be rolled out immediately to cushion households from price shocks. During the 2022 cooking oil crisis, the government's first response was to impose price caps and later provide cash transfers to millions of low-income families to offset high oil prices (Setkab, 2022b). By effectively lowering the cost of cooking oil, subsidies protect household purchasing power and food security (Efendi et al., 2024; Fauziah, 2011). Poor families spend a large share of income on staple foods (Zani et al., 2019), so preventing a sharp price spike averts difficult trade-offs (such as cutting nutrition) and helps avoid pushing vulnerable groups into poverty. Stabilizing cooking oil prices also helps contain inflation in the broader economy (Alrasyid et al., 2022) since this commodity is a significant item in the consumer price index. In short, this alternative directly shields both consumers and the local economy from the worst effects of the shortage.

However, Stability and Long-Term Sustainability was a relative weakness for subsidies. By nature, price subsidies or one-off aid do not increase the actual

supply of cooking oil or address the root causes of the scarcity; they are a short-term relief mechanism. If maintained too long, they can strain government budgets and even disincentivize producers (Negara & Habir, 2022). The AHP panel likely recognized that while subsidies were extremely effective in the immediate term, they were not a permanent solution. Local officials treated subsidies and aid as necessary but temporary measures to buy time until supply-side solutions could take effect.

On Policy Alignment, Subsidies and Social Assistance fit well with national and regional directives during the crisis. For instance, the President's office launched the BLT *Minyak Goreng* cash assistance program and even temporarily banned palm oil exports to force more supply into the domestic market (Ismiralda, 2022; Setkab, 2022b). Local governments were expected to help implement these policies by identifying beneficiaries, distributing subsidized oil, and monitoring markets. In Konawe Selatan, providing subsidies or emergency market operations was fully in line with national policy and the local government's mission to protect citizen welfare. There were no conflicts with higher-level authorities, and in fact, they demanded such actions.

Local Cooking Oil Production

The second-ranked strategy was Local Cooking Oil Production, which represents efforts to develop the district's cooking oil supply. This could involve establishing or expanding small-scale processing facilities and encouraging local entrepreneurs to locally produce alternative cooking oil from coconut (Amin, 2022; Coca, 2023; Dahniar et al., 2024). Konawe Selatan has abundant coconut resources, giving it a potential comparative advantage for producing coconut oil locally. Emphasizing local production tackles directly the root cause of the shortage and was highly valued for Stability and Long-Term Sustainability. Once local oil processing capacity is built, the region becomes less dependent on external markets and more resilient to global price shocks. This aligns with broader food security recommendations that stress strengthening local supply chains for durability in the face of volatility (Npueng et al., 2022; Suryana, 2014).

Local Cooking Oil Production also scored strongly on Economic Impact. Creating a local industry around cooking oil can stimulate the economy by generating jobs and adding value to local agricultural products (Reski et al., 2022; Taipabu et al., 2018). Farmers could earn more by processing coconuts locally rather than selling raw produce, and new small businesses could emerge (Reski et al., 2022; Saediman et al., 2023). It could also lead to more stable or lower oil prices for consumers in the district by cutting transportation costs. Evidence from other regions supports these benefits. For example, studies in Gorontalo and Aceh found that developing village-scale coconut oil enterprises significantly raised local incomes and provided affordable cooking oil for the community (Amin, 2022; Azis et al., 2020). If Konawe Selatan could produce surplus oil, it might even supply neighboring areas, turning a crisis response into a longer-term economic opportunity. In this regard, Local Production is not just a food security measure but also a driver of rural development.

In terms of Urgency, this strategy was moderate. Building up local production capacity cannot be done overnight as constructing or upgrading facilities, training producers, and ramping up output takes time. During the peak of the shortage, local production could not immediately flood markets with oil in the way that releasing stock or subsidies could. However, the local government did attempt some quick wins. Notably, in March 2022, the Regent of Konawe Selatan urged residents to use traditional methods to process coconuts into cooking oil for household use (Clarity, 2022). Such community-level measures could provide a small amount of supply in the short term, although on a limited scale. Thus, while Local Production would not solve the crisis in the immediate weeks, it could start contributing modestly in the near term and, more importantly, greatly enhance supply security in the longer run.

With respect to Policy Alignment, developing local cooking oil production was generally in line with both local and national policy objectives. Indonesia's national policies encourage downstream agro-industry and rural economic development, and ensuring domestic food commodity supply became a national focus when the government temporarily banned palm oil exports to prioritize local needs (Ismiralda, 2022). Konawe Selatan's development plans emphasize using local resources and increasing self-sufficiency in essential goods (Perda No. 15 Tahun 2021 Tentang RPJMD Kabupaten Konawe Selatan 2021-2026, 2021). Pursuing local oil production did not conflict with any higher authority regulations; rather, it complemented the national aim of securing domestic cooking oil supply by expanding the supply base at the local level (Alouw & Wulandari, 2020; Alrasyid et al., 2022).

Stock and Distribution Assurance

The third-ranked strategy was Stock and Distribution Assurance, which focuses on managing the supply chain so that whatever cooking oil is available actually reaches consumers in a timely and fair manner. Urgency was a major strength of this alternative. It can yield quick results by unlocking existing supply and ensuring it flows to the market. During the crisis, a significant issue was not only limited production but also dislocated distribution. Local authorities across Indonesia responded with rapid measures like market inspections and enforcement raids to crack down on illegal hoarding (Antara, 2022). In Southeast Sulawesi, the provincial inflation task force (*Tim Pengendalian Inflasi Daerah* or TPID) and police carried out checks to ensure retailers complied with price controls and that distributors were releasing oil rather than stockpiling it (Antara, 2022). By actively monitoring distribution channels and intervening, Konawe Selatan's government could have an immediate impact on alleviating local scarcities.

In terms of Stability and Long-Term Sustainability, stock and distribution measures are necessary but not sufficient on their own. Ensuring smooth distribution does not create new oil supply, so by itself it is more of a reactive or supportive measure. Once the crisis subsides, these efforts need to be sustained as routine governance rather than a standalone long-term solution. For example, establishing protocols for maintaining a buffer stock of cooking oil or having a permanent multi-agency team (like the TPID) to monitor prices and supplies can

help prevent or mitigate future shortages. In fact, distribution oversight is an ongoing necessity, but it does not fundamentally increase supply without other policies. Thus, Stock and Distribution Assurance can be seen as a vital support strategy that magnifies the effectiveness of supply or price interventions.

Policy Alignment for this strategy is very strong. During the cooking oil crisis, the national government explicitly tasked local governments with supervising distribution and enforcing market rules. The Ministry of Trade directed local trade offices to conduct inspections and uphold the highest retail price (HET) regulations, and local law enforcement was involved in prosecuting hoarders (Efendi et al., 2024). All these tasks fall squarely within the mandate of local authorities and their coordination teams (like the TPID). For Konawe Selatan, focusing on stock and distribution was essentially fulfilling its expected role in the multi-level crisis response. It also aligns with the local government's duty to protect consumers and ensure fair trade in its jurisdiction.

The Resource Availability for stock and distribution measures is generally favorable. Unlike building new facilities or funding large subsidies, this strategy relies mostly on governance capacity in monitoring, coordination meetings, information sharing, and deploying staff for inspections. Konawe Selatan's agencies could undertake these actions using existing personnel and routine operational budgets. Given that the district already had mechanisms in place, implementing this strategy did not require significant new expenditure or outside help. Essentially, the local government had the means to carry out distribution oversight with the tools at hand and it had a responsibility to do so.

Inflation Monitoring and Control

The fourth strategy was Inflation Monitoring and Control, which entails closely tracking cooking oil prices and taking steps to curb excessive inflation during the crisis. Economic Impact was a key strength of this alternative. Controlling inflation protects the real purchasing power of households and the stability of the local economy. Such inflation erodes incomes and can reduce economic activity if not controlled. The local government helps ensure that families can afford essential goods and that inflationary pressure does not spill over into other commodities by actively monitoring prices and taking action to keep them under control. During the 2022 episode, regions that mobilized their inflation control teams saw cooking oil prices stabilize faster, limiting the duration of peak prices (Bank Indonesia, 2022).

Policy Alignment for inflation monitoring is virtually guaranteed. Indonesia has an established framework for inflation control that involves local governments through TPID committees. In 2022, the Ministry of Home Affairs explicitly instructed all regional leaders to pay attention to inflation in key commodities and even allowed the use of emergency budgets for market interventions to contain price spikes (Setkab, 2022a). Engaging in aggressive price monitoring and control was thus exactly in line with national directives and the expected role of a district government. Keeping inflation low is a political and developmental priority at both national and local levels, since high food inflation immediately harms public welfare (Pratiwi et al., 2023).

In terms of Urgency, inflation monitoring was started quickly but has an indirect effect. The district government can set up price monitoring or does it in collaboration with the local office of Bank of Indonesia. However, inflation monitoring serves only as an early warning system and informs other actions. Its benefits are realized only when the information leads to something tangible, like releasing government stock, prosecuting unscrupulous traders, or adjusting subsidy levels, which are part of other strategies. Still, having this mechanism in place early is critical to guide those interventions. Thus, it was urgent to implement the monitoring apparatus, but the relief it provides is mediated through follow-up measures.

Looking at Stability and Long-Term Sustainability, inflation monitoring has a meaningful but supporting role. On one hand, it is a sustainable activity in that it has been institutionalized. This means the local government will keep an eye on cooking oil prices even after the shortage. In the long run, diligent price monitoring can catch emerging supply-demand problems early so that authorities can respond before a full-blown crisis develops (Nur et al., 2022). In that sense, it's part of a preventative strategy for stability. On the other hand, monitoring alone does not secure any physical supply of cooking oil; it must be coupled with concrete actions to ensure affordability. Indeed, price monitoring is a critical component of a resilient food system, but by itself it cannot guarantee a stable supply or price without complementary policies.

Coconut Production

The lowest ranked alternative was Coconut Production, i.e. increasing the production of coconuts as a raw material for cooking oil. Konawe Selatan considered leveraging its rich coconut palm resources to boost the supply of coconut oil as an alternative to palm oil. While this strategy taps into a local strength, it was ranked last due to its limited usefulness for the immediate crisis and several practical limitations. The most obvious drawback is Urgency: expanding coconut production is inherently a long-term endeavor. Planting new coconut palms or rehabilitating old groves takes years before yielding any significant increase in coconuts (Coca, 2023). Even improving yields on existing trees through better farm practices would take at least a growing season or more to translate into extra harvest.

For Stability and Long-Term Sustainability, Coconut Production does have merits. In the long run, increasing coconut output could diversify the region's cooking oil supply base, making it more resilient to shocks in any single commodity (Alouw & Wulandari, 2020). Historically, coconut oil was a common cooking oil in Indonesia (before palm oil took over), and many smallholders produced coconut oil for their own use from their trees (Coca, 2023). Revitalizing that capacity could reduce dependence on industrial palm oil that has to be imported from other islands (Alrasyid et al., 2022). Promoting coconut farming aligns with Konawe Selatan's climate and land use; coastal and inland areas are suitable for more coconut cultivation. Nevertheless, even as a long-term strategy, simply growing more coconuts addresses only one piece of the puzzle (raw material supply) and must be coupled with investments in processing facilities and market development to actually result in more cooking oil on people's tables.

Fortunately, there has been rapid growth and significant demand for coconut-based products globally in recent years (Alouw & Wulandari, 2020; Hoe, 2018), which could generate greater economic returns for coconut producers.

In terms of Policy Alignment, Coconut Production was neutral to moderately positive. There is no urgent national directive during the crisis that said “grow more coconuts.” However, in a broader sense, promoting coconut cultivation does align with certain longer-term government programs. The Ministry of Agriculture has initiatives to revitalize neglected commodities like coconut, encouraging replanting and farmer training (Direktorat Tanaman Tahunan dan Penyegar, 2020). Locally, Konawe Selatan’s development plans include agricultural diversification and support for estate crops well-suited to the region (Perda No. 15 Tahun 2021 Tentang RPJMD Kabupaten Konawe Selatan 2021-2026, 2021). So, pursuing coconut development would fit into those agendas. It was more of a locally-driven, strategic initiative aligned with the spirit of food security and regional development.

Regarding Resource Availability, this alternative faces significant constraints. Scaling up coconut production requires considerable resources: available land, access to high-quality coconut seedlings for new plantings, and agricultural extension services to teach farmers better cultivation techniques (Alouw & Wulandari, 2020; Coca, 2023; Dahniar et al., 2024). The local government has a limited budget and human resources for agricultural expansion projects beyond traditionally prioritized crops such as rice, corn, and cocoa (Saediman, Mboe, et al., 2021). Human resource capacity is another factor as agriculture officers would need to dedicate time to coconut programs, potentially diverting attention from other priorities. Farmer adoption is also a resource question: convincing farmers to allocate their land, labor, and capital to coconuts depends on them perceiving a real future payoff (Saediman, Mboe, et al., 2021). All these factors suggest that the feasibility of rapidly ramping up coconut production was low.

The Economic Impact of boosting coconut farming is uncertain and likely limited in the short-to-medium term. On the one hand, more coconuts could eventually mean higher incomes for farmers and new jobs if a value chain develops (Reski et al., 2022; Saediman et al., 2023; Taipabu et al., 2018). In a successful scenario, this would diversify and strengthen the rural economy (Coca, 2023; Dahniar et al., 2024; Hasballah et al., 2021). On the other hand, farmers would need to invest time and resources to plant or rehabilitate coconut trees, incurring costs now for benefits that might only materialize years later. Indeed, during the 2022 crisis, raw coconuts were not in shortage. The pressing issue was converting available coconuts to oil and distributing it. Thus, increasing production alone would not have lowered cooking oil prices or improved availability for consumers in the short run.

Synthesis and Policy Discussion

The AHP results suggest that Konawe Selatan’s local government pursued a balanced strategy addressing the symptoms and the root causes of the cooking oil shortage. The weighting of criteria reflects a dual focus: decision-makers were keenly aware of the need for swift action (*urgency*) while also prioritizing lasting

solutions (*long-term stability*). This duality is evident in the selected policy responses: immediate relief for consumers coupled with efforts to build local self-reliance in supply. Such an approach mirrors the principle that responses to food crises should combine short-term measures with a long-term vision.

Importantly, the ranking of alternatives implies an optimal bundle of policies rather than a single “silver bullet.” The top strategy, Subsidies and Social Assistance, provided quick relief to protect households at the peak of the crisis. The second (Local Production) and even the fifth (Coconut Production) aimed at fundamentally strengthening supply security to prevent future shortages. Meanwhile, the third (Stock and Distribution Assurance) and fourth (Inflation Monitoring) served as enabling measures to ensure that the first two strategies could achieve their full effect. In practice, these strategies are complementary. For example, subsidies (which may involve selling oil at below-market prices) only succeed if distribution networks function properly and their effectiveness is measured by price stability, which links to inflation monitoring. Similarly, local production efforts will eventually benefit from increased coconut output, tying the second and fifth strategies together over a longer horizon. The AHP prioritization exercise, while forcing a rank order, highlights these interactions and helps local policymakers understand the role and weight of each component in the overall strategy.

A key lesson from this case is the importance of local context in tailoring responses to a national crisis. Konawe Selatan is a district with unique characteristics: it has abundant coconut resources, limited fiscal capacity, and is distant from Indonesia’s major cooking oil production centers (hence dependent on imports from other provinces). The AHP results show that local officials tailored their priorities to this context rather than relying solely on generic national solutions. For instance, they gave high priority to encouraging coconut oil use and local production. This demonstrates how decentralization in Indonesia can allow local governments to innovate and fill gaps that central policies might overlook. Konawe Selatan’s strategy illustrates that by using a tool like AHP, local policymakers can systematically identify which responses play to their region’s strengths and address their specific vulnerabilities.

Local context and the availability of indigenous resources have proven pivotal in designing effective food security strategies. For instance, in Southeast Sulawesi, Saediman et al. (2016) found that cassava was consumed daily as the primary staple by cassava-farming households, and 96% of these households were classified as food secure. Similarly, Saediman et al. (2019) observed in a cassava-growing village that 81.3% of households were food secure, with cassava consumed 4.1 days per week compared to 2.9 days for rice. These examples confirm the significance of tailoring food security measures to local conditions and crops, in contrast to overreliance on centrally promoted staples (e.g. rice) that have historically overshadowed traditional foods. Konawe Selatan’s emphasis on local cooking oil production from coconut exemplifies this approach, leveraging a native resource and avoiding excessive dependence on externally supplied cooking oil in pursuit of a more resilient, context-specific food system.

Another notable aspect of this case is how the AHP process itself aided decision-making and consensus-building. The decision involved multiple stakeholders, each with potentially different perspectives. AHP required them to explicitly compare criteria and alternatives, bringing out trade-offs in a structured way. The low consistency ratio indicated that the comparisons were logically sound, adding confidence to the results. Overall, AHP injected rigor and transparency into the policy deliberation. In a government setting, especially for critical issues like food security, this structured approach can help reduce bias and clarify why specific actions are prioritized. Konawe Selatan's government can use this analysis to justify its strategy choices to the public or higher authorities, showing that decisions are not arbitrary but are based on systematic evaluation.

The findings from Konawe Selatan also offer broader lessons for handling future food commodity shortages. One lesson is the value of diversification in strategy to attack the problem from multiple angles. Relying on only one type of intervention would likely have been insufficient. Another lesson is the importance of coordination across government levels. During the cooking oil crisis, lack of coordination sometimes led to missteps. Konawe Selatan's strategy assumed that certain central supports (like cash transfers and market operations) would be in place, and the district shaped its actions to complement those supports. Going forward, institutional mechanisms that integrate local governments into national crisis responses could improve overall effectiveness. The case reinforces that neither level can single-handedly solve such crises; instead, success comes from vertical coordination and mutual reinforcement of policies.

From a broader food policy perspective, the case underlines the importance of resilience and adaptability. The palm oil shock behind the cooking oil crisis was partly external (global price spikes) and partly internal (policy and market failures). Building resilience means making the food system better able to absorb such shocks without severe disruption. Konawe Selatan's push towards local production and coconut diversification are essentially resilience-building moves. If replicated in other regions, these efforts could make Indonesia less susceptible to global volatility or export bans, since local alternative oils might cover gaps when palm oil supply falters. Another aspect of resilience is consumer adaptability. The crisis forced many Indonesians to use substitutes or ration their cooking oil. In Konawe Selatan, officials promoted traditional coconut oil as one adaptation (Clarity, 2022), effectively encouraging the public to be flexible (Alrasyid et al., 2022). Here, a well-informed and adaptive populace can mitigate some effects of shortages. This suggests that alongside tangible interventions, governments should not overlook the role of communication and public guidance in crisis response to ensure that society is on board with and prepared to support the measures being implemented.

CONCLUSIONS AND RECOMMENDATIONS

The AHP-based analysis identified clear priorities for addressing the cooking oil shortage in Konawe Selatan District. Providing subsidized cooking

oil and social assistance emerged as the top strategy, reflecting its high performance on key decision criteria such as policy urgency and resource feasibility. This was followed by increasing local cooking oil production and ensuring stable stock and distribution networks, indicating that experts value a balance between immediate relief and the strengthening of supply chain infrastructure. Lower-ranked strategies, including market monitoring and inflation control and expanding coconut production, were deemed less critical in the short term, though they remain important for long-run sustainability. These results underscore that swift, direct interventions supported by adequate budget and resources were seen as paramount, while alignment with broader policies, expected economic impact, and long-term stability also guided the prioritization.

Broader implications of these findings highlight the need for local governments to adopt a proactive, multi-pronged approach in bolstering food supply resilience. The prioritization of subsidies and local production measures suggests that effective crisis response requires both immediate action to protect consumers and investments in local capacity to reduce future vulnerabilities. The case of cooking oil shortages serves as an example of how evidence-based decision frameworks like AHP can help local authorities systematically evaluate options to ensure that urgent measures are balanced with strategies that enhance long-term self-sufficiency and stability in basic commodities.

Policy recommendations drawn from this study are twofold. At the local level, government authorities should consider institutionalizing emergency support mechanisms. At the national level, it is recommended that policymakers strengthen coordination with regions by ensuring a reliable central supply and distribution framework for key food commodities. This could include building strategic reserves of cooking oil, streamlining inter-regional distribution channels, and enacting regulatory measures to prevent hoarding and excessive price inflation during supply crises. Such support from central authorities would complement local efforts, helping to synchronize policy effectiveness across governance levels. Overall, this study's findings reinforce the importance of integrated, multi-level governance in managing food commodity shortages.

FURTHER STUDY

Comparative studies across districts with different socio-economic and agricultural profiles may yield insights into contextual determinants of policy effectiveness. Additionally, incorporating broader stakeholder perspectives could enrich the AHP framework and enhance policy inclusiveness. Finally, integrating other decision-support methods such as Fuzzy AHP or hybrid models may provide deeper analytical robustness for evaluating trade-offs in complex food policy decisions.

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