

Policy Networks and Multi-Stakeholder Collaboration in Agricultural Subsidy Programs of Fertilizer Distribution in Pinrang Regency

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Abstract: This study examines multi-actor dynamics in subsidized fertilizer procurement and distribution for farmer groups in Pinrang Regency, Indonesia. Through qualitative methodology involving in-depth interviews, field observations, and document analysis, the research analyzes coordination mechanisms, policy implementation challenges, and stakeholder interactions in agricultural subsidy programs. Findings reveal significant coordination gaps between inside government actors, including Regional Parliament Commission II and Department of Agriculture, despite systematic approaches through e-RDKK data management and established risk frameworks. While administrative systems claim adequate quota allocation, persistent farmer complaints about fertilizer scarcity and distribution delays indicate substantial disconnects between bureaucratic records and field realities. Outside government actors, particularly farmer groups, retail kiosks, academics, media, and political parties, demonstrate valuable local knowledge and implementation capacity but remain largely excluded from meaningful participation in policy design and evaluation processes. The study identifies persistent shadow actors engaging in rent-seeking behaviors that undermine policy objectives, alongside inadequate integration of academic expertise and limited media engagement in policy socialization. These findings suggest that effective subsidized fertilizer programs require genuine partnership mechanisms leveraging unique capabilities of all stakeholder groups while addressing structural barriers to inclusive participation and transparent accountability. The research contributes to understanding collaborative governance in agricultural policy implementation and highlights the need for enhanced multi-stakeholder coordination to achieve sustainable food security objectives in developing country contexts.

Keywords: Multi-actor Governance, Agricultural Subsidies, Policy Implementation, Stakeholder Coordination, Collaborative Governance

INTRODUCTION

The increasing global population pressure has intensified the demand for sustainable agricultural production, making food security a critical policy priority for developing nations. In this context, government intervention through agricultural support programs has become essential to ensure adequate food production and farmer welfare. Rice serves as the primary staple food for more than half of the world's population, particularly in Asian countries where it constitutes the foundation of food security systems (Samal et al, 2022). Previous studies have highlighted the crucial role of fertilizer subsidies in enhancing agricultural productivity and supporting smallholder farmers' livelihoods across developing countries (Alawode, 2025).

Indonesia, as the world's fourth most populous country, faces significant challenges in maintaining national food security while supporting its predominantly agricultural economy. The Indonesian government has implemented fertilizer subsidy programs since 1970 as a cornerstone of agricultural development policy, aimed at increasing crop productivity through technological inputs and supporting overall agricultural commodity production (Chandio et al 2024). These policies are designed to ensure fertilizer availability at government-regulated retail prices (Harga Eceran Tertinggi/HET), enabling farmers to implement balanced fertilization practices essential for sustainable food security. Research has demonstrated that fertilizer subsidies play a vital role in reducing production costs, increasing harvest yields, and supporting national food security objectives (Falatehan, et al 2021; Putri et al 2024).

The implementation of agricultural subsidy programs involves complex interactions among multiple stakeholders, creating a multi-actor governance environment that significantly influences policy outcomes. Studies have revealed that the relationships between central government, local government, distributors, and farmers play crucial roles in budget management, fertilizer distribution, and policy implementation oversight (Jamil et al., 2023). The effectiveness of these programs largely depends on the coordination and collaboration among various actors within the policy network. Contemporary research emphasizes that understanding multi-stakeholder dynamics is essential for

improving policy implementation and achieving desired agricultural development outcomes (Alam et al 2024). South Sulawesi province, particularly the regencies of Pinrang, Wajo, and Sidrap, serves as one of Indonesia's primary rice production centers, contributing significantly to national food security. The region's agricultural success stems from favorable geographical conditions, including fertile land and well-developed irrigation systems. However, challenges such as climate change, subsidized fertilizer availability, and agricultural modernization continue to pose significant obstacles to optimal productivity. Government policies and technological advancement support are crucial for maximizing this sector's potential in supporting national food security objectives, particularly through effective fertilizer subsidy distribution mechanisms.

Despite comprehensive policy frameworks governing fertilizer subsidies, implementation challenges persist in ensuring effective distribution to target beneficiaries. Research indicates that fertilizer distribution often fails to meet the six essential criteria of appropriate targeting: right type, quantity, price, quality, time, and location (Adiraputra & Supyandi (2021). The electronic-based Definitive Group Needs Plan (e-RDKK) system and Farmer Cards have been introduced to improve targeting and reduce distribution irregularities. However, studies have shown that distribution inefficiencies continue to result in inadequate fertilizer supply for farmers' actual needs, leading to reduced agricultural productivity and farmer welfare (Hatta et al., 2022).

Table 1. Subsidized Fertilizer Prices for Rice Farming in 2024

Fertilizer Type	Content	Subsidized Price (per kg)	Description
Urea	Nitrogen (N)	Rp 2,300 - 2,800	Subsidy for rice and other crops
NPK	Nitrogen (N), Phosphorus (P), Potassium (K)	Rp 4,000 - 5,500	Subsidy to support plant growth
SP-36	Phosphorus (P)	Rp 4,500 - 5,500	Subsidy for root growth and flowering phase
ZA	Nitrogen (N), Sulfur (S)	Rp 2,500 - 3,500	Subsidy for supplemental fertilization in rice

Source: Ministry of Agriculture, Indonesia (www.pertanian.go.id)

The pricing structure presented in Table 1 demonstrates the government's commitment to supporting farmers through subsidized fertilizer programs, with significant price reductions compared to market rates. However, the variation in prices across different regions reflects the complexity of distribution logistics and the challenges faced in maintaining consistent pricing policies nationwide.

Pinrang Regency in South Sulawesi exemplifies the challenges faced by Indonesia's agricultural regions in implementing fertilizer subsidy programs. Despite being a major rice production center with extensive productive paddy fields supported by technical irrigation systems, local farmers frequently encounter problems such as insufficient subsidized fertilizer supply, delayed distribution, and even fertilizer scarcity (Jamil,et al., 2023). Statistical data reveals concerning trends, with rice harvested area in Pinrang Regency reaching approximately 77.79 thousand hectares in 2023, representing a significant decrease from the previous year, while rice production totaled 454.77 thousand tons of unhusked rice, indicating declining agricultural performance (Central Statistics Agency of Pinrang Regency, 2023).

Field observations in Pinrang Regency reveal persistent problems in fertilizer subsidy distribution, including supply shortages, price increases at the farmer level, and farmers' inability to purchase fertilizer with cash payments (Detiksulsel.com, 2022). Research conducted by Hidayat et al (2024) in neighboring Bone Regency identified similar governance challenges, including inadequate supervision standards, long distribution chains, dual pricing systems, and various forms of subsidy misuse by unauthorized parties. These findings highlight the critical need for enhanced oversight mechanisms and improved coordination among involved actors to ensure effective policy implementation and equitable fertilizer access for legitimate beneficiaries.

While existing studies have examined fertilizer subsidy programs from various perspectives, there remains a significant gap in comprehensive analysis of multi-actor dynamics within the policy implementation process, particularly through the lens of Kingdon's (2014) framework distinguishing between inside government and outside government actors. Previous research has primarily focused on distribution mechanisms, farmer welfare impacts, or oversight challenges in isolation, without thoroughly examining the complex interactions among diverse stakeholders that ultimately

determine policy success. This study addresses this gap by applying Kingdon's multi-actor framework to analyze the procurement and distribution of subsidized fertilizer programs for farmer groups in Pinrang Regency, providing crucial insights into how actor coordination and collaboration can be enhanced to improve agricultural policy implementation effectiveness and achieve sustainable food security objectives in Indonesia's agricultural development context.

METHOD

This study employs a qualitative descriptive approach to examine multi-actor dynamics in subsidized fertilizer procurement and distribution for farmer groups in Pinrang Regency. Following Creswell's (2014) framework, qualitative research enables comprehensive understanding of complex social phenomena by capturing detailed perspectives from various information sources within their natural contexts. The research design focuses on analyzing the roles and interactions among government and non-government actors involved in fertilizer subsidy management, utilizing Kingdon's (2014) multi-actor theoretical framework that distinguishes between inside government actors (Department of Agriculture and Regional Parliament Commission II) and outside government actors (farmer groups, academics, media, political parties, and retail kiosks). Data collection was conducted through triangulated methods including direct observation of distribution processes, in-depth interviews with key stakeholders, and document analysis of policy regulations and implementation reports to ensure comprehensive coverage of multi-stakeholder perspectives and experiences.

Data analysis followed Miles and Huberman's (1994) interactive model comprising data reduction, data display, and conclusion drawing to systematically process and interpret collected information. The research employed multiple validation strategies including triangulation of sources, methods, and time periods, as well as member checking procedures to verify data accuracy with informants and ensure findings accurately reflected field conditions. Reliability was maintained through consistent application of data collection instruments and systematic documentation of all research procedures to enable replication and verification of results. This methodological approach enabled deep exploration of complex actor relationships and governance mechanisms while maintaining scientific rigor through systematic data collection, analysis, and validation processes essential for understanding multi-actor policy implementation dynamics in agricultural subsidy programs.

FINDINGS AND DISCUSSIONS

Inside Government Actors in Subsidized Fertilizer Policy Implementation

The implementation of subsidized fertilizer policies in Pinrang Regency reveals significant complexities in coordination among government institutions at various levels. The Regional Parliament Commission II demonstrates active engagement in policy oversight through direct communication with the Department of Agriculture and continuous monitoring of farmer complaints. However, systematic challenges persist in quota allocation accuracy, with registered farmers often unable to access adequate fertilizer supplies due to distribution to unregistered recipients. This coordination gap between planning and implementation reflects institutional capacity limitations in ensuring precise targeting of subsidy programs.

The Department of Agriculture's confidence in their systematic approach through e-RDKK data collection and Farmer Card implementation contrasts sharply with field realities experienced by beneficiaries. While departmental officials claim adequate quota allocation based on registered farmer data, persistent complaints about fertilizer scarcity and distribution delays suggest a disconnect between administrative records and actual farmer needs. This discrepancy indicates that technical systems alone cannot guarantee effective policy implementation without comprehensive field verification and responsive feedback mechanisms.

Table 2. Inside Government Actor Roles and Challenges

Actor	Primary Functions	Key Challenges	Implementation Gaps
Regional Parliament Commission II	Policy oversight, RDKK coordination, farmer complaint handling	Unregistered farmer access, fertilizer mafia practices	Limited enforcement capacity, reactive responses
Department of Agriculture	e-RDKK management, quota allocation, annual socialization	Data accuracy, field verification	Disconnect between administrative records and field reality
District Verification	Transaction verification, field validation	Limited personnel and budget	Inadequate monitoring coverage

Teams			
Central Authority	Payment	Subsidy disbursement, audit compliance	Complex verification layers
			Bureaucratic delays in payment processes

Source: Field Research Data, 2025

This systematic documentation of government actor functions reveals the complexity of coordination required for effective policy implementation, yet highlights persistent institutional limitations that prevent optimal service delivery to intended beneficiaries.

These findings align with Kingdon's (2014) framework regarding inside government actors, where formal authority and technical expertise may not automatically translate into effective policy outcomes. Similar to research by Fahmid et al. (2022) on fertilizer subsidy policy dynamics in Indonesia, coordination challenges between different government levels significantly impact program effectiveness. The study confirms that despite having formal coordination mechanisms, information asymmetries and bureaucratic silos continue to hamper optimal resource allocation and service delivery to intended beneficiaries.

Risk analysis documentation reveals systematic awareness of potential implementation failures, yet preventive measures remain largely procedural rather than outcome-oriented. The identification of risks such as inaccurate e-RDKK data input and inadequate verification processes suggests institutional learning capacity, but the predominant focus on coordination and socialization as solutions indicates limited innovation in addressing structural problems. This approach fails to address fundamental issues of accountability and performance measurement in subsidy distribution systems.

The payment mechanism complexity involving multiple verification layers from village to central government levels creates numerous potential failure points in the distribution chain. Each verification stage introduces delays and opportunities for discretionary decision-making that may not align with farmer needs or policy objectives. The involvement of various actors including kiosk operators, district verification teams, and PT Pupuk Indonesia creates interdependencies that require seamless coordination but often result in bureaucratic bottlenecks.

Annual socialization programs conducted by the Department of Agriculture represent positive efforts toward stakeholder engagement, yet these initiatives remain predominantly top-down in nature. The emphasis on information dissemination rather than participatory dialogue limits opportunities for genuine policy adaptation based on beneficiary feedback. This one-way communication model fails to capture the nuanced challenges faced by farmers and other implementing actors at the grassroots level.

The acknowledgment of "fertilizer mafia" practices by parliamentary oversight bodies highlights serious governance challenges that technical solutions alone cannot address. These informal networks operating within formal distribution systems demonstrate how shadow actors can subvert policy intentions through rent-seeking behaviors. The persistence of such practices despite regulatory frameworks indicates the need for stronger enforcement mechanisms and community-based monitoring systems.

Implementation inconsistencies across different areas of Pinrang Regency, particularly regarding the new direct distribution system through farmer group associations (GAPOKTAN), reveal institutional capacity variations that undermine policy equity. While some areas have successfully implemented streamlined distribution channels, others continue to rely on traditional multi-tiered systems that increase vulnerability to manipulation and delay. Enhanced institutional capacity building and standardized implementation protocols are essential to ensure uniform policy application across all administrative areas within the regency.

Outside Government Actors in Subsidized Fertilizer Policy Implementation

Farmer groups function as crucial intermediaries between government policy and grassroots implementation, yet their participation remains largely passive rather than genuinely collaborative. Despite their formal role in planning through e-RDKK preparation, farmers report limited involvement in actual distribution oversight and problem-solving mechanisms. The requirement to purchase non-subsidized fertilizers as a condition for accessing subsidized ones demonstrates how farmers become vulnerable to exploitative practices by distribution actors seeking to maximize profits from captive markets.

The reactive nature of farmer group engagement with government agencies reveals systemic limitations in participatory governance mechanisms. While farmers actively coordinate among themselves to identify and report distribution

problems, their communications with Department of Agriculture and Regional Parliament often fail to generate timely or comprehensive solutions. This pattern of complaint-based rather than proactive engagement indicates missed opportunities for co-production of more effective distribution strategies that could benefit from local knowledge and community oversight.

These findings resonate with Kingdon's (2014) conceptualization of outside government actors who possess significant influence despite lacking formal authority. Similar to studies by Sun et al (2024) on multi-stakeholder agricultural governance, farmer groups demonstrate substantial capacity for self-organization and problem identification, yet their potential contributions to policy improvement remain underutilized due to limited institutional channels for meaningful participation. Strengthening formal mechanisms for farmer group involvement in policy design and evaluation could significantly enhance program effectiveness and legitimacy.

Academic involvement in agricultural policy discourse remains notably absent despite the critical need for evidence-based analysis and innovation in subsidy distribution systems. The lack of systematic research engagement with policy processes represents a significant gap in knowledge production and application that could inform more effective interventions. Academic institutions possess analytical capabilities and objectivity that could contribute valuable insights for addressing persistent challenges in fertilizer distribution, yet these resources remain disconnected from practical policy improvement efforts.

Table 3. Outside Government Actor Engagement and Limitations

Actor Type	Participation Level	Key Contributions	Primary Limitations
Farmer Groups	Reactive participation	Local knowledge, problem identification	Limited formal consultation mechanisms
Academics	Minimal involvement	Research capacity, objective analysis	Disconnected from policy processes
Political Parties	Crisis-responsive	Democratic representation, advocacy	Focus on electoral concerns rather than technical solutions
Media	Event-driven coverage	Social control, accountability pressure	Superficial analysis, limited policy education
Retail Kiosks	Transactional role	Direct farmer interaction, distribution feedback	Excluded from policy improvement processes

Source: Field Research Data, 2025

The systematic exclusion of outside government actors from meaningful policy participation represents a significant missed opportunity for enhancing program effectiveness through collaborative governance approaches that could leverage diverse stakeholder capabilities and local knowledge.

Political actors recognize the strategic importance of subsidized fertilizer policies for agricultural sustainability and electoral legitimacy, yet their engagement often lacks the technical depth necessary for addressing implementation complexities. The emphasis on representing farmer voices and ensuring policy accountability demonstrates positive democratic functions, but political interventions frequently focus on crisis response rather than systematic improvement of distribution mechanisms. This reactive approach limits the potential for political actors to contribute to long-term institutional strengthening and policy innovation.

Media coverage of fertilizer subsidy issues remains superficial and event-driven rather than providing sustained analysis of policy performance and improvement opportunities. While media actors acknowledge their role as social controllers monitoring government implementation, their limited involvement in policy socialization and education represents missed opportunities for enhancing farmer awareness and engagement. The focus on problems such as scarcity and corruption, while important for accountability, fails to contribute to constructive dialogue about alternative approaches or best practices.

Retail kiosk operators serve as the final link in the distribution chain, yet their integration into the overall policy system remains primarily transactional rather than collaborative. Despite their direct interaction with farmers and practical knowledge of distribution challenges, kiosk operators have limited opportunities to contribute feedback to policy improvement processes. The persistence of administrative barriers preventing unregistered farmers from

accessing subsidies demonstrates how frontline implementers become gatekeepers rather than facilitators of inclusive access to government programs.

The collective pattern of outside government actor engagement reveals significant untapped potential for enhancing subsidized fertilizer policy effectiveness through more inclusive and participatory approaches. While each actor group possesses unique capabilities and perspectives that could contribute to improved outcomes, the current system fails to create meaningful opportunities for collaborative problem-solving and policy co-production. Developing structured platforms for multi-stakeholder dialogue and establishing formal mechanisms for incorporating outside actor feedback into policy adaptation processes could significantly improve both the effectiveness and legitimacy of subsidized fertilizer programs in Pinrang Regency (Ayunda & Purwaningsih, 2024; Harsanto & Wahyuningrat, 2024).

CONCLUSION

This study reveals significant complexities in multi-actor governance of subsidized fertilizer procurement and distribution in Pinrang Regency, where coordination challenges between inside and outside government actors substantially impact policy effectiveness. Inside government actors, including the Regional Parliament Commission II and Department of Agriculture, demonstrate systematic approaches through e-RDKK data management and risk analysis frameworks, yet persistent gaps between administrative records and field realities indicate institutional limitations in ensuring equitable access to subsidized fertilizers. Outside government actors, particularly farmer groups, retail kiosks, and civil society organizations, possess valuable local knowledge and implementation capacity but remain largely excluded from meaningful participation in policy design and evaluation processes. The persistence of shadow actors engaging in rent-seeking behaviors, combined with inadequate integration of academic expertise and limited media engagement in policy socialization, undermines the potential for collaborative governance approaches that could enhance program effectiveness. While Kingdon's framework effectively explains the distinction between formal authority and actual influence in policy processes, the findings suggest that successful subsidized fertilizer programs require more than technical coordination among government institutions—they demand genuine partnership mechanisms that leverage the unique capabilities of all stakeholder groups while addressing structural barriers to inclusive participation and transparent accountability in agricultural policy implementation.

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