

## **Earnings and Marketing Structure of Paddy Farming: A Case in Huruluwewa Colonization Scheme in Anuradhapura District**

**R. P. I. R. Prasanna<sup>1</sup> and M. B. Ranathilaka<sup>2</sup>**

*<sup>1</sup>Dept. of Social Sciences, Faculty of Social Sciences and Humanities,  
Rajarata University of Sri Lanka*

*<sup>2</sup>Dept. of Economics and Statistics, Faculty of Arts, University of Peradeniya*

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### **Introduction**

In the early 1980s, the IMF and the World Bank advocated that the government of Sri Lanka undertake market-oriented policy reforms in the economy, including in the agricultural sector, under the Structural Adjustment Program (SAP). The main argument made was that government operations in agricultural marketing (input and output markets) are not effective and efficient, and do not promote the interests of farmers and consumers. Farmers in Sri Lanka's main paddy producing areas complain of difficulties in selling their paddy harvest due to failures in the government paddy purchasing mechanism. Through the market-oriented policy reforms in agriculture, it was expected to increase market competition and thereby increase producer prices (producer welfare) and stimulate agricultural growth and income. With this policy reform, the significance of the Paddy Marketing Board (PMB) and Multi-Purpose Cooperative Societies (MPCS) in paddy marketing was reduced due to the competition from the private sector (Prasanna, 2006). For example, during the 1980s, the open market price of paddy exceeded the guaranteed price, rendering the government paddy purchasing institutions as financially unviable (Weerahewa, 2004).

The studies cited numerous reasons for the widening gap between producer price and consumer price, and thereby poor earnings from paddy farming. Among these reasons, the oligopolistic nature of traders and smaller involvement of the government sector in paddy marketing activities are the

decisive reasons (Prasanna, 2006). Hence, today, paddy farming has become an economically unviable sector, leading to indebtedness among the farmers (Irshard & Thiruchelvam, 2006), and the government has to spend more on subsidy programs and other supportive programs to protect the paddy sector due to its importance concerning national food security; it provides approximately 50% of the daily calorie intake of households with 45% of per capita protein requirements, and livelihoods of many farmers. At present, from over 1.8 million paddy farmers, the majority of small-scale farmers own less than 1 ha. of land and are primarily dependent on rice farming. In this context, it is questionable whether the nature of the paddy market structure is a matter of poor earnings of paddy farming.

### **Objectives**

The main objective of this paper is to study the nature of the problem of poor earnings of paddy farming, paying particular attention to the paddy marketing channel in the major colonization schemes in Sri Lanka. The study will focus on the following points: 1) Analysis of cost and income of paddy farming, 2) Examination of the nature of the paddy marketing channel, 3) Analysis of the effects of the existing paddy marketing structure on farmers' production and marketing conditions, and 4) Suggesting ways to correct paddy marketing problems by empirically conceptualizing the paddy marketing problems, solutions, and challenges.

### **Methodology**

In order to deal with the research subject, data for analysis was drawn from two field surveys—farmer survey and survey on traders in paddy marketing channel—in the Huruluwewa Major Colonization Scheme (HMCS) area in January / February 2018. The HMCS was selected for the study as it is one of the main paddy producing areas of the North Central Province in Sri Lanka. A pre-tested, semi-structured questionnaire was employed in each survey to gather data on the socioeconomic background of paddy farmers, paddy production, characteristics of paddy marketing channel, and nature and functions of participants in paddy marketing channel. One hundred and ten (110) farmers in the right-bank and left-bank of the HMCS were selected for the study by giving equal probability to all farm households in sampling. In addition, 20 traders in the paddy marketing channel, officers in the

government paddy purchasing centers in the area, and leaders of farmer organizations were interviewed to gather data on the paddy marketing channel in the area. The collected data were analyzed using a descriptive statistical method.

## **Results and Discussion**

The analysis of average cost and income of paddy farming in the survey area shows that farmers earn a net income of Rs. 12,989 per acre by spending Rs. 42,575. As the average farm size in the area is 1.8 acres, the total net income of average farmers in the scheme is Rs. 23,380. Mean Selling Price of paddy in the concerned season of the study was Rs. 39 and only 47 farmers could sell their produce at the above mean price. However, the distribution of farmers' net income revealed that 37 (33.6%) farmers did not receive the deserved positive net income. Moreover, the study identified a positive relationship between farm productivity and per acre normalized profit. The results further designate a negative relationship between farm size and paddy productivity, indicating declining farm productivity when farmers increase the land scale of farming. This finding contradicts with other studies that encourage farmers to increase the land scale to get economies of scale. The possible reasons explained by the farmers for the negative relationship between farm size and productivity are water management issues at the field level frequently faced by the farmers due to drought, and the problems of irrigation water management by the Irrigation Department at the scheme, and the prevailing labor shortage.

Several village-level collectors were reported in one village. The capacity of storage facilities of interviewed collectors at the village level varied from 11,000 kg to 200,000 kg. Most of them had zero transportation cost because usually, the farmers transport their harvest from farm to assembler's place. Most collectors had their own small stores, and some had concrete compounds for drying the wet paddy. However, the collectors do not hold the collected paddy for a long time, and 80 percent of them kept 50 cents from each kilogram as their profit. They usually find the capital for buying paddy by their own capital or savings, pawning jewelry or registration certificates of their vehicles and obtaining a short-term loan from the banks.

The main feature of the channel is the hierarchical relationship between participants in the marketing channel based on the market. It shows that the paddy market in the area is dominated by a few large-scale traders directly via their agents, who find the required paddy procurement finance from large-scale traders and indirectly through village-level assemblers. At the village level, 67% and 15% of farmer products are channeled through village-level collectors and agents of large-scale traders, and a proportion of 80% and 100% of assembled products are then shipped to large-scale traders by the village level collectors and agents of large-scale traders respectively. The government purchasing mechanism has only purchased 7% of production in the area, from which, 80% have been directed to the large-scale traders, particularly during off-season. Thus, it indicates that 74.2% of the products sold by the farmers is handled by a few large-scale traders, particularly in the region. This assembled paddy by the large-scale traders is ungraded and unprocessed; thus, they undertake marketing functions—finance of paddy procurement, transportation, storage, processing, rice distribution, and price determination at the farm level. The interviews with village-level collectors revealed that they had to dispatch their assembled paddy to large-scale traders because generally they are provided with price information with an assured forward market. Thus, it is posited that there are only a few buyers or there is *an oligopolistic market structure* for paddy in the survey area since a significant proportion of farmer products is handled by only a few traders in the NCP.

The results also showed that 63 (57.2%) farmers are selling their harvest before eight weeks (between A and B) after harvesting (or before the next cultivation season) at a price below the average. The pressing concern of this matter is that this leads to lower income in paddy farming (even a loss). As depicted in Figure 1, there are 16 (14.5%) farmers in the negative net income region because of selling the harvest at the harvesting period, even though their farm productivity is above the mean productivity in the area. The study identified causes that influence paddy farmers to sell their harvest in between the harvesting time and the beginning of next cultivation season. Less financial capability to cover the cost of production within a cultivated season and the debt trap laid by the village-level paddy collectors are the critical factors which limit farmer movement to a higher price region in certain seasons.

## Conclusions

The primary aim of this study was to investigate the nature of the paddy marketing structure in one of the main colonization schemes in Sri Lanka, to understand whether it explains poor earnings of paddy farming. The study results indicated that paddy farmers do not derive adequate net income from paddy farming, and a majority of farmers sell their harvest at the harvesting period at the lowest price; this does not support them to cover the cost of production adequately. Further, the oligopolistic market structure in the paddy marketing in the area was revealed by the study as few large-scale traders handle 74.2% of farmers' production. The lower financial capability of the farmers to cover variable costs of paddy farming and pre-modern economic characteristics of the paddy marketing channel have created a space for large-scale traders to grab the farmers' production at a minimum price during the harvesting period. Farmers do not receive any service from these traders regarding price information, input supply, credit provisions, or assured market for them at a reasonable price. The study found small involvement of the government in paddy marketing and zero involvement of farmer organizations and agricultural cooperatives in paddy marketing activities, though they provide agricultural extension services, inputs (managing the government subsidy programs), irrigation water management, and other farm-related services.

In conclusion, it is evident that the market-oriented policy reforms have not led to improved market competition in paddy marketing and enhancement of the welfare of paddy producers in the scheme. Thus, immediate measures should be taken to address the marketing-related issues faced by the farmers in main paddy growing areas of the country.

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