Socioeconomic and Demographic Status of Tribes in Mayurbhanj, Odisha: An Analysis of Select Blocks

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Abstract

This study offers a detailed socioeconomic profile of 5,075 individuals from 1,175 households across three blocks in Mayurbhanj district, highlighting the diverse spread of tribal communities and gender dynamics. The analysis shows a higher proportion of females (51.9%) than males (48.1%), with notable gender differences across blocks (p < 0.05). Specifically, Baripada has a significant female majority of 53.5%, while Khunta and Samakhunta display slight male majorities. Additionally, the average annual income and expenditure of the tribe are both 82,763 rupees, with statistically significant differences (p < 0.01 for income, p < 0.05 for expenditure). However, disparities in expenditure across the blocks are evident: Baripada, Khunta, and Samakhunta recorded contributions of 52,414, 64,440, and 53,400 rupees, respectively. These findings emphasise the complexity and diversity within tribal communities, underscoring the need for tailored economic strategies and resource allocation to address local socio-economic dynamics effectively.

Keywords: Demography, socio-economic, tribe, livelihood

Introduction

Scheduled Tribes are among the most vulnerable communities in Odisha, particularly in regions such as Mayurbhanj (Dungdung & Pattanaik, 2020). In these areas, including Rayagada, Nabarangpur, Mayurbhanj, Koraput, Malkangiri, and Sundargarh, tribal communities constitute a significant majority (Rath, 2018). They uphold a distinctive societal framework, viewing themselves as self-contained units within an ideal state (Garada, 2012).

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The forest holds significant cultural and economic value for these tribes, who regard it as their mother and depend on its resources for their livelihood (Rout et al., 2010). Their sustenance mainly comes from agricultural produce, minor forest products, and hunting wild game. Mayurbhanj District alone accounts for about 58% of the district's population, which belongs to various tribes (Mohanty, 2017), including Santhal, Mahali, Saunti, Bhumji, Bathundi, Munda, Gond, Kol, Mankirdia, Lodha, Baiga, and Hill Kharia, among others. Notably, the Kol and Bhumji tribes are prominently concentrated in this region (Ota & Mohanty, 2021).

While communities like Santhal and Bhumji are present in every block of the district, others, such as Lodha, Mankirdia, and Kharia, are primarily found in the hilly regions of Simlipal, Morada, and Suilapada blocks around Baripada (Sahoo, 2023). Their livelihoods depend on collecting forest resources, such as nuts, flowers, and leaves from Sal trees (Maharana & Nayak, 2017). Furthermore, many tribes engage in daily wage labour, contributing to agricultural work and small-scale industries in the region (Mohanty, 2017; Majhi & Puhan, 2017). Their traditional practices extend beyond subsistence farming and forest gathering to include handicrafts and other forms of artisanal work, which are vital to their economic activities (Jana et al., 2022).

In essence, these tribes showcase a rich cultural heritage closely linked to their natural environment (Hansda & Sachan, 2019). Their sustainable practices and detailed knowledge of local ecosystems are crucial for their survival and the conservation of biodiversity in the region.

Study Area

Mayurbhanj, a district in northern Odisha, covers an area of 10,418 square kilometres. Its administrative centre is Baripada, situated between 21°17' and 22°34' North latitude, and 85°40' and 87°10' East longitude (Figure 1). This district is landlocked and borders the Midnapore district of West Bengal to the northeast, the Singhbhum district of Jharkhand to the northwest, the Balasore district to the southeast, and the Kendujhar district to the southwest. Three blocks with a tribal population exceeding 70 per cent were examined in this study: Baripada, Khunta, and Samkhunta. The region's economy is mainly driven by agriculture, forestry, and small-scale industries, with tribes playing a vital role in the area's socio-economic fabric.

Overall, Mayurbhanj stands out not only for its natural beauty and geographical diversity but also for its rich cultural tapestry and the resilience of its communities in the face of various socio-economic challenges.

Figure 1

Location of Study Area
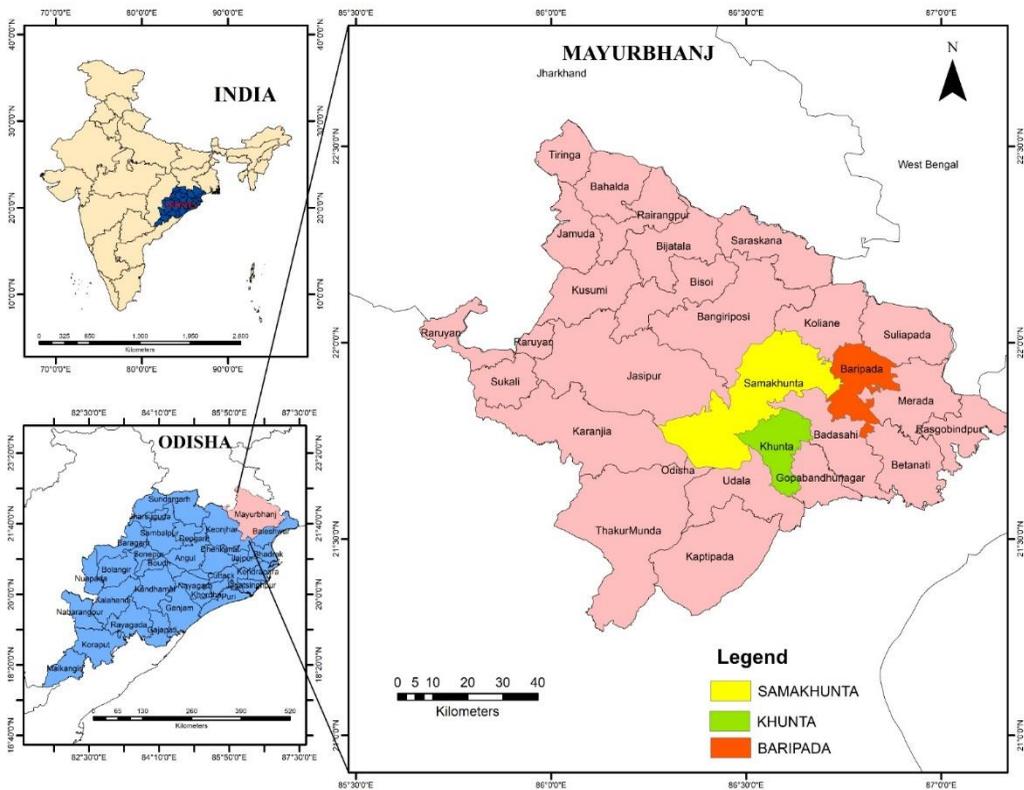
Data and Methodology

To achieve the study's objectives, a thorough investigation was carefully planned and carried out across three distinct blocks: Khunta (classified as rural), Baripada (classified as urban and densely populated), and Samakhunta (also rural but with moderate population density). These blocks were strategically selected to provide a comprehensive understanding of diverse demographic and geographic conditions within the Mayurbhanj District.

Using a structured questionnaire, the study gathered data from 1,175 respondents across 14 tribal villages in the targeted blocks. This methodological approach ensured a robust sampling framework, allowing for a comprehensive analysis of the socio-economic and demographic factors influencing tribal communities in the region.

To understand the various demographic features and socio-economic conditions, SPSS was used to analyse the questionnaire data.

The gathered data were coded and entered into MS Excel spreadsheets and SPSS files. Analysis of socio-academic, socio-economic, and socio-cultural characteristics, traditional beliefs, and cultural practices

utilised descriptive statistics, including Chi-square tests and ANOVA for comprehensive evaluation.

Demography

The term "demography" was coined by Guillard in his work titled "Elements de statistique humaine, ou demographie compare (Carmichael, 2016). It originates from the Greek word 'Demos', meaning people, and broadly encompasses the study of population composition, structure, distribution, change, and growth across various locations and periods.

Population Composition

It illustrates a unified yet diverse distribution of tribal communities. Despite belonging to the same community, they vary. Specifically, the Santal community is predominantly located in Baripada and Khunta Block, whereas the Bhumija clan is concentrated in Samakhunta. The demographic data from 5,075 individuals across 1,175 households in the three selected blocks of Mayurbhanj district reveal a noticeable gender pattern. Overall, females constitute a slightly higher proportion of the population (51.9%) compared to males (48.1%). Statistical analysis further shows a significant association between gender distribution and the specific blocks ($p < 0.05$), indicating that population composition varies meaningfully across the study area.

Table 1

Sex Composition in Major Tribal Blocks of Mayurbhanj District

		Block			Total	χ2
		Baripada	Khunta	Samakhunta		
Male	Count	1400	555	485	2440	
	% within Block	46.5	50.5	50.3	48.1	
Female	Count	1610	545	480	2635	7.286a*
	% within Block	53.5	49.5	49.7	51.9	
Total	Count	3010	1100	965	5075	
	% within Block	100.0	100.0	100.0	100.0	

(Chi-square analysis table of sex composition) *Significant, ** Highly significant

Statistical analysis further shows a significant association between gender distribution and the specific blocks ($p < 0.05$), indicating that population composition varies meaningfully across the study area. A closer look at block-wise distribution shows contrasting gender patterns. Khunta and Samakhunta blocks have a marginal male majority, suggesting a relatively balanced but slightly male-dominated population. In contrast, Baripada block stands out with a distinctly higher proportion of females, where females outnumber males by about seven percentage points (53.5% females vs. 46.5% males). This makes Baripada the only block with a clear female-dominant demographic trend (Table 1).

The demographic pattern suggests that the gender distribution in Mayurbhanj is not uniform and varies

significantly across blocks. While the overall population leans slightly toward females, block-level differences highlight localised social, economic, or migration-related factors that may shape gender composition. The strong female presence in Baripada may reflect better retention of women, men's migration for livelihoods, or other socio-demographic influences. These insights are important for planning and implementing block-specific development policies, particularly in health, welfare, and resource allocation.

There exist visible differences in the age composition of the tribal population across Baripada, Khunta, and Samakhunta. Baripada has a noticeably larger child population, suggesting higher dependency and a younger demographic structure (Figure 2). Samakhunta, on the other hand, shows a more substantial presence in the 16–30 and 30–45 age groups, suggesting a more active working-age population. Khunta displays a relatively balanced distribution across most age groups but does not lead in any particular category. The 45–60 age group is most concentrated in Samakhunta, while all three areas show a small elderly population (60+), reflecting limited life expectancy or out-migration of older adults.

Overall, the pattern suggests differing demographic pressures: Baripada may require more child-focused services, while Samakhunta's workforce concentration may influence economic and livelihood dynamics. Khunta remains relatively stable across categories, with slight variation.

Figure 2

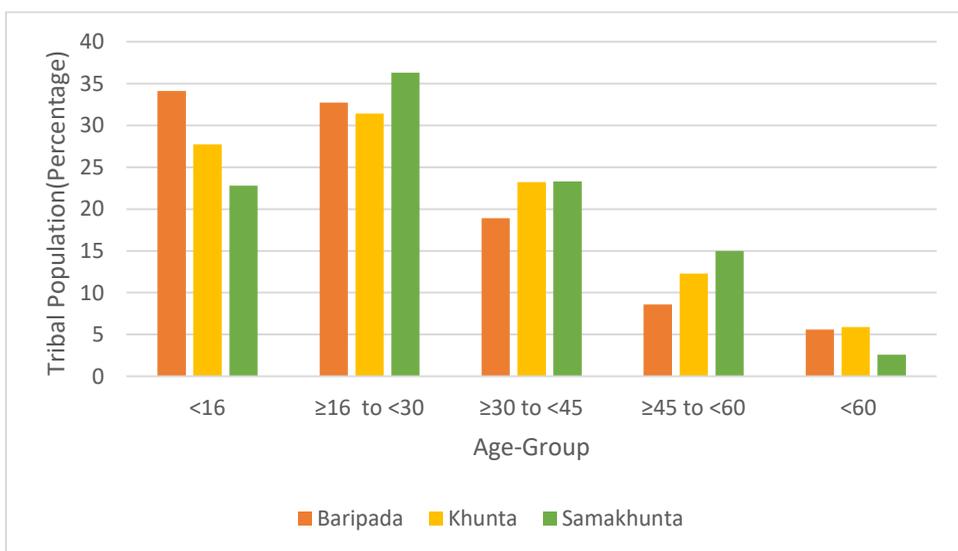Age-Wise Distribution of Tribal Population

Table 2

Educational Status of Selected Blocks

Educational status			Block			Total	χ2
			Baripada	Khunta	Samakhunta		
	Literate	Count	1805	765	430	3000	
		% within Block	60.0	69.5	44.6	59.1	
	Illiterate	Count	1035	305	505	1845	
		% within Block	34.4	27.7	52.3	36.4	1.692E2a **
	Below the age group 6	Count	170	30	30	230	

(Chi-square analysis table of educational status) *Significant, ** Highly significant

The study reveals that 59.1% of the tribal population in the sample is literate, while 36.4% remains illiterate. Block-wise analysis shows notable variation: literacy levels stand at 44.6% in Samakhunta, 69.5% in Khunta, and 60% in Baripada. Although Baripada is categorised as an urban area, its educational advantages appear to have only a modest influence on improving literacy among tribal communities. This indicates that urban proximity alone does not necessarily translate into better educational outcomes for tribal populations.

The chi-square value shown in Table 2 ($χ^2$ = 1.692E2**) indicates a statistically significant association between educational status and block, meaning the differences observed across the three blocks are not due to chance. Instead, the variation reflects genuine disparities in educational access, awareness, or infrastructural support within these regions.

Social Status

Religion. The majority of tribes follow Hinduism, accounting for 94.6% of the total sample. The chi-square value ($χ^2$ = 71.538**) confirms a statistically significant association between religion and block, suggesting that the observed variation in religious composition across the three areas is meaningful and not due to chance (Table 3). Overall, the results indicate that while the tribal population is predominantly Hindu across the region, the degree of religious diversity differs noticeably among the blocks, with Baripada showing the highest level of variation.

Table 3

Table Showing Different Religions in Selected Blocks of Mayurbhanj

			Block			Total	χ2
			Baripada	Khunta	Samakhunta		
Religion	Hindu	Count	2785	1090	925	4800	71.538a**
		% within Block	92.5	99.1	95.9	94.6	
	Christian	Count	225	10	40	275	
		% within Block	7.5	0.9	4.1	5.4	
	Total	Count	3010	1100	965	5075	
		% within Block	100.0	100.0	100.0	100.0	

(Chi-square analysis table of religion) *Significant, ** Highly significant

Language. Only 5% of respondents from the Santal, Bhumija, and Kolha tribes are proficient in reading, writing, and speaking their respective languages, while 75% cannot read or write in their script. Despite all members being able to speak their native language, just 4% are familiar with Odia, Hindi, and English. Understanding Odia is widespread among them, highlighting communication challenges that hinder their integration into mainstream society.

Marital Status. They exhibit a preference for endogamous marriages and selective mating when selecting life partners. On average, boys marry between 15 and 25, while girls tend to marry later, generally between 20 and 30. The graph (Figure 3) indicates that marriage is almost universal among the tribal population once individuals reach adulthood. While the younger age group (<16) is naturally unmarried, marriage rates rise rapidly after age 16 and remain high throughout adulthood and older age groups. This pattern highlights the strong cultural importance of marriage among tribal communities and reflects a social structure in which early, near-universal marriage is common.

Figure 3

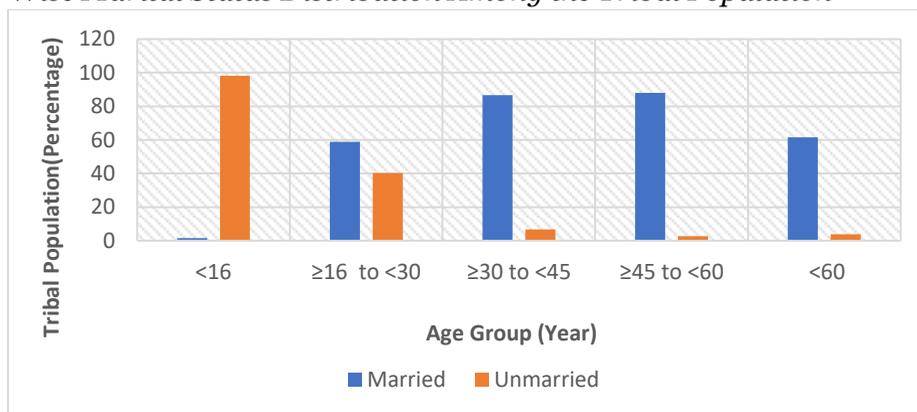*Age-Wise Marital Status Distribution Among the Tribal Population*

Figure 4

Field Photograph Showing Tribal Housing Structures

House Type. According to the survey findings, 61% of respondents live in traditional kutcha houses, 20% in pucca houses, and 13% in semi-pucca dwellings (Figure 4).

Toilet Facility. In the tribal villages, cleanliness is diligently upheld by residents, who maintain tidy homes. However, it is noteworthy that only a minority, approximately 18% of households, possess pit toilet facilities. Surprisingly, the vast majority, around 75% of the sampled households, lack any form of toilet facilities altogether, 4% had septic tanks and only 3 % modern facilities.

Drinking Water and Health Facility. Drinking water is a basic need for human beings, and 57.17% of the total tribal participants reported problems with drinking water. In contrast, more than 60 % of the people depend upon their traditional treatment methods, and more than 70 % of the tribes still believe in Blackmagic, superstition, witch-hunting, etc.

Figure 5

Workforce Distribution Among Tribal Communities in Selected Blocks of Mayurbhanj
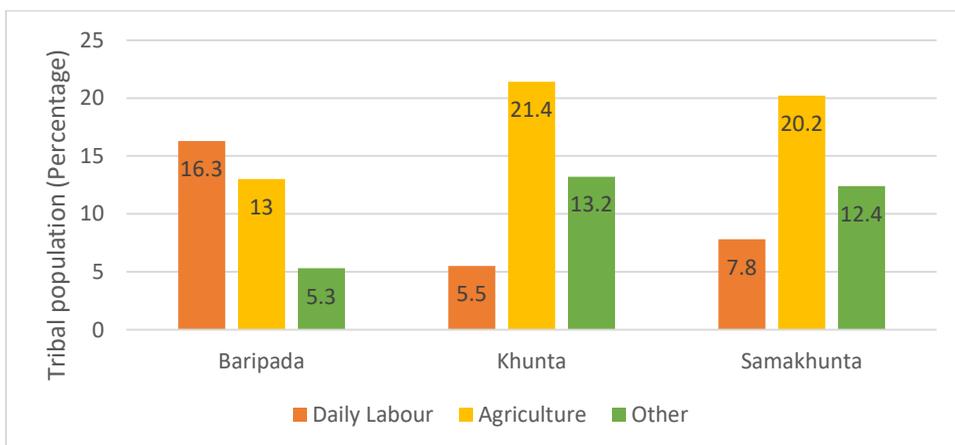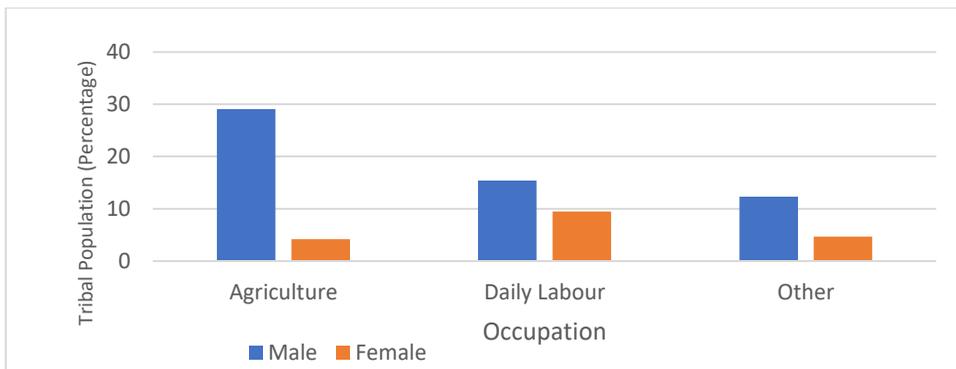
Figure 6

Gender-wise Occupational Distribution in the Study Area

Economics Status

Occupation. The tribes mainly depend on agriculture for their livelihood. 82% of households in the study region have agricultural land; 13% are landless, and only 3% cultivate leased land. More than 85% of the tribe depends on agriculture for its livelihood.

In Mayurbhanj, the results from the sample collected showed that the percentage of daily labourers was higher in the Baripada block at 16.3% than in the Khunta and Samakhunta blocks at 5.5% and 7.8%, respectively. Figure 4.9 shows that 47% of tribes in Baripada earn their livelihood as Daily Labourers, whereas in Khunta and Samakhunta, 53% and 50% of the working population depend on Agriculture, respectively (Figure 5). Earnings from daily labour were higher than in agriculture in Baripada because it is an urban region, and people earn more as daily labourers than in agriculture.

The workforce distribution clearly indicates that agriculture remains the backbone of livelihoods in Khunta and Samakhunta, reflecting their more rural, agrarian character. In contrast, Baripada shows higher dependence on daily wage labour, suggesting limited agricultural engagement and possibly fewer stable livelihood opportunities for tribal households. Overall, the graph highlights variations in economic dependency: rural blocks rely heavily on farming, while areas influenced by urban areas push tribal communities toward wage-based, diversified work.

Urbanisation and access to wage work shape livelihood choices, leading to a greater emphasis on labour-oriented occupations in Baripada. At the same time, traditional farming continues to sustain rural tribal communities in Khunta and Samakhunta. This difference underscores how location and economic environment influence the survival strategies of tribal households. Figure 6 presents the distribution of male and female workers across three major occupational categories—Agriculture, Daily Labour, and other activities. A clear gender gap is visible in all sectors. Agriculture shows the highest male participation, indicating that farming remains a male-dominated livelihood. Female involvement in agriculture is noticeably low, which may reflect limited access to land, tools, or decision-making roles.

In the category of daily labour, although males still make up the majority, the female share is relatively higher than in agriculture. This suggests that women participate more in wage-based informal work, possibly because alternative livelihood options are unavailable to them.

The "Other" occupation category also shows a similar pattern, with males outnumbering females. Overall, the graph conveys the message that tribal and rural communities still experience gendered divisions of labour. Men engage more in primary and regular income-earning activities, while women are concentrated in limited or low-paid opportunities. This highlights the need for skill development, livelihood diversification, and gender-inclusive employment programs to enhance women's economic participation.

Dependency ratio = (number of people aged 0-16) +(Number of people above age 60) +Total number of non-worker/Total number of working population x 100

As the dependency ratio increased, economic stress affected people's living conditions. From the analysed data, the dependency ratio for the tribes was 58.34%, indicating a moderate economic condition in the region.

The study reveals that rice is the primary crop cultivated by tribal households in the region, with nearly 68% of them engaged in rice farming. Another significant source of livelihood is Sabai grass, grown by about 26% of the tribal population, reflecting its importance as a cash crop for income generation.

Livestock rearing is also a significant part of their livelihood system. A large number of tribes keep poultry (82%), while 58% domesticate cows, along with some pigs in smaller quantities. These practices not only boost their income but also ensure food security and support traditional ways of life. It clearly indicates that tribal livelihoods are deeply connected to agriculture and livestock rearing, with rice cultivation and poultry farming forming the backbone of their daily sustenance. This demonstrates their strong reliance on natural resources and traditional methods to maintain economic stability and household well-being.

Table 4 indicates that the tribe's average annual income amounted to 82,763 rupees, a statistically significant figure ($p > 0.01$). Conversely, their average annual expenditure, also totaling 82,763 rupees, was deemed significant ($p > 0.05$). Despite this balance between income and expenditure, the allocation of expenditure at the block level showed notable disparities. The data shows noticeable variation in household income and expenditure across the three blocks of Mayurbhanj. Although the mean household income appears highest in Samakhunta (₹9303.6), followed by Khunta (₹8086.9) and Baripada (₹7899.3), the statistical test ($F = 2.522$) indicates that these differences are not significant. This suggests that tribal households across the three blocks have broadly similar income levels despite their geographical or socio-economic differences. However, household expenditure shows a more distinct pattern. The average expenditure is highest in Khunta (₹6440.5), while Baripada (₹5241.4) and Samakhunta (₹5340.0) report

lower spending. The F-value of 18.985, which is statistically significant, indicates that the difference in expenditure across blocks is meaningful and not due to chance.

All components of total expenditure were significant and positively associated with total expenditure, with the lowest coefficient of 0.067 for Handia and the highest of 0.817 for food (Table 5). The degree of association among the components of expenditure in the present study was all positive, ranging from 0.003 between food and Handia expenses to 0.285 between food and other expenses.

Income and Expenditure

Table 4

Income and Expenditure Details of the Tribes of Selected Blocks of Mayurbhanj

		Number of Households		Mean	F
Block	Baripada	650	Income	7899.3[a]	2.522**
	Khunta	245		8086.9[a]	
	Samakhunta	280		9303.6[a]	
Total		1175		8276.3[a]	
	Baripada	640	Expenditure	5241.4[a]	18.985*
	Khunta	245		6440.5[b]	
	Samakhunta	280		5340.0[a]	
Total		1175		8276.3	

(Income and Expenditure) *Significant, ** Highly significant

Table 5

Table Showing the Correlation Between the Different Consumer Expenditures of Tribes

		Capital	Food	Cloth	Handia	Others	Total Expenditure
Capital	Correlation	1.000	.093	.062	.039	.150	.628
	Significance		.001	.035	.185	.000	.000
Food	Correlation		1.000	.259	.003	.285	.817
	Significance			.000	.930	.000	.000
Cloth	Correlation			1.000	.081	.235	.315
	Significance				.005	.000	.000
Handia	Correlation				1.000	.025	.067
	Significance					.393	.022
Others	Correlation					1.000	.439
	Significance						.000
Total Expenditure							1.000

N.B.- Handia is an alcoholic drink prepared from fermented rice. It is also called Rice beer, and it is a fashionable drink among the Northern tribes of Odisha (Panda et al., 2014).

Capital expenses showed a non-significant association with Handia but significant, low correlation coefficients with food and other expenses. The degree of association between food and Handia was the lowest among all correlations; however, significant, moderate correlation coefficients of 0.259 and 0.285 were obtained with cloth and

other expenses, respectively. Cloth was found to have a positive and significant association with Handia and other expenses, with estimates of 0.081 and 0.235, respectively. Handia showed a very low correlation coefficient of 0.025 with other expenses, indicating that expenses incurred in Handia accounted for only 2.5% of the variation in miscellaneous expenses, yet remained significant.

Conclusion

The diverse distribution of tribal communities highlights both unity and distinct regional concentrations. While the Santal community predominantly resides in Baripada and Khunta Block, the Bhumija clan is notably concentrated in Samakhunta, underscoring the nuanced geographical patterns within the broader tribal landscape. This spatial analysis underscores the complexity and diversity inherent within tribal communities, despite their shared cultural identity. In summary, the socio-academic profile of 5,075 individuals from 1,175 households across three blocks in the Mayurbhanj district reveals a notable gender distribution. Females constitute a higher proportion at 51.9% compared to males at 48.1%. The analysis further indicates a statistically significant gender dependency across the blocks ($p < 0.05$). Specifically, the Khunta and Samakhunta blocks exhibit a slight male majority, whereas Baripada stands out with 53.5% females, indicating a 7% higher female population compared to males.

This variation underscores the importance of considering local contexts and demographics in understanding gender dynamics within the studied communities.

In conclusion, while the tribe's average annual income and expenditure both totalled 82,763 rupees, each figure was statistically significant in its own right ($p > 0.01$ for income and $p > 0.05$ for expenditure), the distribution of expenditure across Baripada, Khunta, and Samakhunta revealed substantial variation. Baripada contributed 52,414 rupees, Khunta 64,440 rupees, and Samakhunta 53,400 rupees, illustrating distinct spending patterns among these regions. These disparities emphasise the need for localised economic strategies and resource allocations that account for the unique socio-economic dynamics within each block of the tribal community.

References

Carmichael, G. A. (2016). Basic sources, concepts, definitions and types of measures. In Fundamentals of demographic analysis: Concepts, measures and methods (Vol. 38). Springer. https://doi.org/10.1007/978-3-319-23255-3_1

Dungdung, K., & Pattanaik, B. K. (2020). Tribal development disparities in Odisha: An empirical analysis. *South Asia Research*, 40(1), 94–110.

Garada, S. (2012). Socio-cultural background of tribal culture in Odisha. *A Journal of Arts,*

Humanities & Management, 2, 59−75.

Hansda, M., & Sachan, J. N. S. (2019). Mahul tree: Its significance in the socio-economic life of the tribes—A case study of Mayurbhanj District in Odisha. *The Researchers' International Research Journal*, 5(3), 19−25.

Jana, N. C., Banerjee, A., & Ghosh, P. K. (2022). Sustainable livelihoods of tribal communities in Odisha, India: The case of Mayurbhanj. Cambridge Scholars Publishing.

Maharana, R., & Nayak, J. K. (2017). Food habit and food preparation among the Hill Kharia of Mayurbhanj district, Odisha: An anthropological study. *International Journal of Academic Research and Development*, 2(6), 913−920.

Majhi, D., & Puhan, R. R. (2017). Impact of education and technology on the changing occupational and livelihood landscape, particularly with reference to the Santal tribe in Jamda block of Mayurbhanj district. *Scholarly Research Journal for Humanity Sciences & English Language,* 4(21), 4897−4910.

Mohanty, B. (2017). Tribal population of Mayurbhanj. *Journal of Humanities and Social Science*, 22(1), 57−60.

Ota, A. B. & Mohanty, B. N. (2021). Population analysis: Scheduled Castes and Scheduled Tribes of Odisha (1961−2011). Scheduled Caste and Scheduled Tribe Research and Training Institute.

Panda, S. K., Bastia, A. K. & Sahoo, G. S. (2014). Process characteristics and nutritional evaluation of Handia—A cereal-based ethnic fermented food from Odisha. *Indian Journal of Traditional Knowledge*, 13(1), 149−156.

Rath, N. K. (2018). The strategy of tribal development in Odisha. *Contemporary Social Sciences*, 27(4), 147−158.

Rout, S. D., Panda, S. K., Mishra, N., & Panda, T. (2010). Role of tribals in collection of commercial non-timber forest products in Mayurbhanj District, Orissa. *Studies of Tribes and Tribals,* 8(1), 21−25.

Sahoo, M. (2023). Utilisation and conservation of biodiversity by indigenous tribes in Similpal Biosphere Reserve, Odisha, India. *Society and Culture Development in India*, 3(1), 77−91.

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