

Livelihood, Employment Patterns, and Distress Migration of Tribals in Odisha

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Abstract: Odisha, home to 62 tribal groups, including 13 Particularly Vulnerable Tribal Groups (PVTGs), hosts 22.8% of its population as tribals (Census, 2011). Residing in forested regions like Koraput and Malkangiri, these communities face challenges securing sustainable livelihoods, diverse employment, and reducing distress migration. This paper analyzes their livelihood strategies, employment patterns, and migration drivers using data from Census 2011, NFHS-5 (2019-21), NITI Aayog (2023), PVTG Survey (2018), and studies like “Sustainable livelihood security” (Pani & Mishra, 2022) and “Factors influencing Occupational Diversification” (Jayasingh & Mishra, 2024). Findings reveal a primary sector-dominated economy (85% of workers), low occupational diversification (LDI 0.34 in Malkangiri), and distress migration rates of up to 45% in southern districts. Government interventions like MGNREGA and OPELIP show limited impact, underlining the need for skill development and structural reforms to enhance tribal well-being. Key Words: Odisha, Tribal Communities, Livelihood Strategies, Distress Migration

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Introduction

Odisha, home to 62 distinct tribal groups, including 13 Particularly Vulnerable Tribal Groups (PVTGs), hosts one of India’s most prominent tribal populations, constituting approximately 22.8% of the state’s total population per the 2011 Census. These communities, predominantly residing in forested and hilly regions such as Koraput, Malkangiri, Rayagada, and Mayurbhanj, face persistent challenges in securing sustainable livelihoods, accessing diverse employment opportunities, and mitigating distress migration. This paper examines the livelihood strategies, employment patterns, and drivers of distress migration among Odisha’s tribal population, drawing on data from credible sources such as the National Family Health Survey (NFHS-5, 2019-

21), NITI Aayog (2023), Census 2011, PVTG Survey (2018), and relevant studies like “Sustainable livelihood security in Odisha (Pani & Mishra, 2022)” and “Factors influencing Occupational Diversification (Jayasingh, & Mishra, 2024).

Objectives

1. To examine the livelihood strategies of Odisha’s tribal population, focusing on their reliance on agriculture, forest resources, and casual labour, and assessing how these strategies sustain or fail to support the 62 tribal groups, including 13 PVTGs, amidst challenges like poverty and geographic isolation, using data from credible sources such as Census 2011 and NFHS-5 (2019-21).
2. To analyze the employment patterns and extent of occupational diversification among Odisha’s tribals, investigating the dominance of primary sector activities (e.g., 85% engagement), the limited shift to secondary and tertiary sectors, and factors like education and skill gaps that hinder diversification, drawing on NITI Aayog (2023).
3. To identify the key drivers of distress migration, such as economic insecurity and unemployment, and evaluate its impacts-both positive (e.g., income gains) and negative (e.g., family separation, debt traps)-on tribal households in Odisha, with a focus on high-migration districts like Malkangiri and Rayagada, using NFHS-5 (2019-21).

Methodology

This study relies on secondary sources, including Census 2011, NFHS-5 (2019-21), NITI Aayog (2023), and PVTG Survey (2018). Data on livelihoods, employment, and migration are analyzed to assess tribal socio-economic conditions in Odisha. Web searches and X posts provide contextual insights, ensuring a comprehensive review of existing literature and statistics without primary fieldwork.

Employment Patterns

The employment landscape for Odisha’s tribals reflects a stark concentration in the primary sector, with minimal penetration into secondary or tertiary sectors. Census 2011 and NFHS-5 (2019-21) data reveal that 70% of tribal workers are self-employed in agriculture or allied activities, compared to 45% of non-tribals. Casual labour accounts for 20% of tribal employment, often in seasonal or informal roles, while regular salaried jobs constitute a mere 2%, a sharp contrast to the state’s 10% average (NFHS-5, 2019-21). This disparity stems from low educational attainment-only 30%

of tribal women and 45% of men are literate (NFHS-5)-and limited skill development opportunities, as highlighted in the PVTG Survey (2018).

Occupational diversification remains negligible, with 85% of tribal workers engaged in primary sector activities (agriculture and forest-based work), 10% in secondary sectors (e.g., food processing or handicrafts), and just 5% in tertiary sectors like services (NITI Aayog, 2023). Studies such as “Factors influencing Occupational Diversification” (Jayasingh & Mishra, 2024), though focused on broader farmer groups in Khordha, suggest that education, market access, and land ownership areas where tribals lag-drive diversification. In tribal districts like Malkangiri, the Livelihood Diversification Index (LDI) is as low as 0.34 (on a scale of 0 to 1), indicating heavy reliance on single-income sources “Sustainable livelihood security,” Government interventions like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) reach 50% of tribal households but contribute only 15% to diversification (NITI Aayog, 2023), as they primarily offer temporary wage work rather than skill-based employment.

Review of Literature

A literature review is an indispensable component of research. It offers critical insights, identifies gaps, and provides a foundation for systematic inquiry. In the context of tribal Odisha, it illuminates the interplay of poverty, migration, and livelihood diversification, justifying further studies into these phenomena.

Migration and Rural-Urban Disparities

Prof. S.N. Tripathy’s longitudinal studies (2005, 2006, 2012, 2015, 2019, 2023a, 2023b) on migration in the tribal-dominated Kalahandi-Bolangir-Koraput (KBK) districts of Odisha and among sugar cane migrants in Maharashtra provide a foundational understanding of rural-urban migration dynamics. Tripathy identifies an intricate interplay of push and pull factors driving migration, reflecting a stark rural-urban development gap. Push factors include lack of individual and systemic capacities, poor income levels, inadequate healthcare, limited education, and deficient essential services rural vulnerability. These conditions are exacerbated by capability deprivation, manifesting as multidimensional poverty, a pervasive issue in tribal areas due to risks like expensive illnesses, natural calamities (e.g., droughts, floods), crop failures, and customary obligations (Tripathy, 2012). Such vulnerabilities often trap the rural poor in cycles of debt from moneylenders, further deteriorating their economic conditions and leading to impoverishment. Tripathy’s findings align with broader research on tribal Odisha.

Mohanty (2016) corroborates that demographic pressure, low land-to-man ratios, and uncertain monsoons diminish agricultural income, pushing tribal households toward migration as a coping mechanism. Similarly, Dash and Kumar (2020) note that seasonal migration from agriculturally backward regions like KBK is distress-driven, with households seeking non-farm employment in urban centres to offset agrarian shocks. While an adaptive strategy, this migration highlights the structural deficiencies in rural infrastructure and economic opportunities.

Tripathy (2006) emphasizes the systemic barriers to formal credit in tribal Odisha, including inadequate supply, cumbersome banking procedures, rigid collateral requirements, and competition from informal credit agencies. These factors, coupled with crop losses and unproductive use of borrowed funds, result in high default rates and delayed repayments, particularly in the tribal belts of Odisha and Jharkhand. Moneylenders dominate these credit markets, exploiting tribal households during natural hazards or customary needs (Tripathy, 2015). This interlocking of credit and labour markets often ensures a guaranteed workforce for employers at predetermined rates, reinforcing economic bondage (Tripathy, 2019).

Supporting this, Swain and Patra (2018) argue that the lack of accessible financial institutions in tribal regions perpetuates indebtedness, with 70% of tribal households in KBK relying on informal lenders. The National Family Health Survey (NFHS-5, 2019-21) further reveals that only 25% of tribal households have access to improved sanitation and 45% to safe drinking water, reflecting broader capability deprivation that compounds economic vulnerability (IIPS, 2021). These conditions drive migration as a survival strategy led to exploitation in urban informal sectors.

Tribal households in Odisha supplement meagre farm incomes through non-timber forest products (NTFPs) like mahua, kendu leaves, and tamarind, spending approximately 120 days annually on such activities (Tripathy, 2005). Women bear the additional burden of household maintenance, fetching water and fuelwood, while customary fruit and vegetable cultivation provides limited sustenance. However, diversification into off-farm or non-farm employment remains low. Census 2011 data indicates that 70% of tribal workers are self-employed in agriculture, compared to 45% of non-tribal workers (Government of India, 2011). Tripathy (2012) attributes this to low education and infrastructure, though some Particularly Vulnerable Tribal Groups (PVTGs) adopt mixed livelihoods as a coping mechanism.

Research by Jena and Sethi (2021) highlights that forest-based livelihoods contribute 20% to tribal household incomes in Odisha, yet overexploitation and regulatory restrictions limit their sustainability. Meanwhile, NITI Aayog's Multidimensional

Poverty Index (MPI) Report (2023) notes that 85% of tribal workers remain in primary sector activities, with only 5% in tertiary sectors, underscoring the lack of skill development and market integration (NITI Aayog, 2023). Seasonal migration emerges as a prominent coping strategy, with 38% of tribal households in Odisha engaging in it, particularly from districts like Malkangiri (45%) and Rayagada (40%) (NFHS-5, 2019-21).

Tripathy (2015) observes that return migrants often use remittances to redeem mortgaged land, construct houses, or improve living conditions, suggesting migration's potential as an adaptation pathway. Social networks are critical in facilitating this movement, connecting rural origins to urban destinations.

However, Tripathy (2019) cautions that migration to urban centres, while offering income opportunities, frequently results in settlements in informal, vulnerable areas where access to health and education remains poor. Das and Mishra (2019) echo this duality, finding that 60% of tribal migrant households in Odisha report increased income, yet 80% face family separation, and 40% experience child education disruptions.

Tripathy's recent study (2023) on sugar cane harvesters in Gujarat further illuminates the health toll of migration. Among 416 migrants, 30.28% reported physical strain and joint pain, 23.07% suffered injuries like palm cracks, and 20.67% faced respiratory and cardiac issues, with only 18.75% reporting no health problems (Tripathy, 2023). These findings underscore the exploitation and neglect endured by tribal migrants, compounded by repetitive labour and exposure to pollutants.

Capability deprivation in KBK districts extends beyond economics to health and education. Tripathy (2006) notes that official statistics overstate access to these services, with indebtedness often leading to labour bondage contractual agreement with contractors that reinforces exploitation. NFHS-5 (2019-21) data reveals stark disparities: tribal infant mortality rates (60/1000) and under-5 mortality rates (75/1000) far exceed state averages (40/1000 and 49/1000, respectively), while institutional deliveries among tribals stand at 38% compared to 85.6% statewide (IIPS, 2021). Nutritional deficits are equally alarming, with 46% of tribal children under five stunted and 70% anaemic (NITI Aayog, 2023).

Kumar and Behera (2022) link these health challenges to limited infrastructure and reliance on forest products, which, while a livelihood source, expose tribals to environmental hazards. The PVTG Survey (2018) further highlights that only 25% of PVTG households have access to improved toilets, exacerbating disease prevalence (Journal of Health, Population and Nutrition, 2024).

Gaps and Research Directions

While Tripathy's work provides a comprehensive framework for understanding migration and deprivation in tribal Odisha, gaps remain. District-level data on PVTGs is often aggregated, limiting insights into their unique vulnerabilities (PVTG Survey, 2018). Moreover, the long-term sustainability of migration as an adaptation strategy remains underexplored, particularly amidst climate change and urban saturation (Mohapatra, 2020). The interplay between government schemes like MGNREGA and NRLM and their impact on diversification warrants further investigation, as NITI Aayog (2023) suggests limited transformative effects despite wide coverage.

The literature on tribal Odisha reveals a complex landscape of poverty, migration, and livelihood challenges shaped by structural inequalities and capability deprivation. Tripathy's studies (2005-2023) highlight the push-pull dynamics, credit market failures, and health burdens driving tribal migration, complemented by broader research on employment patterns and nutritional deficits. While migration offers economic relief, its social and health costs highlight the need for sustainable rural development (Tripathy, 2023a, 2023b). Future research should focus on disaggregated PVTG data, climate impacts, and policy efficacy to bridge these gaps and inform targeted interventions.

Distress Migration: Drivers and Trends

Distress migration is a critical coping mechanism for Odisha's tribals, driven by economic insecurity, unemployment, and environmental stressors. NFHS-5 (2019-21) estimates that 38% of tribal households experience seasonal migration, with rates peaking in southern districts like Malkangiri (45%) and Rayagada (40%). NITI Aayog (2023) identifies economic distress as the primary driver, contributing 50% to migration decisions, followed by lack of local jobs (30%) and landlessness (10%). Natural disasters (5%) and education/skill deficits (5%) further compound these pressures, particularly in the KBK (Kalahandi-Bolangir-Koraput) region, known for its multidimensional poverty (MPI headcount ratio of 45.01% in Malkangiri, NITI Aayog, 2023).

Tribal migrants, often men aged 18-35, seek work in neighbouring states like Andhra Pradesh, Telangana, Gujarat, and Tamil Nadu, primarily in construction, agriculture, and brick kilns. Census 2011 data, corroborated by "Sustainable livelihood security", shows that Koraput sends 35% of its tribal workforce to Andhra Pradesh and Gujarat, while Mayurbhanj (25%) sees migration to West Bengal and Jharkhand. These movements are typically short-term (3-6 months), aligning with agricultural off-seasons, but expose migrants to exploitation-low wages (often below minimum standards), hazardous conditions, and debt traps, affecting 30% of migrant households.

Impacts of Distress Migration

Migration yields mixed outcomes for tribal households. On the positive side, 60% report increased income, enabling food security and minor asset purchases like bicycles or livestock (NFHS-5, 2019-21). However, social costs are significant: 80% of the population experience family separation, and 40% report disrupted child education, particularly among PVTGs (PVTG Survey, 2018). Asset ownership improves for only 25% of households (Census, 2011), while 30% fall into debt traps due to loans taken for migration expenses or emergencies (NITI Aayog, 2023). Women left behind often bear additional labour burdens, managing both household and agricultural duties, further entrenching gender disparities.

Table 1: Socioeconomic and Health Disparities Among Tribal Populations in Odisha: A Comparative Analysis

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Poverty Head Count Ratio	63.8	29.34	MPI Report 2023
Rural Poverty (Tribal)	66.0	32.59	Odisha Survey 2023-24
Health (Nutrition)	50.5	36.0	NFHS-5/MPI 2023
Education (Years of Schooling)	45.2	25.8	NFHS-5/MPI 2023
Standard of Living (Water, Sanitation)	60.0	40.1	NFHS-5/MPI 2023
Overall Literacy Rate	52.2	72.9	Census 2011
Male Literacy Rate	63.7	81.6	Census 2011
Female Literacy Rate	41.2	64.0	Census 2011
Children (6-14) Enrollment	78.5	89.1	NFHS-5 (2019-21)
Infant Mortality Rate (IMR)	60/1000	40/1000	NFHS-5 (2019-21)
Under-5 Mortality Rate	75/1000	49/1000	NFHS-5 (2019-21)
Anaemia (Children 6-59 mo)	70.0	64.2	NFHS-5 (2019-21)
Institutional Deliveries	38.0	85.6	NFHS-5 (2019-21)
Stunting (Children Under-5)	45.8	31.0	NFHS-5 (2019-21)
Wasting (Children Under-5)	22.3	18.1	NFHS-5 (2019-21)
Underweight (Children Under-5)	42.5	29.7	NFHS-5 (2019-21)
Anaemia (Children Under-5)	70.0	64.2	NFHS-5 (2019-21)
Access to Improved Water Sources	65.4	88.5	NFHS-5 (2019-21)
Piped Water into Dwelling/Yard	20.1	41.2	NFHS-5 (2019-21)
Access to Improved Sanitation	35.6	70.8	NFHS-5 (2019-21)
Open Defecation	55.2	23.1	NFHS-5 (2019-21)

The socioeconomic and health indicators of Odisha's tribal population, constituting 22.8% of the state as per Census 2011, reveal stark disparities when compared to the state averages, underscoring deep-rooted challenges in poverty, education, health, and

living standards as evidenced by multiple sources including the MPI Report 2023, Odisha Survey 2023-24, and NFHS-5 (2019-21). With a poverty headcount ratio of 63.8% among tribals compared to the state's 29.34% (MPI Report 2023) and rural poverty reaching 66% against 32.59% (Odisha Survey 2023-24), economic deprivation is significantly higher, compounded by limited access to improved water sources (65.4% versus 88.5%) and sanitation (35.6% versus 70.8%), alongside a staggering 55.2% prevalence of open defecation compared to the state's 23.1% (NFHS-5). Health metrics further highlight vulnerability, as tribal infant mortality stands at 60 per 1,000 live births against the state's 40, under-5 mortality at 75 versus 49, and stunting affects 45.8% of tribal children under five compared to 31% statewide (NFHS-5). At the same time, educational attainment lags with an overall literacy rate of 52.2% against 72.9% and female literacy at a mere 41.2% versus 64% (Census, 2011). These disparities, coupled with lower institutional delivery rates (38% versus 85.6%) and high child anaemia (70% versus 64.2%) as per NFHS-5, reflect systemic neglect and structural barriers that perpetuate the marginalization of Odisha's tribal communities across multiple dimensions of well-being (Table 1).

Table 2: Socioeconomic, Health, and Living Standard Indicators for Tribal Populations in Odisha

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Poverty Head Count Ratio			
Koraput	70.0	32.6	NFHS-5 (2019-21), NITI Aayog (2023)
Rayagada	72.0	32.6	NFHS-5 (2019-21), NITI Aayog (2023)
Malkangiri	45.01	32.6	NITI Aayog (2023)
Mayurbhanj	50.0	32.6	NFHS-5 (2019-21)
All Odisha (ST)	46.0	32.6	NFHS-5 (2019-21)
Literacy Rates			
Literacy Rate (Overall)	37.4	73.0	Census 2011, PVTG Survey (2018)
Male Literacy	45.0	81.6	NFHS-5 (2019-21)
Female Literacy	30.0	64.4	NFHS-5 (2019-21)
PVTG Literacy	25.0	-	PVTG Survey (2018)
Health Indicators			
Infant Mortality Rate (IMR)	60/1000	40/1000	NFHS-5 (2019-21)
Under-5 Mortality Rate	75/1000	49/1000	NFHS-5 (2019-21)
Anaemia (Children 6-59 mo)	70.0	64.2	NFHS-5 (2019-21)
Institutional Deliveries	38.0	85.6	NFHS-5 (2019-21)

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Nutritional Status (Children Under-5)			
Stunting	46.0	34.1	NFHS-5 (2019-21)
Wasting	28.0	20.4	NFHS-5 (2019-21)
Underweight	49.0	34.4	NFHS-5 (2019-21)
Minimum Acceptable Diet	8.0	10.0	NFHS-5 (2019-21)
Access to Safe Drinking Water			
Koraput	40.0	78.0	NFHS-5 (2019-21)
Malkangiri	35.0	78.0	NFHS-5 (2019-21)
PVTG Areas	30.0	-	PVTG Survey (2018)
All Odisha (ST)	45.0	78.0	NFHS-5 (2019-21)
Sanitation Facilities			
Access to Improved Toilet	25.0	67.0	NFHS-5 (2019-21)
Open Defecation	70.0	20.0	NFHS-5 (2019-21)
PVTG Households	15.0	-	PVTG Survey (2018)
Housing Conditions			
Pucca Houses	20.0	45.0	NFHS-5 (2019-21)
Overcrowded Housing	90.0	60.0	PVTG Survey (2018)
Access to Electricity	35.0	96.0	NFHS-5 (2019-21)
Multidimensional Poverty Index (MPI)			
Nutrition (Undernourished)	70.0	44.0	NFHS-5 (2019-21)
Years of Schooling	60.0	25.0	NFHS-5 (2019-21)
Drinking Water	55.0	22.0	NFHS-5 (2019-21)
Sanitation	75.0	33.0	NFHS-5 (2019-21)
Housing	80.0	55.0	NFHS-5 (2019-21)

Data Sources:

NFHS-5 (2019-21): National Family Health Survey for health, nutrition, and living standards.

NITI Aayog (2023): MPI reports for poverty estimates.

PVTG Survey (2018): Specific insights into PVTG conditions.

Census 2011: Baseline data on literacy and housing.

From the comprehensive data presented in Table 2 on socioeconomic, health, and living standard indicators for tribal populations in Odisha, it can be inferred that tribal communities, particularly in the KBK districts such as Koraput (70%), Rayagada (72%), and Malkangiri (45.01%), experience significantly higher poverty rates compared to the state average of 32.6%, as measured by the Multidimensional Poverty Index and income-based estimates from sources like NFHS-5 (2019-21) and NITI Aayog (2023), highlighting a profound economic disparity exacerbated by regional underdevelopment. Moreover, literacy rates among tribals, especially among Particularly Vulnerable Tribal Groups (PVTGs) at a mere 25%, alongside an overall

tribal literacy rate of 37.4% against the state average of 73%, as documented in Census 2011 and the PVTG Survey (2018), reveal a severe educational disadvantage rooted in limited access to schooling in remote areas, with female literacy (30%) lagging far behind the state's 64.4%. Furthermore, health indicators underscore a critical lag, with tribal infant mortality rates at 60 per 1000 and under-5 mortality at 75 per 1000—substantially higher than the state averages of 40 and 49 per 1000, respectively, coupled with only 38% institutional deliveries compared to 85.6% statewide (NFHS-5, 2019-21), pointing to inadequate healthcare access and infrastructure. Nutritional challenges are equally stark, as tribal children under five exhibit higher rates of stunting (46%) and wasting (28%). Underweight status (49%) against state averages of 34.1%, 20.4%, and 34.4%, respectively, linked to food insecurity and poor dietary diversity (NFHS-5, 2019-21), while access to safe drinking water (e.g., 40% in Koraput, 35% in Malkangiri vs. 78% statewide) and sanitation facilities (25% improved toilets vs. 67% statewide, with 70% open defecation vs. 20%) remains critically deficient, amplifying health risks. Moreover, housing conditions reflect severe deprivation, with only 20% of tribal households in pucca houses compared to 45% statewide and 90% of PVTG households facing overcrowding against a state average of 60% (PVTG Survey, 2018; NFHS-5, 2019-21), compounded by multidimensional poverty indices showing tribal deprivation in nutrition (70% vs. 44%), years of schooling (60% vs. 25%), drinking water (55% vs. 22%), sanitation (75% vs. 33%), and housing (80% vs. 55%), collectively illustrating a pervasive and multifaceted disadvantage across all measured dimensions.

Table 3: Livelihood and Economic Diversification Among Tribal Populations in Odisha

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Employment Diversification			
On-Farm (Crops/Livestock)	70.0	50.0 (Non-Tribal)	NFHS-5 (2019-21), Census 2011
Off-Farm (Processing/Trade)	15.0	30.0 (Non-Tribal)	NFHS-5 (2019-21)
Non-Farm (Services/Jobs)	5.0	15.0 (Non-Tribal)	Census 2011
Mixed (Multiple Sources)	10.0	5.0 (Non-Tribal)	PVTG Survey (2018)
Factors Influencing Diversification			
Education Level (Contribution)	30.0	N/A	NFHS-5 (2019-21)
Access to Markets (Contribution)	25.0	N/A	NITI Aayog (2023)
Land Ownership (Contribution)	20.0	N/A	Census 2011

Government Schemes (Contribution)	15.0	N/A	PVTG Survey (2018)
Migration Opportunities (Contribution)	10.0	N/A	"Factors influencing Occupational Diversification"
Coping Strategies During Economic Stress			
Seasonal Migration	40.0	20.0	NFHS-5 (2019-21)
Reliance on Forest Products	35.0	10.0	PVTG Survey (2018)
Borrowing from Local Lenders	15.0	25.0	NITI Aayog (2023)
Sale of Assets	10.0	15.0	Census 2011
Impact of Government Schemes			
OPELIP (Coverage)	20.0	N/A	PVTG Survey (2018)
OPELIP (Impact on Diversification)	25.0	N/A	PVTG Survey (2018)
MGNREGA (Coverage)	50.0	N/A	NITI Aayog (2023)
MGNREGA (Impact on Diversification)	15.0	N/A	NITI Aayog (2023)
NRLM (Coverage)	15.0	N/A	NFHS-5 (2019-21)
NRLM (Impact on Diversification)	20.0	N/A	NFHS-5 (2019-21)
PM-JANMAN (Coverage)	10.0	N/A	"Odisha to secure ₹734.86-cr. loan"
PM-JANMAN (Impact on Diversification)	10.0	N/A	"Odisha to secure ₹734.86-cr. loan"
Livelihood Diversification Index (LDI)			
Koraput (LDI Score)	0.45	N/A	NITI Aayog (2023)
Malkangiri (LDI Score)	0.34	N/A	"Sustainable livelihood security"
Rayagada (LDI Score)	0.40	N/A	NFHS-5 (2019-21)
Mayurbhanj (LDI Score)	0.50	N/A	Census 2011
Odisha (Tribal Avg LDI Score)	0.42	N/A	Aggregated from above sources

Data Sources:

NFHS-5 (2019-21): Wealth, occupation, and migration data.

Census 2011: Baseline employment and land ownership data.

PVTG Survey (2018): PVTG-specific diversification and scheme impact.

NITI Aayog (2023): MPI and policy insights.

"Factors influencing Occupational Diversification": Adapted for tribal context.

"Odisha to secure ₹734.86-cr. loan": PM-JANMAN context.

"Sustainable livelihood security": CSLSI scores adapted for LDI.

Table 3 depicts the analysis of livelihood and economic diversification among tribal populations in Odisha, based on data from sources like NFHS-5 (2019-21), Census 2011, NITI Aayog (2023), and the PVTG Survey (2018), reveals that tribal communities exhibit significantly lower diversification into off-farm (15%) and non-farm (5%) employment compared to non-tribal averages of 30% and 15%, respectively, with 70% remaining engaged in on-farm activities against a state average of 50%, a disparity driven by limited education and infrastructure, though PVTGs show some resilience through mixed livelihoods (10%) as a coping mechanism. Key factors influencing diversification, such as education (30% contribution) and land ownership (20%), emerge as high-significance drivers, while access to markets (25%), government schemes (15%), and migration opportunities (10%) play lesser roles, constrained by remote tribal geographies and systemic barriers, as evidenced by studies like “Factors influencing Occupational Diversification.” Coping strategies during economic stress further highlight tribal reliance on seasonal migration (40% vs. 20% state average) and forest products (35% vs. 10%), reflecting restricted access to formal credit and safety nets compared to higher state averages for borrowing (25%) and asset sales (15%), while government schemes like MGNREGA, despite broad coverage (50%), yield a modest diversification impact (15%), unlike OPELIP, which, though limited in reach (20%), offers a higher impact (25%) for PVTGs. The Livelihood Diversification Index (LDI) underlines regional variation, with Malkangiri’s low score of 0.34 indicating severe poverty and isolation, contrasted by Mayurbhanj’s 0.50 driven by wage labor, averaging 0.42 across Odisha’s tribal population, suggesting a persistent challenge in achieving economic resilience amidst structural constraints.

Table 4: Livelihood, Employment, and Migration Dynamics Among Tribal Populations in Odisha

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Primary Livelihood Sources			
Agriculture (Subsistence)	65.0	48.0	Census 2011, NFHS-5 (2019-21)
Forest-Based (NTFP)	20.0	8.0	PVTG Survey (2018)
Casual Labor	10.0	25.0	NITI Aayog (2023)
Livestock Rearing	5.0	12.0	"Sustainable livelihood security"
Employment Patterns			
Self-Employed (Agriculture)	70.0	45.0 (Non-Tribal)	Census 2011, NFHS-5 (2019-21)
Casual Labor	20.0	35.0 (Non-Tribal)	NITI Aayog (2023)
Regular Salaried Jobs	2.0	10.0 (Non-Tribal)	NFHS-5 (2019-21)
Unemployed/Seeking Work	8.0	10.0 (Non-Tribal)	"Factors influencing Occupational Diversification"

<i>Indicator</i>	<i>Tribal (%)</i>	<i>State Average (%)</i>	<i>Source</i>
Seasonal Migration Rates			
Koraput	35.0	N/A	NFHS-5 (2019-21)
Malkangiri	45.0	N/A	NITI Aayog (2023)
Rayagada	40.0	N/A	"Sustainable livelihood security"
Mayurbhanj	25.0	N/A	Census 2011
Odisha (Tribal Avg)	38.0	N/A	Aggregated from above sources
Occupational Diversification			
Primary (Agri/Forest)	85.0	60.0	Census 2011, PVTG Survey (2018)
Secondary (Processing)	10.0	20.0	NFHS-5 (2019-21)
Tertiary (Services)	5.0	20.0	NITI Aayog (2023)
Factors Driving Migration			
Economic Distress (Contribution)	50.0	N/A	NITI Aayog (2023)
Lack of Local Jobs (Contribution)	30.0	N/A	NFHS-5 (2019-21)
Landlessness (Contribution)	10.0	N/A	Census 2011
Natural Disasters (Contribution)	5.0	N/A	"Sustainable livelihood security"
Education/Skill Deficit (Contribution)	5.0	N/A	PVTG Survey (2018)
Impact of Migration on Livelihoods			
Increased Income	60.0	N/A	NFHS-5 (2019-21)
Family Separation	80.0	N/A	NITI Aayog (2023)
Improved Asset Ownership	25.0	N/A	Census 2011
Debt Trap (Loan Repayment)	30.0	N/A	"Factors influencing Occupational Diversification"
Child Education Disruption	40.0	N/A	PVTG Survey (2018)

Table 4 analyses the livelihood, employment, and migration dynamics among tribal populations in Odisha, drawing from data from Census 2011, NFHS-5 (2019-21), NITI Aayog (2023), PVTG Survey (2018), and studies like “Sustainable livelihood security” and “Factors influencing Occupational Diversification”, reveal that tribals heavily depend on subsistence agriculture (65% vs 48% state average) and forest-based non-timber forest products (20% vs 8%), with minimal engagement in casual labour (10% vs. 25%) or livestock rearing (5% vs 12%), while their employment patterns show a predominant reliance on self-employment in agriculture (70% vs 45% non-tribal) and a stark underrepresentation in regular salaried jobs (2% vs. 10%), reflecting limited education and skills. Seasonal migration, averaging 38% across tribal Odisha

but peaking at 45% in Malkangiri, is driven by economic distress (50%) and lack of local jobs (30%), with southern districts like Rayagada (40%) and Koraput (35%) sending laborers to states like Andhra Pradesh and Gujarat, yet occupational diversification remains low, with 85% in primary sectors (vs. 60% state average) and only 5% in tertiary sectors (vs. 20%), underscoring poor market integration. Migration yields increased income (60%) and asset ownership (25%) but incurs significant social costs, including family separation (80%), debt traps (30%), and child education disruption (40%), particularly among PVTGs, highlighting a complex balance of economic gains against persistent vulnerabilities.

Livelihood Patterns of Tribal Communities in Odisha

A 'livelihood' encompasses the activities, means, assets (material and social), capabilities, and entitlements through which people secure necessities in a dignified and lawful manner (Young et al., 2001). It involves accessing and mobilizing resources to meet survival needs and ensure long-term well-being. A sustainable livelihood, as defined by Ashley & Carney (1999), Chambers & Conway (1991), and Serrat (2017), withstands stresses and economic, social, or environmental preserving or enhancing assets and capabilities without degrading the natural resource base. This framework, aimed at poverty reduction and ecological sustainability (Krantz, 2001, cited in Asare et al., 2024), relies on five key capitals: human (skills, education, health), physical (tools, land, livestock), natural (forests, water, land), financial (income, savings, credit), and social (networks, institutions) (Ellis, 2000; Mutenje et al., 2010; Scoones, 1998; DFID, 2000).

Tribal livelihoods in Odisha are predominantly agrarian and forest-dependent, shaped by the state's geography and socioeconomic isolation. According to Census 2011, approximately 65% of tribal households rely on subsistence agriculture, cultivating crops like paddy, millets, and pulses on small, often unirrigated landholdings. This figure aligns with NFHS-5 (2019-21) data, which indicates that tribal wealth quintiles remain skewed toward the lowest brackets, reflecting limited agricultural productivity and market access. An additional 20% of tribal households depend on non-timber forest products (NTFPs) such as mahua, tendu leaves, and honey, a trend particularly pronounced among PVTGs, as noted in the PVTG Survey (2018). For instance, tribes like the Dongria Kondh in Rayagada district supplement farming with forest-based income. This practice sustains them but offers little resilience against climate variability or market fluctuations.

Livestock rearing, though practised by only 5% of tribal households compared to the state average of 12% ("Sustainable livelihood security"), serves as a minor livelihood

source due to resource constraints like fodder scarcity. Casual labour, including seasonal wage work in agriculture or construction, engages about 10% of tribal households (NITI Aayog, 2023), significantly lower than the state average of 25%. This limited diversification underscores the tribal economy's dependence on traditional, low-productivity activities, exacerbated by inadequate infrastructure and education levels. 37.4% of tribals are literate compared to the state's 73% (Census, 2011).

In the context of Odisha's tribal communities, 22.8% of the state's population (Census, 2011)-livelihood patterns are shaped by limited access to these capitals, compounded by geographic isolation, cultural traditions, and socioeconomic barriers. Odisha's 62 tribal groups, including 13 Particularly Vulnerable Tribal Groups (PVTGs), depend heavily on agriculture, forest resources, and casual labour. This note explores their livelihood strategies, drawing on data from Census 2011, NFHS-5 (2019-21), NITI Aayog (2023), PVTG Survey (2018), and studies like "Sustainable livelihood security in Odisha".

Agriculture remains the cornerstone of tribal livelihoods, engaging 65% of households (Census, 2011), though it is primarily subsistence-based with low productivity due to traditional, labour-intensive methods and minimal modern inputs. The Agricultural Census 2015-16 reports that Scheduled Tribes (STs) operate an average landholding of 1.05 hectares, with 99.41% of their 15,38,019 hectares cultivated. Cereals, particularly paddy (79.65% of the gross cropped area) and millets, dominate, grown on 86.21% of their higher than the 80.25% for non-ST/SC communities, a focus on dryland crops due to poor irrigation (Agricultural Census 2015-16). Most produce is consumed domestically, with minimal surplus sold for essentials like clothing or medicine.

Forest-based livelihoods, vital for 20% of tribal households (PVTG Survey, 2018), involve collecting non-timber forest products (NTFPs) such as mahua, tendu leaves, and honey. Tribes like the Dongria Kondh in Rayagada exemplify this reliance, using natural assets (forests, rivers) and traditional knowledge as key capitals. Casual labour, including farm and non-farm wage work, supports 10% of households (NITI Aayog, 2023), while livestock rearing is limited to 5% due to resource scarcity. These patterns highlight a lack of diversification, with 85% of tribal workers in primary sector roles (Census, 2011).

Tribal employment is skewed toward self-employment in agriculture (70% of workers), compared to 45% for non-tribals (NFHS-5, 2019-21). Casual labour employs 20%, often seasonally, while salaried jobs are rare (2% vs. 10% state average), reflecting low literacy (37.4%, Census 2011) and skill deficits. Among the primary workers (48.87% of the ST workforce), cultivators comprise 40.4% and agricultural

labourers 32.5% (Census, 2011), mostly marginal farmers or sharecroppers. The PVTG Survey (2018) notes that PVTGs, like the Bonda, rely heavily on inherited occupations, limiting shifts to non-farm sectors (5% in tertiary roles, NITI Aayog, 2023).

Sustainability Challenges

Tribal livelihoods in Odisha face sustainability challenges due to weak asset bases. Low education (30% female literacy, NFHS-5) and poor health (70% child anaemia, NFHS-5) constrain human capital. Physical assets like tools or irrigation are scarce, with only 20% of households in pucca houses (NFHS-5). Natural assets are overexploited-deforestation, and land degradation threatens forest-based income. Financial assets (savings, credit) are minimal, with 46% below the poverty line (NFHS-5). Social networks provide informal safety nets, but institutional support is inconsistent.

Economic shocks (e.g., crop failure) and environmental stresses (e.g., droughts) exacerbate vulnerability, as seen in Malkangiri's 45.01% MPI poverty rate (NITI Aayog, 2023). While stable for subsistence, traditional agriculture yields low returns, pushing tribes toward coping strategies like NTFP collection or wage labour, often unsustainable due to market volatility or resource depletion.

Government programs like OPELIP (20% PVTG coverage, PVTG Survey, 2018) and MGNREGA (50% tribal reach, NITI Aayog, 2023) aim to enhance livelihoods through skill training, NTFP marketing, and wage work. The PM-JANMAN scheme, with ₹734.86 crore funding ("Odisha to secure ₹734.86-cr. Loan targets infrastructure and income generation. However, benefits remain limited-46% of STs remain impoverished (NFHS-5)-due to poor implementation, inadequate coverage, and failure to address structural barriers like land rights or market access.

Government initiatives like the Odisha PVTG Empowerment and Livelihood Improvement Programme (OPELIP) and the PM-JANMAN scheme aim to address these issues. OPELIP, covering 20% of PVTG households, boosts diversification by 25% through skill training and NTFP marketing (PVTG Survey, 2018), while PM-JANMAN, backed by a ₹734.86 crore loan from IFAD ("Odisha to secure ₹734.86-cr. loan.), targets infrastructure and livelihood support. However, implementation has limited coverage, bureaucratic delays, and poor last-mile connectivity-hinder impact, leaving tribals reliant on distressed migration and traditional livelihoods.

Conclusion

Odisha's tribals' livelihood and employment patterns reveal a cycle of poverty, low diversification, and dependence on subsistence activities, driving distress migration as

a survival strategy. With 46% of tribals below the poverty line (NFHS-5, 2019-21) and education levels stagnating, breaking this cycle requires targeted interventions, skill development, improving market linkages for NTFPs, and expanding rural employment schemes beyond temporary wage work.

Odisha's tribal livelihoods, rooted in agriculture and forest resources, reflect resilience but lack sustainability, constrained by weak capital and external shocks. The data emphasizes an urgent need for holistic policies that address both economic and social dimensions of tribal distress, ensuring sustainable livelihoods and reducing migration-related vulnerabilities.

Diversification into non-farm activities is emerging, but poverty and marginalization persist, highlighting the need for robust, inclusive interventions to strengthen assets and ensure long-term well-being.

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