

## EXECUTIVE SUMMARY

Increasing paddy production, stabilization of domestic rice consumption and the increasing dynamism of rice processing and domestic markets call for a rethinking of the general direction of the rice milling industry in Sri Lanka. Achieving food security and ensuring uninterrupted access to competitive markets are the priority policy direction areas in the Government Development Policy Framework in Sri Lanka. In order to understand the competitiveness of rice milling industry, this study is focused on assessing the structure, conduct and performance (SCP) of the rice milling industry in Polonnaruwa and Hambantota Districts which are the major hubs of the country for parboiled and raw rice processing. The SCP approach is widely used to analyze competitive conditions in industries by examining how the structure of industry relates to the market conduct and performance. The research methods adopted are the calculation of the concentration indices such as the four firm Concentration ratios (CR4), Herfindalh- Hirshman Index (HHI), Lawrence curve and Gini co-efficient. Due to the heterogeneous nature of rice milling industry in Polonnaruwa nearly 75 % ( N=120) of the total miller population was interviewed: In Hambantota, out of 108 millers 31 (29%) were randomly selected due to the homogenous nature of milling.

Out of the quantity of paddy milling per day, 47 % of rice mills are less than 8Mt/day while 34 % is 8-20 Mt/day and the rest (19%) is greater than 20 Mt/day. In Hambantota, nearly 50% of the mills fall in the range of 8-20 Mt/day. The estimated values of CR4 for the per day rice production of the whole miller population in Polonnaruwa and Hambantota are 30% and 8% respectively. The calculated values of the Herfindalh – Hirshman Index (HHI) equal to 0.04 in Polonnaruwa and 0.01 in Hambantota. The Lawrence curve and the Gini co-efficient values in terms of quantity of rice produced by millers indicate moderate and low degree of inequality in Polonnaruwa and Hambantota respectively. The correlation analysis reveals that there is a strong relationship among paddy storage ability, credit affordability and per day rice production. These structure, conduct and performance characteristics indicate that the rice milling industry in Polonnaruwa operates in weak oligopsony and that the industry in Hambantota is highly competitive. The present method of classification of rice mills in Sri Lanka is relatively out dated.

Shortage of capital is a major constraint for the rice millers (74%). Lack of understanding and experience in the milling industry is another major constraint (65%). Lack of knowledge on rice milling technology (50%), unstable output market (44%) and high competition of the industry (30%) are also perceived as important entry barriers. Experiences in milling technology and high quality processing machines are vital instruments to create competitive advantage. Survey results show that a number of mills were started during the period 2000-2010. It implies that there are new entrants to the industry. However, most of those millers belong to the category of less than 8Mt per day production. It was found that large and medium

scale millers had considerable experience in the industry and most of them had started on small scale at the beginning.

Nearly 80% of the millers in Polonnaruwa, which is the major parboiled rice producing area, have mechanical dryers. Therefore, the rice production in rainy seasons is also possible. About 23% have color separators in Polonnaruwa, which are highly expensive machineries and it was 10% in Hambantota. Only 31% have weighing bridges which are also expensive. All large scale millers have Water Jet Polishers and rice graders which indicate that polishing and grading are popular in commercial rice milling.

The major paddy purchasing method of large scale millers in Polonnaruwa is through brokers. In Hambantota major channel is miller purchasing from paddy farmers. Millers in both districts have major rice selling markets in Colombo and suburbs. Receiving low quality paddy and lack of consistent electricity supply are the major constraints faced by millers in both districts. This study has also found that the rice ceiling price is a constraint for the millers to produce quality rice. A huge variation can be observed in the amount of loans obtained for paddy purchasing. In Polonnaruwa Government Banks dominate granting loans for the industry while in Hambantota it is dominated by private banks. It was found during the study that three mills carry out color sorting, polishing and grading rice on contract basis by millers who do not have machineries for such work in Polonnaruwa. This is a method found in Vietnam rice milling industry as well.

Analysis of market margins by using series of secondary data shows that farmers' share in consumer price of rice has a volatile trend. However, a shown slight upward trend is observed during recent years, which is quite apparent in Hambantota. In Hambantota a greater share goes to the farmer. Only four mills in Hambantota have obtained Good Manufacturing Practices (GMP) certification from the Sri Lanka Standards Institution. All those millers are small scale rice exporters. In Polonnaruwa and Hambantota, 94% and 77% of millers sell their rice under their own brand name. Nearly 6% of small scale millers in both districts sell their brown rice to large and medium scale millers. Analysis of rice retail prices of all rice consuming countries shows that the Sri Lankan rice prices are competitive. A huge amount (nearly 3000mt) of rice bran is monthly exported to India from major rice processing areas for extracting rice oil.

Rapid development of the rice milling industry has taken place during the last decade. Demanding new methods of classification. The study suggests the necessity of a new classification based on the literature in certain other rice producing countries. According to the per day rice production(Mt), it is suggested to classify less than 8 Mt, 8-20 mt as medium and more than 20 Mt as large scale.

Scale up of medium capacity millers (8-20mt/day) is needed to reduce milling industry concentration in Polonnaruwa. The industry further needs a proper rice

grading system which is present in most of other rice producing countries. Millers who process improved rice using proper grading and Sri Lanka Standards Certification should be given an opportunity to sell their products exempting them from ceiling price to a certain extent. Defining mandatory grading and standards for Sri Lankan rice and collaborating with the private sector to enforce them as a vital step. Technical capacity to achieve the required standards needs to be build. Hence, introducing ceiling prices based on graded rice according to the standards is recommended. This may be helpful to increase the quality of rice reaching international standards.

Color sorters, water jet polishers and modern graders are expensive heavy machineries in the industry. Three mills found during the study, do color sorting, polishing and grading rice on contract basis with millers who do not have those machineries. This is a method found in Vietnam rice milling industry. This mechanism can be promoted increase to enhance the capacity of small scale millers.

In order to improve the milling industry there is an urgent need to upgrade the competency of personnel in new milling technologies as per the needs of changed environment. Some of the large scale millers have gained knowledge on new technology from other countries- mainly from India at their expense.

When new mills are established they must be established in the major rural producing areas. That will minimize environmental problems caused by the mills concentrated in urban areas. It will also reduce the interference of brokers and enhance the rural economy. Measures should be taken to find out the ways and means of utilizing paddy husk that is wasted in large scale in the Hambantota district. Encouraging investment for establishing rice bran oil manufacturing plant in Polonnaruwa area is highly recommended.

The present taxation procedure needs to be restructured in order to ensure the sustainability of the industry. It is further recommended that a detailed study be conducted to evaluate the merits and demerits of different taxation systems with a view to design an appropriate taxation system.