

Socio-Economic Development and Use of Productive Potential of ST People on the Changing Business Scenario of Mayurbhanj and Rayagada District of Odisha (India) - An Empirical Analysis.

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Abstract: *Every effort of economic development of a country like India where more than 70% of the population live in rural, must begin with the development of villages and every effort towards development of villages must begin with the development of the weaker section of the population that is the SC and ST. Thus the recognition of Mahali ST of Mayurbhanj district of North Odisha and Dongria-Kondh ST communities of Rayagada district of South Odisha in India by sensitive observers are significant. The data are analyzed in both qualitative and quantitative research using statistical methodologies.*

In a poor and backward State like Odisha it is least expected that the development scenario of the village and the pace of socio-economic transformations could be better. The socio-economic survey of Mayurbhanj and Rayagada districts of Orissa have clearly reveals that the State has to make a longitudinal perspective plan for the transformation of the subsistence oriented backward tribal development economy in order to solve the problem of poverty and to improve the 'quality of life' of rural scheduled people.

Keywords: *Socio-economic development, Common Property Resources (CPRs), Human Development Index (HDI)*

1. INTRODUCTION

India being the second largest tribal dominated country after Africa is one of the most fascinating Nations of World from anthropological point of view. The total tribal population of India is 8.08 per cent (Census of India, 2001). As many as 427 tribal communities are residing in India, of whom 75 are declared as Particularly Vulnerable Tribal Groups (PVTGs) who are spread across the country [1-4].

Odisha is a tribal dominated State with the largest number of tribal communities (62), representing major linguistic groups like Dravidian, Austro-Asiatic and Indo-Aryan. Almost 44.21 per cent of the total land area in Odisha has been declared as Scheduled area. The total tribal population of the State is 8.15 million, who constitute 22.13 per cent (ibid). Next to Madhya Pradesh, Odisha has the highest percentage of tribal population. It is one of the most fascinating ethnographic states of India. It has been the home of as many as 62 different tribal communities of which kondhs are numerically the largest race. When the time calls for "War of Economic"; the scope of economic improvement of weaker section is vast. The state Odisha also constitutes as many as 93 schedule caste communities and that are about 16.53% of the total population of the state. The statistical report of SC and ST distribution in the state indicates that, though the SC people are being the inhabitants of all the districts but the ST people are dense populated at some of the districts. It is observed that mainly ST community people are permanent inhabitants of some of the north and south districts of Odisha [5-10].

The state of Odisha is endowed with rich structure, policies and prospects for rural industrialization and development but no remarkable achievement in this field has been obtained. It lacks proper

coordination and integration of productive potential of rural people with its rural prospects. However the development of SC & ST people are plagued by some major problems like inadequate flow of credit, use of obsolete technology, machinery and equipment and inadequate infrastructure facilities, lack of communication and market information, poor quality of raw materials, lack of storage and ware-housing facilities, and lack of promotional strategy. Solving these problems is necessary for developing rural industries. Rural industrialization is inextricably interwoven with SC & ST entrepreneurship [11-18]. A new approach is required to build sustainable development in the field of rural industries. That is an integrated approach to entrepreneurial culture in rural Odisha. That must be consisting of varied activities - governmental and NGOs efforts existing entrepreneurial culture, market culture where the products and service are delivered, which create around the dynamics of entrepreneurial growth and change. This kind of new entrepreneurial culture needs for new goods and services, start many new venture by exploiting new combinations of its available resources to achieve entrepreneurial goals, This culture should be nurtured, fostered and promoted with new vision, values, norms and traits that is conducive for the sustainable development of the SC & ST people & as a whole of rural people [19-25].

The main aim of small business development is to make the rural community self- reliant, generate income within the community and to provide employment to rural youth and to reduce migration from rural to urban areas. Finally within the available infrastructure and resources, the entrepreneur can promote his entrepreneurial capability as well as induce economic growth. Therefore the researcher is putting his efforts to utilize the productive potential of those SCs & STs only the means to an end to help the emergence of healthy, talented and successful intrapreneurs and entrepreneurs those can take over responsibility among them for their economic growth by establishing enterprises at rural areas. This is the true aim of the study at its district level [26-30].

2. MOTIVATION OF THE STUDY

Among all other section of population in the society, the scheduled caste (SC) and scheduled tribe (ST) people are the weakest maximum in the category of below poverty line. There is no fine tuning to their skills, which failed to commercialize their business units. CPRs like land, forest, pastures, ponds/tanks, rivers etc can be utilized by them optimally to improve their economic condition without any disturbance to the ecosystems. Hence the principal motivation behind this research work is to explore the wide range of disparity in the standard of living of them in comparison to other section of people. This disparity is perceived in terms of productivity of agriculture, per capita income, unemployment, absence of market and marketing facilities and lack of alternative subsidiary occupation in village and other industries.

2.1. Objectives of the Study

Gravity of the problem and its pervasive significance in the economy of ST people of the state, Mayurbhanj district of North Odisha and the Rayagada district of South Odisha for the study in particular have induced to plan the present study.

This research is persuaded for the accomplishment of the following major objectives like:

- To analyze the present socio-economic development conditions of the ST people at the districts level.
- To study the involvement of existing agencies and their support for ST development.
- To examine the potential of ST entrepreneurs for the development of the community and various problems faced by them.
- To suggest suitable measures in solving the problems and a few suitable projects for the study area and to evolve a methodology to coordinates and implement CPRs into gainful employment generation.
- To provide guidance on business opportunities identification and training for upgrading skills.
- To find out innovative schemes for entrepreneurship development among ST by way of education, training, financial assistance, scientific and technical assistance. It is to amalgamate the technology with business tactics for economic developments.

2.2. Scope of the Study

The proposed study as purely analytical and empirical in character is based on both primary and secondary data. As all the community under SC and ST are not convenient to go for the detailed survey, so for better convenient point of view, Mahali ST of Mayurbhanj district of North Odisha and Dongria-Kondh ST communities of Rayagada district of South Odisha are selected.

3. NATURE AND SOURCE OF DATA

Out of all communities inhabitant at Mayurbhanj district, it is preferred to select the Mahali ST community of the district for study, as they have enormous potential skills of bamboo craft manufacturer, in other hand at Rayagada district preference is given to pick up Dongria-Kondh, as one of the Particularly Vulnerable Tribal Groups (PVTGs) due to their excellence skill on horticulture and agriculture production at hill barren land, called Dongar respectively. Total samples of more than 120 respondents are selected from both the districts for the present study using simple random sampling questionnaires technique.

4. RESEARCH METHODOLOGY

All collected data are classified and tabulated according to their specific characteristics relevant for the study. The data analyses are undertaken mostly with the help of several managerial and statistical devices such as percentages, hypothesis tests, correlation and HDI (Human Development Index) analysis. Comparative and experimental methods of analysis are also adopted by taking interviews of various persons associated with the study. Data are tested and analyzed through the computer based statistical techniques like, Mean, Standard Deviation and Coefficient of Variation (C.V.), Karl Pearson's Coefficient Correlation between indicators in the study area is applied to examine the result.

4.1. The Student's T-Test of the Null Hypothesis

Out of the physical quality of life index using indicators like Family Size (X_1), Education (X_2), Income (X_3), Health (X_4) and Socio-Economic Status (SES) (X_5), which were assumed to have direct bearing upon these communities standard of living. The t-statistic for the above indicators is analyzed. A **t-test** is any statistical hypothesis test in which the test statistic follows a Student's t distribution if the null hypothesis is supported. It can be used to determine if two sets of data are significantly different from each other, and is most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known.

We compute the t-statistic for each C_i which follows t-distribution with (n-1) degrees of freedom.

$$t = \frac{\hat{C}_i - C_i}{S.E.(\hat{C}_i)}$$

The null hypothesis is $C_i = 0$.

If $t^* < t$ (tabulated), we accept the null hypothesis i.e. we accept that \hat{C}_i is not significant.

If $t^* > t$ (tabulated), we reject the null hypothesis and we accept the alternative one. i.e. \hat{C}_i is statistically significant. Thus, greater the value of t^* the stronger the evidence that C_i is statistically significant.

Karl Pearson's Coefficient of Correlation

Correlation in statistics refers to the relationship between any two or more variables. Two variables are said to be correlated if with a change in the value of one variable, there arises a change in the value of another variable.

That there is linear relationship between the two variables;

That the two variables are casually related which means that one of the variables is independent and the other one is dependent; and

A large number of independent causes are operating in both variables so as to produce a normal distribution.

There are different methods of studying correlation between any two or more series. But for measuring the correlation between any two variables i.e. simple correlation, Karl Pearson's coefficient method is used.

Karl Pearson's Coefficient of Correlation (r) =

$$\frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \cdot \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

X = given, or reduced values of the first variable

Y = given, or reduced value of the second variable, and

N = number of pairs of observations of X and Y.

The value of 'r' lies between ± 1 .

Positive value of 'r' indicates positive correlation between two variables, changes in both the variables take place in same direction, whereas negative values of 'r' indicates a negative correlation i.e. changes in the two variables taking place in opposite direction. A zero value of 'r' indicates that there is no association between two variables.

4.2. Human Development Index (HDI)

The 2013 Human Development Report by the United Nations Development Program was released on March 14, 2013, and calculates HDI values based on estimates for 2012. The **Human Development Index (HDI)** is a composite statistic of life expectancy, education, and income indices used to rank countries into four tiers of human development. The communities are ranked for each variable as well as on the basis of the overall measure of backwardness. For preparing the index (on the basis of which each individual community is ranked) the following formula is used.

$$\text{HDI} = \frac{(X_i - X_{\min})}{X_{\max} - X_{\min}}$$

where X_i refers to each variable for the i^{th} community, X_{\min} to the lowest value of the variable and X_{\max} the highest value.

This Research Design is based on the Computer based Statistical Empirical analysis to study the economic development of SC and ST community of both districts. The analysis has been carried out to identify the various factors impacting poverty of SC and ST people of Mayurbhanj and Rayagada district.

4.3. Empirical Analysis

4.3.1. Socio-Economic Profile of Mahali ST of Mayurbhanj District.

In investigation certain variables pertaining to socio-economic background are taken to provide the sociological differentiation of the respondents. This study deals with Development and use of productive potential of Mahali ST community in Mayurbhanj district. It covers the socio-economic background and life style of the respondents with specific focus on the personal character of age and socio economic characteristic like education, family size, and income etc. This study also reviewed few of the key entrepreneurship related to the Mahali ST community, like livelihood, common property resources, social and cultural life and technology for product and marketing etc.

Age distribution of our sample is presented in the above table as per the age pattern, the Table indicates that for the age group upto 25 years is 28.6%, age group from 26 years to 35 years is 48.2%, age of 36 years to 45 years is 17.9%, age group from 46 years to 55 years is 3.6% and age group of above 55 years is only 1.8%. The study depicts that age distribution of the respondents is positively skewed and found the age between 26 yrs. to 35 yrs. is maximum and age above 55 years is minimum in the study area in case of Mahali ST.

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Table1. Age distribution of the Respondents in case of Mahali ST

| Age Group | Frequency | Percentage |
|-------------------|-----------|--------------|
| Upto 25 yrs. | 16 | 28.6 |
| 26 yrs to 35 yrs. | 27 | 48.2 |
| 36 yrs to 45 yrs | 10 | 17.9 |
| 46 yrs to 55 yrs | 2 | 3.6 |
| Above 55 yrs. | 1 | 1.8 |
| Total | 56 | 100.0 |

Table2. Gender of the respondents in case of Mahali ST

| Gender | Frequency | Percentage |
|--------------|-----------|--------------|
| Male | 29 | 51.8 |
| Female | 27 | 48.2 |
| Total | 56 | 100.0 |

The above tables regarding gender of the respondent in the study area have been presented. The table bears the fact that male (51.8%) is numerically more than female (48.2%).

Table3. Size of family of the Respondents in case of Mahali ST

| Size of the family | Frequency | Percentage |
|---------------------|-----------|--------------|
| up to 3 members | 9 | 16.1 |
| 4 to 5 members | 39 | 69.6 |
| 6 and above members | 8 | 14.3 |
| Total | 56 | 100.0 |

Size of the family for the purpose this research, refers the number of relations (by blood, marriage and adoption) residing in the household. The study depicts that family size distribution of the respondents is skewed. An analysis of the above table shows that there are respondents having up to 3 members in families comprising 16.1%. Respondents having 4 to 5 members in the family are 69.6% and having 6 and above members in the family are 14.3%. Respondents largely belong to medium size families comprising 4 to 5 members irrespective of their socio-economic status.

Table4. Educational status of the respondents in case of Mahali ST People

| Education level | Frequency | Percentage |
|-------------------|-----------|--------------|
| Illiterate | 2 | 3.6 |
| Literate | 14 | 25.0 |
| Primary | 20 | 35.7 |
| High School | 12 | 21.4 |
| College education | 8 | 14.3 |
| Total | 56 | 100.0 |

The importance of education recognized for growing in all aspects in the county. Education, other things remaining constant, fits the right qualified person at the right place. Educational levels of the respondents are presented in the above tables. As would be seen from above table there are respondents having different educational level, i.e., 25.0% are literate, 35.7% are primary, 21.4% are high school, 14.3% are having college education and 3.6% of the respondents are found illiterate in the study area in case of Mahali ST. This is definitely an issue for the nation's growth.

Table5. Quantity of land owned in case of Mahali ST People

| Land quantity | Frequency | Percentage |
|--|-----------|--------------|
| Less than 2 acre | 12 | 21.4 |
| More than 2 acre and less than 5 acre | - | - |
| More than 5 acre and less than 10 acre | - | - |
| More than 10 acre | - | - |
| Landless | 44 | 78.6 |
| Total | 56 | 100.0 |

The quantity of agricultural land owned by the respondents i.e. among Mahali ST community environment of the sample area of the present investigation is evident from the distribution as in the above table reveals majority of respondents are landless i.e. 78.6% followed by less than 2 acres of land owned i.e. 21.4%.. An analysis of the table indicates that percentage of landless in case of Mahali ST people in the study area is startling.

Table6. *Income Level of the family of the Respondents in case of Mahali ST*

| Income status | Frequency | Percentage |
|----------------------|------------------|-------------------|
| Upto Rs.15000 | 19 | 33.9 |
| Rs.15001 to Rs.25000 | 23 | 41.1 |
| Rs.25001 to Rs.35000 | 7 | 12.5 |
| Rs.35001 to Rs.45000 | 3 | 5.4 |
| Above Rs.45000 | 4 | 7.1 |
| Total | 56 | 100.0 |

Income of the family of the respondent here relates to the amount of money received during a period of time in exchange of labour and services, from the sale of goods or property, or as profit from financial investments. The facts concerning the income level of the respondents is summarized in the above table. 33.9% of the family of respondents earn below Rs.15000, 41.1% of family of respondents earn between Rs.15001 to Rs.25000, similarly 12.5% of the sample earn between Rs.25001 to Rs.35000 whereas the percentage of respondents family earning between Rs.35001 to Rs.45000 is 5.4% and 7.1% of the sample Mahali ST population earn above Rs.45000. The entry of the above table is self-explanatory. The study depicts that income distribution of the respondents is asymmetrical and found that the lower income group is predominant in the sample area which shows direct impact on livelihood of the Mahali ST community.

Table7. *Expenditure Level of the family of the Respondents in case of Mahali ST*

| Expenditure status | Frequency | Percentage |
|---------------------------|------------------|-------------------|
| Upto Rs. 15000 | 12 | 21.4 |
| Rs.15001 to Rs.25000 | 28 | 50.0 |
| Rs.25001 to Rs.35000 | 6 | 10.7 |
| Rs.35001 to Rs.45000 | 5 | 8.9 |
| Above Rs.45000 | 5 | 8.9 |
| Total | 56 | 100.0 |

The facts concerning the expenditure level of the respondents is depicted in the above table. 21.4% of the family of respondents made expenditure below Rs.15000, 50.0% of family of respondents spent between Rs.15001 to Rs.25000, similarly 10.7% of the sample spent between Rs.25001 to Rs.35000 whereas the percentage of respondents family spending between Rs.35001 to Rs.45000 is 8.9% and 8.9% of the sample Mahali ST population having expenses above Rs.45000. It is found that the expenditure status between Rs.15001 to Rs25000 is more in the sample area.

Table8. *Health status of the respondents in case of Mahali ST People*

| Health Status | YES | | NO | |
|-------------------------------------|------------------|-------------------|------------------|-------------------|
| | Frequency | Percentage | Frequency | Percentage |
| Preference of treatment at Hospital | 56 | 100.0 | - | - |
| Preference of Herbal Medicine | 47 | 83.9 | 9 | 16.1 |
| Belief in Gunia | 56 | 100.0 | - | - |
| Health Camp | 17 | 30.4 | 53 | 94.6 |
| Family Planning Operation | 17 | 30.4 | 39 | 69.6 |
| Malaria | 48 | 85.7 | 8 | 14.3 |
| TB | 3 | 5.4 | 53 | 94.6 |

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Table9. *Opinion of the respondents in the study area*

| Opinion | YES | | NO | |
|-------------------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Interest on Entrepreneurship work | 42 | 75.0 | 14 | 25.0 |
| Interest in formal education | 9 | 16.1 | 47 | 83.9 |
| Interest in informal education | 17 | 30.4 | 39 | 69.6 |
| Skill development training required | 53 | 94.6 | 3 | 5.4 |
| Product development training | 56 | 100.0 | - | - |
| Drinking water facility | 56 | 100.0 | - | - |

Table10. *Opinion on No. of programmes / Govt. Organisation known to people (out of 25) available for Mahali ST Respondents*

| No. of programmes / Govt. Organisation known to people | Frequency | Percentage |
|--|-----------|--------------|
| 0 | 2 | 3.6 |
| 2 | 3 | 5.4 |
| 3 | 12 | 21.4 |
| 4 | 19 | 33.9 |
| 5 | 11 | 19.6 |
| 6 | 2 | 3.6 |
| 7 | 3 | 5.4 |
| 8 | 3 | 5.4 |
| 15 | 1 | 1.8 |
| Total | 56 | 100.0 |

The above table shows most of the people were not aware about the government offices and schemes in those study areas.

Table11. *Opinion on awareness among Mahali ST respondents regarding the role and duty of the officials in no. (Out of 14) available in the study area*

| Aware of the role and duty of the officials in No. | Frequency | Percentage |
|--|-----------|--------------|
| 1 | 1 | 1.8 |
| 2 | 8 | 14.3 |
| 3 | 14 | 25.0 |
| 4 | 17 | 30.4 |
| 5 | 12 | 21.4 |
| 7 | 2 | 3.6 |
| 8 | 1 | 1.8 |
| 12 | 1 | 1.8 |
| Total | 56 | 100.0 |

The above table shows most of the people were not aware about the government officials in those study areas and the officials movement (field visit) there the least.

Table12. *Opinion on duration of income received by the Respondents in the study area in case of Mahali ST People*

| Duration | Frequency | Percentage |
|-----------------------|-----------|--------------|
| Income earned monthly | 1 | 1.8 |
| Income earned weekly | 39 | 69.6 |
| Income earned daily | 16 | 28.6 |
| Total | 56 | 100.0 |

The above table indicates maximum people from the study areas earn their livelihood from their weekly production and weekly local haats. This justifies they earn from their own potential skill utilization, however govt. support is supplement.

To accomplish the objectives of the study in the sample area, different techniques and important indicators considered for the following analysis.

Table13. Mean, Standard Deviation and Coefficient of Variation (C.V.) of the indicators

| Indicators | Mean | S.D. | C.V | t-test |
|-------------------------------|------|--------|-------|--------|
| Age (X ₁) | 2.02 | ± 0.88 | 43.56 | 17.08 |
| Family size (X ₂) | 1.98 | ± 0.56 | 28.28 | 26.69 |
| Education (X ₃) | 2.64 | ± 1.12 | 42.42 | 17.68 |
| Income (X ₄) | 2.11 | ± 1.15 | 54.50 | 13.65 |
| Expenditure (X ₅) | 2.34 | ± 1.18 | 50.43 | 14.84 |

In the above table it is observed that there is less variation in case of Family size (X₂) followed by Education (X₃), this shows more consistency of opinion collected from the study area. It is also found that in case of the indicator Income (X₄) there is more variation i.e. 54.50 followed by Expenditure (X₅), which shows less consistency of data in the study area so far as Income and Expenditure are concerned. Tabulated value of t-test at 5% level of significance = 1.960 and for 1% level of significance = 2.576. Here, the t-statistic for the above indicators are significant both at 5% level of significance and 1% level of significance.

Table14. Correlation Coefficient (‘r’ value) between indicators in the study area

| Categories | Age (X ₁) | Family size (X ₂) | Education (X ₃) | Income (X ₄) | Expen-diture (X ₅) | Agril. Land owned (X ₆) |
|-------------------------------------|-----------------------|-------------------------------|-----------------------------|--------------------------|--------------------------------|-------------------------------------|
| Age (X ₁) | 1.00 | | | | | |
| Family size (X ₂) | 0.12 | 1.00 | | | | |
| Education (X ₃) | 0.26* | 0.34* | 1.00 | | | |
| Income (X ₄) | 0.27* | 0.03 | 0.22 | 1.00 | | |
| Expenditure (X ₅) | 0.24 | 0.04 | 0.20 | 0.89** | 1.00 | |
| Agril. Land owned (X ₆) | 0.09 | 0.18 | 0.05 | 0.33* | 0.33* | 1.00 |

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

It reveals from the above table that correlation coefficient (‘r’) value between income and expenditure status is 0.89, this shows there exists strong and positive correlation between these two indicators. Next moderate and positive correlation exists between income and family size i.e. 0.34, between income and agril. Land owned i.e. 0.33 and between expenditure and agril. Land owned i.e. 0.33. Cases like age and education (0.26), age and income (0.27) there also exists moderate and positive correlation. Correlation Coefficient ‘r’ value between rests of the cases shows weak and insignificant correlation. It is found that changes in income change the expenditure in a positive direction of the Mahali ST people in the study area.

4.3.2. Socio- Economic Profile of Dongria-Kondh ST of Rayagada district

This study deals with Development and use of productive potential of Dongria-Kondh ST community in Rayagada district. This community considered due to their excellence skill on horticulture and agriculture production at hill barren land, called Dongar. It covers the socio-economic background and life style of the respondents with specific focus on the personal character of age and socio economic characteristic like education, family size, and income etc. This study also reviewed few of the key entrepreneurship related to the Dongria-Kondh ST community like livelihood, common property resources, social and cultural life and technology for product and marketing etc.

Table15. Age distribution of the Respondents in case of Dongria-Kondh ST

| Age Group | Frequency | Percentage |
|-------------------|-----------|--------------|
| Upto 25 yrs. | 3 | 4.8 |
| 26 yrs to 35 yrs. | 32 | 50.8 |
| 36 yrs to 45 yrs | 14 | 22.2 |
| 46 yrs to 55 yrs | 14 | 22.2 |
| Above 55 yrs. | 3 | 4.8 |
| Total | 63 | 100.0 |

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Age distribution of our sample is presented in the above table as per the age pattern, the Table indicates that for the age group upto 25 years is 4.8%, age group from 26 years to 35 years is 50.8%, age of 36 years to 45 years is 22.2%, age group from 46 years to 55 years is 22.2% and age group of above 55 years is only 4.8%. The study depicts that the age between 26 yrs. to 35 yrs. is maximum and age above 55 years and another age group upto 25 years is minimum in the study area in case of Dongria-Kondh ST community.

Table16. Gender of the respondents in case of Dongria-Kondh ST

| Gender | Frequency | Percentage |
|--------------|-----------|--------------|
| Male | 50 | 79.4 |
| Female | 13 | 20.6 |
| Total | 63 | 100.0 |

The above tables regarding gender of the respondent in the study area have been presented. The table bears the fact that male (79.4%) is numerically more than female (20.6%).

Table17. Size of family of the Respondents in case of Dongria-Kondh ST

| Size of the family | Frequency | Percentage |
|---------------------|-----------|--------------|
| up to 3 members | 5 | 7.9 |
| 4 to 5 members | 40 | 63.5 |
| 6 and above members | 18 | 28.6 |
| Total | 63 | 100.0 |

An analysis of the above table shows that there are respondents having up to 3 members in families comprising 7.9%. Respondents having 4 to 5 members in the family are 63.5% and having 6 and above members in the family are 28.6%. Respondents largely belong to medium size families comprising 4 to 5 members irrespective of their socio-economic status.

Table18. Educational status of the respondents in case of Dongria-Kondh ST People

| Education level | Frequency | Percentage |
|-------------------|-----------|--------------|
| Illiterate | 10 | 15.9 |
| Literate | 29 | 46.0 |
| Primary | 15 | 23.8 |
| High School | 7 | 11.1 |
| College education | 2 | 3.2 |
| Total | 63 | 100.0 |

As would be seen from above table there are respondents having different educational level, i.e., 46.0% are literate, 23.8% are primary, 11.1% are high school, 3.2% are having college education and 15.9% of the respondents are found illiterate in case of Dongria-Kondh ST. This is definitely an issue and challenge for nation's growth so far as educational status is concerned in the study area.

Table19. Quantity of land owned in case of Dongria-Kondh ST people

| Land quantity | Frequency | Percentage |
|--|-----------|--------------|
| Less than 2 acre | 14 | 22.2 |
| More than 2 acre and less than 5 acre | 17 | 27.0 |
| More than 5 acre and less than 10 acre | 14 | 22.2 |
| More than 10 acre | 2 | 3.2 |
| Landless | 16 | 25.4 |
| Total | 63 | 100.0 |

The quantity of agricultural land owned by the respondents i.e. among Dongria-Kondh ST community environment of the sample area of the present investigation is evident from the distribution as in the above table reveals majority of respondents are having more than 2 acre and less than 5 acre i.e. 27.0% followed by less than 2 acres land owned and also more than 5 acre & less than 10 acre of land owned i.e. 22.2%. Percentage of landless is also high i.e. 25.4% in the sample area. This is definitely an issue. An analysis of the table indicates that percentage of more than 2 acre and less than 5 acre in case of Dongria-Kondh ST people in the study area is comforting.

Table20. *Income Level of the family of the Respondents in case of Dongria-Kondh ST*

| Income status | Frequency | Percentage |
|----------------------|-----------|--------------|
| Upto Rs.15000 | - | - |
| Rs.15001 to Rs.25000 | 18 | 28.6 |
| Rs.25001 to Rs.35000 | 21 | 33.3 |
| Rs.35001 to Rs.45000 | 9 | 14.3 |
| Above Rs.45000 | 15 | 23.8 |
| Total | 63 | 100.0 |

The facts concerning the income level of the respondents is summarized in the above table that 28.6% of family of respondents earn between Rs.15001 to Rs.25000, similarly 33.3% of the sample earn between Rs.25001 to Rs.35000 whereas the percentage of respondents family earning between Rs.35001 to Rs.45000 is 14.3% and 23.8% of the sample Dongria-Kondh ST population earn above Rs.45000. The study depicts that income distribution of the respondents is asymmetrical and found that the group Rs.25001 to Rs.35000 is predominant in the sample area.

Table21. *Expenditure Level of the family of the Respondents in case of Dongria-Kondh ST*

| Expenditure status | Frequency | Percentage |
|----------------------|-----------|--------------|
| Upto Rs.15000 | - | - |
| Rs.15001 to Rs.25000 | 17 | 27.0 |
| Rs.25001 to Rs.35000 | 20 | 31.7 |
| Rs.35001 to Rs.45000 | 6 | 9.5 |
| Above Rs.45000 | 20 | 31.7 |
| Total | 63 | 100.0 |

The facts concerning the expenditure level of the respondents is depicted in the above table that 27.0% of family of respondents spent between Rs.15001 to Rs.25000, similarly 31.7% of the sample spent between Rs.25001 to Rs.35000 whereas the percentage of respondents family spending between Rs.35001 to Rs.45000 is 9.5% and 31.7% of the sample Dongria-Kondh ST population having expenses above Rs.45000. It is found that the expenditure status between Rs.25001 to Rs.35000 and in other case above Rs.45000 is more in the sample area.

Table22. *Health status of the respondents in case of Dongria-Kondh ST People*

| Health Status | YES | | NO | |
|-------------------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Preference of treatment at Hospital | 50 | 79.4 | 13 | 20.6 |
| Preference of Herbal Medicine | 60 | 95.2 | 3 | 4.8 |
| Belief in Gunia | 53 | 84.1 | 10 | 15.9 |
| Health Camp | 32 | 50.8 | 31 | 49.2 |
| Family Planning Operation | 5 | 7.9 | 58 | 92.1 |
| Malaria | 63 | 100.00 | - | - |
| TB | - | - | 63 | 100.00 |

Table23. *Opinion of the respondents in case of Dongria-Kondh ST in the study area*

| Opinion | YES | | NO | |
|-------------------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Interest on Entrepreneurship work | 52 | 82.5 | 11 | 17.5 |
| Interest in formal education | 17 | 27.0 | 46 | 73.0 |
| Interest in informal education | 33 | 52.4 | 30 | 47.6 |
| Skill development training required | 58 | 92.1 | 5 | 7.9 |
| Product development training | 55 | 87.3 | 8 | 12.7 |
| Drinking water facility | 59 | 93.7 | 4 | 6.3 |

Socio-Economic Development and Use of Productive Potential of ST People on the Changing Business Scenario of Mayurbhanj and Rayagada District of Odisha (India) - An Empirical Analysis

Table24. *Opinion on No. of programmes / Govt. Organisation known to people (out of 25) available for Dongria-Kondh ST respondents.*

| No. of programmes / Govt. Organisation known to people | Frequency | Percentage |
|--|-----------|------------|
| 1 | 12 | 19.0 |
| 2 | 11 | 17.5 |
| 3 | 11 | 17.5 |
| 4 | 15 | 23.8 |
| 5 | 7 | 11.1 |
| 6 | 2 | 3.2 |
| 7 | 2 | 3.2 |
| 8 | 1 | 1.6 |
| 10 | 1 | 1.6 |
| 12 | 1 | 1.6 |

The above table shows most of the people were not aware about the government offices and schemes in those study areas.

Table25. *Opinion on awareness among Dongria-Kondh ST respondents regarding the role and duty of the officials in no. (Out of 14) available in the study area.*

| Aware of the role and duty of the officials in No. | Frequency | Percentage |
|--|-----------|------------|
| 1 | 3 | 4.8 |
| 2 | 22 | 34.9 |
| 3 | 9 | 14.3 |
| 4 | 7 | 11.1 |
| 5 | 10 | 15.9 |
| 6 | 2 | 3.2 |
| 7 | 3 | 4.8 |
| 8 | 1 | 1.6 |
| 9 | 1 | 1.6 |
| 10 | 1 | 1.6 |
| 11 | 1 | 1.6 |
| 12 | 3 | 4.8 |

The above table shows most of the people were not aware about the government officials in those study areas and the officials movement (field visit) there the least.

Table26. *Opinion on duration of income received by the Respondents in the study area in case of Dongria-Kondh ST People.*

| Duration | Frequency | Percentage |
|-----------------------|-----------|--------------|
| Income earned monthly | 11 | 17.5 |
| Income earned weekly | 51 | 81.0 |
| Income earned daily | 1 | 1.6 |
| Total | 63 | 100.0 |

The above table indicates maximum people from the study areas earn their livelihood from their weekly production and weekly local haats. This justifies they earn from there own potential skill utilization, however govt. support is supplement.

To accomplish the objectives of the study in the sample area, different statistical techniques and important indicators considered for the following analysis.

Table27. *Mean, Standard Deviation and Coefficient of Variation (C.V.) of the indicators*

| Indicators | Mean | S.D. | C.V | t-test |
|-------------------------------|------|--------|-------|--------|
| Age (X ₁) | 2.62 | ± 0.89 | 33.97 | 23.42 |
| Family size (X ₂) | 2.21 | ± 0.57 | 25.79 | 30.60 |
| Education (X ₃) | 2.81 | ± 1.46 | 51.96 | 15.30 |
| Income (X ₄) | 3.33 | ± 1.14 | 34.23 | 23.29 |
| Expenditure (X ₅) | 3.46 | ± 1.20 | 34.68 | 22.84 |

In the above table it is observed that there is less variation in case of Family size (X₂) followed by Age (X₁), this shows more consistency of opinion collected from the study area. It is also found that in case of the indicator Education (X₃) there is more variation i.e. 51.96 followed by Expenditure (X₅) which shows less consistency of data in the study area so far as Education and Expenditure are concerned. Tabulated value of t-test at 5% level of significance = 1.960 and for 1% level of significance = 2.576. Here, the t-statistic for the above indicators are significant both at 5% level of significance and 1% level of significance.

Table28. Correlation Coefficient (‘r’ value) between indicators in case of Dongria-Kondh ST

| Categories | Age (X ₁) | Family size (X ₂) | Education (X ₃) | Income (X ₄) | Expen-diture (X ₅) | Agril. Land owned (X ₆) |
|------------------------------------|-----------------------|-------------------------------|-----------------------------|--------------------------|--------------------------------|-------------------------------------|
| Age (X ₁) | 1.00 | | | | | |
| Family size (X ₂) | 0.51** | 1.000 | | | | |
| Education (X ₃) | -0.14 | -0.07 | 1.000 | | | |
| Income (X ₄) | 0.27* | 0.31* | -0.19 | 1.000 | | |
| Expenditure (X ₅) | 0.12 | 0.28* | -0.24 | 0.94** | 1.000 | |
| Agrl. Land owned (X ₆) | 0.14 | 0.18 | -0.02 | 0.67** | 0.65* | 1.000 |

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

It reveals from the above table that correlation coefficient (‘r’) value between income and expenditure status is 0.94, this shows there exists strong and positive correlation between these two indicators. Next good and positive correlation exists between income and Agrl. Land owned i.e. 0.67, between expenditure and agrl. land owned i.e. 0.65 and between age and family size i.e. 0.51. Cases like age and income (0.27), there also exists moderate and positive correlation. Correlation Coefficient ‘r’ value between rests of the cases shows weak and insignificant negative correlation. It is found that changes in income change the expenditure in a positive direction of the Dongria-Kondh ST people in the study area.

4.4. Community Level Human Development Index (HDI)

An estimation of HDI had been attempted at community levels to find out the relative position of these communities in the overall scenario of quality of life of Mahali ST and Patra-Tanti SC community of Mayurbhanj district and Dongria-Kondh ST and Ghantra SC of Rayagada district. Needless to say that the concept of HDI was brought into the limelight by UNDP with an intention to probe into the relationship between development in one hand and the quality or the actual way of people’s live and livelihood in the other. Taking the need of the hour into consideration, the present study endeavoured to work out a physical quality of life index using indicators like Family Size (X₁), Education (X₂), Income (X₃), Health (X₄) and Socio-Economic Status (X₅), which were assumed to have direct bearing upon these communities standard of living. The communities are ranked for each variable as well as on the basis of the overall measure of backwardness. For preparing the index (on the basis of which each individual community is ranked) the following formula is used.

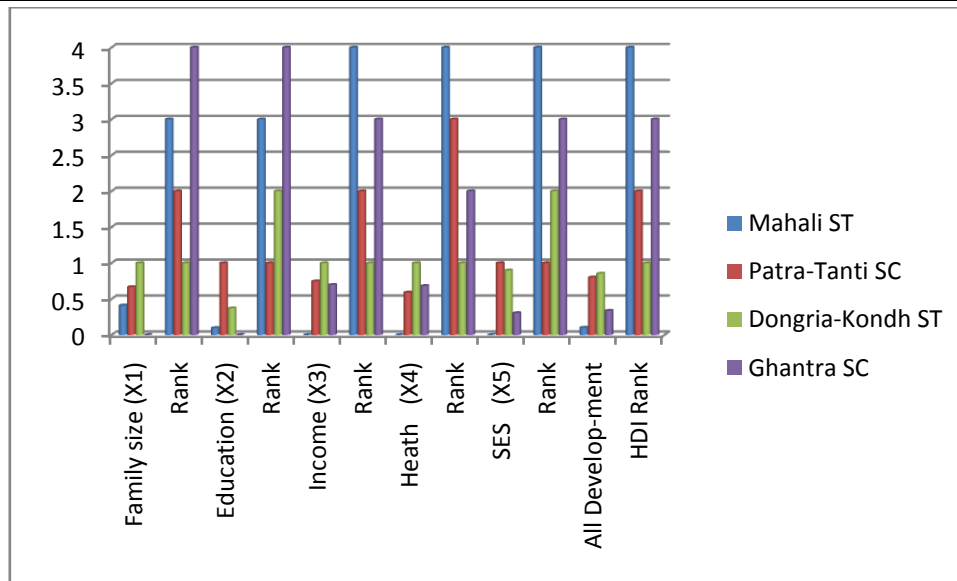
$$HDI = \frac{(X_i - X_{min})}{X_{max} - X_{min}}$$

where X_i refers to each variable for the ith community, X_{min} to the lowest value of the variable and X_{max} the highest value. After proper estimation, the development status of 2 sampled communities of Mayurbhanj and Rayagada district of Odisha was carefully recorded in a tabular manner below.

Table29. Human Development Index of the communities in the study area

| Community | Family size (X ₁) | Rank | Education (X ₂) | Rank | Income (X ₃) | Rank |
|------------------|-------------------------------|------|-----------------------------|------|--------------------------|------|
| Mahali ST | 0.4103 | 2 | 0.0968 | 2 | 0.0000 | 2 |
| Dongria-Kondh ST | 1.0000 | 1 | 0.3710 | 1 | 1.0000 | 1 |

| Community | Heath (X ₄) | Rank | SES (X ₅) | Rank | All Develop-ment | HDI Rank |
|------------------|-------------------------|------|-----------------------|------|------------------|----------|
| Mahali ST | 0.0000 | 2 | 0.0000 | 2 | 0.1014 | 2 |
| Dongria-Kondh ST | 1.0000 | 1 | 0.8986 | 1 | 0.8539 | 1 |



[Graph-Community Level Human Development Index (HDI)]

It is observed that **Dongria-Kondh ST community** is the highest in case of physical quality of life and **Mahali ST Community** is the lowest one so far HDI is concerned in the sample area, among the communities considered for the present study. In case of indicator health it is found that Dongria-Kondh ST is the highest rank in HDI and Mahali ST is the lowest HDI rank in the study area. In case of income it is observed that the Dongria-Kondh ST have the highest HDI and Mahali ST is the lowest rank. In case of education the Patra-Tanti SC is the highest and the Ghantra SC is the lowest rank. In case of family size Dongria-Kondh ST community is the highest and Ghantra SC community is the lowest rank. In case of socio-economic status it is observed from the above HDI rank table that the Patra-Tanti SC community is the highest and the Mahali ST community is the lowest HDI rank in the sample area.

4.5. Technical Findings of the Study

- Products are not standardized. High differentiation is observed. This increases the bargaining power of customers. They are also using very less no of tools & equipments for the production purposes, which restricting them in increasing product mix.
- In case of Dongria only raw products are being sold, which reduces the market value. No scopes of production of derivatives are seen in the study areas.
- Proper marketing strategies should be formed to transfer extra financial benefits to the skilled manufacturers. The channel partners enjoying more benefits.
- The tribal skilled people have no financial strength (at the context of Odisha) to hold the product for proper price. Because of their livelihood and style of living they go for desperate sale, causing zero net profit.
- It is also found the training imparted to increase the no. of skilled labors, revolving around a few. The concern training organizations do not introduce new entrants in the program. This process restricts increasing in skilled no. of manpower, volume production (contributing to price) and under-utilization of the Union and State Govt. funds. Knowledge transfer is also restricted.
- They adopt serial production process leading to increase in cost of labor, which increases cost of product and ultimately the price of product in market. Less no. of skilled labor in this field is also one of the major reasons in restriction of competition and market coverage.
- The community couldn't accept it as a profession. Only a few people with certain informal education regarding the business are engaged in this industry.
- This handicraft industry neither encouraged nor rewarding by the recognized organizations.

4.6. Overall Findings of the Study

- a. Culturally they are good in marriage pattern and family life. Polygamy and marriage within blood relation is a hateful and shameful incident and wrongly accepted in the community.
- b. Socially though they are backward but religiously at par with the general category.
- c. Any aged or partially disabled people can do this type of craft at own place.
- d. Economical viability of this craft business is remunerative.
- e. Marketability of the product is encouraging and need to be expanded to make better percentage of profit.
- f. The supports from Govt. neither in form of product design nor motivational (stimulated) skill development are being adopted in these areas. Even if financial support also stopped to this community and craft since 2005.

5. CONCLUSION

The state is endowed with rich structure, policies and prospects for rural industrialization and development but no remarkable achievement in this field has been obtained. It lacks proper coordination and integration of productive potential of rural people with its rural prospects. However the development of rural people are plagued by some major problems like inadequate flow of credit, use of obsolete technology, machinery and equipment and inadequate infrastructure facilities, lack of communication and market information, poor quality of raw materials, lack of storage and warehousing facilities, and lack of promotional strategy. Solving these problems is necessary for developing rural industries. Rural industrialization is inextricably interwoven with rural entrepreneurship. A new approach is required to build sustainable development in the field of rural industries. That is an integrated approach to entrepreneurial culture in rural Orissa. That must be consisting of varied activities - governmental and NGOs efforts existing entrepreneurial culture, market culture where the products and service are delivered, which create around the dynamics of entrepreneurial growth and change. This kind of new entrepreneurial culture needs for new goods and services, start many new venture by exploiting new combinations of its available resources to achieve entrepreneurial goals, This culture should be nurtured, fostered and promoted with new vision, values, norms and traits that is conducive for the sustainable development of the rural people.

At last it can be concluded by hoping the following social contribution outcomes.

1. This strategy will generate small business units at rural and remote India. This also will join the main stream of industrialization and modernization to generate good business opportunity in the era of globalization.
2. These small business units will help in optimum utilization of human resources skills those who remained outside the mainstream.
3. This process will help in the preparation of a list of requirements in synchronization to the parameters of district level plan.
4. Some of the problems in the country regarding productions and employment can be solved with realistic financial allocations.
5. It will open up awareness and inspire the rural unemployed and under-employed mass for employment through small/tiny handicraft industries.
6. Migration of rural people towards urban cities will reduce which eradicate seeking cheap labor.

At the conclusion part it is need to be mentioned that, "it should be the moral responsibility of the society and Govt. as a whole to encourage this community people for production of these items in form of use, design, skill development and finance to generate rural employment, use of barren lands and more over eco-environmental friendly application & attitude of a community business for sustainability".

6. SUGGESTIONS

Hence the research is under progress a much concrete suggestions would not be possible to contribute. The suggestions whatever will be specified only based on certain logics and assumptions. The fields applications of these suggestions are still in the verse of prove.

1. A formal and/or formal with partial informal training is needed for a period of three months time to train those people on project preparation, techno-economic feasibility analysis, registration, material procuring and selection, inventory requirement, product standardization, product specification and design, business opportunity identification, marketing, rules and regulations on tie-up, collaborations, profit sharing, motivational skills development, time management and time bound, managerial skills development and export-import technique, handicraft industrial business activities and any other relevant syllabi.
2. Financial help should be organized through loan scheme to SHG or micro-financing system. These industries are supposed to be looked into or take care by the Ministry of MSME, Govt. of India. Subsidies/Bail out packages is supposed to be worked out for this type of industry.
3. More no. of human resources should be involved and competition can be created through human skill and market expansion in both horizontally and vertically.
4. Hence there is a greater demand of these products in many of the domestic market; other market areas should be focused.
5. New utilities of the products can be thought over. Now these type of products are used for decorative and storage items, astray, utensils, mementos and some other few utilities domestic and household goods.
6. TRIFED, Govt. of India undertaking should have to help in marketing for a better commercial value.
7. Managing human skill and developing, it would include identifying rural artisans engaged in cottage and small industries which could be run through local skill, providing training and management skills and marketing of the village industrial products.
8. Improve productivity enhance quality, reduce cost and restructure product mix through up gradation of technology and modernization.
9. Strengthen and enlarge skill profile and entrepreneurial base to increase opportunities for self-employment.
10. Restructuring the production process which includes change in output pattern, re-evaluations of non-renewable resources and ecologically adjusted production.
11. Improve general levels of welfare of workers and artisans through better working conditions, welfare measures and security of employment earnings.
12. Tribal should be allowed to develop according to their own genius.
13. Tribal rights in land and forest should be respected.
14. Tribal teams should be trained to undertake administration and development without too many outsiders being inducted
15. Tribal development should be undertaken without disturbing tribal social and cultural institutions
16. The index of tribal development should be the quality of their life and not the money spent

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