A Study on Socio-Economic Background of Rice Growing Farmers in Balasore District of Odisha

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Abstract: **Rice is principal crop in Odisha, covering 60.55 percent of total cultivated area. This article starts with the objective of examining the socio-economic background of rice growing farmers in Balasore district of Odisha. Balasore district of Odisha is selected as the sample. 600 farmers are randomly selected from four blocks of the study area. Out of which, 594 questionnaires have been considered as valid. The data is based on farmers perception point of view. It is observed that 159 farmers are in between 31-40 years of age. The maximum of 196 farmers earn income of range in between Rs. 40,001 to Rs. 70,000. The number of male farmers out of 594 total farmers is 572. 64 number of farmers are both of cultivation of rice with having both wholly owned and leased in land. 297 as the highest number of farmers having 2 to 4 acres of land. It is concluded that socio-economic background is the significant parameter for rice farming and its marketing, as facilities and schemes by the government are concerned for augmenting rice production in the study area with the objective of enhancement of welfare of rice growing farmers. In this connection, government may bring more attention for promotion of rice farming and its marketing with a view to achieve more benefit of farmers in the study area.**

Keywords: **Farmers, Rice, Socio-Economic.**

1. Introduction

Rice is one of the major food grain of India. Moreover, this country has the largest area under rice cultivation, as it is one of the principal food crops. In fact, it is the dominant crop of the country. Rice is the basic food crop and being a tropical plant, it flourishes comfortably in hot and humid climate. In Odisha, rice is synonymous with food. Agriculture in Odisha to a considerable extent means growing rice. Rice is principal crop in Odisha, covering 60.55 percent of total cultivated area. Total area under crops exhibited a healthy increase of 25 percent over the previous years in 2016-17 (Odisha Economic Survey, 2017-18). The production of rice increased to 97.94 lakh MT during 2016-17 from 68.59 lakh MT during 2005-06. But its production, decreased to 65.51 lakh MT during 2017-18 because of unfavorable climatic condition (Odisha Economic Survey 2017-18). Similarly, rice is the staple food of Balasore district of Odisha. During the year 2014-15, the production of paddy in Balasore was 7596244 quintals (District Statistical Hand Book, Balasore, 2015). In order to augment rice production leading to strengthen the socio-economic background of the rice growing farmers in the district of Balasore of Odisha, it is pertinent to analyse the socio-economic background of the rice growing farmers in the study area.

2. Review of Literature

Hnin Yu LWIN et al. (2006) have evaluated the rice marketing channels and the interaction of market participants in selected areas of Myanmar. The major rice marketing channels in the studied sites indicate that almost all products of farmers flow to collectors and millers. The authors found that lack of formal cooperative structures, farmers support groups as well as growing market power of millers at the farm-gate level result that farmers possess low bargaining power in trading of rice at the studied areas. The authors suggested that government should build-up the cooperatives not only to encourage the bargaining power of farmers at farm gate level but also to accelerate the market intelligence of intermediaries in the channel of rice marketing. Further, authors have pointed out that a public market information center organized by government and nonprofit rice traders organization is need to be distributed up-to-date market information effectively and efficiently in order to reconcile the conflicting sources of information.

Veena Goel et al. (2008) have focused on the marketing practices, marketing structures and firms motives for vertical coordination of the paddy-rice distribution system during the post green revolution period in the Punjab state of India. The study has examined that the emergence of public sector as a giant player in the paddy (non-basmati) wholesale markets, unscrupulous practices for paddy or rice supplies, wide disparities in raised issue of prices, reduced off take from the public distribution system, introducing various schemes to off load excessive stocks and improve marketing efficiency. The study has also found private milling gains momentum during the downward phase of the industry on account of increased profitability.

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Kirit S Parikh (2013) has studied that identification of the poor and the scale of production are the most critical challenges of the proposed legislation on the right to food. The author has found that food grain supply would have only a slight impact on the nutritional outcomes. This paper suggests that universal entitlement which excludes identifiable rich. Food coupons could eliminate the need for the operations of public distribution system and eliminate diversion. This article also suggests that cash transfers to the women of the household through Aadhaar card could substantially reduce diversions and avoid the problem of distribution of food coupons.

Akshay Kumar et al. (2017) have conducted a study in district Saharanpur during 2014 in order to investigate the socioeconomic status of rural rice farmers. In this connection, primary data was collected through structured questionnaire taking a sample of size eighty allocating to four blocks selected purposively, each comprising two villages selected on the basis of proportional sampling method. Most of the rice farmers were found educated as well as semi-medium size category. The study finds that among 100 farmers 96.25% were found educated while the rest 3.75% were uneducated which indicated high degree of illiteracy level. The major sources of income were farm income as well as foreign remittances. As per the study, the total expenditures recorded were Rs. 25,001 to Rs. 50,000 annual ranges per annum. The article suggests that the government should take steps to improve their standard of living.

N. Ruaykijakaran et al. (2018) have examined the socio-economic, knowledge and attitudes towards marketing innovation of organic rice farmers in chachoengsao province of Thailand. The study finds that most farmers are female (65 percent), aged between 51-60 years old (35 percent), graduated from primary school (80 percent). The result of participant on farmer knowledge of marketing innovation was a knowledgeable about organic rice marketing innovative at a moderate level (55 percent). The farmers had high level of attitudes towards marketing innovation (80 percent) as per the study.

3. Objective of the study

The specific objective of the study is to examine the socio-economic background of rice growing farmers in Balasore district of Odisha.

4. Methodology of the study

The methodology of the study is based on both primary as well as secondary data. Balasore is taken as the sample district of Odisha, especially, in rice crop. The primary data is based on the perception of rice growing farmer. Balasore district of Odisha is selected as the sample. In this regard, the survey was undertaken from 2016 to 2017 in the study area. The survey method is applied for setting structured questionnaire. 600 farmers are randomly selected from four blocks of the study area. 594 responses have been considered as valid. Again, the

population is segmented into mutually exclusive subgroups like stratified sampling. For analysis of data, the statistical tool like chi-square test has been used. The data is also expressed in the form of table, graph etc.

5. Analysis and Interpretation of Data

The socio-economic background of rice growing farmers in the district of Balasore of Odisha is as follows:
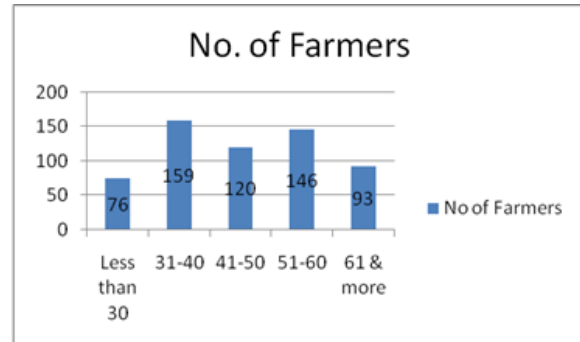
A. Age and Farmers

Fig. 1. Age & farmers, Source: Compiled data (Primary Data)

The fig. 1 highlights on the age wise respondents ranges from below 30 years to more than 61 years of age of farmers. The age ranges from 31-40 years represents more i.e. 159 respondents than other groups. The lowest respondents are marked in the age group of below 30 years.

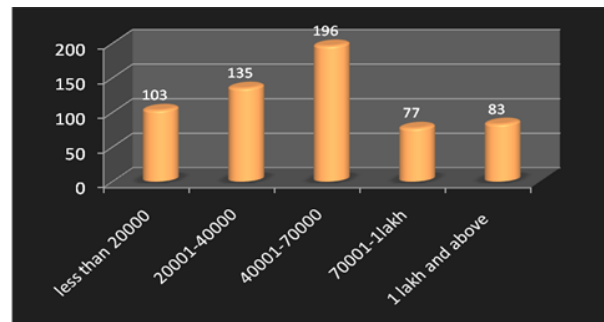### B. Income and Farmers

Fig. 2. Farmers and income (in Rs.)
Source: Compiled data (Primary Data)

The income of the farmers has been presented in the figure-2 which ranges from less than Rs. 20,000 to more than Rs.1,00,000. This is the range which is responded by the respondents and accordingly range is fixed. Maximum of 196 farmers able to earn Rs. 40,001 to Rs.70, 000 during two seasons i.e. Rabi & Kharif. It also shows the highest i.e. 196 out of 594 valid responses. Only 83 farmers have responded their income of more than Rs.1 lakh per annum, which indicates their hard labour and effort that is only of 13.97 percent of the total.

C. Age & Income

The table 1 reveals the cross relation measurement of the age of the farmers in relation to their income. The groups of income

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Table 1
Cross relation of Age and Income, Source: Compiled data (Primary Data)

Age	Income (Rs.) per annum					Total
	<20,000	20,001-40,000	40,001-70,000	70,001-1 Lakh	>1 Lakh	
≤ 30	10	10	35	13	8	76
31-40	24	48	61	12	14	159
41-50	14	23	46	15	22	120
51-60	35	30	30	22	29	146
≥ 61	20	24	24	15	10	93
Total	103	135	196	77	83	594

Table 2
Chi-Square Test of Age and Income of Farmers, Source: Compiled data (Primary Data)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.550[a]	16	0.000
Likelihood Ratio	47.811	16	0.000
Linear-by-Linear Association	0.176	1	0.675
No. of Valid Cases	594		

The minimum expected count is 9.86.

in rice cultivation has been categorized. This relation indicates the age wise income of the farmers. Maximum of 196 farmers earn Rs.40001-Rs.70000 per annum whereas 83 farmers can earn above 1 lakh rupees from rice farming per annum in different seasons. From 31-40 years, farmers prove their efficiency in earning more followed by the age group i.e. 51-60 years' farmers. But maximum of 29 farmers able to earn above Rs. 1 lakh of age group of 51-60 years followed by 41-50 years of farmers. Only 8 farmers get above 1 lakh from the age group of below 30 years. So from that it is concluded that except below 30 years' age group of farmers all are able to earn more amount of selling from their rice farming and its marketing.

In the table 2, out of the 594 farmers, chi-square result reveals 46.550, in which degree of freedom, i.e. 16 (age & income), which is much higher than table value. So there is much differences among the farmers in response to their age and income.

D. Age & Gender

Table 3
Age and Gender, Source: Compiled data (Primary Data)

Age	Gender		Total
	Male	Female	
≤ 30	72	4	76
31-40	156	3	159
41-50	118	2	120
51-60	137	9	146
≥ 61	89	4	93
Total	572	22	594

The table 3 indicates that the results of cross relation measurement of the age of the farmers in relation to their gender. The gender has been categorized into age wise. This relation indicates the age wise income of the farmers. Maximum of 572 farmers are male as compared to female of only 22. A total of 594 have been considered from rice farming and its marketing per annum in different seasons. Maximum 9 female farmers are in the age group of 51-60 years and 2 females are in the age group of 41-50 years as minimum and above years. They also assist in farming and marketing of rice with their male family members.

Table 4
Chi-Square Test, Source: Compiled data (Primary Data)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.895[a]	8	0.272
Likelihood Ratio	9.351	8	0.314
Linear-by-Linear Association	0.114	1	0.735
No. of Valid Cases	594		

8 cells (53.3%) have expected count less than 6. The minimum expected count is 0.13.

In the table 4, Out of the 594 farmers, chi-square result reveals 9.895, in which degree of freedom is 8 (age & gender), which is much higher than table value. So, there is much differences among the farmers in response to their age and gender type.

The above age and gender of tabular representation may be shown in fig. 3.
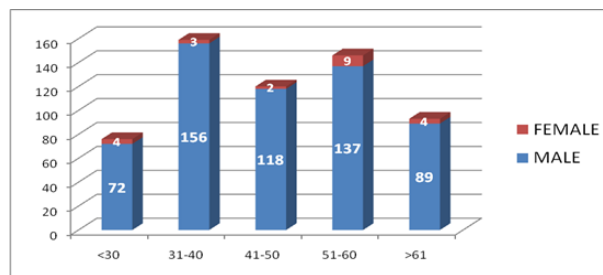

Fig. 3. Age and gender, Source: Compiled data (Primary Data)

From fig. 3, it is shown that 22 female farmers are marked within the range of age groups. Basically, female farmers assist their male members of their family in farming & marketing of rice. The maximum of 156 male farmers are in the age group of 31-40 years, followed by the age group of 51-60 years. On the other hand, the maximum of 9 female farmers are in the age group of 51-60 years.

6. Operational Holdings of Land

The operational holdings of land of rice growing farmers in the study district has been laid down below as:
- Wholly owned and self-operated holdings

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- Wholly leased-in holdings
- Partly owned & partly Leased-in

Table 5
Operational Holdings of land, Source: Compiled data (Primary Data)

Operational Holdings	No. of Farmers
Wholly & Self - operated holdings	412
Wholly leased - in holdings	118
Partly owned & Partly leased-in holdings	64

The table 5 reported that, in this three categories, 412 are found those are having wholly owned land for rice cultivation, whereas 118 are found those are having wholly leased-in holdings and 64 are in both category of operational holdings for rice farming. So most of the farmers are having some sort of land for their own farming.

7. Size of Land Holdings

The size of land holding are found in five categories such as a. Below 1 acre (Marginal Farmers), b. 1 acres-2 acres (Small), c. 2 acres-4 acres(Semi-medium), d. 4-10 acres (Medium), e. 10 acres and above (Large).
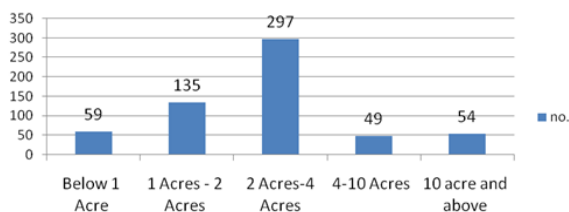

Fig. 4. Size of land holdings, Source: Compiled data (Primary Data)

In the fig. 4, out of 594 farmers, 59 are found as marginal farmers, 135 are small farmers, 297 are semi-medium farmers, 49 are medium farmers and 54 are found as large farmers those are having more than 10 acres of land for farming.

8. Findings of the study

From the above analysis, it is found that 159 farmers are in between 31-40 years of age where as maximum of 196 farmers able to earn Rs. 40,001 to Rs. 70,000 during both Kharif and Rabi seasons. It is observed that maximum of 572 farmers are male as compared to female of 22. The highest number of male farmers are in between 31 to 40 years of age. From operational holdings of land point of view, 412 number of farmers have wholly owned land for rice cultivation out of 594 farmers. In the context of size of land holdings, the highest number of farmers have 2 to 4 acres of land i.e., 297.

9. Conclusion and Suggestion

From the above analysis, it is concluded that, socio-economic background is the significant parameter for rice farming and its marketing, as facilities and schemes by the government are concerned for augmenting rice production in the study area with the objective of enhancement of welfare of rice growing farmers. In this connection, government may bring more attention for promotion of rice farming and its marketing with a view to achieve more benefit of farmers in the study area.

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