**Original Research Article**

**Economic Significance of Gender on Harvest Festivals in State of Odisha**

**ABSTRACT**

 This study investigated the economic significance of harvest festivals in Odisha. The role of gender in these festivals. Utilizing a mixed method approach, both quantitative and qualitative data were collected from the Sundargarh district, specifically targeting Bisra and Nuagaon taluks. The economic impact was assessed through income generation opportunities, expenditure patterns, and associated economic activities. The study found that harvest festivals significantly contributed to the local economy by boosting sales, attracting tourism, and creating job opportunities. Gender analysis revealed distinct roles with women predominantly involved in preparation and rituals, while men engaged in economic activities. The findings highlight the festivals' role in economic resilience, cultural preservation, and social cohesion, offering insights for policymakers and cultural organizations to enhance rural development and tourism.

***Keywords:*** Harvest festivals, Odisha, Gender roles, Community well-being, Cultural heritage.

**1. INTRODUCTION**

India is one of the world's most diverse country, with a wide range of cultures, religions, festivals, castes, classes, and creeds. India is the home of numerous religions, including Buddhism, Hinduism, Sikhism, Jainism, and many more, all of which rely on various cultures to bring about world peace. Festivals are recognized for their ability to celebrate and raise awareness of their own history, customs, and culture. Harvest festivals are a time for communities to unite, show appreciation, and celebrate the results of their labor. Odisha is a festival-rich state having a vibrant cultural heritage. In Odisha, there is a proverb that says "Bara Masare Tera Parva," which means that there are thirteen festivals for the people to celebrate in a year (Sahoo, 2022).

Harvest festivals honor farming practices like planting and harvesting crops or honoring the natural world and its creatures. Agricultural festivals are comprehensive festive activities based on 'local special agricultural products or culture', held regularly or irregularly in a specific area, and held various activities with a specific theme, while integrating tourism, culture, economic and trade activities (Nengjie et al., 2008).

The archeological artifacts narrate the history of Akhand Bharat is known for the ceremonial festivals, ritual festivals, birth and death festivals, harvest festivals, seasonal festivals right from the thousands of years. The religious conglomeration with the festivals further enriches the glory of Indian rituals and vast traditions. They are designed to help us stay connected while we share precious moments and feelings with our loved ones (Kumar, 2023).

**1.1 Harvest festivals of India**

In South India, Pongal marks a significant harvest festival, celebrated primarily in Tamil Nadu. The festival spans four days, with each day holding unique rituals and customs. Pongal is dedicated to the Sun God, Surya, and involves the boiling of freshly harvested rice with milk and jaggery in earthen pots, symbolizing abundance and prosperity. In North India, Baisakhi stands out as a joyous occasion celebrated predominantly by the Sikh community. It celebrates the foundation of the Khalsa Panth by Guru Gobind Singh Ji in 1699 and the Sikh New Year. Baisakhi also coincides with the harvest season, and festivities include vibrant processions, traditional dances like Bhangra and Gidda, and the sharing of delicious sweets and savories.

Makar Sankranti, celebrated in Western India, particularly in states like Maharashtra, Gujarat, and Rajasthan, heralds the arrival of longer days and the end of winter. The festival is marked by kite flying, bonfires, and the consumption of traditional sweets made from sesame seeds and jaggery. People also take ritual baths in rivers, believing it purifies their sins and bestows prosperity. Onam, celebrated in Kerala, is one of the most significant harvest festivals in the region, marked by colorful floral decorations, traditional dance performances like Kathakali, boat races, and elaborate feasts known as Onam Sadya. The festival commemorates the return of King Mahabali, a beloved mythical ruler, and is a time for families to come together and celebrate the richness of Kerala's culture and heritage.

These harvest festivals not only celebrate the agricultural abundance but also serve as reminders of the interconnectedness between humans, nature, and the divine. They provide a glimpse into the diverse cultural tapestry of India, where each region adds its unique flavors and traditions to the celebration of life and abundance.

**1.2 Harvest festivals in Odisha**

 There are over 13 festivals celebrates in 12 months with considerable enthusiasm. Odisha's festivals are planned such that they relate to spirituality, science, history, and mythology (Ojha, 2021). Majority of the Indians being agriculturists, Odisha consisting of both tribals and non-tribals are involved in agricultural activities and enjoy each and every festival with great pomp and gaiety (Singh, 2012). Men, women, children and every member of the family are involved in the festivals with high level of excitement. Rice is seeded during Akhyatrutiya in May–June, completed planting is marked by Raja Sankranti in mid-June, rice is in its reproductive phase during Garbhanasankranti in October, and rice harvesting occurs at Nuakhai and Laxmipuja in May–June and October, respectively. The tribal people commemorate Makarsankranti, around the middle of January, as Chaita Parab because this is when rice is brought to the granary and threshed (Das, 2012). With the help of bamboo pots called as kula in which they take seeds and perform rituals in their respective fields. Rituals are performed by the Gram Pandit called as pahan (a priest or someone who performs religious rituals).

Pousha Punei: Held on the full moon day of the month of Pousha, this agricultural celebration in Western Odisha honors the fresh crop. The landowners' and the previous shareholders' contract expire on this day, and new agreements for the upcoming year are finalized side by side.

Mana Basa Gurubara: This is a major festival when Goddess Laxmi is adored, and it is observed every Thursday in the month of March. Mature paddy is gathered from the fields by farmers, and housewives use it to weave menta, or ropes. The farm ladies begin mopping their threshing floor and house on Wednesday using water, cow dung, and clay to maintain cleanliness. Women will paint floors in a unique style called “alpina” with the help of rice powder and water (Satprakashananda,1986). They store the freshly harvested paddy in Manas, which are bamboo measuring units, early in the morning on a wooden khatuli, a little bed that is embellished with fresh linen and flowers. They offer Goddess Laxmi with Prasad three times a day. Only family members consume the delicious desserts, sweets, kheer, fruits, etc. that make up the prasad. ­ (Sabita et al., 2018).

While there are several celebrations in Odisha, Makar Sankranti is one of the most important ones. Even though almost every state in India celebrates this harvest festival, Odisha's celebration is unique for two reasons: first, it coincides with the state's traditional new year, and second, it has astronomical significance for those who think that the motion of celestial bodies affects life. In Odisha, Makar Sankranti celebrations mark the start of Makar Mela and the creation of a variety of delicious, mouthwatering foods. The uncooked, freshly harvested rice, banana, jaggery, coconut, rasgullas, sesame, Chhena puddings, and Khai/Liaa are all used in the making of the traditional Makar Chaula cuisines. For the believers, this traditional dish holds great significance, and it is undoubtedly made on this particular day (Sahu, 2015).

With reference to the Sambalpuri culture of Odisha another agricultural festival called Nuakhai is celebrated for welcoming of first harvesting of the season to home. In accordance with the Hindu calendar, Nuakhai falls on the day following the Ganesh Chaturthi holiday, Panchami tithi, which is the fifth day of the Suklapaksha (lunar fortnight) of the month of Bhadrapada or Bhaadra (August–September). 'Nua' means new and "khai" means to eat, this day involves dining together and acknowledging the new harvest crops. The new cereal is not consumed until Nuakhai rites are carried out in front of the presiding deity. The deity is offered prasad made from freshly harvested rice as part of the agrarian custom. The home is prepared to welcome the deity to enjoy the first fresh harvest of the new season, having been properly cleaned and groomed down to the last detail. Farmers credit the good harvest to the blessings of the deities, viewing it as a sign of submission (Meher, 2020).

Harvest festivals in India are not only occasions for celebration and religious fervor but also play a vital role in sustaining rural livelihoods, promoting cultural heritage, and fostering social cohesion.

**2. METHODOLOGY**

**2.1 Selection of Study Area**

Odisha was selected purposively because of its geographical diversity, ranging from coastal plains to highland terrains, impacts agricultural practices and harvest festivities. The study was conducted in Sundargarh district of Odisha during 2023-24. This district was selected purposively because it has distinct, rich, variegated traditions- its various strands being fair, festival, deities and their rituals performing arts like dance, music, dramatic performance, food and beverage, ornaments, artifact sand crafts, different rituals and sacrifices and in fact, an entire gamut of things associated with lives of castes of the area. A total of 120 respondents were included in the sample by randomly selected. An ex post facto research design was used in the study.

**2.2 Sources of Data**

Primary data collected through pretested schedule from the respondents by personal interview method and focused group discussions (FGD) during Feb to April 2024. Secondary data gathered from various published sources. i.e., Census of India (2011), Ministry of Tourism, government of India, Block office of Bisra and Nuagaon, Sundargarh, Odisha.

**2.3 Analytical t****ools**

The following statistical methods and procedures were used to score, quantify, evaluate, categorize, and tabulate the collected data.

**Frequency:** Frequency is the number of times a variable is repeated. This measure was used to know the distribution pattern of respondent’s variable wise and to categorize the respondents based on their opinion on each activity.

**Percentage:** Percentage is the number, amount and rate etc., expressed as it is part of a total which is 100. For calculating percentage, the frequency of particular set was divided by the total number of observations multiplied by 100.

**Mean (𝑋̅):** The ratio of the total number of observations to the sum of all the observations is known as the mean. The dependent and independent variables were divided into low, medium, and high categories using this metric. The mean was employed as a metric to categorize the participants into distinct groups.

 $\overbar{x}=\frac{∑x}{n}$

Where,

𝑋̅ = Mean of the observations

∑X = Sum of all the observations n = Total number of observations.

**Standard Deviation:** It is defined as the square root of the square root of the deviations from the mean of the collection of observations. The dependent and independent variables were divided into low, medium, and high categories using this metric.

$$SD=\sqrt{\frac{∑\left(x-\overbar{x}\right)^{2}}{n-1}}$$

Where,

𝑋̅ = Mean

n = Number of observations

**Chi square test:** In this research study aimed at assessing the gender dynamics, we employed the chi-square test as a statistical tool within our methodological framework. The chi-square test, a powerful tool for analyzing categorical data. To conduct this analysis, we collected data on key categorical variables such as gender and participation rates. These variables were compiled into a contingency table summarizing the observed frequencies of their combinations. The expected frequencies for each cell of the table were computed under the assumption of no association, using the formula:

Expected Frequency (E) = (Row Total \* Column Total) / Grand Total.

Subsequently, we calculated the

Chi-square statistic (χ²) using the formula:

 $x^{2}=∑\frac{\left(O\_{i}-E\_{i}\right)^{2}}{E\_{i}}$

Where, Σ represents the summation across all cells of the contingency table.

The degrees of freedom (d.f) were determined as (r - 1) \* (c - 1), where 'r' represents the no. of rows and 'c' the no. of columns in the contingency table.

 A predetermined significance level (alpha) was chosen to determine the level of significance for the test. Finally, by comparing the calculated chi-square statistic to the critical value from the chi-square table. The chi-square statistic measures the difference between the expected and observed frequencies in a contingency table.

The hypothesis taken in this study are as follows:

**Null Hypothesis (H0):** There is no association between the gender and participation in harvest festivals.

**Alternative Hypothesis (H1):** There is an association between the gender and participation in harvest festivals.

p-value < 0.05; Reject H0.

 p-value > 0.05; Accept H0.

**3. RESULT AND DISCUSSION**

**3.1 Analysis of the economic significance of harvest festivals in Odisha.**

Nearly half of the respondents (45%) believed that harvest festivals significantly contribute to income generation by providing opportunities for selling goods and services. A substantial portion of respondents (38.33%) felt that harvest festivals contribute to income generation by attracting tourists or visitors who spend money in the village.

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Statement** | **Frequency** | **Percentage** |
| 1. | Yes, by providing opportunities for selling goods and services | 54 | 45.00 |
| 2. | Yes, by attracting tourists or visitors who spend money in the village | 46 | 38.33 |
| 3. | No, it does not significantly contribute to income generation | 20 | 16.67 |
|  | **TOTAL** | **120** | **100.00** |

**Table 1 Perception on contribution to income generation**

. A smaller segment of respondents (16.67%) believed that harvest festivals did not significantly contribute to income generation. Similar results were found in Ossowska (2023).

**Figure 1. Perception on contribution to income generation**

**3.2 Economic benefits perceived by respondents**

The table 2 presents the total expenditure in rupees on various items including food and beverages, decorations, transport, clothing, entertainment, and religious items.

**Table 2 Economic benefits perceived by respondents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **Items** | **No. of respondents** | **Total expenditure (Rs)** | **Average expenditure per respondents (Rs)** |
|  | Food and beverages | 120 | 108000 | 18000 |
|  | Decorations | 120 | 12000 | 2000 |
|  | Transport | 120 | 6000 | 1000 |
|  | Clothing | 120 | 36000 | 6000 |
|  | Entertainment | 120 | 18000 | 3000 |
|  | Religious items | 120 | 24000 | 4000 |
| **TOTAL** |  | **120** | **204000** | **34000** |

Food and Beverages had the highest expenditure, accounting for 53% of the total expenditure. Clothing was the second highest expenditure category, making up 17% of the total, reflecting cultural norms and the importance of dressing well for the occasion. At 3%, entertainment was the category with the lowest spending. This imply that, in relation to other categories, entertainment was less important during the harvest festival and expenditure on food, eateries were highest among all. Similar results were found in Chhabra (2003).

**Fig. 2 Economic benefits perceived by respondents**

**3.3 Various Economic activities associated:**

The following table 3 represents the economic activities undertaken during harvest festivals.

***Table 3 Economic activities***

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Statement** | **Frequency** | **Percentage** |
| 1. | Selling agricultural produce | 46 | 38.33 |
| 2. | Handicrafts and artisanal products | 24 | 20 |
| 3. | Food stalls and catering services | 12 | 10 |
| 4 | Cultural performances & entertainment | 38 | 31.66 |
|  | **TOTAL** | **120** | **100** |

The largest proportion of respondents (38.33%) were involved in selling agricultural produce during the harvest festival. Cultural performances and entertainment also played a substantial economic role, with 31.67% of respondents participating in these activities. A significant portion of the economic activity (20%) involved the sale of handicrafts and artisanal products. Food stalls and catering services, though representing a smaller proportion (10%), were still an important part of the festival's economic activities. Similar results were obtained in Janse (2019).

**Fig.3 Economic activities**

**3.4 Community involvement during harvest festivals:**

The data presents various aspects of community involvement during harvest festivals, reflecting the diverse ways in which community members participate and contribute.

**Table 4** **Role of community in village**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Category** | **Frequency** | **Percentage** |
| 1. | Involve resource poor people | 4 | 3.33 |
| 2. | Collect charity from different households | 44 | 36.67 |
| 3. | Involvement of children in cultural performances | 14 | 11.67 |
| 4. | Conducting feasts, parties | 32 | 26.67 |
| 5. | Common dining | 26 | 21.67 |
|  | **Total** | **120** | **100.00** |

The most common form of community involvement was the collection of charity from different households, with 36.67% of respondents highlighting this activity. Organizing feasts and parties was another significant aspect, noted by 26.67% of respondents. Common dining, where community members ate together, is mentioned by 21.67% of respondents. The involvement of children in cultural performances is highlighted by 11.67% of respondents. The involvement of resource-poor people is noted by 3.33% of respondents

**Figure 4. Role of community in village**

**3.5 Participation of respondents in village harvest festivals:**

The data in Table 5 provides information about the participation of respondents in harvest festivals, broken down by gender.

|  |  |  |
| --- | --- | --- |
| **Category** | **Frequency** | **Percentage** |
| Male | 72 | 60 |
| Female | 48 | 40 |
| **TOTAL** | **120** | **100** |

**Table 5 Participation of respondents in harvest festivals**

The data shows a higher frequency and percentage of male participation (60%) in harvest festivals. Although lower than male participation, females still represented a substantial portion (40%) of the participants. This revealed the disparities as well as the interest towards attending in festivals. Similar results were found in Chang (2014) and Bano (2005). 263 participants (61%), while 165 (39%) were male. Married people with children also prefer rural participation. Agritourists, who have the potential to become loyal, focus above all on buying fresh and high-value products Ceylan, R (2024).

**Figure 5 Participation of respondents in harvest festivals**

**Chi square test:**

A chi-square test was performed to evaluate the association between gender and participation in harvest festivals.

The hypothesis formulated as follows:

 Null Hypothesis H0: There is no significant association between gender and participation in harvest festivals.

Alternative Hypothesis H1: There is a significant association between gender and participation in harvest festivals.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Observed value** | **Row Labels** | **No** | **Yes** | **Row Total** |
|  | F | 6 | 42 | 48 |
|  | M | 28 | 44 | 72 |
|  | **Column Total** | **34** | **86** | **120**  |

**Table 6 Observed and Expected values of respondents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Expected value** | **Row Labels** | **No** | **Yes** |
|  | F | 6.8 | 17.2 |
|  | M | 10.2 | 25.8 |

Chi test value 0.0262

p-value < 0.05; Reject H0.

 p-value > 0.05; Accept H0.

p-value = 0.0262s <0.05.

Ho rejected.

So, there is significant association between gender and participation in harvest festivals.This implies likelihood of participating in harvest festivals was different for males and females.Participation of males revealed their active involvement in physical and logistical aspects of setting up and running the festival. Further they have fewer domestic responsibilities compared

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Statement** | **Frequency** | **Percentage** |
| 1 | Cooking and preparing food | 30 | 50% |
| 2 | Decorating | 22 | 36.67% |
| 3 | Cultural performance | 8 | 13.33% |
|  | **TOTAL** | **60** | **100** |

to women. Women’s participation was influenced family and domestic spheres. They have traditional roles in culinary activities, art, crafts and hospitality.

**3.6 Role of women during harvest festivals:** The data in the table 7 represents the roles of women during harvest festivals, indicating their involvement in various activities.

TABLE 7. Roles of women during harvest festivals

It is highlighting the role of women in cooking and preparing food with half (50%) of the respondents primarily engaged in cooking and preparing food during harvest festivals. Approximately 37% of the respondents indicating that women contribute substantially to the aesthetic and festive environment of the celebration. A smaller proportion of respondents (13.33%) indicate that women participate in cultural performances. Similar results were found in Alshammari *et al*. (2019) and Thomas (2022).

**Fig. 6 Participation of women in harvest festival**

**3.7 Role of males in harvest festivals:** The table 8 provides men's involvement in various activities during harvest festivals.

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Statement** | **Frequency** | **Percentage** |
| 1. | Leading ceremonies | 32 | 26.67 |
| 2. | Agricultural activities | 48 | 40.00 |
| 3. | Organizing events | 40 | 33.33 |
|  | **TOTAL** | **120** | **100** |

 **Table 8 Participation of male**

The majority of males, 40%, were primarily involved in agricultural activities. A substantial portion, 33.33%, of males were involved in organizing events. This suggested that beyond the physical labor, males were also crucial in the logistical and planning aspects of the harvest.

**CONCLUSION**

Harvest festivals serve as powerful economic and cultural engines within communities. They provide farmers with direct market access, boosting local economies while supporting regional businesses. These celebrations simultaneously preserve cultural heritage and create economic diversification opportunities through tourism and cultural activities.

During these festivals, spending focuses primarily on essentials like food, clothing, and decorations, demonstrating how religious traditions adapt to practical needs while maintaining customs. There are notable gender differences in participation, with men 60% more likely to participate than women, reflecting traditional gender roles within the community.

These gender distinctions extend to specific responsibilities: women predominantly handle food preparation and cooking alongside decorative duties, aligning with traditional expectations regarding household management. Men, meanwhile, typically engage in agricultural activities and physically demanding harvest-related tasks, highlighting their contribution of manual labor during festival periods.

Beyond economic and practical impacts, harvest festivals play a crucial role in fostering social cohesion. They facilitate neighborly harmony, promote peace, preserve cultural heritage, and strengthen community bonds. These celebrations represent a holistic approach to community life that balances economic opportunity, cultural preservation, and social unity.

**Ethical declarations: All data collection procedures are based on the ethical guidelines.**

**Data Availability Statement: The study is entirely based on primary data, which was collected**

**using a pre-tested survey schedule to ensure reliability and validity.**

**REFERENCES**

Alshammari, F., & Kim, Y.-K. (2019). Seeking and escaping in a Saudi Arabian festival. International Journal of Event and Festival Management, 10(1), 2-16.

Ceylan, R., Govindasamy, R., Özkan, B. U. R. H. A. N., & Pandey, S. (2024). Stimulating agritourism loyalty in the Mid-Atlantic states of the USA. Turyzm/Tourism, 34(2).

Chhabra, D., Sills, E., & Cubbage, F. W. (2003). The significance of festivals to rural economies: Estimating the economic impacts of Scottish Highland Games in North Carolina. Journal of Travel Research, 41(4), 421-434.

Das, S. (2012). Rice in Odisha. <https://doi.org/10.22004/ag.econ.287645>

Faraway, J. J. (2016). Extending the linear model with R: generalized linear, mixed effects and nonparametric regression models. Chapman and Hall/CRC.

Gibson, C., Connell, J., Waitt, G. & Walmsley, J. (2011). Chapter 1. The Extent and Significance of Rural Festivals. In C. Gibson & J. Connell (Ed.), Festival Places: Revitalising Rural Australia (pp. 3-24). Bristol, Blue Ridge Summit: Channel View Publications.

Gupta, Anil. (2004). Origin of agriculture and domestication of plants and animals linked to early Holocene climate amelioration. Current Science. 87(1), 54-59.

Håland, E. J. (2017). Greek Festivals, Modern and Ancient: A Comparison of Female and Male Values Volume 1. Cambridge Scholars Publishing.

Hariharan, R., & Kumar, R. S. (Eds.). (2025). Recent Research in Management, Accounting and Economics (RRMAE).

Janse, H. (2019). Changes in gender roles within intangible cultural heritage: A survey of gender roles and gender restrictions within the Yama Hoko Yatai float festivals in Japan. Heritage, 2(3), 2090-2110.

Kumar, S. (2023). Millets an ingredient of celebrating harvest festivals and religion in Bharat. S4(Special Issue 08),13-17.

Meher, Bandana. (2020). Nuakhai: The Festival of Reconnecting Family.

Njoku, R. C. (2020). West African Masking Traditions and Diaspora Masquerade Carnivals: History, Memory, and Transnationalism (NED-New edition). Boydell & Brewer.

Ojha, Laxmipriya. (2021). Raja Festival A Worship of Motherhood: Theoretical perspective

Ossowska, L., Janiszewska, D., Kwiatkowski, G., & Kloskowski, D. (2023). The impact of local food festivals on rural areas’ development. Sustainability, 15(2), 1447.

Pirkova-Jakobson, S. (1956). Harvest festivals among Czechs and Slovaks in America. The Journal of American Folklore, 69(273), 266-280.

Sabita, M., Abha, S., Sahoo, L. P., & Gayatri, M. (2018). Cultural practice in agriculture of Odisha. Odisha Review, (November), 69-71.

Satprakashananda, S. (1956). Folk festivals in India. Midwest Folklore, 6(4), 221-227. Retrieved from https://www.jstor.org/stable/4317600

Sahoo, T. (2022). Fairs and festivals of Mayurbhanj: An overview. International Journal of Humanities Social Science and Management (IJHSSM), 2(5), 441-447.

Sahu, C. K. (2015). Makar festival of Mayurbhanj: At a glance. International Journal of Research in Social Sciences (IJRSS), 5(1), 163-172. ISSN: 2249-2496.

Singh, P. K. (2012). Nuakhai: Festival of social harmony. Odisha Review, September, 23-25.

Thomas, A. (2022). Participation and role of women in events and festivals: A study on the contributions of women in revitalizing and sustaining the folk potential of fairs and festivals in India. In S. Arora & A. Sharma (Eds.), Event tourism in Asian countries (1st ed., pp. 17). Apple Academic Press.