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Evaluating the effectiveness of government rice seed subsidies in supporting agricultural sustainability: A case study of Subak Penarungan, Badung Regency, Indonesia

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Abstract--This study aims to evaluate the effectiveness of the Rice Seed Subsidy Program based on the Five Accuracy Principles (*right type, quantity, place, price, and timing*) within the institutional framework of the Subak system in Subak Penarungan, Mengwi District, Badung Regency, Indonesia. The study also analyzes the gap between farmers' expectations (*importance*) and perceptions (*performance*) using the Importance Performance Analysis (IPA) approach and examines the role of Subak institutions in supporting program implementation. A mixed-method approach combining quantitative and qualitative techniques was employed. Data were collected through surveys involving 81 respondents and supported by interviews and documentation. The analysis was conducted using Importance Performance Analysis (IPA) and Cartesian quadrant mapping to identify priority areas for improvement. The findings indicate that the effectiveness of the program is categorized as good; however, it has not fully met farmers' expectations, as reflected by the average importance score of 4.85 and performance score of 4.74, resulting in a gap value of -0.11. Among the Five Accuracy dimensions, the *right type* dimension demonstrated the highest performance, whereas the *right timing* dimension showed the lowest. All assessed attributes revealed negative gap values, indicating



discrepancies between actual implementation and farmers' expectations. The strengths of the program lie in seed quality and ease of distribution, while weaknesses are associated with quantity accuracy, cost efficiency, supply continuity, timeliness, and institutional responsiveness. Although Subak institutions play an important role in coordinating and distributing subsidized seeds, improvements in administrative capacity and responsiveness remain necessary. The study concludes that program effectiveness can be enhanced through updating land-based demand data, synchronizing distribution schedules with planting seasons, strengthening information systems, improving cost efficiency, and reinforcing a more responsive and participatory institutional role of Subak.

Keywords---rice seed subsidy, Five Accuracy Principles, Subak, Importance Performance Analysis (IPA), program effectiveness.

Introduction

Food security remains a fundamental issue in sustaining human welfare, social stability, and national economic growth, particularly in agrarian countries such as Indonesia. However, the agricultural sector faces increasingly complex challenges, including rapid population growth, agricultural land conversion, climate variability, and farmers' dependency on agricultural inputs such as quality seeds and fertilizers (Elmi, 2024). Climate-related phenomena, particularly El Niño and La Niña, have significantly disrupted rice cultivation cycles and productivity, thereby increasing the vulnerability of Indonesia's food system, which remains highly dependent on rice production (Elmi, 2024). This challenge is reflected in declining rice production, where the Central Bureau of Statistics reported that Indonesia's rice production during January–September 2023 reached only 45.33 million tons of dry unhusked rice, representing a 0.23% decrease compared to the same period in the previous year (BPS, 2023).

In response, the government has implemented several agricultural interventions, including the Rice Seed Subsidy Program, aimed at improving farmers' access to quality seeds at affordable prices to strengthen agricultural productivity and national food security. In Badung Regency, Bali, the program is financed through regional government expenditure and distributed to farming communities, including Subak Penarungan, one of the largest beneficiary areas due to its extensive agricultural land and active farmer institutions. Nevertheless, the realization of seed subsidy distribution in Subak Penarungan remained relatively low, reaching only 32.42% by mid-2024, raising concerns regarding program effectiveness in planning and implementation.

The effectiveness of agricultural subsidy programs should not merely be assessed based on aid distribution but rather on their ability to meet farmers' needs accurately, accountably, and efficiently. Accordingly, the effectiveness of rice seed subsidies can be evaluated using the Five Accuracy Principles, namely *right type*, *right quantity*, *right place*, *right price*, and *right timing*. In practice, several implementation challenges remain evident, including mismatches between

distributed seed varieties and local land conditions, insufficient quantities, delayed delivery schedules, and farmers' preference for purchasing seeds independently despite government subsidies. These conditions indicate a discrepancy between policy objectives and field implementation, requiring a more systematic evaluation framework.

Within the Balinese agricultural context, the institutional role of the traditional Subak system is highly relevant to the effectiveness of subsidy implementation. Beyond managing irrigation, Subak functions as a socio-cultural agricultural institution responsible for organizing planting systems, coordinating farmer activities, and regulating agricultural resources through collective decision-making mechanisms. However, despite its institutional strength, Subak also faces modern administrative challenges, including bureaucratic adaptation, limited institutional responsiveness, and changing socio-economic dynamics among farmers. Therefore, evaluating the effectiveness of rice seed subsidies requires not only technical assessment but also an understanding of Subak's institutional role in supporting program implementation.

Based on these conditions, this study aims to evaluate the effectiveness of the Rice Seed Subsidy Program in Subak Pekarungan based on the Five Accuracy Principles, analyze the gap between farmers' expectations and perceptions using the Importance Performance Analysis (IPA) approach, and examine the institutional role of Subak in supporting program implementation. This study is expected to provide policy recommendations for a more effective, participatory, and sustainable agricultural subsidy system.

Methods

This study employed a **mixed-method approach**, integrating quantitative and qualitative techniques to comprehensively evaluate the effectiveness of the Rice Seed Subsidy Program in Subak Pekarungan, Mengwi District, Badung Regency, Bali, Indonesia. The research was conducted purposively in Subak Pekarungan due to its status as one of the largest recipients of subsidized rice seed assistance in Badung Regency and its active institutional farming system. The study population consisted of 410 registered farmers, from which 81 respondents were selected using **stratified random sampling** based on the Slovin formula with a 10% margin of error. Primary data were collected through structured questionnaires, interviews, and field documentation, while secondary data were obtained from government reports, statistical publications, and relevant literature.

The effectiveness of the subsidy program was evaluated using the **Five Accuracy Principles**, namely *right type*, *right quantity*, *right place*, *right price*, and *right timing*, measured through multiple indicators assessed using a five-point Likert scale for both farmers' expectations (*importance*) and perceptions (*performance*). Data analysis was conducted using **Importance Performance Analysis (IPA)** and **gap analysis** to identify discrepancies between expected and perceived program performance. Furthermore, Cartesian quadrant mapping was applied to classify priority areas for improvement, maintenance, or intervention in the implementation of the rice seed subsidy program.

Result and Discussion

Effectiveness of the Rice Seed Subsidy Program Based on the Five Accuracy Principles

The effectiveness of the Rice Seed Subsidy Program in Subak Pendarungan was evaluated using the **Five Accuracy Principles**, namely *right type*, *right quantity*, *right place*, *right price*, and *right timing*. The evaluation was conducted by comparing farmers' expectations (*importance*) and perceived program performance (*performance*) through the Importance Performance Analysis (IPA) approach. The results indicate that, overall, the program has been implemented in a relatively effective manner; however, it has not entirely fulfilled farmers' expectations. This finding suggests that while the subsidy program has generated tangible benefits for rice farmers, several implementation aspects still require improvement, particularly those related to distribution governance, timeliness, and institutional responsiveness. In agribusiness systems, seed subsidies are not merely an input support mechanism but a strategic policy instrument influencing production efficiency, farming productivity, and food security resilience. Therefore, program effectiveness should be assessed not only from the availability of subsidized seeds but also from the extent to which the assistance meets farmers' actual production needs.

Table 1. Effectiveness of the Rice Seed Subsidy Program Based on the Five Accuracy Principles

Dimension	Importance	Performance	Gap
Right Type	4.98	4.96	-0.02
Right Quantity	4.81	4.68	-0.13
Right Place	4.88	4.81	-0.07
Right Price	4.85	4.70	-0.15
Right Timing	4.73	4.57	-0.16
Overall Average	4.85	4.74	-0.11

Primary Data, 2026

As shown in Table 1, the average *importance* score reached 4.85, while the *performance* score was 4.74, resulting in an overall negative gap of -0.11. Although the performance level can generally be categorized as good, the existence of a negative gap across all dimensions indicates that actual implementation remains below farmers' expectations. This finding suggests that the program has not failed; rather, its implementation quality still requires improvement to achieve greater alignment with farmers' needs and expectations. The absence of positive gaps further implies that no dimension has fully exceeded or met the expected standards perceived by beneficiaries.

Among the evaluated dimensions, right type demonstrated the strongest performance, with an *importance* score of 4.98, a *performance* score of 4.96, and the smallest gap (-0.02). Farmers highly appreciated the suitability of seed varieties, seed quality, and the availability of certified seeds distributed under the program. This finding indicates that seed quality constitutes the program's principal strength, reflecting farmers' confidence that the distributed varieties are

compatible with local agroecological conditions and cultivation practices. Such results are consistent with prior studies emphasizing that farmers' trust in agricultural inputs is strongly influenced by seed quality, varietal suitability, and certification status, as these attributes directly affect productivity and farming outcomes. Therefore, maintaining seed quality and varietal relevance should remain a strategic priority for sustaining program legitimacy among farmers.

The right quantity dimension recorded a relatively larger gap (-0.13), suggesting that the quantity of subsidized seeds distributed has not fully matched farmers' actual land requirements. Although farmers perceived seed quantity as highly important (*importance* = 4.81), the *performance* score remained lower (4.68), indicating concerns regarding allocation accuracy and adequacy. In practical terms, insufficient seed allocation may force farmers to purchase additional seeds independently, thereby reducing the intended economic benefits of the subsidy scheme. This result implies that weaknesses in program implementation may stem from inaccuracies in land-based needs assessments and distribution planning. Consequently, improving the accuracy of beneficiary data and land area verification should become a priority to ensure more precise allocation of subsidized seeds.

Regarding right place, the findings indicate relatively positive performance, reflected in an *importance* score of 4.88, a *performance* score of 4.81, and a relatively small gap (-0.07). Farmers generally considered distribution points to be accessible and appropriately located near agricultural production areas. Nevertheless, some respondents expressed concerns regarding the clarity and timeliness of distribution-related information. This finding suggests that effective distribution should not be understood solely in terms of geographical accessibility but also in terms of communication effectiveness and information transparency. Thus, enhancing communication mechanisms and distribution-related socialization may further strengthen the effectiveness of this dimension.

The right price dimension produced a gap of -0.15, indicating that although subsidized seeds were perceived as more affordable, farmers still faced indirect economic burdens such as transportation and administrative costs. This finding demonstrates that the effectiveness of agricultural subsidies should not be assessed solely based on official subsidized prices but also on the effective price ultimately borne by farmers. Therefore, improving cost efficiency throughout the distribution chain remains essential to maximize the program's economic benefits and ensure equitable access to subsidized seeds.

Among all dimensions, right timing emerged as the weakest aspect of program implementation, exhibiting the largest negative gap (-0.16). Delays in seed distribution, uncertainty regarding supply continuity, and limited responsiveness to farmers' complaints reduced the effectiveness of the subsidy scheme, particularly because rice cultivation depends heavily on synchronization with planting seasons and irrigation schedules. Within the traditional Subak system, planting schedules are collectively coordinated to optimize irrigation and pest management. Consequently, delays in seed availability may disrupt planting synchronization and diminish the practical benefits of subsidized assistance. This finding highlights the urgent need for better synchronization between distribution

schedules, local planting calendars, and institutional coordination among government agencies, seed providers, and Subak management.

Farmers' Expectations and Perceptions Based on Importance Performance Analysis (IPA)

To further evaluate the effectiveness of the Rice Seed Subsidy Program, this study employed Importance Performance Analysis (IPA) to examine the discrepancy between farmers' expectations (*importance*) and perceived implementation performance (*performance*). IPA was used to identify priority areas for program improvement by mapping attributes into a Cartesian quadrant diagram according to their relative importance and performance. The analysis revealed that the average *importance* score was 4.85, while the average *performance* score was 4.74, indicating that although farmers generally perceived the program positively, implementation performance remained slightly below expectations. The overall negative gap across all attributes confirms that the program has not yet fully achieved the expected service quality perceived by farmers.

Table 2. IPA Quadrant Classification of Rice Seed Subsidy Program Attributes

Quadrant	Interpretation	Main Attributes
Quadrant I (<i>Concentrate Here</i>)	High importance, low performance	None
Quadrant II (<i>Keep Up the Good Work</i>)	High importance, high performance	Seed variety suitability, seed quality, certified seed availability, varietal suitability to farmer preferences, accessibility of distribution points, alignment of distribution with agricultural areas, seed storage conditions, affordability of subsidized prices, pricing fairness
Quadrant III (<i>Low Priority</i>)	Relatively lower performance and importance	Allocation adequacy, calculation accuracy, fulfillment ratio of seed needs, clarity of distribution information, cost efficiency, farmers' purchasing power, timeliness of distribution, supply continuity, institutional responsiveness
Quadrant IV (<i>Possible Overkill</i>)	Low importance, high performance	None

Primary Data, 2026

The quadrant mapping demonstrates that program attributes were distributed only in Quadrant II and Quadrant III, while no attributes were positioned in Quadrants I and IV. This finding is particularly important because it suggests that no attribute was categorized as highly important with critically poor performance. However, the absence of Quadrant I attributes should not be interpreted as evidence of perfect implementation, as all attributes still exhibited negative gaps, meaning that actual program performance consistently remained

below farmers' expectations. Instead, the results indicate that the program has functioned relatively well but still requires systematic improvements across several implementation aspects.

Attributes classified under Quadrant II (Keep Up the Good Work) represent the primary strengths of the program and should therefore be maintained. These attributes include the suitability of seed varieties to local land conditions, seed quality, certified seed availability, accessibility of distribution points, and subsidized price affordability. Farmers considered these dimensions highly important and simultaneously perceived program performance as relatively satisfactory. In particular, the strong performance of seed quality-related attributes indicates that the subsidy program has successfully provided agricultural inputs that align with local farming preferences and agroecological conditions. Likewise, the accessibility of distribution points demonstrates that the spatial distribution system has been organized effectively to reduce physical barriers faced by farmers in accessing subsidized seeds. Nevertheless, despite their relatively strong performance, several attributes within Quadrant II still showed slight negative gaps, suggesting that even well-performing components remain below the ideal standards expected by farmers. Therefore, these strengths should be preserved while simultaneously undergoing incremental improvements. In contrast, Quadrant III (Low Priority) contained attributes associated with the program's relative weaknesses, particularly regarding allocation adequacy, calculation accuracy, continuity of seed supply, timeliness of distribution, information transparency, and institutional responsiveness. Although classified as relatively lower priority within the IPA framework, these attributes should not be interpreted as unimportant, since the overall *importance* scores across all indicators remained high. Instead, Quadrant III highlights aspects where implementation performance lags behind better-performing dimensions. The findings indicate that challenges primarily lie in distribution governance and institutional service quality, rather than in the technical quality of seeds themselves. For example, delayed distribution schedules and supply discontinuity may reduce the practical usefulness of subsidized seeds, particularly within rice farming systems that depend on synchronized planting cycles. Similarly, weak responsiveness to complaints and limited dissemination of distribution information suggest deficiencies in communication and service mechanisms between implementing institutions and farmers.

The findings also imply that the principal issue of the subsidy program is not related to the fundamental design of the policy, but rather to the quality of implementation mechanisms. The absence of attributes in Quadrant IV further confirms that no program resources appear to be excessively allocated to aspects perceived as less important by farmers. Therefore, policy improvements should focus on strengthening implementation quality through more accurate beneficiary data collection, improved coordination of distribution schedules with local planting calendars, enhanced information dissemination, and more responsive institutional mechanisms for addressing farmers' concerns. In this regard, the IPA findings provide practical guidance for policymakers to prioritize improvements without altering the core objectives of the rice seed subsidy policy.

The Role of Subak Institutions in the Implementation of the Rice Seed Subsidy Program

The findings demonstrate that the institutional role of the traditional Balinese Subak system constitutes an essential component in determining the effectiveness of the Rice Seed Subsidy Program in Subak Penarungan. Within the Balinese agricultural context, Subak functions not only as an irrigation management system but also as a socio-cultural agricultural institution responsible for organizing collective farming activities, coordinating information exchange, regulating planting schedules, and facilitating social cohesion among farmers. Consequently, the effectiveness of government agricultural programs at the local level is strongly influenced by the capacity of Subak institutions to mediate between policy implementation and farmers' actual needs. The findings reveal that Subak plays a significant role in facilitating internal coordination, farmer registration, distribution point determination, and communication regarding subsidized seed distribution. Through its collective decision-making mechanism (*paruman*), Subak enables farmers to participate in discussions regarding planting schedules, varietal preferences, and agricultural input requirements, thereby enhancing local acceptance of the subsidy program.

The positive contribution of Subak institutions is particularly evident in dimensions related to right type and right place, where farmers reported relatively high levels of satisfaction. This finding suggests that the social legitimacy, organizational structure, and local knowledge embedded within Subak contribute positively to aligning distributed seed varieties with local agroecological conditions and ensuring that distribution points remain geographically accessible. In this context, Subak functions as an intermediary institution capable of translating government policies into locally appropriate implementation practices. These findings support previous studies emphasizing that collective farmer institutions strengthen coordination capacity, improve information sharing, and enhance the effectiveness of agricultural interventions among smallholder farmers. Therefore, the presence of Subak can be viewed as a strategic local institutional asset that increases the social acceptance and contextual suitability of agricultural subsidy programs.

Despite these institutional strengths, the study also found that the role of Subak has not yet been fully optimized in supporting all dimensions of program implementation. Several weaknesses remain evident, particularly in dimensions related to right quantity, right timing, clarity of distribution information, and responsiveness to farmers' complaints. These limitations indicate that although Subak possesses strong social capital and close relationships with farmers, its administrative and managerial capacities still require improvement. Weaknesses in beneficiary data updating, demand estimation, communication effectiveness, and complaint management suggest that institutional effectiveness is constrained not by social legitimacy but by technical and administrative limitations. In practice, inaccurate seed allocation and delayed distribution schedules may partly reflect the limited institutional capacity to synchronize administrative procedures with farmers' planting calendars and actual land-based requirements.

Farmer participation also emerged as an important determinant of program effectiveness. The findings indicate that farmers' involvement in seed requirement assessments, varietal preference discussions, monitoring processes, and evaluation mechanisms contributes positively to the implementation process. In the Subak system, farmer participation is institutionalized through deliberative forums, allowing members to collectively discuss agricultural issues and provide feedback regarding program implementation. However, participation in practical implementation remains uneven, particularly in communicating real seed requirements and reporting field-level constraints. This finding suggests that participatory governance should be strengthened to ensure that subsidy programs are not only administratively accurate but also technically relevant to farmers' actual production needs.

From an agribusiness perspective, these findings confirm that the effectiveness of agricultural subsidy programs is not solely determined by policy design or input provision but is also shaped by the institutional quality of local organizations responsible for implementation. Therefore, strengthening the institutional role of Subak should become a strategic priority in future subsidy policies. Capacity-building efforts may include improving administrative management, beneficiary data systems, complaint-handling mechanisms, monitoring procedures, and institutional responsiveness. By strengthening these capacities, Subak can function not only as a traditional irrigation institution but also as an active policy implementation partner capable of ensuring that subsidized seed distribution becomes more responsive, participatory, and aligned with local farming realities.

Constraints and Opportunities for Improving the Effectiveness of the Rice Seed Subsidy Program

The findings indicate that the effectiveness of the Rice Seed Subsidy Program in Subak Penarungan remains constrained by several interconnected challenges, which can be classified into technical, institutional, and participatory constraints. First, technical constraints are reflected in inaccuracies regarding seed quantity allocation, limited supply continuity, inefficiencies in distribution-related costs, and delays in seed delivery relative to planting schedules. These findings indicate that the program's principal weaknesses are not associated with seed availability itself but rather with the quality of distribution governance. In rice farming systems, delayed seed delivery may disrupt planting synchronization, irrigation scheduling, and overall production efficiency, particularly in farming environments that rely heavily on coordinated agricultural calendars. Therefore, technical weaknesses primarily stem from mismatches between distribution planning and farmers' actual production cycles.

Second, institutional constraints remain evident in limited responsiveness to farmers' complaints, uneven dissemination of distribution information, and insufficient integration between local farming realities and administrative procedures. Although Subak possesses strong social legitimacy and organizational cohesion, the institution still faces challenges in administrative adaptation and service responsiveness. The findings suggest that local institutions have not yet fully translated their social strengths into effective governance capacities capable of supporting precise data collection, efficient

communication, and timely intervention during implementation challenges. Consequently, the effectiveness of subsidy implementation depends not only on policy design but also on the administrative and managerial capabilities of institutions responsible for program coordination.

Third, participatory constraints were identified through the limited involvement of farmers in communicating actual seed requirements, varietal preferences, and program evaluations. Although farmers actively participate in collective meetings within the Subak system, practical participation in monitoring and feedback mechanisms remains relatively limited. This condition may reduce the ability of implementing institutions to accurately capture field-level needs, resulting in discrepancies between subsidized seed allocation and actual agricultural demands. Therefore, participatory mechanisms should be strengthened to ensure that farmers are not merely beneficiaries of government assistance but active contributors to program planning and evaluation.

Despite these challenges, the study also identified significant opportunities for improving program effectiveness. First, the strong institutional foundation of the traditional Subak system represents an important social asset capable of strengthening coordination, legitimacy, and local acceptance of agricultural interventions. Second, farmers demonstrated high appreciation toward seed quality and accessibility of distribution locations, indicating that the program's fundamental design remains relevant and beneficial. Third, opportunities exist to improve data accuracy regarding seed requirements, synchronize distribution schedules with local planting calendars, simplify distribution costs, and enhance communication mechanisms between stakeholders. These findings suggest that program weaknesses are primarily associated with implementation quality rather than policy failure.

From a policy perspective, improving the effectiveness of the Rice Seed Subsidy Program requires a shift toward more responsive, participatory, and data-driven governance mechanisms. Priority interventions should include updating land-based beneficiary data, synchronizing seed distribution schedules with local planting seasons, strengthening information systems, reducing transaction and transportation costs, and improving institutional responsiveness through better complaint-handling mechanisms. Furthermore, empowering Subak institutions as active implementation partners may significantly enhance distribution accuracy and accountability at the local level. Therefore, rice seed subsidies should not merely function as a price reduction instrument but also as a strategic mechanism for strengthening local agribusiness systems, institutional resilience, and sustainable food production.

Conclusion

This study evaluated the effectiveness of the Rice Seed Subsidy Program in Subak Pinarungan, Mengwi District, Badung Regency, using the Five Accuracy Principles (*right type, quantity, place, price, and timing*), while also examining the gap between farmers' expectations and perceptions through Importance Performance Analysis (IPA) and assessing the role of Subak institutions in program implementation. The findings indicate that the program has generally

been implemented effectively and has provided tangible benefits to farmers; however, it has not fully met farmers' expectations, as evidenced by the overall negative gap between *importance* and *performance* scores.

Among the evaluated dimensions, right type emerged as the strongest aspect of implementation, reflecting farmers' positive perceptions regarding seed quality, certified seed availability, and varietal suitability to local farming conditions. Conversely, right timing represented the weakest dimension, primarily due to delays in distribution schedules, discontinuity of seed supply, and limited responsiveness to farmers' complaints. Meanwhile, dimensions related to right quantity, right place, and right price demonstrated relatively good performance but still revealed implementation gaps associated with allocation accuracy, information dissemination, cost efficiency, and affordability at the farm level.

The IPA findings further revealed that program strengths were concentrated in attributes associated with seed quality, varietal suitability, accessibility of distribution points, and affordability of subsidized prices, whereas weaknesses were primarily related to allocation adequacy, timeliness, continuity of supply, information clarity, and institutional responsiveness. Although no attributes were classified under critical-priority categories, all attributes demonstrated negative gaps, suggesting that implementation improvements remain necessary across multiple dimensions.

Furthermore, the study confirms the important role of the traditional Subak institution in facilitating coordination, communication, and local implementation of agricultural policies. However, despite its strong social legitimacy, Subak still faces administrative and managerial limitations in supporting data accuracy, complaint handling, and timely distribution management. Therefore, strengthening institutional capacity and participatory governance mechanisms remains essential for improving the long-term effectiveness and sustainability of the rice seed subsidy program.

Managerial Implications

The findings of this study provide several practical implications for policymakers and agricultural stakeholders responsible for implementing rice seed subsidy programs. First, improving beneficiary data accuracy through land-based verification systems is essential to ensure that seed allocation corresponds more precisely to farmers' actual cultivation needs. Periodic updating of beneficiary databases involving Subak administrators and local farmer representatives may reduce inaccuracies in quantity distribution.

Second, improving distribution timeliness should become a primary managerial priority. Since rice cultivation is highly dependent on synchronized planting schedules, government agencies and seed distributors should coordinate distribution timelines with local agricultural calendars established within the Subak system. Earlier procurement planning and pre-season coordination mechanisms may reduce delays and improve program responsiveness.

Third, strengthening institutional communication and information systems is necessary to improve farmers' access to distribution-related information and complaint-handling mechanisms. Establishing transparent communication channels involving Subak leaders, local agricultural officers, and farmer representatives may increase trust, transparency, and responsiveness in subsidy implementation.

Finally, enhancing the institutional role of Subak through capacity-building programs in administrative management, monitoring, beneficiary data collection, and participatory planning may improve program governance at the local level. In this regard, rice seed subsidies should not merely function as a price-support mechanism but also as an integrated policy instrument aimed at strengthening local agribusiness resilience, institutional collaboration, and sustainable food security.

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