

## RESEARCH PAPER

## OPEN ACCESS

**Perceived social and economic impacts of the rice production project among beneficiary farmers in Agusan del Norte, Philippines****Rosalina A. Sagocsoc\****Caraga State University, College of Agriculture and Agri-Industries, Caraga, Philippines***Key words:** Rice project, Agricultural development, Financial support, Farmer, Demographics, Socioeconomic profile, Rural livelihood, Farming communities, Government assistance, Project evaluation**Received:** June 01, 2026    **Accepted:** June 15, 2026    **Published:** June 19, 2026**DOI:** <https://dx.doi.org/10.12692/ijb/28.6.155-168>**ABSTRACT**

Rice production remains fundamental to food security, rural livelihoods, and agricultural development in the Philippines. However, the effectiveness of government-supported rice development programs depends not only on financial investments but also on beneficiaries' socioeconomic characteristics, perceptions, satisfaction, and the resulting social and economic outcomes. This study evaluated the implementation and perceived impacts of the Rice Production Project among farmer beneficiaries in RTR, Buenavista, and Cabadbaran, Agusan del Norte. A descriptive survey research design was employed involving 209 farmer beneficiaries selected from the project areas. Primary data were collected using a structured questionnaire and analyzed using descriptive statistics, including frequency, percentage, and weighted mean. The respondents were predominantly 41 years and older (82.3%), married (78.5%), female (54.5%), high school graduates (48.8%), and primarily dependent on farming (98.1%) as their main source of income. Beneficiaries demonstrated highly positive perceptions of project implementation, with an overall weighted mean of 3.72, indicating that the project was very well implemented. They also expressed a high level of satisfaction with the program (overall weighted mean= 3.47), reflecting generally satisfactory service delivery. Furthermore, respondents perceived the project to have a very high social impact (overall weighted mean= 3.64) by enhancing farming confidence, household food security, and community support, as well as a very high economic impact (overall weighted mean= 3.62) through reduced dependence on high-interest loans, improved access to agricultural inputs, and greater financial stability. The findings demonstrate that the Rice Production Project has made a meaningful contribution to improving the well-being and resilience of participating farmers. Strengthening market linkages, improving service efficiency, and expanding youth participation are recommended to enhance the long-term sustainability and effectiveness of future agricultural development programs.

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## INTRODUCTION

Agriculture remains one of the most important sectors of the Philippine economy, serving as a major source of employment, rural livelihood, and food security. Among agricultural commodities, rice is the country's staple food and a strategic crop that directly influences national food availability, household welfare, and economic stability. Despite its importance, the Philippine rice sector continues to face numerous challenges, including rising production costs, limited access to affordable financing, fluctuating market prices, climate-related risks, and declining participation of younger generations in farming. These constraints reduce farm profitability and threaten the long-term sustainability of rice production, particularly among smallholder farmers who constitute the majority of rice producers (Food and Agriculture Organization [FAO], 2022; Philippine Statistics Authority [PSA], 2024).

To address these challenges, the Philippine government has implemented various agricultural support programs that provide financial assistance, production inputs, extension services, and institutional support to improve farmers' productivity and livelihoods. Such interventions are intended not only to increase agricultural output but also to strengthen farmers' resilience by improving access to resources, enhancing technical knowledge, and reducing financial vulnerability. Previous studies have shown that well-designed agricultural support programs can improve farm productivity, household income, technology adoption, and food security when implemented effectively and supported by strong extension and institutional services (Kassem *et al.*, 2021; FAO, 2023).

Beyond financial assistance, contemporary agricultural development recognizes that successful interventions should address the broader socioeconomic conditions of farming households. Farmers' age, educational attainment, household composition, gender participation, and primary livelihood influence their capacity to adopt improved

farming practices, participate in extension programs, and benefit from development initiatives. Likewise, beneficiaries' perceptions of project implementation, satisfaction with services received, and perceived social and economic impacts provide valuable indicators of program effectiveness that extend beyond conventional measures of production and income. Positive beneficiary perceptions often reflect transparency, accountability, effective communication, and sustained community participation, all of which are essential for the long-term success of agricultural development programs (FAO, 2023; Kassem *et al.*, 2021).

The Rice Production Project implemented in the municipalities of RTR, Buenavista, and Cabadbaran, Agusan Del Norte represents one such initiative designed to strengthen rice production through financial assistance, institutional support, and farmer-oriented interventions. Between 2021 and 2024, the project experienced a substantial increase in financial investment, demonstrating a strong commitment by implementing agencies to improving agricultural productivity and supporting rural livelihoods. However, the effectiveness of such investments cannot be adequately evaluated solely on the basis of financial allocation. Equally important is understanding whether the intended beneficiaries perceive the program as accessible, well implemented, and capable of improving their social and economic well-being.

Although numerous studies have examined the effects of agricultural development programs on crop productivity and farm income, relatively few have simultaneously evaluated beneficiary socioeconomic characteristics, perceptions of project implementation, satisfaction with program delivery and perceived social and economic impacts within a single analytical framework at the local government level. Moreover, empirical evidence assessing these dimensions among beneficiaries of the Rice Production Project in Agusan Del Norte remains limited. This lack of integrated assessment represents an important research gap because understanding farmers' experiences and perceptions provides valuable insights

into the strengths and limitations of development interventions and helps identify areas requiring policy improvement. Addressing this gap is essential for designing evidence-based agricultural programs that are not only technically effective but also socially responsive and economically sustainable.

Against this background, the present study evaluates the Rice Production Project implemented in RTR, Buenavista, and Cabadbaran, Agusan Del Norte by examining the socioeconomic profile of its beneficiaries together with their perceptions of project implementation, level of satisfaction, and perceived social and economic impacts. The findings are expected to provide evidence that can assist policymakers, local government units, agricultural extension agencies, and development practitioners in strengthening future agricultural support programs and improving the effectiveness of interventions aimed at enhancing the livelihoods and resilience of smallholder rice farmers.

The study was conducted to evaluate the implementation and perceived outcomes of the Rice Production Project among farmer beneficiaries in RTR, Buenavista, and Cabadbaran, Agusan del Norte. Specifically, it aimed to:

1. To describe the socioeconomic profile of the project beneficiaries in terms of age, sex, civil status, educational attainment, and primary source of income.
2. To assess beneficiaries' perceptions of the implementation of the Rice Production Project based on program awareness, understanding of project objectives, eligibility, responsibilities, and household support.
3. To determine the level of beneficiary satisfaction with the services, information dissemination, and overall implementation of the Rice Production Project.
4. To evaluate the perceived social impact of the Rice Production Project on beneficiaries' well-being, farming confidence, food security, cooperative participation, and community support.
5. To assess the perceived economic impact of the Rice Production Project in terms of financial

stability, access to production inputs, labor utilization, debt reduction, and future farming investment.

6. To provide evidence-based recommendations for improving the implementation, sustainability, and long-term effectiveness of government-supported rice production programs.

## MATERIALS AND METHODS

### Study area

The study was conducted in the municipalities of Remedios T. Romualdez (RTR), Buenavista, and the City of Cabadbaran in Agusan Del Norte, Caraga Region, Philippines. These localities are among the major rice-producing areas in the province and have been beneficiaries of the Rice Production Project, a government-supported agricultural development initiative designed to improve rice productivity and strengthen the livelihoods of smallholder farmers through financial assistance, agricultural support services, and institutional interventions. The project is implemented in collaboration with local government units, agricultural extension personnel, and farmers' cooperatives to enhance agricultural productivity and rural development.

### Research design

This study employed a descriptive cross-sectional survey research design, which is appropriate for describing the characteristics, perceptions, and experiences of a defined population at a specific point in time. The design enabled the assessment of beneficiaries' socioeconomic characteristics, perceptions of project implementation, level of satisfaction, and perceived social and economic impacts of the Rice Production Project. Descriptive survey methods are widely used in program evaluation because they provide reliable information on participants' experiences and perceptions without manipulating the study environment (Creswell and Creswell, 2018).

### Respondents and sampling procedure

The respondents consisted of 209 beneficiaries of the Rice Production Project from the municipalities of RTR, Buenavista, and Cabadbaran.

Eligible respondents were farmers officially enrolled in the project during the implementation period and actively engaged in rice farming. Because the study specifically sought to evaluate the experiences of project beneficiaries, respondents were selected using purposive sampling, whereby only individuals who had directly participated in the Rice Production Project were included in the survey. This approach ensured that the collected information accurately reflected beneficiaries' experiences with the program.

### Research instrument

Primary data were collected using a structured questionnaire developed to evaluate four major aspects of the Rice Production Project:

1. Respondents' socioeconomic profile (age, sex, civil status, educational attainment, and primary source of income);
2. Beneficiaries' perceptions of project implementation;
3. Level of satisfaction with the project; and
4. Perceived social and economic impacts of the intervention.

The perception, satisfaction, social impact, and economic impact sections consisted of statements measured using a four-point Likert scale, where higher scores indicated more favorable responses. The instrument was designed to capture beneficiaries' overall assessment of the project's implementation and its contributions to their livelihoods.

Before data collection, the questionnaire was reviewed by agricultural and research experts to ensure its content validity and clarity. Necessary revisions were incorporated based on their recommendations to improve the consistency and comprehensibility of the survey instrument.

### Data collection procedure

Permission to conduct the study was obtained from the appropriate local authorities and project implementers before field data collection commenced. The questionnaires were personally

administered to the respondents by the researchers with the assistance of local agricultural personnel when necessary. The objectives of the study were explained to all participants, and informed consent was obtained prior to participation. Respondents were assured that their responses would remain confidential and would be used solely for academic and research purposes.

### Data analysis

The collected data were encoded, verified, and analyzed using descriptive statistical techniques. Frequency and percentage were used to summarize the respondents' socioeconomic characteristics. Weighted mean was employed to evaluate beneficiaries' perceptions of project implementation, level of satisfaction, perceived social impact, and perceived economic impact.

The weighted mean values were interpreted using the corresponding descriptive scales adopted in the questionnaire. For the perception, social impact, and economic impact indicators, weighted mean scores ranging from 3.50 to 4.00 were interpreted as Strongly Agree, while lower ranges followed the corresponding verbal interpretations provided in the survey instrument. Similarly, satisfaction ratings were interpreted according to the predefined scale, where higher mean values represented greater levels of satisfaction. The use of descriptive statistics was considered appropriate because the study primarily aimed to describe respondents' characteristics and summarize their perceptions regarding the implementation and outcomes of the Rice Production Project rather than to test causal relationships or hypotheses.

### Ethical considerations

The study adhered to fundamental ethical principles governing research involving human participants. Participation was entirely voluntary, and respondents were informed of the objectives of the study before data collection. Informed consent was obtained from each participant, and respondents were assured that they could decline participation or

withdraw from the study at any time without consequence. Personal identities were not recorded in the dataset, and all information obtained was treated with strict confidentiality and used exclusively for research purposes.

## RESULTS AND DISCUSSION

### Respondents' socioeconomic profile

The socioeconomic characteristics of the 209 beneficiaries are presented in Table 1. The age distribution indicates that the Rice Production Project primarily served middle-aged and older farmers. The largest proportion of respondents belonged to the 41–50 years age group (59 respondents, 28.2%), followed closely by those aged 61 years and above (57 respondents, 27.3%) and 51–60 years (56 respondents, 26.8%). In contrast, only 7 respondents (3.4%) were between 21 and 30 years, while 30 respondents (14.4%) were aged 31–40 years. Collectively, more than four-fifths of the beneficiaries (82.3%) were at least 41 years old, demonstrating that rice farming in the study area remains largely dependent on an ageing farming population (Table 1).

The predominance of older farmers reflects a demographic pattern widely reported in Philippine agriculture, where younger generations increasingly seek employment outside the agricultural sector because of higher educational aspirations, urban migration, and the perceived risks associated with farming. An ageing farming workforce may constrain long-term agricultural productivity by slowing the adoption of new technologies and reducing labor availability. These findings highlight the importance of developing youth-oriented agricultural programs, entrepreneurship initiatives, and incentive mechanisms that encourage younger individuals to participate in rice production. Similar concerns regarding the ageing agricultural workforce have been documented by the Food and Agriculture Organization (FAO, 2023) and studies on farmer demographics in Southeast Asia, which emphasize generational renewal as a prerequisite for sustainable agricultural development.

**Table 1.** Profile of the respondents

| Profile Variables             | f   | %     |
|-------------------------------|-----|-------|
| <b>Age</b>                    |     |       |
| 21 – 30 yrs old               | 7   | 3.4   |
| 31 – 40 yrs old               | 30  | 14.4  |
| 41 - 45 yrs old               | 59  | 28.2  |
| 51 – 60 yrs old               | 56  | 26.8  |
| 61 yrs old and above          | 57  | 27.3  |
| Total                         | 209 | 100.0 |
| <b>Civil status</b>           |     |       |
| Single                        | 16  | 7.7   |
| Married                       | 164 | 78.5  |
| Widowed                       | 25  | 12.0  |
| Separated                     | 4   | 1.9   |
| Total                         | 209 | 100.0 |
| <b>Sex</b>                    |     |       |
| Male                          | 95  | 45.5  |
| Female                        | 114 | 54.5  |
| Total                         | 209 | 100.0 |
| <b>Educational attainment</b> |     |       |
| Elementary                    | 39  | 18.7  |
| High school graduate          | 102 | 48.8  |
| College graduate              | 33  | 15.8  |
| Vocational                    | 14  | 6.7   |
| Post graduate                 | 8   | 3.8   |
| Others (college level)        | 13  | 6.2   |
| Total                         | 209 | 100.0 |
| <b>Source of income</b>       |     |       |
| Business/Enterprise           | 4   | 1.9   |
| Farming                       | 205 | 98.1  |
| Total                         | 209 | 100.0 |

With respect to civil status, the majority of respondents were married (164 respondents, 78.5%), followed by widowed (25 respondents, 12.0%), single (16 respondents, 7.7%), and separated (4 respondents, 1.9%) (Table 1). The predominance of married beneficiaries suggests that rice farming is primarily undertaken within family households, where agricultural decisions, labor allocation, and income utilization are often shared among household members. Family-based farming systems generally provide greater labor availability and facilitate knowledge transfer between generations, contributing to farm continuity and resilience. The presence of widowed respondents, many of whom are likely older farmers, further illustrates the need for agricultural support programs that are responsive to vulnerable household structures.

The sex distribution revealed a relatively balanced participation of both men and women, although female respondents (114, 54.5%) slightly

outnumbered male respondents (95, 45.5%) (Table 1). This finding demonstrates the active involvement of women in rice production and supports growing evidence that women contribute substantially to agricultural production, farm management, and household food security. In many farming communities, women increasingly participate not only in production activities but also in financial decision-making, farmer organizations, and project implementation. The relatively high representation of women among project beneficiaries indicates that the Rice Production Project reached both male and female farmers, thereby supporting more inclusive agricultural development. This observation is consistent with FAO (2023), which emphasizes that improving women's participation in agricultural programs contributes to greater household resilience, productivity, and food security.

Educational attainment showed that nearly half of the respondents were high school graduates (102 respondents, 48.8%), followed by those who had completed elementary education (39 respondents, 18.7%) and college education (33 respondents, 15.8%). Smaller proportions reported vocational education (14 respondents, 6.7%), college-level education without graduation (13 respondents, 6.2%), and postgraduate education (8 respondents, 3.8%) (Table 1). These findings indicate that most beneficiaries possess a basic educational foundation, although relatively few have completed higher education. Educational attainment plays a significant role in farmers' capacity to access technical information, adopt improved production technologies, and participate effectively in extension programs. Consequently, extension activities under the Rice Production Project should continue to employ practical, demonstration-based approaches that are appropriate for beneficiaries with varying educational backgrounds.

Regarding livelihood, the respondents were overwhelmingly dependent on agriculture. Farming was identified as the primary source of income by 205 respondents (98.1%), whereas only 4 respondents

(1.9%) reported business or enterprise as their principal livelihood (Table 1). This finding confirms that the project successfully reached its intended target population of active rice farmers whose livelihoods rely almost entirely on agricultural production. However, the limited diversification of income sources also indicates that these households remain highly vulnerable to production risks, fluctuating market prices, climate-related shocks, and pest outbreaks. Previous studies have shown that diversified rural income sources can enhance household resilience and reduce vulnerability to agricultural uncertainties, suggesting that complementary livelihood programs could further strengthen the long-term sustainability of project beneficiaries.

### **Recipients' perceptions of the rice production project**

The beneficiaries' perceptions of the Rice Production Project are presented in Table 2. Overall, respondents expressed a highly favorable assessment of the program, with an overall weighted mean of 3.72, corresponding to the verbal interpretation of "Strongly Agree" and indicating that the project was "Very Well Implemented." The consistently high ratings across all indicators suggest that beneficiaries perceived the project as transparent, well-organized, and responsive to their needs, reflecting effective implementation by the responsible agencies.

Among the evaluated indicators, the highest mean score was recorded for the statement, "I believe I am qualified to be a recipient of the Program" (WM= 3.80), followed closely by "I know my responsibilities as a recipient of the program" (WM= 3.78). These findings indicate that the eligibility criteria and beneficiary selection process were clearly communicated and generally perceived as fair. Furthermore, respondents demonstrated a strong understanding of their obligations under the program, suggesting that project orientation and beneficiary engagement activities were effective. Clearly defined eligibility requirements and participant responsibilities are essential components of successful agricultural development programs because they promote



transparency, strengthen accountability, and encourage beneficiaries to actively participate in project implementation.

High levels of agreement were also observed regarding respondents' household support for the project (WM= 3.70), understanding of the program objectives (WM= 3.67), and awareness of the program through dissemination activities (WM= 3.66) (Table 2). These results indicate that the project's information dissemination strategies effectively

reached the target beneficiaries and that participants clearly understood the goals and expected outcomes of the intervention. Effective communication before and during project implementation is widely recognized as a critical factor influencing beneficiary participation, trust, and eventual program success. When beneficiaries understand the objectives and expected benefits of an intervention, they are generally more willing to comply with program requirements and adopt recommended agricultural practices.

**Table 2.** Recipients' perceptions of the rice project

| Indicators                                                    | Wtd mean | Verbal description | Interpretation        |
|---------------------------------------------------------------|----------|--------------------|-----------------------|
| I am aware of the program as disseminated by the implementers | 3.66     | Strongly agree     | Very well implemented |
| I understand the objectives of the program.                   | 3.67     | Strongly agree     | Very well implemented |
| I believe I am qualified to be a recipient of the Program.    | 3.80     | Strongly agree     | Very well implemented |
| I know my responsibilities as a recipient of the program      | 3.78     | Strongly agree     | Very well implemented |
| My household is supportive of the project.                    | 3.70     | Strongly agree     | Very well implemented |
| Overall weighted mean                                         | 3.72     | Strongly agree     | Very well implemented |

Legend: 1.00-1.49-Strongly disagree/Very Poorly; 1.50-2.49-Disagree/Poorly implemented 2.50-3.49-Agree/Well implemented; 3.50-4.00-Strongly agree/Very well implemented

The uniformly high ratings across all perception indicators demonstrate that the Rice Production Project successfully established positive relationships with its intended beneficiaries. Beneficiaries not only perceived the project as accessible and transparent but also believed that they had been appropriately selected and adequately informed about their roles. Such positive perceptions are particularly important because beneficiary confidence influences participation, compliance with program guidelines, and long-term sustainability of development interventions.

These findings are consistent with previous research showing that effective communication, transparent beneficiary selection, and participatory implementation substantially improve the performance of agricultural extension and rural development programs. Farmers who clearly understand project objectives and perceive implementation processes as fair are generally more likely to participate actively, adopt recommended technologies, and sustain project gains over time. Similarly, satisfaction with institutional support and extension services has been identified as an important

determinant of farmers' continued engagement in government-supported agricultural programs (Kassem *et al.*, 2021). The Food and Agriculture Organization (FAO, 2023) likewise emphasizes that beneficiary participation, transparent governance, and inclusive communication are fundamental elements of successful agrifood development initiatives because they strengthen trust between implementing agencies and farming communities.

From a practical perspective, the consistently high perception scores indicate that the project has established a solid institutional foundation for achieving its long-term objectives. Maintaining this level of beneficiary confidence will require continued transparency in beneficiary selection, regular communication, and sustained technical support throughout future implementation phases. Although all indicators received very favorable ratings, continued investment in community engagement and participatory monitoring can further strengthen beneficiaries' sense of ownership and contribute to the long-term sustainability of the Rice Production Project.

**Table 3.** Respondents' level of satisfaction of the rice production project

| Indicators                                                                                                | Wtd mean | Verbal description | Interpretation        |
|-----------------------------------------------------------------------------------------------------------|----------|--------------------|-----------------------|
| How satisfied are you with the services provided?                                                         | 3.51     | Very satisfied     | Very well implemented |
| How satisfied are you with the waiting time in availing the services?                                     | 3.28     | Satisfied          | Well implemented      |
| How satisfied are you with the information and services provided by the government through this project?) | 3.51     | Very satisfied     | Very well implemented |
| How satisfied are you with the way this project is disseminated?                                          | 3.49     | Satisfied          | Well implemented      |
| How satisfied are you with the overall program of the Rice Production Project?                            | 3.57     | Very satisfied     | Very well implemented |
| Overall Weighted Mean                                                                                     | 3.47     | Satisfied          | Well implemented      |

Legend: 1.00-1.49- Not satisfied; 1.50-2.49-Moderately satisfied; 2.50-3.49-Satisfied; 3.50-4.00-Very satisfied

### Respondents' level of satisfaction with the rice production project

The respondents' level of satisfaction with various aspects of the Rice Production Project is presented in Table 3. Overall, the beneficiaries expressed a favorable evaluation of the project, with an overall weighted mean of 3.47, corresponding to the verbal description "Satisfied" and the interpretation "Well Implemented." Although the overall mean falls just below the threshold for the "Very Satisfied" category, the consistently positive ratings across all indicators indicate that the project effectively met the expectations of its beneficiaries and delivered services perceived as beneficial.

Among the individual indicators, respondents reported the highest level of satisfaction with the overall Rice Production Project (WM = 3.57), followed by satisfaction with the services provided (WM= 3.51) and the information and services delivered by the government through the project (WM= 3.51). These indicators were all rated "Very Satisfied," suggesting that beneficiaries appreciated both the quality of the services received and the project's overall contribution to their farming activities. The high ratings imply that the project's core interventions-including financial assistance, technical support, and government service delivery-were implemented in a manner that addressed the needs of participating farmers.

In contrast, relatively lower ratings were observed for waiting time in availing project services (WM= 3.28)

and the manner in which the project was disseminated (WM= 3.49). Although these indicators remained within the "Satisfied" category, they represent the lowest scores among all satisfaction measures. These findings suggest that while respondents generally valued the project, improvements in operational efficiency and communication strategies could further enhance beneficiary experiences. In particular, reducing administrative delays and strengthening information dissemination may increase accessibility and improve the overall quality of service delivery.

The pattern of responses demonstrates that beneficiaries distinguished between the quality of the project's core services and the efficiency of its implementation processes. The higher ratings assigned to service quality and overall program performance indicates that respondents recognized the project's positive contributions to their livelihoods. Conversely, the comparatively lower ratings related to waiting time and dissemination highlight opportunities for refining project management rather than shortcomings in the intervention itself. Such findings are common in publicly funded agricultural development programs, where administrative procedures and logistical constraints may influence beneficiary satisfaction despite positive program outcomes.

The satisfaction results presented in Table 3 are consistent with the positive perceptions reported in Table 2, reinforcing the conclusion that beneficiaries



viewed the Rice Production Project as both credible and beneficial. Farmers who perceive agricultural interventions as useful and responsive are generally more willing to continue participating in future programs, adopt recommended technologies, and cooperate with implementing agencies. Previous studies have shown that satisfaction with extension services is strongly associated with service quality, accessibility, timely delivery, and effective communication between farmers and service providers (Kassem *et al.*, 2021). Likewise, participatory and farmer-centered approaches have been shown to improve beneficiary satisfaction and strengthen the long-term effectiveness of agricultural development initiatives (Bernard *et al.*, 2008).

From a practical standpoint, the findings suggest that the Rice Production Project has successfully established a high level of beneficiary satisfaction, particularly regarding the quality of services and overall program implementation. Nevertheless, continuous improvement in administrative efficiency, scheduling of services, and dissemination of project

information would likely enhance farmers' experiences and further strengthen confidence in future agricultural interventions. Addressing these operational aspects could contribute to higher beneficiary retention, increased participation, and greater overall program effectiveness.

### Perceived social impact of the rice production project

The perceived social impact of the Rice Production Project is presented in Table 4. Overall, respondents rated the project's social outcomes very positively, with an overall weighted mean of 3.64, corresponding to the verbal description "Strongly Agree" and the interpretation "Very High Social Impact." The consistently high ratings across all ten indicators indicate that beneficiaries perceived the project as contributing not only to agricultural production but also to improved household well-being, social cohesion, and community resilience. These findings suggest that the benefits of the project extended beyond economic assistance to include broader improvements in beneficiaries' quality of life.

**Table 4.** Perceived level of social impact of the rice production project

| Indicators                                                                                                      | Wtd mean | Verbal description | Interpretation          |
|-----------------------------------------------------------------------------------------------------------------|----------|--------------------|-------------------------|
| This program has helped reduce the stress and challenges my family faced before the intervention.               | 3.70     | Strongly agree     | Very high social impact |
| I feel more confident in my farming practices with the resources provided by this financial assistance/support. | 3.69     | Strongly agree     | Very high social impact |
| I appreciate that the cooperative now processes our harvests, making it easier for me to sell my produce.       | 3.50     | Strongly agree     | Very high social impact |
| I am happy knowing my cooperative has a reliable buyer for my harvest at a fair price.                          | 3.34     | Strongly agree     | Very high social impact |
| I feel more connected to other farmers through the support provided by the cooperative.                         | 3.60     | Strongly agree     | Very high social impact |
| The agriculture services have motivated me to continue farming as a livelihood.                                 | 3.73     | Strongly agree     | Very high social impact |
| I believe that these programs have increased the overall food security in my household and my community.        | 3.73     | Strongly agree     | Very high social impact |
| I feel that I can rely on this program to support me during difficult times.                                    | 3.66     | Strongly agree     | Very high social impact |
| This program has made me more aware of the importance of timely loan repayments.                                | 3.73     | Strongly agree     | Very high social impact |
| I am grateful to our cooperative and government leaders for supporting marginalized farmers like me.            | 3.77     | Strongly agree     | Very high social impact |
| Overall Weighted Mean                                                                                           | 3.64     | Strongly agree     | Very high social impact |

Legend: 1.00-1.49-Strongly disagree/Very low; 1.50-2.49-Disagree/Low; 2.50-3.49-Agree/High; 3.50-4.00-Strongly agree/Very high

Among the evaluated indicators, the highest rating was recorded for gratitude toward the cooperative and government leaders for supporting marginalized farmers (WM= 3.77), reflecting beneficiaries' strong appreciation of institutional support and the inclusive nature of the intervention. High ratings were also observed for motivation to continue farming as a livelihood (WM= 3.73), improved household and community food security (WM= 3.73), and greater awareness of the importance of timely loan repayment (WM= 3.73). These findings indicate that the project strengthened beneficiaries' confidence in farming, reinforced responsible financial behavior, and enhanced their perception of household food security. Such outcomes are particularly important because sustained farmer motivation and responsible participation contribute to the long-term success of agricultural development programs.

Respondents likewise strongly agreed that the project reduced the stress and challenges experienced by their families before the intervention (WM= 3.70) and increased their confidence in farming practices through the resources provided (WM= 3.69). In addition, beneficiaries expressed confidence that they could rely on the program during difficult times (WM= 3.66) and reported feeling more connected to fellow farmers through cooperative support (WM= 3.60). These results suggest that the project enhanced both individual confidence and social capital within farming communities. Strengthening relationships among farmers through cooperatives can facilitate knowledge sharing, collective action, and mutual assistance, all of which contribute to greater resilience in rural communities.

Although all indicators received favorable ratings, relatively lower scores were recorded for appreciation that the cooperative now processes harvests to facilitate marketing (WM= 3.50) and particularly for having a reliable buyer offering fair prices for harvested rice (WM= 3.34). While the latter remained within the study's positive interpretation, it represented the lowest-rated social impact indicator. This finding suggests that, despite improvements in

production support and community engagement, beneficiaries continue to perceive challenges related to post-harvest marketing and market access. Reliable markets and fair pricing remain critical determinants of farmers' livelihoods, and strengthening these components could further enhance the social benefits generated by the project.

The findings presented in Table 4 demonstrate that the Rice Production Project has contributed substantially to beneficiaries' social well-being. Beyond providing financial assistance, the program appears to have strengthened farmers' confidence, encouraged continued engagement in agriculture, promoted responsible financial practices, and reinforced social support through cooperatives and government institutions. These outcomes reflect the multidimensional nature of agricultural development programs, where improvements in social capital and institutional trust are often essential for sustaining long-term livelihood improvements.

The results are consistent with previous studies demonstrating that agricultural support programs implemented through participatory approaches and farmer organizations generate benefits beyond increased production. Strengthened social networks, improved confidence, enhanced food security, and greater institutional trust have been identified as important outcomes of successful rural development interventions (FAO, 2023). Likewise, evidence indicates that cooperative participation improves farmers' access to information, resources, and collective marketing opportunities while enhancing resilience to economic and environmental shocks (Bernard *et al.*, 2008; Verhofstadt and Maertens, 2015). Although the present study focused on beneficiaries' perceptions, the uniformly high ratings suggest that the Rice Production Project has fostered a supportive environment that promotes both individual and community development.

From a practical perspective, maintaining these positive social outcomes will require continued investment in farmer organizations, extension

services, and community participation. At the same time, the relatively lower rating related to reliable market access highlights an opportunity for future program enhancement. Strengthening market linkages, expanding cooperative marketing arrangements, and improving value-chain coordination could increase farmers' confidence that their produce will be purchased at fair and stable prices. Such improvements would not only enhance household incomes but also reinforce the social gains already achieved through the project.

### Perceived economic impact of the rice production project

The respondents' perceptions of the economic impact of the Rice Production Project are

presented in Table 5. Overall, the project was perceived to have generated substantial economic benefits, as reflected by an overall weighted mean of 3.62, corresponding to the verbal description "Strongly Agree" and the interpretation "Very High Economic Impact." The consistently high ratings across the ten indicators demonstrate that beneficiaries viewed the project as an important source of financial support that enhanced farm productivity, improved household financial stability, and strengthened their capacity to sustain rice production. These findings indicate that the project's economic benefits extended beyond immediate financial assistance to include improved production capacity and greater confidence in managing future farming activities.

**Table 5.** Perceived level of economic impact of the rice production project

| Indicators                                                                                                            | Wtd mean | Verbal description | Interpretation            |
|-----------------------------------------------------------------------------------------------------------------------|----------|--------------------|---------------------------|
| This financial assistance has reduced my dependence on high-interest loans, making financing more sustainable for me. | 3.73     | Strongly agree     | Very high economic impact |
| The program has reduced my farming expenses, making it easier to manage my finances.                                  | 3.69     | Strongly agree     | Very high economic impact |
| I can buy better inputs, such as seeds and fertilizers, because of the financial support.                             | 3.71     | Strongly agree     | Very high economic impact |
| Having a stable buyer for my produce has increased my income from rice farming.                                       | 3.49     | Agree              | High economic impact      |
| This program has improved my overall financial outlook and given me greater security for future crop cycles'.         | 3.62     | Strongly agree     | Very high economic impact |
| This assistance has helped me pay for additional labor during planting and harvest seasons.                           | 3.73     | Strongly agree     | Very high economic impact |
| I feel more financially stable since receiving this interest-free loan.                                               | 3.65     | Strongly agree     | Very high economic impact |
| I can repay my debts more easily because of the fair prices offered by the cooperative.                               | 3.39     | Agree              | High economic impact      |
| I can set aside funds for future farming needs due to the loan.                                                       | 3.50     | Strongly agree     | Very high economic impact |
| I can set aside funds for future farming needs due to the loan.                                                       | 3.70     | Strongly agree     | Very high economic impact |
| Overall Weighted Mean                                                                                                 | 3.62     | Strongly agree     | Very high economic impact |

Legend: 1.00-1.49-Strongly disagree/Very low; 1.50-2.49-Disagree/Low; 2.50-3.49-Agree/High; 3.50-4.00-Strongly agree/Very high

Among the evaluated indicators, the highest mean scores (WM = 3.73) were recorded for three statements: reduced dependence on high-interest loans, assistance in hiring additional labor during planting and harvesting seasons, and increased awareness of the importance of timely loan repayment (Table 5). These findings suggest that the financial assistance provided through the project substantially eased farmers' liquidity constraints

and enabled them to finance essential production activities without relying on costly informal credit. Access to affordable financial support is particularly important for smallholder farmers, who often experience seasonal cash shortages that limit their ability to purchase inputs or employ sufficient labor during critical stages of crop production. By reducing reliance on high-interest borrowing, the project appears to have

strengthened beneficiaries' financial resilience and reduced their exposure to debt-related risks.

High levels of agreement were also observed for respondents' ability to purchase better-quality agricultural inputs such as seeds and fertilizers (WM= 3.71), set aside funds for future farming needs (WM= 3.70), reduce overall farming expenses (WM= 3.69), improve financial stability after receiving the interest-free loan (WM= 3.65), and enhance their overall financial outlook for future cropping cycles (WM= 3.62). These results indicate that the project facilitated productive investment rather than merely providing short-term financial relief. Access to improved farm inputs is widely recognized as a major determinant of agricultural productivity, while the ability to save resources for future production cycles contributes to greater household resilience and long-term farm sustainability. Collectively, these findings suggest that the Rice Production Project supported both immediate production needs and longer-term financial planning among beneficiary households.

Despite the overwhelmingly positive responses, two indicators received comparatively lower ratings. Respondents rated having a stable buyer that increased income from rice farming at WM= 3.49, corresponding to "Agree" and "High Economic Impact," while the ability to repay debts more easily because of fair prices offered by the cooperative received the lowest mean score (WM= 3.39), also interpreted as "High Economic Impact." Although these ratings remain positive, they suggest that market-related issues continue to constrain the full realization of the project's economic benefits. Access to reliable markets and stable prices is essential for translating increased production into higher household income. Consequently, while the project effectively strengthened production capacity and financial management, improvements in post-harvest marketing, cooperative marketing systems, and value-chain integration may be necessary to maximize farmers' economic returns.

The findings presented in Table 5 indicate that the Rice Production Project has generated meaningful economic

improvements for participating farmers by addressing several of the financial constraints commonly faced by smallholder producers. The perceived reduction in dependence on expensive credit, improved access to quality agricultural inputs, increased capacity to employ labor, and enhanced financial security collectively demonstrate that the project contributed to strengthening beneficiaries' productive capacity. Such improvements are consistent with the primary objectives of agricultural financial assistance programs, which seek to enhance farm profitability while reducing farmers' vulnerability to production and financial risks.

These findings are supported by previous studies demonstrating that access to affordable agricultural finance, production inputs, and institutional support significantly improves farm productivity and household welfare among smallholder farmers. The Food and Agriculture Organization (FAO, 2022) emphasizes that secure access to productive resources and financial services enables rural households to invest in agricultural production, improve resilience, and strengthen long-term livelihood security. Similarly, Abate *et al.* (2014) reported that participation in agricultural cooperatives improves farmers' market participation, access to production services, and economic performance, while Verhofstadt and Maertens (2015) found that cooperative membership contributes to higher household welfare through improved marketing opportunities and reduced transaction costs. The comparatively lower ratings for market access observed in the present study therefore highlight an area where additional institutional support could further enhance the project's overall economic effectiveness.

From a practical perspective, the results suggest that future phases of the Rice Production Project should continue providing affordable financial assistance while strengthening market-oriented interventions. Expanding cooperative marketing networks, establishing stronger linkages with institutional buyers, improving post-harvest facilities, and promoting value-added processing could enable

farmers to obtain more stable and remunerative prices for their produce. Such complementary interventions would help ensure that the gains achieved through improved production and financial supports are translated into sustained increases in farm income and long-term economic resilience.

## CONCLUSION

The findings of this study demonstrate that the Rice Production Project has been effectively implemented and has generated positive outcomes for its beneficiaries in RTR, Buenavista, and Cabadbaran, Agusan Del Norte. The respondents were predominantly middle-aged and older farmers, largely married, with high school education, and highly dependent on farming as their primary source of livelihood. These socioeconomic characteristics underscore the importance of sustaining agricultural support programs that address the needs of smallholder farming households while promoting greater participation among younger generations to ensure the long-term sustainability of rice production. The beneficiaries exhibited a high level of awareness and understanding of the project's objectives, eligibility requirements, and responsibilities, indicating that the program was implemented transparently and effectively communicated to its target population. The consistently favorable perceptions of project implementation were complemented by high levels of beneficiary satisfaction, particularly regarding the quality of services provided and the overall performance of the program. These findings suggest that the project's implementation mechanisms successfully established trust and encouraged active participation among recipient farmers.

The study further revealed that the Rice Production Project generated substantial perceived social and economic benefits. Beneficiaries reported increased confidence in farming, enhanced household food security, stronger support from cooperatives and government institutions, greater motivation to continue farming, and improved financial stability. Likewise, respondents perceived that the project reduced dependence on high-interest loans, improved access to

quality farm inputs, facilitated the hiring of farm labor, and strengthened their capacity to plan for future production cycles. Collectively, these outcomes indicate that the project has contributed to improving both the social well-being and economic resilience of participating farming households.

Despite these positive outcomes, the findings also identify opportunities for further strengthening the program. Comparatively lower ratings related to service efficiency, market access, and the availability of reliable buyers suggest that future interventions should place greater emphasis on improving project dissemination, streamlining service delivery, strengthening cooperative marketing systems, expanding market linkages, and promoting value-added agricultural enterprises. Addressing these aspects would enable farmers to convert production gains into more stable and sustainable household incomes while enhancing the long-term impact of the project.

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