

## **Seasonal Migration and Rural Transformation: An Empirical Study of Tribal Youth in Nandurbar District, Maharashtra**

**Dr. Dileep Jankiram Ghongade**

Associate Professor

Dr. Babasaheb Ambedkar College of Social Work

Morane, Dhule, Maharashtra, India – 424001

### **Abstract**

Seasonal migration has become a significant livelihood strategy among tribal youth in rural India, particularly in structurally vulnerable districts. This study examines the determinants and socio-economic implications of seasonal migration among tribal youth in Nandurbar, a predominantly tribal region characterised by agrarian instability and limited non-farm employment opportunities. Using primary data collected from 150 tribal youth across selected talukas, the research applies descriptive statistics, chi-square tests and binary logistic regression to analyse migration patterns and associated factors.

The findings reveal that 61.3% of the respondents engaged in seasonal migration during the reference year. Landholding size and household income emerged as significant predictors of migration, with youth from landless and marginal households being substantially more likely to migrate. Low educational attainment and household debt further increased migration probability. While migration generated average seasonal remittances that contributed to short-term consumption enhancement, it did not significantly improve long-term asset accumulation. Additionally, migration was associated with increased agricultural and domestic workload among women in migrant households, indicating gendered social consequences.

The study concludes that seasonal migration among tribal youth in Nandurbar district is primarily distress-driven rather than opportunity-driven, reflecting structural vulnerabilities in rural development. Although migration provides temporary economic relief, it does not fundamentally transform livelihood insecurity. The paper emphasises the need for place-based development strategies focusing on agricultural strengthening, employment diversification, skill development and labour protection to address the structural roots of tribal youth migration.

Keyword : Tribal youth; Seasonal migration; Agrarian distress; Rural transformation; Livelihood vulnerability; Maharashtra; Informal labour; Nandurbar district

## 1. Introduction

Migration has emerged as one of the most defining socio-economic processes shaping rural India in the twenty-first century. While urbanisation and industrial growth continue to attract labour from agrarian regions, migration from tribal-dominated districts reflects a distinct pattern driven more by structural vulnerability than by opportunity-led mobility. In fully tribal districts such as Nandurbar, seasonal migration among youth has become an increasingly visible survival strategy. This phenomenon is not merely a demographic movement; rather, it is deeply intertwined with livelihood insecurity, agrarian distress, limited educational attainment and uneven development trajectories.

Nandurbar district, situated in the north-western region of Maharashtra, is characterised by a predominantly Scheduled Tribe (ST) population, hilly terrain and rain-fed agriculture. The majority of households depend on small and marginal landholdings, forest-based subsistence and wage labour. Agricultural productivity remains highly dependent on monsoon variability, making income flows unstable and unpredictable. In such an environment, tribal youth often encounter limited local employment opportunities beyond subsistence farming and occasional public employment schemes. As a result, seasonal migration to neighbouring industrial centres—particularly in Gujarat—has evolved into a recurring livelihood pattern.

Seasonal migration differs significantly from permanent migration. It is cyclical, temporary and often organised through informal contractor networks. Tribal youth typically migrate for periods ranging from three to eight months annually, engaging in construction labour, sugarcane cutting, brick kiln work or factory-based informal employment. After the agricultural season resumes or when temporary contracts conclude, migrants return to their native villages. This circular mobility reflects a coping mechanism rather than long-term socio-economic mobility. It indicates a persistent structural gap between rural livelihood capacity and youth employment aspirations.

The youth demographic segment plays a critical role in shaping rural transformation. Young individuals between the ages of 18 and 35 represent the most economically active and mobile population group. In tribal contexts, youth are frequently positioned at the intersection of traditional agrarian expectations and modern consumption aspirations. Increased exposure to media, mobile technology and peer networks has expanded awareness of urban lifestyles

and wage differentials. Consequently, migration is not solely a response to distress but also influenced by perceived opportunity, social comparison and aspirational change.

However, tribal youth migration must be analysed within broader structural inequalities. Tribal communities in India have historically experienced marginalisation in terms of land rights, education, infrastructure access and political representation. Despite constitutional safeguards and targeted development programmes, disparities persist in literacy rates, healthcare accessibility and employment diversification. The concentration of tribal populations in ecologically fragile and geographically remote regions further exacerbates developmental challenges. Within this structural context, migration becomes both an adaptive strategy and an indicator of systemic imbalance.

The agrarian economy of Nandurbar district exemplifies these structural pressures. With limited irrigation coverage and fragmented landholdings, agricultural income often remains insufficient to sustain households throughout the year. Crop failure due to erratic rainfall increases dependency on wage labour. Although schemes such as MGNREGA provide supplementary employment, their seasonal and wage limitations restrict long-term income stability. For tribal youth seeking financial independence or supporting family debt obligations, migration offers relatively higher daily wages compared to local alternatives. Yet, these higher wages are often offset by insecure working conditions, absence of social security and exploitative labour arrangements.

The migration networks linking Nandurbar villages to industrial hubs in Gujarat and other parts of Maharashtra are deeply embedded within social structures. Contractors, locally known as mukadams, facilitate recruitment and transport arrangements. Peer influence and kinship networks play a decisive role in shaping migration decisions. When one member of a village migrates and remits income, others often follow, creating a chain migration pattern. Over time, migration becomes institutionalised as a normative life-course event for tribal youth, particularly males.

Despite its economic significance, seasonal migration carries complex social consequences. Extended absence of young males alters household labour dynamics, increasing agricultural responsibilities for women and elderly members. Educational discontinuity among migrating youth contributes to school dropout and skill stagnation. Children accompanying migrating parents may experience interruptions in schooling and healthcare access. Furthermore, exposure to informal urban labour markets exposes migrants to occupational hazards, wage insecurity and limited legal protection.

From a sociological perspective, migration among tribal youth reflects both agency and constraint. Classical push–pull migration theory explains rural-to-urban mobility as a result of push factors such as poverty and unemployment, and pull factors such as higher wages and industrial demand. In the context of Nandurbar, push factors include agrarian instability, limited non-farm employment and debt burden. Pull factors encompass wage differentials, contractor-mediated employment and expanding industrial sectors in nearby states. However, this explanatory framework must be complemented by structural theories emphasising unequal regional development and historical marginalisation.

Migration also contributes to subtle forms of rural transformation. Remittances, even if modest, influence consumption patterns, housing improvement and access to mobile technology. Youth returning from migration often introduce new aspirations, behavioural norms and consumption preferences. Such exposure may alter traditional community structures, intergenerational authority patterns and occupational expectations. Yet, these transformations remain uneven and fragile, as remittance income rarely translates into sustainable asset accumulation or skill enhancement.

In examining tribal youth migration in Nandurbar district, it is essential to move beyond simplistic narratives of opportunity-driven mobility. Migration here represents a cyclical response to structural vulnerability. It neither ensures long-term upward mobility nor completely alleviates poverty. Instead, it reflects a precarious equilibrium where temporary wage gains compensate for systemic rural underdevelopment. The persistence of seasonal migration signals underlying deficits in local employment generation, skill development infrastructure and agricultural resilience.

Understanding this phenomenon is particularly relevant for social work and development policy. Tribal youth constitute a critical demographic group whose migration decisions shape household welfare, community cohesion and regional labour markets. Policy responses must therefore address both the immediate vulnerabilities faced by migrants and the structural drivers compelling migration. Strengthening local employment opportunities, enhancing skill training, improving agricultural productivity and ensuring labour protection mechanisms are integral components of a comprehensive response.

This study seeks to empirically examine the determinants, patterns and socio-economic consequences of seasonal migration among tribal youth in Nandurbar district. By analysing household characteristics, educational background, landholding status and migration networks, the research aims to situate youth mobility within the broader framework of rural transformation. The study also explores how migration influences household income

dynamics, gender roles and community structures. In doing so, it contributes to the growing discourse on tribal development, youth employment and rural inequality in India.

Ultimately, seasonal migration among tribal youth is not merely a demographic movement but a reflection of structural imbalances in rural development. Examining this process within a fully tribal district provides critical insight into how historical marginalisation, agrarian instability and labour market demand intersect to shape youth trajectories. Through a grounded analysis of Nandurbar district, this research highlights the need for context-specific, place-based development strategies capable of transforming migration from a distress-driven necessity into a choice rooted in opportunity and dignity.

## **2. Review of Literature**

Seasonal migration among rural and tribal populations has received sustained scholarly attention within development studies, sociology and political economy. Migration is widely understood not merely as physical mobility but as a structural response to uneven development, labour market segmentation and agrarian transformation. Early theoretical formulations such as the push–pull model (Lee, 1966) conceptualised migration as the outcome of adverse conditions in origin areas and attractive opportunities in destination regions. Push factors typically include poverty, unemployment and environmental stress, whereas pull factors relate to wage differentials and industrial demand. Although the push–pull framework remains influential, subsequent research has emphasised that migration decisions are embedded within broader socio-economic and political structures.

In the Indian context, rural–urban and seasonal migration patterns have been strongly associated with agrarian distress and informal labour markets. Breman (1996) documented how migrant labour from tribal and lower-caste communities in western India is characterised by insecurity, debt bondage and exploitative contractor networks. His ethnographic work highlighted the cyclical and distress-driven nature of migration, particularly among marginalised communities lacking stable agrarian assets. Similarly, Deshingkar and Start (2003) argued that seasonal migration in India is a livelihood diversification strategy rather than a purely distress phenomenon, as households often combine farming, wage labour and migration to manage income risk. Their findings suggest that migration must be analysed within a multi-activity livelihood framework.

Research focusing on tribal regions indicates that migration is often structurally linked to ecological fragility and historical marginalisation. Xaxa (2011) emphasised that Scheduled Tribes in India experience persistent exclusion from mainstream development due to geographical isolation, limited infrastructure and weak political representation. In such

contexts, migration emerges as both adaptation and survival strategy. Mohanty (2012) observed that tribal youth frequently migrate due to limited educational attainment and absence of local industrial employment, reinforcing a cycle of informal labour dependency.

Agrarian distress has been repeatedly identified as a core driver of migration. According to Kannan and Raveendran (2012), stagnation in agricultural productivity and declining viability of small landholdings have intensified rural labour mobility across India. Rain-fed regions, particularly those dependent on monsoon variability, exhibit higher seasonal migration rates. Studies in semi-arid Maharashtra demonstrate that crop failure, indebtedness and lack of irrigation compel young male labourers to seek employment in urban construction and sugar industries (Kulkarni, 2017). These findings are particularly relevant to tribal-dominated districts where agricultural infrastructure remains underdeveloped.

The role of informal labour markets in shaping migration outcomes has also been widely discussed. Srivastava (2011) highlighted that seasonal migrants in India predominantly work in unregulated sectors such as construction, brick kilns and sugarcane harvesting, where labour rights protections are weak. The absence of social security coverage and written contracts increases vulnerability to wage exploitation and occupational hazards. Such conditions disproportionately affect tribal migrants who often lack awareness of legal entitlements. Breman (2009) further noted that labour contractors mediate migration flows, creating dependency networks that institutionalise mobility as a recurring livelihood pattern.

Youth migration presents additional dimensions linked to aspiration and social change. Jeffrey (2010) argued that rural youth mobility in India is influenced not only by economic necessity but also by changing aspirations shaped by education, media exposure and consumer culture. Tribal youth, while constrained by structural disadvantages, increasingly seek wage employment outside agriculture to attain financial independence and social status. However, limited skill development opportunities often confine them to low-paying informal jobs, perpetuating inequality.

Gendered dimensions of migration have also received scholarly attention. Rao (2012) observed that male-dominated seasonal migration alters household labour divisions, increasing agricultural and domestic burdens on women. In tribal communities, women often assume additional responsibilities during male absence, yet rarely gain control over remittance income. Studies in western India show that migration can reinforce patriarchal structures even as it transforms consumption patterns (Shah & Lerche, 2018). These gendered

implications are particularly relevant in analysing the broader social transformation effects of youth mobility.

Migration has also been examined through the lens of social capital theory. Massey et al. (1993) proposed that migration networks reduce risk and cost, facilitating chain migration. In rural India, kinship ties and village networks significantly shape migration decisions. Once initial migrants establish connections in destination areas, subsequent youth follow established pathways, making migration self-perpetuating. Studies in tribal belts of central India confirm that peer influence and contractor mediation create institutionalised migration circuits (Naik, 2016).

Remittance flows constitute another critical dimension of migration research. Adams and Page (2005) suggested that remittances can reduce poverty at the household level, though their impact on long-term development remains limited. In tribal contexts, remittances often finance consumption smoothing rather than productive investment. Deshingkar (2010) noted that while migrant earnings improve short-term liquidity, they rarely translate into sustainable asset creation due to low wage levels and irregular employment duration.

Recent scholarship has also linked migration with capability deprivation and structural inequality. Drawing upon the capability approach, de Haan (2011) argued that migration decisions are shaped by unequal access to education, health and institutional support. Tribal youth lacking access to quality schooling and vocational training face constrained livelihood choices, making migration a constrained rather than voluntary decision. This perspective situates migration within broader questions of social justice and development inequality.

Within Maharashtra, district-level studies reveal significant migration from tribal regions such as Nandurbar, Dhule and Palghar toward industrial centres in Gujarat (Government of Maharashtra, 2021). Seasonal labour mobility peaks during agricultural lean periods, indicating strong seasonality linked to rainfall cycles. Although public employment programmes aim to reduce distress migration, their limited wage rates and irregular implementation restrict effectiveness (Khera, 2019).

Overall, the literature suggests that seasonal migration among tribal youth is a multidimensional process shaped by agrarian instability, labour market demand, social networks and historical marginalisation. While migration can provide temporary income support, it rarely transforms structural vulnerabilities. Existing studies emphasise economic drivers but often underexplore the social transformation dimension within fully tribal districts. There remains a need for micro-level empirical analysis examining how youth

migration reshapes household structures, gender roles and community dynamics in districts such as Nandurbar.

This study builds upon existing scholarship by situating tribal youth migration within the intersecting frameworks of agrarian distress, informal labour markets and rural transformation. By focusing on a fully tribal district in Maharashtra, it seeks to contribute context-specific empirical evidence to the broader discourse on migration, inequality and development.

### **3. Theoretical Framework**

Understanding seasonal migration among tribal youth requires a multidimensional theoretical lens that moves beyond purely economic explanations. Migration in tribal regions such as Nandurbar is embedded within historical marginalisation, agrarian instability and unequal development processes. This study draws upon four complementary theoretical perspectives: Push–Pull Migration Theory, the Sustainable Livelihoods Framework, Social Capital Theory and the Capability Approach. Together, these frameworks provide an integrated analytical foundation for examining the structural, relational and agency-based dimensions of tribal youth migration.

#### **1. Push–Pull Migration Theory**

Push–Pull Migration Theory, most prominently articulated by Lee (1966), remains one of the foundational models in migration studies. The theory posits that migration decisions are influenced by adverse conditions in the place of origin (push factors) and attractive opportunities in destination areas (pull factors). Push factors typically include poverty, unemployment, environmental stress and lack of infrastructure, whereas pull factors involve higher wages, industrial growth and perceived opportunities for advancement.

In the context of tribal youth in Nandurbar district, push factors include agrarian distress, rain-fed agriculture, fragmented landholdings, limited irrigation facilities and absence of local non-farm employment. Periodic drought conditions and unstable agricultural income intensify income insecurity. Youth belonging to small or marginal farming households face restricted livelihood options within the village economy.

Simultaneously, pull factors operate through wage differentials and labour demand in neighbouring industrial centres, particularly in Gujarat. Construction, brick kiln, sugarcane cutting and factory-based informal employment offer higher daily wages compared to rural wage rates. Contractor networks further reduce migration barriers by arranging transportation and employment linkages. Thus, migration decisions emerge from a dynamic interaction between local deprivation and external opportunity structures.

However, while Push–Pull Theory explains immediate drivers of migration, it does not fully capture deeper structural inequalities and historical marginalisation shaping tribal mobility. Therefore, additional frameworks are necessary.

## **2. Sustainable Livelihoods Framework**

The Sustainable Livelihoods Framework (Chambers & Conway, 1992) conceptualises livelihood strategies as combinations of assets—natural, human, financial, physical and social capital—utilised to cope with vulnerability contexts. Migration is viewed not merely as distress but as a livelihood diversification strategy adopted by households to manage risk and enhance income stability.

In tribal regions, natural capital such as forest resources and land often remains limited or insecure. Human capital is constrained by low educational attainment and limited skill training. Financial capital is weak due to restricted access to formal credit institutions. Physical capital, including irrigation and infrastructure, is underdeveloped. Social capital exists within kinship networks but may not translate into institutional leverage.

Within this asset-poor context, migration becomes a strategy to supplement financial capital. Seasonal mobility allows households to diversify income sources during agricultural lean periods. Rather than abandoning rural life, tribal youth temporarily relocate to urban labour markets and return to support farming activities. Migration, therefore, represents a coping mechanism within a broader vulnerability framework shaped by environmental and economic instability.

This perspective shifts analysis from migration as failure of rural development to migration as adaptive livelihood management. However, adaptation under constrained choices may still reflect structural inequality.

## **3. Social Capital Theory**

Social Capital Theory, articulated by scholars such as Bourdieu (1986) and later expanded in migration research by Massey et al. (1993), emphasises the role of networks, relationships and social norms in facilitating mobility. Migration is rarely an isolated individual decision; rather, it is embedded within community networks that reduce risk and transaction costs.

In tribal villages of Nandurbar, migration pathways are often mediated by kinship ties and contractor systems. When one youth migrates and secures employment, others follow through established networks. This creates chain migration patterns where social ties substitute for formal labour market information systems. Trust-based relationships between labour contractors and families institutionalise seasonal mobility.

Social capital reduces uncertainty associated with migration but may also reinforce dependency on informal labour markets. Tribal youth lacking broader institutional connections remain confined to low-skilled sectors through network-based recruitment. Thus, while social capital enables migration, it may simultaneously reproduce occupational segmentation and vulnerability.

#### **4. Capability Approach**

The Capability Approach, developed by Sen (1999), shifts the analytical focus from resource availability to substantive freedoms and opportunities. Migration decisions must be understood in terms of the capabilities individuals possess to pursue valued life choices. In contexts of limited education, skill access and institutional support, migration may represent a constrained choice rather than an empowered decision.

Tribal youth in Nandurbar often face capability deprivation due to limited access to quality schooling, vocational training and infrastructure. Although migration offers income, it does not necessarily enhance long-term capabilities such as skill development, asset accumulation or social mobility. Informal sector employment rarely provides stable contracts or social security benefits. Therefore, migration may improve short-term income but fail to expand long-term freedoms.

From a capability perspective, true development would involve expanding local opportunities so that migration becomes voluntary rather than necessity-driven. This approach situates youth migration within broader questions of social justice, structural inequality and inclusive development.

#### **Integrated Conceptual Model**

By integrating these four frameworks, this study conceptualises tribal youth migration as a structurally embedded livelihood strategy shaped by vulnerability, social networks and constrained capabilities. Push-pull forces explain immediate economic drivers. The Sustainable Livelihoods Framework situates migration within household survival strategies. Social Capital Theory explains network-based mobility patterns. The Capability Approach critically evaluates whether migration enhances or restricts long-term well-being.

Together, these perspectives suggest that seasonal migration among tribal youth is neither purely distress-driven nor purely opportunity-driven. It represents a complex interplay between structural constraints and adaptive agency. In a fully tribal district such as

Nandurbar, where agrarian limitations intersect with labour market demand, youth mobility reflects both resilience and systemic inequality.

This theoretical framework guides the empirical analysis of determinants, patterns and socio-economic consequences of seasonal migration, enabling a comprehensive understanding of rural transformation within tribal contexts.

#### **4. Research Objectives**

The study aims to examine the structural determinants and socio-economic implications of seasonal migration among tribal youth in Nandurbar. The following four specific objectives are formulated:

1. To analyse the socio-economic profile of tribal youth engaged in seasonal migration, including education, landholding status and household income.
2. To identify and examine the major push and pull factors influencing seasonal migration among tribal youth.
3. To assess the economic impact of seasonal migration on household income and remittance patterns.
4. To examine the social consequences of migration, particularly its effects on gender roles and agricultural participation within migrant households.

#### **5. Research Hypotheses**

Based on the theoretical framework, the following four hypotheses are proposed for empirical testing:

**H1:** Tribal youth from households with small or marginal landholdings are significantly more likely to engage in seasonal migration than those from larger landholding households.

**H2:** Lower household income significantly increases the probability of seasonal migration among tribal youth.

**H3:** Seasonal migration leads to a significant increase in short-term household consumption expenditure through remittance income.

**H4:** Seasonal migration of male youth significantly increases agricultural and domestic workload among women in migrant households.

#### **6. Methodology**

##### ***6.1 Research Design***

The present study adopts a cross-sectional descriptive and analytical research design to examine the determinants and socio-economic consequences of seasonal migration among

tribal youth in Nandurbar. The research is quantitative in orientation, as it seeks to generate measurable evidence regarding migration patterns, structural drivers and household-level impacts. At the same time, it maintains an explanatory character by testing theoretically derived hypotheses related to landholding, income vulnerability and social transformation. The cross-sectional framework enables comparison between migrant and non-migrant youth within the same socio-economic environment. Although it does not establish long-term causality, it provides a structured snapshot of migration behaviour during a defined reference period, thereby allowing systematic analysis of structural determinants.

## **6.2 Study Area**

Nandurbar district is located in the north-western part of Maharashtra and is widely recognised for its predominantly tribal population. The district is administratively divided into six talukas: Nandurbar, Shahada, Taloda, Navapur, Akkalkuwa and Akrani (Dhadgaon). Geographically, the region is characterised by hilly terrain, forest cover and monsoon-dependent agriculture. Irrigation facilities remain limited in many interior villages, and the majority of households rely on small and marginal landholdings. Seasonal out-migration to neighbouring industrial areas, particularly in Gujarat, has become a recurrent livelihood pattern among tribal youth.

For the purpose of this study, three talukas were selected based on migration intensity, geographical diversity and accessibility. Akkalkuwa and Akrani (Dhadgaon) talukas were selected due to their high tribal concentration and recurrent seasonal migration patterns. These talukas are marked by difficult terrain and relatively limited industrial or non-farm employment opportunities. In addition, Navapur taluka was selected to introduce comparative variation, as it includes villages with relatively better road connectivity and exposure to market networks.

Within these selected talukas, a total of nine villages were chosen. From Akkalkuwa taluka, the villages of Molgi, Jamana and Umarkuva were included. From Akrani (Dhadgaon) taluka, the villages of Dhadgaon, Chinchkheda and Bilgaon were selected. From Navapur taluka, the villages of Raingan, Visarwadi and Bhadwad were included. The selection of villages was purposive and based on documented evidence of youth migration, consultation with local officials and accessibility for field investigation. These villages represent varying levels of infrastructure access and migration intensity, thereby strengthening the comparative depth of the study.

### ***6.3 Target Population and Sampling Procedure***

The target population consisted of tribal youth aged between 18 and 35 years residing in the selected villages for at least five years. Both youth who had engaged in seasonal migration during the previous year and those who had not migrated were included in the sampling frame to facilitate comparative analysis.

A multi-stage sampling technique was adopted. In the first stage, talukas were purposively selected as described above. In the second stage, villages within each taluka were identified based on migration prevalence and demographic composition. In the third stage, households were selected using systematic random sampling from village household lists obtained from local authorities. If more than one eligible youth was present within a household, one respondent was selected using simple random selection.

A total sample of 150 respondents was surveyed, ensuring proportional representation from each taluka. This sample size was considered adequate for descriptive statistical analysis and for conducting chi-square and logistic regression tests with sufficient statistical reliability.

### ***6.4 Data Collection Methods***

Primary data were collected through a structured interview schedule administered via face-to-face interviews. Considering variations in literacy levels among respondents, interviews were conducted in the local language to ensure comprehension and accuracy. The instrument was pre-tested in a non-sample village to refine wording and ensure contextual relevance.

The questionnaire was organised into sections covering socio-demographic characteristics, educational attainment, landholding size, household income, debt status, migration history, duration of migration, remittance patterns and perceived social impacts. Information regarding changes in agricultural participation and household responsibilities during migration periods was also recorded.

Secondary data were obtained from district statistical reports, census publications and government development records to contextualise demographic patterns and migration trends in the district.

### ***6.5 Operationalisation of Variables***

Seasonal migration status was treated as the principal dependent variable and operationalised as a binary variable indicating whether the respondent had migrated for employment during the previous year. Independent variables included landholding size

(categorised as marginal/small and medium/larger), household income level, education level of the youth, household debt status and presence of migration networks within the village.

Economic impact was measured through reported remittance amounts and perceived changes in household consumption expenditure. Social impact was examined through reported changes in women's agricultural workload and household decision-making roles during periods of male migration.

### ***6.6 Techniques of Data Analysis***

Data were coded and entered into statistical software for analysis. The analytical process proceeded in stages. Descriptive statistics such as frequencies, percentages and mean values were computed to summarise socio-economic characteristics and migration patterns. Chi-square tests were applied to examine associations between migration status and categorical socio-economic variables. Subsequently, binary logistic regression analysis was conducted to estimate the probability of seasonal migration based on explanatory variables including landholding size, income and education.

Model adequacy was assessed using pseudo  $R^2$  statistics and classification accuracy measures. The combination of descriptive and inferential techniques enabled both pattern identification and hypothesis testing.

### ***6.7 Ethical Considerations***

Ethical principles were strictly observed throughout the research process. Respondents were informed about the purpose of the study and assured that participation was voluntary. Informed consent was obtained prior to interviews. Confidentiality and anonymity were maintained, and personal identifiers were excluded from analytical datasets. The research adhered to academic standards of integrity and responsible data use.

## **7. Results**

This section presents the empirical findings of the study on seasonal migration among tribal youth in Nandurbar. The results are organised into descriptive and inferential components to systematically examine migration patterns, determinants and socio-economic impacts.

### ***7.1 Socio-Demographic Profile of Respondents***

**Table 1 presents the socio-demographic characteristics of the 150 tribal youth surveyed across selected villages of Akkalkuwa, Akrani (Dhadgaon) and Navapur talukas.**

**Table 1: Socio-Demographic Characteristics of Respondents (N = 150)**

Variable	Category	Frequency	Percentage (%)
Age Group	18–25	64	42.7
	26–35	86	57.3
Education	No Formal Education	38	25.3
	Primary	57	38.0
	Secondary & Above	55	36.7
Landholding	Landless	29	19.3
	Marginal (<1 ha)	71	47.3
	Small/Medium (>1 ha)	50	33.4
Migration Status	Migrated	92	61.3
	Non-Migrant	58	38.7

The data reveal that 61.3% of respondents engaged in seasonal migration during the reference year. A significant proportion (47.3%) belonged to marginal landholding households, indicating agrarian vulnerability. Educational attainment remains modest, with only 36.7% having secondary education or above.

### **7.2 Push Factors Influencing Migration**

Respondents identified multiple structural drivers contributing to migration decisions.

**Table 2: Major Push Factors Reported by Migrant Youth (N = 92)**

Push Factor	Frequency	Percentage (%)
Low Agricultural Income	74	80.4
Household Debt	61	66.3
Lack of Local Employment	79	85.8
Crop Failure	52	56.5

The findings indicate that lack of local employment (85.8%) and low agricultural income (80.4%) are dominant push factors. This supports the agrarian distress hypothesis.

### **7.3 Migration and Landholding Size (Chi-Square Test)**

To examine whether landholding size significantly influences migration probability, a chi-square test was conducted.

**Table 3: Migration Status by Landholding Size**

Landholding Category	Migrant	Non-Migrant	Total
Landless/Marginal	70	30	100
Small/Medium	22	28	50
<b>Total</b>	92	58	150

**Chi-square value ( $\chi^2$ ) = 10.84**

**df = 1**

**p-value = 0.001**

The association between landholding size and migration status is statistically significant at the 1% level. Youth from landless and marginal households are significantly more likely to migrate compared to those from relatively larger landholding households. This finding supports Hypothesis 1.

#### ***7.4 Household Income and Migration (Logistic Regression)***

Binary logistic regression was conducted to estimate the probability of migration based on key predictors.

**Table 4: Logistic Regression Predicting Seasonal Migration**

Predictor	B	SE	Odds Ratio (Exp B)	p-value
Marginal Landholding	1.12	0.42	3.06	0.008
Low Household Income	0.95	0.37	2.58	0.011
Low Education	0.73	0.34	2.08	0.031
Household Debt	0.81	0.39	2.25	0.040

**Model Fit:**

Nagelkerke  $R^2 = 0.34$

Classification Accuracy = 72.6%

The regression model indicates that youth from marginal landholding households are 3.06 times more likely to migrate compared to those with larger landholdings. Low household income increases migration probability by 2.58 times. Educational disadvantage also significantly increases migration likelihood. The model explains 34% of the variance in migration behaviour, demonstrating moderate explanatory strength.

#### ***7.5 Economic Impact: Remittance and Consumption***

**Table 5: Average Remittance and Household Consumption Change**

Variable	Mean (INR)	Standard Deviation
Average Seasonal Remittance	32,500	8,420
Increase in Monthly Household Expenditure	2,150	710

Migrant households reported an average seasonal remittance of Rs.32,500. A paired comparison indicates a noticeable short-term increase in household consumption expenditure. However, qualitative responses suggest limited long-term asset creation.

#### ***7.6 Social Impact: Gendered Workload***

**Table 6: Change in Women's Agricultural Workload in Migrant Households (N = 92)**

Change in Workload	Frequency	Percentage (%)
Increased Significantly	63	68.5
Increased Moderately	19	20.7
No Change	10	10.8

The majority (68.5%) of migrant households reported a significant increase in women's agricultural and domestic workload during male migration periods. This finding supports the gendered burden hypothesis.

### **7. Summary of Key Findings**

The empirical results demonstrate that seasonal migration among tribal youth in Nandurbar district is strongly associated with agrarian vulnerability, low household income and limited education. Landholding size emerges as a statistically significant predictor of migration behaviour. While migration contributes to short-term income enhancement through remittances, it does not appear to substantially alter long-term asset ownership. Furthermore, the social costs of migration are reflected in increased workload among women and altered household labour dynamics.

Overall, the findings confirm that tribal youth migration is primarily distress-driven rather than opportunity-driven, reflecting structural imbalances in rural development within a fully tribal district context.

### **8. Discussion**

The findings of the present study provide important insights into the structural determinants and socio-economic implications of seasonal migration among tribal youth in Nandurbar. The discussion links the empirical results with existing migration literature and theoretical perspectives outlined earlier.

The study reveals that 61.3% of the surveyed tribal youth engaged in seasonal migration during the reference year. This high migration prevalence confirms that migration in tribal districts is not an exceptional phenomenon but a structurally embedded livelihood strategy. Similar patterns of cyclical and distress-driven migration among tribal and marginalised communities have been documented in western India (Breman, 1996; Breman, 2009). The present findings reinforce the argument that migration among tribal populations is closely associated with agrarian vulnerability and limited non-farm employment opportunities.

The chi-square analysis demonstrated a statistically significant association between landholding size and migration status. Youth from landless and marginal households were significantly more likely to migrate than those from relatively larger landholding households. This finding supports the agrarian distress hypothesis and aligns with earlier research indicating that declining viability of small landholdings intensifies labour mobility (Kannan & Raveendran, 2012). In rain-fed and resource-constrained regions such as Nandurbar, agricultural income remains unstable, thereby pushing youth toward wage labour markets outside the district. The empirical evidence thus validates the push dimension of Lee's (1966) Push-Pull Migration Theory, wherein structural deprivation at the origin area acts as a primary driver of mobility.

Household income emerged as another significant predictor of migration in the logistic regression model. Youth from low-income households were more than twice as likely to migrate compared to those from relatively better-off households. This finding is consistent with the Sustainable Livelihoods Framework (Chambers & Conway, 1992), which conceptualises migration as a livelihood diversification strategy adopted to compensate for asset deficits. In tribal contexts where financial capital is limited and access to formal employment is scarce, migration functions as a risk management mechanism rather than an indicator of upward mobility.

Educational attainment was also found to influence migration behaviour. Youth with lower educational qualifications exhibited higher migration probability, indicating limited local skill-based employment opportunities. This finding corresponds with de Haan's (2011) argument that migration decisions are shaped by capability deprivation. Tribal youth lacking access to quality education and vocational training often remain confined to low-skilled informal labour markets. Thus, migration does not necessarily expand long-term capabilities but reflects constrained choices within unequal development structures.

The analysis of push factors among migrant youth further strengthens the structural interpretation of migration. A large majority identified lack of local employment and low agricultural income as primary reasons for migration. These findings resonate with Deshingkar and Start (2003), who observed that seasonal migration in India is frequently linked to agricultural stagnation and limited rural diversification. However, unlike some studies suggesting migration as an aspirational choice among youth (Jeffrey, 2010), the present study indicates that migration in Nandurbar is predominantly distress-driven rather than opportunity-driven.

The role of social networks, although not quantified in depth in the regression model, emerged qualitatively during field interactions. Many respondents reported migrating through contractor or kinship-based connections. This observation supports Social Capital Theory (Massey et al., 1993), which emphasises that migration networks reduce risk and facilitate chain mobility. In tribal villages, once migration pathways are established, they tend to become institutionalised, creating a recurring cycle of seasonal labour mobility.

Regarding economic impact, the study found that migrant households received an average seasonal remittance that contributed to short-term consumption enhancement. This aligns with Adams and Page (2005), who argue that remittances can reduce immediate poverty at the household level. However, respondents reported limited investment in productive assets, suggesting that remittance flows primarily support consumption smoothing rather than structural economic transformation. Thus, migration alleviates short-term income stress but does not substantially alter long-term vulnerability.

The social consequences of migration are equally significant. A majority of migrant households reported increased agricultural and domestic workload for women during periods of male migration. This finding corroborates Rao's (2012) analysis of gendered labour redistribution in migrant-sending regions. While migration generates financial inflows, it simultaneously intensifies women's unpaid labour burden. In tribal contexts, this dual effect reflects complex intra-household adjustments shaped by economic necessity.

Overall, the findings confirm that seasonal migration among tribal youth in Nandurbar district is primarily a structurally induced coping mechanism rooted in agrarian instability, income vulnerability and limited capability expansion. Migration provides temporary economic relief but does not fundamentally transform structural disadvantages. The results reinforce the integrated theoretical framework combining Push–Pull Theory, Sustainable Livelihoods Framework, Social Capital Theory and the Capability Approach.

In summary, the study contributes to migration scholarship by demonstrating that in a fully tribal district context, youth migration reflects both resilience and structural inequality. It underscores the need for place-based rural development strategies that address agrarian productivity, skill development and local employment generation. Without such interventions, seasonal migration is likely to persist as a cyclical response to enduring structural vulnerability.

## **9. Policy Implications**

The findings of the study highlight that seasonal migration among tribal youth in Nandurbar is largely distress-driven and structurally embedded within agrarian instability,

income vulnerability and limited local employment opportunities. While migration provides short-term financial relief, it does not substantially enhance long-term economic security or capability expansion. In light of these findings, several policy implications emerge that are particularly relevant for tribal development planning and rural governance.

First, strengthening local livelihood opportunities must be prioritised to reduce distress-driven migration. The high migration rate among youth from marginal and landless households indicates that agrarian income alone is insufficient to sustain rural livelihoods. Enhancing irrigation facilities, promoting crop diversification and supporting climate-resilient agriculture can stabilise farm incomes. Public investment in minor irrigation schemes and watershed development in hilly tribal regions would reduce dependence on erratic monsoon patterns. Improving agricultural productivity may not eliminate migration entirely, but it can transform it from a necessity to a choice.

Second, employment diversification beyond agriculture is essential. The absence of non-farm employment opportunities in tribal villages compels youth to migrate to informal labour markets in other states. Establishing local agro-processing units, forest-based enterprises and small-scale rural industries can generate employment within the district. Skill development centres tailored to tribal youth should be expanded to improve employability in semi-skilled sectors. Linking vocational training programmes with local market demand can reduce overdependence on informal construction and brick kiln labour.

Third, public employment programmes require strengthening in tribal districts. Although schemes such as MGNREGA provide supplementary income, irregular implementation and limited workdays restrict their effectiveness in preventing seasonal migration. Ensuring timely wage payments, increasing work availability during agricultural lean periods and focusing on productive asset creation could enhance the programme's stabilising impact. Special emphasis should be placed on tribal-majority villages where migration intensity is high.

Fourth, migration governance mechanisms must be institutionalised. Since seasonal migration is likely to continue in the short term, policy responses should also focus on safeguarding migrant rights. Registration systems at the village level can help track migrant workers and facilitate access to welfare benefits. Inter-state coordination between Maharashtra and destination states such as Gujarat is necessary to ensure labour protection, minimum wage enforcement and occupational safety. Legal awareness campaigns targeting tribal youth can reduce vulnerability to contractor exploitation.

Fifth, the gendered implications of migration demand targeted interventions. The study indicates that women in migrant households experience increased agricultural and domestic workload. Strengthening women's self-help groups, improving access to credit and providing agricultural extension support can reduce their labour burden and enhance economic agency. Policies should recognise women as active economic contributors rather than passive dependents in migration-affected households.

Sixth, education and capability enhancement must be integrated into tribal development planning. Lower educational attainment significantly increases migration probability. Expanding access to secondary education, residential schools and vocational training in remote tribal blocks can broaden livelihood choices. Career counselling and youth mentoring initiatives can encourage informed employment decisions and prevent premature school dropout linked to migration cycles.

Seventh, place-based development strategies are critical. Tribal districts such as Nandurbar possess unique ecological and socio-cultural characteristics that require context-specific planning. Forest-based livelihoods, minor forest produce processing and eco-tourism initiatives could be developed sustainably while respecting tribal rights. Integrating livelihood promotion with environmental conservation may create long-term employment pathways within the district.

Finally, policy frameworks should shift from viewing migration solely as a problem to recognising it as a complex livelihood strategy. Rather than attempting to eliminate migration, interventions should aim to reduce distress and enhance informed mobility. When local opportunities expand and labour rights protections improve, migration can evolve from a survival mechanism into a strategic economic choice.

In conclusion, the policy implications of this study underscore the need for an integrated approach combining agricultural strengthening, employment diversification, skill development, gender-sensitive programming and migration governance. Addressing structural vulnerabilities in tribal districts is essential to ensure that youth mobility reflects opportunity rather than compulsion. Such measures would contribute to more inclusive and sustainable rural development in tribal regions of Maharashtra.

## **10. Conclusion**

The present study examined the determinants and socio-economic implications of seasonal migration among tribal youth in Nandurbar. The findings reveal that migration in this fully tribal district is not an isolated or sporadic occurrence, but a structurally embedded livelihood strategy shaped by agrarian instability, limited non-farm employment and income

vulnerability. A significant proportion of youth surveyed reported seasonal migration during the reference year, indicating that mobility has become a recurring and institutionalised feature of rural life.

Empirical analysis demonstrated that landholding size and household income are significant predictors of migration behaviour. Youth from landless and marginal households were considerably more likely to migrate compared to those from relatively larger landholding families. This confirms that agrarian distress and inadequate agricultural income remain primary push factors driving mobility. The regression results further indicated that low educational attainment increases migration probability, suggesting that capability deprivation restricts local employment opportunities and channels youth into informal labour markets.

While migration contributes to short-term income enhancement through remittances, the findings indicate limited evidence of long-term structural transformation. Remittance income primarily supports consumption smoothing rather than productive investment or asset accumulation. Thus, seasonal migration alleviates immediate economic pressure but does not substantially reduce structural vulnerability. In addition, the study identified significant social consequences, particularly increased agricultural and domestic workload among women in migrant households. This highlights the gendered dimensions of rural transformation linked to youth mobility.

The discussion linking findings with migration literature confirms that tribal youth migration in Nandurbar aligns closely with distress-driven mobility patterns documented in earlier research. The integrated theoretical framework—combining Push–Pull Theory, Sustainable Livelihoods Framework, Social Capital Theory and the Capability Approach—provides a comprehensive explanation of how structural deprivation, livelihood risk management and network-based facilitation interact to shape migration decisions.

Overall, the study concludes that seasonal migration among tribal youth represents a complex interplay of resilience and structural inequality. It reflects adaptive agency within constrained socio-economic conditions. Migration persists not because of abundant opportunity at destinations, but due to insufficient livelihood security at the place of origin. Therefore, sustainable rural development in tribal districts requires integrated interventions that strengthen agricultural productivity, diversify employment opportunities, expand educational access and protect migrant labour rights.

In essence, transforming migration from a distress-driven necessity into a voluntary and informed economic choice depends upon addressing the structural roots of vulnerability

in tribal regions. Without targeted and context-sensitive development strategies, seasonal migration is likely to remain a cyclical response to enduring rural inequality. Limitations and

### **11. Directions for Future Research**

While the present study provides valuable insights into seasonal migration among tribal youth in Nandurbar, certain limitations must be acknowledged.

First, the study is based on a cross-sectional research design, which restricts the ability to establish long-term causal relationships between socio-economic variables and migration behaviour. Migration patterns are dynamic and may vary across agricultural cycles, rainfall conditions and labour market fluctuations. A longitudinal design would provide deeper understanding of changes in migration intensity and livelihood outcomes over time.

Second, the sample size, although adequate for statistical analysis, is limited to selected villages within three talukas. Therefore, findings may not be fully generalisable to all tribal regions of Maharashtra or other states in India. Comparative inter-district or inter-state studies could strengthen external validity.

Third, the analysis primarily relies on self-reported data regarding income, remittances and workload changes. Such responses may involve minor recall bias or estimation error. Future studies may incorporate triangulation methods, including administrative records and observational techniques, to enhance data reliability.

Fourth, while the study quantitatively examined economic and social determinants, it did not extensively explore the psychological and aspirational dimensions of youth migration. Qualitative methods such as in-depth interviews and life-history approaches could provide richer insights into identity transformation, cultural change and youth aspirations associated with mobility.

Future research may also examine the long-term impact of migration on skill acquisition, social mobility and asset formation among tribal youth. Additionally, gender-focused studies could explore the empowerment or marginalisation outcomes for women in migrant-sending households. Comparative research between tribal and non-tribal districts would further illuminate structural differences in migration drivers.

In conclusion, while the study contributes empirical evidence on tribal youth migration in a fully tribal district context, further longitudinal, comparative and mixed-method research is necessary to deepen understanding of rural transformation and mobility patterns in marginalised regions.

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