Rice Marketing Practices in Tunga, Leyte, Philippines

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Abstract

This study describes and assesses rice marketing practices in Tunga, Leyte, Philippines, identifying associated problems and proposed solutions. Data were collected from 110 randomly sampled rice farmers using a descriptive research design and a researcher-developed questionnaire. The respondents were predominantly male (58%), married (95%), and middle-aged, with 49% aged 46-59. Educational backgrounds varied, with many having completed elementary (15%), high school (26%), or college (15%) levels.

The marketing practices analysis revealed that farmers commonly sell directly to local traders, recognizing the value of adding quality to their produce. However, significant challenges hinder their success. Key problems include a severe lack of capital for essential harvesting and threshing operations and the market power of traders who dictate and control prices, disadvantaging the farmers.

To address these issues and improve the rice marketing system, the study recommends several strategies. These include promoting fair trade practices to ensure equitable pricing, investing in transportation infrastructure, and establishing grain reserves. Furthermore, providing farmers with training in proper storage and drying techniques and enhancing their access to timely market information are suggested as vital steps toward increasing their income and ensuring the financial stability of the local rice industry.

Keywords: Rice production, marketing strategies, rice local traders, descriptive statistics, Philippines

Introduction

Rice is the main staple food crop in the Philippines. It is also the major source and the single largest contributor to income in the country (Casinillo, 2020). Rice productivity can

contribute to higher yields and the reduction of poverty, especially in rural areas (Casinillo & Seriño, 2022). Increased productivity may also assist in raising the income and food security of small farmers who depend on rice production for their livelihoods. As a vital sector, the rice commodity still encounters various issues, especially those concerning the welfare of producing farmers (Peñaflor-elorde et al., 2024). One such problem is the marketing of rice commodities, specifically the low selling price at the farmer-producer level (Thamthanakoon et al., 2022). Marketing procedure is demonstrated as a farmers' participation in agrifood markets can enhance their livelihoods by increasing incomes, improving food security, and reducing poverty in rural areas (Okwuokenye & Okoedo-Okojie, 2014). In the marketing of agricultural goods, the decision on the choice of channels is critical for farmers (Ouma et al., 2020). Choosing a marketing channel is a critical component of successful marketing for rural producers, as different channels are characterized by varying costs, profit margins, and risks. Apparently, selling to middlemen, brokers, or collectors at the farm gate is often less remunerative (Abu et al., 2016). However, there are challenges that rice farmers are facing, which hinder their marketing procedure from being effective and efficient (Zeithaml et al., 1985; Ishrat et al., 2023). In that case, there are studies in the literature that dealt with the solutions on how to enhance the marketing procedure and attain an efficient supply chain (Okwuokenye & Okoedo-Okojie, 2014; Bellezas et al., 2020; Karno et al., 2025). Marketing is a powerful instrument through which per capita income can be raised, leading to a higher standard of living (Moffett et al., 2025). Hence, a good marketing strategy must be applied by rice farmers to enhance their economic activities and improve their profitability.

In fact, utilizing an efficient marketing channel ensures the highest price for the output, thereby increasing profit and improving living conditions for a business worker (Zelisko et al., 2020). A trading system is an important component for farming, which is expected to be able to allocate trading system costs as efficiently as possible so as to obtain greater profits (Bellezas et al., 2020). Particularly, in Eastern Visayas, Philippines, the rice marketing system is almost controlled by middlemen, rice millers, and traders. The price of harvested paddy rice is determined by the middlemen since they dominate the rice marketing system (Bellezas et al., 2020). The National Food Authority (NFA) is tasked to declare the government support price for paddy rice during the cropping season, but it requires clean and dry rice and other requirements to market the harvested rice to NFA (Angeles&Agdeppa, 2002). The NFA, representing the government, and the private sector, consisting of rice merchants, commission agents, rice millers, wholesalers, and retailers, are jointly responsible for the marketing of rice in the Philippines**.** While commission agents also purchase rough rice, they do so on behalf of rice millers and are paid a certain amount for each bag they buy. Rice millers transport and sell the milled rice to wholesalers and retailers after drying, storing, and processing rough rice. Wholesalers typically supply the rice needed by local merchants, but they also sell and transport rice to other deficient regions. Wholesalers and retailers serve as intermediaries for consumers and institutional clients. Since these marketing categories are not mutually exclusive and traders commonly take on various functions, vertical integration, both forward and backward, is common (Thamthanakoon et al., 2022). In this study, the conceptual framework delved into elucidating the market strategies, problems, and challenges, and solutions to improve the current policies that favor the rice farmers and other stakeholders.

Apparently, the marketing practices of rice farmers in Tunga, Leyte, Philippines, are facing some challenges and problems that include marketing cost, policy issues, limited infrastructures, higher domestic prices of output, and lack of knowledge, among others. In that case, a survey study must be conducted to know the possible solutions to such problems

and to improve the current policies in the municipality. Although there are many studies related to the rice marketing practices on the agricultural support services, little has been done yet in Tunga, Leyte, Philippines; hence, this study was conducted. Generally, this study aimed to assess the rice marketing practices in Tunga, Leyte. Specially, it intended to: (1) describe the socio-demographic profile of the respondents; (2) assess the rice marketing practices in the study area; (3) find out the problems encountered by the farmers in marketing rice; and (4) identify suggested solutions to improve rice marketing. This study is essential to the Local Government Units, for it can be a basis for developing policies and actions to improve the marketing system of rice in the municipality. Furthermore, results can be a basis for further research, and the findings of the study may contribute to the body of knowledge involving market strategies.

Methodology

Tunga is a landlocked municipality in the province of Leyte. Tunga is classified as a 6th-class municipality in the province of Leyte. This study was conducted in three Barangays of Tunga, Leyte, namely: Astorga, Banawang, and San Pedro. These three barangays were chosen due to their extensive rice farm land area and had the highest number of rice farmers, as reflected in the data provided by the Tunga Municipal Agriculture Office (MAO). The study took place from February to March 2024. The sample size was determined through the use of Slovin's formula, as shown below. Given a total population of 151, with 5% margin of error, at least 110 rice farmers served as respondents for this study. The number of respondents per barangay was determined using simple random sampling. Each individual is chosen entirely by chance, and each member of the population has an equal chance of being included in the sample.

Table 1 Distribution of respondents by barangay

Barangay	Number of registered farmers	Sample size
Astorga	57	42
Banawang	48	34
San Pedro	46	34
Total	**151**	**110**

This study was designed to determine the rice marketing practices of farmers. The primary aim was to assess the rice marketing practices in Tunga, Leyte. It included the socio-demographic profile of farmer respondents, covering age, sex, civil status, household size, educational attainment, and the main source of income. The topic on marketing practices addressed the flow of palay from farmers to the market, posing questions to respondents about where they sold their rice produce, the marketing mechanism, and whether they allocated products solely for sale or retained some for family consumption. This also involved identifying problems faced by rice farmers in marketing their products and developing the rice marketing value chain. The research was limited to the production activities and delimited the study. The study used a researcher-made questionnaire, which was drafted in English and translated into the local dialect (Leyte-Samarnon) to facilitate an interview. The questionnaire consists of four (4) parts, such as: Part I: Socio-demographic profile; Part II: Rice marketing practices by the farmer; Part III: Problems encountered by the farmers in marketing rice; and Part IV: Suggested solutions to improve rice marketing in Tunga, Leyte. For the socio-demographic profile (Part I), the farmers were asked the following: (1) age; (2) sex; (3) civil status; (4) educational attainment; (5) farm size; (6)

number of years in farming; (7) household size; (8) major source of income; and (9) other source of income. As for Part II and Part IV, the researchers surveyed the farmers and asked them to enumerate the possible rice marketing practices and suggested solutions to improve rice marketing. In addition, the farmers were asked to rate the following rice marketing practices and suggested solutions using a 3-point Likert scale with the following responses: 1 - disagree; 2 - agree; 3 - strongly agree. Moreover, for Part III, the researchers surveyed the farmers and asked about the possible problems encountered in the marketing of rice produce, and were asked to rate using a 3-point Likert scale (i.e., 1 - a problem; 2 - not a serious problem; and 3 - a serious problem). The range of description is shown below (Table 1).

Table 2 Perception scores and their corresponding description.

Possible perception score	Marketing channel response	Degree of Problem
1.00-1.67	Disagree	Not a problem
1.68-2.33	Agree	Not a serious problem
2.34-3.00	Strongly agree	A serious problem

The data gathered were analyzed using descriptive statistics such as frequency, percentage, mean, and ranks. Ranking was employed to identify the suggested solutions to improve rice marketing. Computational results were presented in a statistical table, and interpretations were given accordingly.

Results and Discussion

Socio-demographic Profile of the Respondents

A study conducted by researchers emphasized the socio-demographic characteristics of 110 respondents. The participants had a mean age of 57 years, with 18% categorized in the adult age group (22-45 years old), 49% in the middle age group (46-59 years old), and 33% in the elderly age group (60 years old and above). The majority of the respondents fall within the 46-59 age range, indicating that this age group is considered active and productive. Smith et al. (2020) found that middle-aged individuals often have accumulated experience and knowledge, making them proficient in the agricultural practices necessary for rice cultivation. The majority of the respondents were male (58%). According to Casinillo (2022), men are primarily the principal operators in farming since it is a masculine work. In terms of civil status, the majority were married (95%). Casinillo and Seriño (2022) noted that married farmers have advantages in agricultural production since they are more responsible. Regarding educational attainment, 16% had completed only elementary level, 15% had graduated from elementary school, 23% had finished high school, and 26% had graduated from high school. Additionally, 5% had completed college-level, and 15% had only completed college.

This suggests that most farmers had finished high school. Red et al. (2021) portrayed that educational attainment is a vital aspect in farming since it is positively associated with their knowledge and practices, which impact their adoption of new technologies. Furthermore, most respondents had a farm size below 1 hectare (86%). This aligns with the latest Census of Agriculture in the Philippines, which is 1.29 hectares, mostly consisting of small-scale family farmers. In terms of household size, 3-4 members constituted the majority (47%), indicating larger family sizes. The results also revealed that the primary source of income was rice farming (100%). This suggests that rice farming plays a crucial role in the livelihood and financial stability of the farmers, with other sources of income including

piggery (55%), indicating that farmers have a diversification opportunity to enhance their economic stability.

Table 3 Socio-demographic profile of the respondents

Variables	Frequency (n=110)	Percentage (%)
Age		
Adult (22-45)	20	18
Old (46-59)	54	49
Senior (60 and above)	36	33
Total	**110**	**100**
Mean: 57		
Sex		
Male	64	58
Female	46	42
Total	**110**	**100**
Civil Status		
Single	4	4
Married	105	95
Widowed	1	1
Total	**110**	**100**
Educational Attainment		
Elementary level	18	16
Elementary graduate	17	15
High School level	25	23
High School graduate	29	26
College level	5	5
College graduate	16	15
Total	**110**	**100**
Farm Size (hectare)		
Below 1 ha	95	86
1-2 ha	15	14
Total	**110**	**100**
No. of years in farming		
10 and below	20	18
11-20	27	25
21-30	33	30
31 and above	30	27
Total	**110**	**100**
Household size		
1-2	23	21
3-4	52	47
5-6	26	24
7-8	8	7
9-10	1	1
Total	**110**	**100**
Major Source of Income		
Rice Farming	110	100
Total	**110**	**100**
Other Source of Income		
Farm Labor	34	31

Variables	Frequency (n=110)	Percentage (%)
Sari-sari Store	15	14
Piggery	61	55
Total	**110**	**100**

Marketing Practices of Rice

Based on the gathered data in Table 3, farmers practice various rice marketing channels. The weighted mean scores indicate the level of agreement among the farmers regarding each marketing channel. The most common practice among the farmers was employing labor to manually load the rice from the farm location to the roadside, with a weighted mean of 2.2. This method is favored by farmers, indicating that they see value in using labor to transport the rice to a more accessible location for trading. Another popular practice among farmers was allocating a portion of their produce for family consumption, with a weighted mean of 2.2. This indicates that many farmers prioritize using a part of their harvest for personal consumption, ensuring food security for their families (Ivanic & Martin, 2008). Some farmers also choose to dry the rice themselves and sell it clean and dry to traders to demand a better price, with a weighted mean of 2.1. This suggests that many farmers see value in enhancing the quality of their produce before selling it (Best et al., 2005). Additionally, selling the harvested rice directly to local traders in the town received a weighted mean score of 1.9. This suggests that many farmers prefer to sell their rice directly to traders within their local area. Based on the data, it can be concluded that the farmers employ a diverse range of rice marketing practices. While employing labor to manually load the rice from the farm location to the roadside is the most common practice, farmers also allocate a portion of their produce for family consumption. Many farmers see the value in adding quality to their produce before selling. This suggests that the marketing of rice among farmers is characterized by a combination of traditional practices to enhance the value of their produce (Karno et al., 2025).

Table 4 Marketing practices of rice

* Marketing practices of rice	Weighted Mean	Description
• Sell the harvested rice directly to the local traders in the town	1.9	Agree
• Sell the harvested rice by contract to the traders from Ormoc	1	Disagree
• Sell the harvested rice by contract to the traders from Mindanao	1	Disagree
• Sell the harvested rice directly to the traders from Tacloban City	1.1	Agree
• Sell the harvested rice directly to the NFA buying station	1	Disagree
• The trader picks up the rice produce directly from the farm location using his trucking vehicle	1.9	Agree
• Rent a motorcycle for transportation to the nearest station where traders are located	2.1	Strongly agree
• Employ labor to manually load the rice from the farm location to the roadside	2.2	Strongly agree
• The trader picked up the rice and hauled it to the roadside	2.0	Agree
• Do you market all your rice produce	1.7	Agree
• Allocate a portion of their produce for	2.2	Strongly agree

* Marketing practices of rice	Weighted Mean	Description
family consumption		
• Do not sell rice produce unless needed	1.8	Agree
• Only sell the produce to cover harvesting and hauling costs	1.6	Agree
• Do not sell the produce because I sell the well-milled rice directly to consumers	1.6	Agree
• Sell the rice and seed	1.5	Agree
• Do the drying of rice and sell it clean and dry to traders to demand a better price	2.1	Strongly agree
• Do the drying and milling, and sell directly to consumers	1.9	Agree
• Immediately sell the produce right after harvest	1.9	Agree

** Multiple responses*

Problems Encountered by Farmers

Based on the gathered data, the problems faced by farmers in the marketing of rice can be analyzed as follows. In terms of financial issues, insufficient capital for harvesting and threshing operations was identified as a serious problem with a weighted mean of 2.2. This suggests that farmers are struggling due to insufficient funds during critical stages of production. In the study of Palis et al. (2025), it is portrayed that it is costly to acquire basics like seeds, fertilizer, water, and pesticide, let alone capital assets like land and rice planting equipment or machinery." This emphasizes that limited financial capacity extends beyond inputs to postharvest activities like harvesting and threshing, supporting the conclusion that farmers face ongoing financial constraints throughout the rice production cycle. Similarly, the expensive transportation of rice from the farm to the trader's location was also considered a serious problem, with a weighted mean of 2.2. These findings underscore the need for targeted interventions and support mechanisms to alleviate the financial strain faced by individuals and businesses operating in this industry. Regarding transportation, the absence of transportation for delivering the product to traders has a weighted mean of 2.1, indicating a serious problem. The poor road system, with a weighted mean of 2.2, is also seen as a serious issue. This suggests that the availability of transportation is a major concern, and the condition of the road network significantly hampers efficient product delivery, underscoring the need for infrastructure improvements. The current findings align with a study carried out in Bangladesh, where participants stated that "poor road conditions caused difficulties in transporting products to their markets" and that "the poor road conditions and networks also made it expensive for the farmers to pay transporters" (Quddus & Kropp, 2020). This cross-country evidence strengthens the idea that expensive transportation and poor road infrastructure are universal obstacles that restrict farmers' access to markets and lower profitability, highlighting the urgent need for transportation support and infrastructure improvements for rural producers. In terms of pricing, the issue of traders dictating and controlling prices was identified as a serious problem with a weighted mean of 2.5. Additionally, the hidden charges of shrinkage (tarha) and the deductions traders require for each bag, with means of 2.1 and 2.1, respectively, indicate further serious problems. These findings underscore the significant financial pressures faced by farmers due to unfavorable and unstable pricing practices controlled by traders, highlighting the need for regulatory interventions to stabilize prices and ensure fair trading conditions. This situation is consistent with the findings of Donkor et al. (2021), who found that the majority of rice farmers sell

their produce through middlemen who typically set the prices, lowering the producers' profit margins. The problems faced by farmers in the marketing of rice produce are serious concerns, indicating a need for targeted interventions and regulatory support (Norton & Alwang, 2020; Aguda et al., 2022; Casinillo et al., 2024; Karno et al., 2025).

Table 5 Problems encountered by farmers

* Problems encountered by farmers	Weighted mean	Description
A. Financial		
• Insufficient capital for harvesting and threshing operations	2.2	A serious problem
• The expensive transportation of rice from the farm to the trader's location	2.2	A serious problem
Average weighted mean	**2. 2**	**A serious problem**
B. Transportation		
• Absence of transportation for delivering the product to the traders	2.1	A serious problem
• Poor road system	2.2	A serious problem
Average weighted mean	**2.1**	**A serious problem**
C. Pricing		
• Hidden charges of shrinkage (tarha)	2.1	A serious problem
• Traders are required to charge and deduct for each piece of the bag (4 pieces of the bag equivalent to 1 kilo)	2.1	A serious problem
• Palay prices experience fluctuations and instability	2.3	A serious problem
• Prices decrease during peak harvest periods	2.1	A serious problem
• Traders dictate and control the prices	2.5	A serious problem
• Rice crops that are damaged have a significantly lower purchase price	2.0	Not a serious problem
• Prices decrease when it rains	2.2	A serious problem
• There are only a small number of traders in the area	2.1	A serious problem
• Limited understanding of market prices	1.9	Not a serious problem
Average weighted mean	**2.2**	**A serious problem**
D. Storage and Drying		
• Absence of storage facilities	2.0	Not a serious problem
• The road serves as a drying area	2.0	Not a serious problem
• The product cannot be stored indoors	2.0	Not a serious problem
• Absence of drying facilities	2.0	Not a serious problem
• Absence of market information	1.9	Not a serious problem
• Shortage of labor for head loading/hauling from the farm to the roadside	2.0	Not a serious problem
• Shortage of labor for manual harvesting and gathering	2.0	Not a serious problem
Average weighted mean	**2.0**	**Not a serious problem**

***** *Multiple responses*

Solution to Improve the Marketing Practices of Rice Produce

Based on the data gathered, several strategies have been identified to improve rice marketing. The first strategy, which ranked 1st with a percentage of 100%, indicates a strong

agreement among the respondents regarding the potential benefits of implementing fair trade practices in improving farmers' income and financial stability. The second strategy, ranking 2nd with a percentage of 100%, is investing in infrastructure such as roads and bridges, seen as a top priority by the respondents. There is unanimous agreement that improving transportation efficiency through these infrastructure investments can have a significant positive impact on the rice industry (Bellezas et al., 2020; Karno et al., 2025). The third strategy, ranking 3rd with a percentage of 89%, suggests that establishing a strategic grain reserve is regarded as a crucial solution by all respondents. This measure can help mitigate the effects of price fluctuations and provide stability to farmers, enhancing their financial security. The fourth strategy, ranking 4th with a percentage of 82%, is providing training to farmers on best practices in storage and drying, which is essential for maintaining the quality of rice. This training can help farmers reduce post-harvest losses and ensure better market opportunities. The fifth strategy, ranking 5th with a percentage of 78%, is providing farmers with training on accessing and utilizing market information. Respondents unanimously agree on the positive impact such training can have on the farmers' ability to make informed decisions, navigate market dynamics, and enhance their profitability. The data emphasize the need for fair trade practices, investment in transportation infrastructure, establishing grain reserves, providing training in storage and drying, and enhancing farmers' access to market information to improve income and financial stability in the rice industry (Maryani et al., 2017; Sunmee et al., 2019; Rahman et al., 2024).

Table 6 Solution to improve the marketing practices of rice production

* Suggested solutions	Frequency	Percentage (%)	Ranking
Pricing			
• Implementing fair trade practices can improve their income and financial stability	110	100	1st
Transportation			
• Investing in infrastructure such as roads and bridges can significantly improve transportation efficiency	100	100	2nd
Pricing			
• Establish a strategic grain reserve to buffer against price fluctuations	98	89	3rd
Storage and Drying			
• Providing training to farmers on best practices for storage and drying to maintain the quality of rice	90	82	4th

• Providing farmers with training on how to access and use market information can be very beneficial	86	78	5th

***** *Multiple responses*

Conclusion

Conclusively, the rice farmers prefer to sell their rice directly to traders within their local area. Additionally, there are serious problems in pricing, transportation, and financial capital during marketing. In that case, the Local Government Unit (LGU) should enforce price regulations that ensure fair pricing mechanisms in the rice market and create a transparent pricing system that will protect farmers from price manipulation by the traders. The LGU should implement subsidized or cooperative-based transportation services for rice farmers. By pooling resources, farmers can reduce individual transportation costs. In addition, a farmers' cooperative can be organized to provide farmers access to credit through production. These could include low-interest loans or grants for critical stages such as harvesting and threshing operations. Furthermore, the LGU should prioritize the improvement and maintenance of rural road networks. Investing in better road infrastructure will facilitate smoother and faster transportation of rice, reducing delays and costs associated with poor road conditions. The limitation of this study is the analysis is purely descriptive, hence, as for future research, one may consider inferential statistics that determines the relationship between the profiles of rice farmers, marketing strategies, problems and solutions to enhance the current results of the study.

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