International Research Journal of Multidisciplinary Scope (IRJMS), 2024; 5(4):1014-1024 IRJMS

Original Article | ISSN (O): 2582-631X DOI: 10.47857/irjms.2024.v05i04.01584

Do Household Attributes Motivate Outmigration in Rural Areas? Evidence from Bodoland Territorial Region in the State of Assam, India

Sanjit Muchahary*, NB Singh

Department of Humanities and Social Sciences, National Institute of Technology Silchar, Assam, India. *Corresponding Author's Email: san87mucha@gmail.com

Abstract

This paper investigates how the attributes of a household such as socioeconomic, demographic and institutional access shape outmigration decisions of family members in a rural economic setting. We used primary data from household-level interviews ($n = 400$) conducted at two community development blocks in each of four districts of Bodoland Territorial Region (BTR), an autonomous council situated in Assam in India's northeast region. A total of 24 villages were randomly chosen by employing a two-stage cluster sampling technique for household-level interviews. We estimated an econometric model to understand the effects of socioeconomic and demographic variables on the migration responses of the family members. A logistic regression model was used to determine the odds ratios of independent variables. The odds ratio of an independent variable explains its effect on outmigration decision of a household. Findings reveal that a family member with a higher level of educational attainment positively affects outmigration decision within the family. Findings also reveal that there is statistically significant negative relationship between outmigration and landholding which implies that family members of poor households possess higher propensity of migration to destinations compared to family members of land-rich households. Apart from landholding, other economic characteristics of a household also trigger its outmigration decision. Overall, this paper provides contemporary ground-level insights into the status of households and labour migration in BTR.

Keywords: Bodoland Territorial Region, Household, Landholding, Outmigration.

Introduction

Internal migration, defined as the change in residence of people within a country, is believed to optimize the efficient labour allocation across different sectors of an economy when people's untapped potential is realized (1). Therefore, it is an integral component and prevalent in Indian economy especially in informal sector (2). Internal migrants, often called migrant workers, shoulder the various activities and support the urban economy in towns and cities (3). For them, the very act of migration, which may be either internal or international, provides an assured livelihood source that they derive at destinations, generates inflow of income in the form of remittances and may help them acquire skills during their stay at destinations (4). The number of internal migrants has been increasing over the years in India. The census of 2011 enumerated a total of 450 million migrants that constituted 37 per cent of the total population in India (1, 2, 5). It increased by 45 per cent from 309 million people enumerated in the census of 2001, just within a gap of one decade (1, 5). These migrants primarily engage in unorganized sectors of the economy. The informal sector of an economy in developing countries, such as India, heavily relies on unorganized labour employment which includes migrant workers (6). Among the states, Maharashtra, Uttar Pradesh, Gujarat, Haryana and the union territory of Delhi are the five destinations which, together, absorb approximately half of the interstate migrants in India. Among the origin states, Bihar, Uttar Pradesh, Rajasthan, Maharashtra and Madhya Pradesh are in the top positions and account for almost half of the interstate migrants in the country (3). The north-eastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram Nagaland and Tripura remain viable destinations for in-migrants despite, none of them are in the top destination slot.

(Received 10th July 2024; Accepted 25th October 2024; Published 30th October 2024)

These north-eastern states of the country, often together called northeast region, remain familiar or known due to conflict and violence attributed to, *inter alia*, the influx of immigrants. In the pre-independence period, the northeast region received a large number of in-migrants during the British colonial administration when they initiated a plantation-based economy in this region. Moreover, in the post-independence period, the influx of immigrants into northeast region from neighboring countries brought massive changes to the demographic, socioeconomic, cultural and political life of the region. However, the in-depth studies on outmigration from northeast region are lacking (7). Mizoram, Arunachal Pradesh, Nagaland and Assam recently experienced massive outmigration to different destinations within the country (8). It is observed that the outmigration stream from northeast region is mainly urban-to-urban migration (7). In contrast, the in-migration stream or interstate inflow into northeast region is dominated by rural-to-rural migration. However, the preliminary evidence from field survey data suggests that outmigration from Bodoland Territorial Region (BTR), which is rapidly increasing, occurs from rural areas or villages and migrants migrate to urban destinations.

BTR (henceforth Bodoland), an outcome of the Bodo peace accord signed in 2003, is an autonomous council in the state of Assam that was created under the provision of the Constitution of India. It has jurisdiction over four districts, viz. Kokrajhar, Chirang, Baksa and Udalguri, often together called the Bodoland Territorial Area District (BTAD), and covers a total geographical area of 8,970 square km that lies on the northern bank of the mighty river Brahmaputra below the foothills of Bhutan. It is designed to provide constitutional protection to fulfill economic, educational and linguistic aspirations, preserve land rights, support the sociocultural and ethnic identity of tribes, and accelerate infrastructure development (9). It is, therefore, empowered to enact laws and execute them with respect to land and revenue within its area by virtue of constitutional provisions (10).

Bodoland has completed 20 years since its formation. Autonomous administrative councils such as Bodoland in India's northeast region are primarily tasked with advancing notified areas/regions by safeguarding land of the tribal people (11). With over 95 per cent of the total population living in rural areas, the economy of Bodoland is primarily agrarian in structure. Since the majority of population directly depends on agriculture as the primary source of livelihood, rural households, therefore, warrant land for cultivation. However, a recent study found that the inequality of landholding among tribal people in Bodoland is very high (12). Another recent study (13) also revealed the existence of horizontal or group-based inequalities among different social groups concerning landholding and occupation in administrative positions in Bodoland. Prima facie evidence from field survey data also suggests that there are high marginal- and small-peasant households that possess a tiny size of farmland making livelihood based on agriculture a challenging one. Since Bodoland is lagging behind industrial development, the peasants are left no option but to migrate outside their villages for smoothing their comsuption expenditures. Overall, this region is one of the most underdeveloped areas in terms of socioeconomic development in India (14). Given this context, this paper examines how attributes of rural households such as socioeconomic, demographic and institutional access shape outmigration decisions of family members in Bodoland. In other words, it evaluates the causal relationship between household characteristics and outmigration choices of the rural household.

The economics literature on migration suggests that migration decision is undertaken by either the prospective individual migrant or the household head at the family level. Neo-classical migration theory emphasizes that labour migration is based on rural-urban wage differentials (15, 16) or individual migrants' perceived or expected net benefits (17, 18). This theory is based on the notion of rationality of individual migrant who maximises the utility or gain associated with migration from origin to destination. Another new approach to studying labour migration is the new economics of labour migration (NELM), which became evident during the 1980s. This approach departs from the neo-classical migration theory, emphasizing that migration is a result of a family decision to maximize income and employment opportunities as well as minimize risks associated with farming, such as crop failures (19, 20). The NELM theory advocates that the motivation for migration is

influenced by the relative deprivation of a household in its village reference group at the place of origin (21). This theory highlights a new outlook on the studies of labour migration that emphasizes the role of relative deprivation of a family or individual with respect to other families or individuals in relevant reference category rather than the absolute income hypothesis of neo-classical migration theory (22, 23). Therefore, migration is essentially a family decision influenced by the attributes of a household, and the family head adopts the strategy of partial migration by sending at least one family member to urban destination while keeping others at home to continue farming (24).

Peasants from landless households and marginal households in rural areas of developing countries migrate to urban areas in order to minimize their income shocks. Outmigration, therefore, is a short-term choice or strategy a household employs to diversify its income portfolios and contain fluactuations in the family income. The NELM theory views migration from the household-oriented perspective as it considers the household as a unit that decides the migration choice in the family. Since prospective migrants are influenced by their household attributes, we assume that the household is the unit of analysis in this paper.

Why does outmigration occur in the countryside? Several factors may motivate or force outmigration to happen. Both pull and push factors such as expected returns from nonfarm activities, land subdivision and falling agricultural produce may influence outmigration in the countryside (25). Therefore, outmigration is influenced by various factors, such as land ownership (26, 27), unstable livelihood sources at origins (28), depletion of common-pool land resources (29), agricultural land abandonment (30) and livelihood diversification (25) in the countrysides of developing countries such as India.

Due to low agricultural yields and enlarging opportunities in nonfarm occupations, agriculture no longer provides a sustainable source of livelihood for the majority of families in the countryside (3). Data from successive rounds of national sample surveys indicate that the number of families without farmland in the countryside has been increasing over the years (31). Recent studies (32, 33) showed that households with smaller farmland possess at least one migrant member in the family. There are evidences that households with smaller farmland leave agriculture because farming on a meagre plot of farmland no longer provides even the subsistence income (34, 35). Such migrants, often called distress-induced temporary migrants, engage in informal nonfarm urban work to minimize their livelihood vulnerability.

However, the motivation behind outmigration may not solely depend on the landholding of a household. In fact, a previous study (36) showed that no relationship between the land held by a family and the propensity of family members to outmigrate is obtained. Therefore, factors other than landholding also affect outmigration decision in the countrysides of developing countries. Apart from landholding, it is also found that the people belonging to lower income group and with low levels of educational attainment are most likely to outmigrate (37). Therefore, the economic characteristics and the level of educational attainment also significantly affect outmigration decisions of a household in rural areas. A recent paper (38), on the other hand, revealed that the family members with a higher level of education, rather than the educational attainment of the family head play a critical role in motivating outmigration within a rural household. Also, the other attributes of a household and the head of the family influence the migration decisions of family members (39).

Methodology

This section outlines the data collection, definition of variables and measurement or method used in this paper.

Data

In this paper, we consider the household as a unit because households are fundamental to the NELM theory (27). We also assume that responses provided by the head of a household reflect the collective decision of that household (40). Therefore, we collected the data taking consent from the family heads, and the information obtained was primarily the responses of the family heads. This paper is based on a field survey data collected from 400 households drawn from the community development blocks (CDBs) in Kokrajhar, Chirang, Baksa and Udalguri districts in Bodoland. We collected the data through a structured questionnaire by employing a two-stage

cluster sampling technique. In first stage, two CDBs from each of the four districts were selected as the sampling area. Therefore, a total of eight CDBs clusters formed the units of sampling at the first stage, often called the first stage units. These eight CDBs were drawn at random basis. While drawing CDBs as cluster, a precaution was taken to avoid the inclusion of CDBs that consist of urban or semi-urban pockets. In second stage, three villages from each cluster totalling twenty-four villages were randomly selected for collecting data at the household level. While selecting households for data collection, the survey targeted the families which own at least one migrant as well as non-migrant families in each sampled villages. At least fifteen households from each sampled villages were interviewed for collecting primary data.

Variables

We classified the independent variables into four main dimensions: the characteristics of the family head, household composition, household economic characteristics and institutional access. The outcome or response variable in this paper is binary $\binom{0}{1}$; that is, a household may or may not possess migrant to the destination. The outcome variable (M_i), therefore, takes a value of 1 if a family possesses at least one migrant or 0 otherwise. The variables within each main dimension are defined in Table 1.

Table 1: Definition of Variables

Main dimension	Variable	Type of variable	Definition
Dependent variable			
	Migrant (M_i)	Dummy	Household possesses at least one migrant: $M_i = 1$, otherwise 0
Independent variables			
Household head characteristics	Age (X_1)	Continuous	Age of family head
	Gender (X_2)	Dummy	Gender of family head: female = 0; male = 1
	Education (X_3)	Categorical	Education of family head: illiterate or primary schooling = 0; upper primary schooling = 1; high schooling = 2; senior secondary = 3; college or above = 4
Household composition characteristics	Child (X_4)	Dummy	Family member of age ≤ 14: no = 0; yes = 1
	Member_1 (X_5)	Dummy	Family member of age ≥ 15 with primary schooling: no = 0; yes = 1
	Member_2 (X_6)	Dummy	Family member of age ≥ 15 with upper primary schooling: no = 0; yes = 1
	Member_3 (X_7)	Dummy	Family member of age ≥ 15 with high schooling: no = 0; yes = 1
	Member_4 (X_8)	Dummy	Family member of age ≥ 15 with senior secondary schooling: no = 0; yes = 1
	Member_5 (X_9)	Dummy	Family member of age ≥ 15 with college/higher degree: no = 0; yes = 1
Household economic characteristics	Landholding(X_{10})	Categorical	Household in terms of land holding (in acre): marginal (0.008–1) = 1; small (1.001–2) = 2; semi-medium (2.001–4) = 3; medium (4.001 & above) = 4
	Agricultural profit (X_{11})	Continuous	Agricultural produce over production cost
	MPCE (X_{12})	Continuous	Monthly per capita consumer expenditure

	Household liability (X_{13})	Dummy	Economic obligations of a household: no = 0; yes = 1
Institutional access	KCC loan (X_{14})	Dummy	Household avails KCC: no = 0; yes = 1
	Job card (X_{15})	Dummy	Household entitles MGNREGA work: no = 0; yes = 1
	PDS (X_{16})	Dummy	Household receives free ration: no = 0; yes = 1

Empirical Strategy and Estimation

Following the NELM model, we assume that the head of a family has a determining role in the process of migration. The decision to send migrant to a destination depends on the number of independent variables *viz.* characteristics of the family head, household composition, household wealth or resources and household access to institutional benefits. Since a household faces the choice of sending a migrant to a destination, the decision of outmigration undertaken by the i^{th} household, which we denote it by M_i, yields two outcomes:

$$M_i = \{1, if\ i^{th}\ household\ sends\ at\ least\ one\ migrant\ \ 0, if\ i^{th}\ household\ does\ not\ send\ any\ migrant$$

We express the probability of outmigration undertaken by i^{th} household, P_i, as a function of the independent variables as shown in equation [1].

$$P_i = E(M_i = 1|X_i) = f(FH_c, HC_c, HE_c, HI_c) \quad ...[1]$$

where FH_c is the family head characteristics, HC_c the household composition characteristics, HE_c the household economic characteristics and HI_c the household access to institutional benefits. In other words, we estimate the probability of i^{th} household opting outmigration choice based on the household covariates which include demographic as well as socio-economic characteristics.

Since the outcome variable is dichotomous or binary, taking a value equal to 1 if a household possesses at least one migrant or 0 otherwise if a household does not possess any migrant, the probability of a household not sending any migrant to a destination is given by:

$$1 - P_i = 1 - E(M_i = 1|X_i) = E(M_i = 0|X_i) \quad ... [2]$$

Using equations [1] and [2], we get,

$$\frac{P_i}{1-P_i} = e^{Z_i} \quad ...[3]$$

where $\frac{P_i}{1-P_i}$ is the odds ratio of migration occurring from i^{th} household and $Z_i = \beta_0 + \sum_{i=1}^{n} \beta_i X_i + \varepsilon$.

We estimated the following logistic regression equation to analyse how the independent variables affect the outcome variable.

$$M_i = In\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots\cdots + \beta_{16} X_{16} \quad ... [4]$$

where β_0 is the constant term, β_1,....., β_{16} are the coefficients of the independent or predictor variables X_1,....., X_{16} respectively. Since P_i represents the probability of at least one migrant being in a family, $(1 - P_i)$ represents the probability of no migrant in a family; therefore, $\left(\frac{P_i}{1-P_i}\right)$ represents the odds ratio. The odds ratio provides the result in favor of the outmigration decision which a household undertakes. Therefore, we used the odds ratio to analyse and interpret how the independent variables affect the outmigration decision of i^{th} household (41). We also reported the coefficients of the independent variables along with standard errors.

Results and Discussion

In Table 2, we present the descriptive statistics of the outcome variable as well as the independent variables. Almost 50 per cent of the families possess at least one migrant. Additionally, the majority of these families are marginalholders (49.75 per cent), followed by smallholders (23 per cent), semi-medium households (20.75 per cent) and medium households (6.50 per cent). Among the family heads, 61 per cent of them are either

illiterate or completed just primary schooling. In summary, the data reveal the socioeconomic characteristics of poor households in the villages of Bodoland.

Table 2: Summary Statistics of Variables

Main dimension	Variable	Mean	Std. Dev.	Min.	Max.
Dependent variable					
	Migrant (M_i) $\left(\frac{0}{1}\right)$	0.49	0.50	0	1
Independent variable					
Family head characteristics	Age (X_1)	51.53	12.05	23	80
	Gender (X_2) $\left(\frac{0}{1}\right)$	0.87	0.33	0	1
	Education (X_3)				
	Illiterate or primary schooling	61%			
	Upper primary schooling	9.75%			
	High schooling	19%			
	Senior secondary	9.25%			
	College or above	1%			
Household composition characteristics	Child (X_4) $\left(\frac{0}{1}\right)$	0.65	0.47	0	1
	Member_1 (X_5) $\left(\frac{0}{1}\right)$	0.80	0.39	0	1
	Member_2 (X_6) $\left(\frac{0}{1}\right)$	0.42	0.49	0	1
	Member_3 (X_7) $\left(\frac{0}{1}\right)$	0.58	0.49	0	1
	Member_4 (X_8) $\left(\frac{0}{1}\right)$	0.30	0.45	0	1
	Member_5 (X_9) $\left(\frac{0}{1}\right)$	0.24	0.42	0	1
Household economic characteristics	Landholding (X_{10})				
	Marginal	49.75%			
	Small	23%			
	Semi-medium	20.75%			
	Medium	6.50%			
	Agricultural profit (X_{11})	17549.88	24052.49	0	200600
	MPCE (X_{12})	5512.31	1410.61	2504	13733
	Household liability (X_{13}) $\left(\frac{0}{1}\right)$	0.10	0.30	0	1
Institutional access	KCC loan (X_{14}) $\left(\frac{0}{1}\right)$	0.05	0.22	0	1
	Job card (X_{15}) $\left(\frac{0}{1}\right)$	0.81	0.38	0	1
	PDS (X_{16}) $\left(\frac{0}{1}\right)$	0.80	0.39	0	1

In Table 3, we present the result of logistic regression model. Among the characteristics of the family head, age (X_1) is statistically significant. This means that the age of the household head positively affects the outmigration decision within a family. This result confirms the previous findings (39, 42). The educational attainment levels of the family heads do not significantly affect the outmigration decision. However, the family members having higher educational levels positively affect the outmigration within a family. This result confirms (38) as well as contradicts (43) the previous findings. The size of landholding owned by a household affects the outmigration decision of that household. The negative association between landholding and outmigration

shows that greater the landholding or farm size a household owns, smaller the probability of outmigration and vice-versa. This result supports the earlier studies (33, 37, 41). There is a negative significant relationship between the profits accrued from agriculture and outmigration. For a rural household, if agriculture proceeds are higher than the cost of production and are sufficient to cover a household's expenditures, the family head may put the family members into farming rather than sending them to destinations. Also, we found a positive association between household liability and outmigration. Rising household liabilities or economic obligations may trigger outmigration of family members. This result confirms the previous findings (43). Additionally, monthly per capita consumer expenditure (MPCE) remains statistically significant which means higher the MPCE, the family members are more likely to out-migrate.

However, none of the characteristics of institutional access or government assistance provided to a household are significant. Earlier studies (33, 41) concluded that provisioning the government assistance to a household decreases the likelihood of outmigration and also found that a higher proportion of households having access to *kisan credit card* (KCC)–a loan meant for farmers, and irrigated farmland may lower the incidence of outmigration in rural areas. Additionally, the previous studies (32, 40) found that the household possessing job card which entitiles the mandated 100 days work annually under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) affects the outmigration decision in rural areas.

We additionally conducted probit estimation to check the robustness of the estimates to violation of distributional assumptions, the result of which is presented in Table 4. We found the results consistent.

Table 3: Result of Logistic Regression

Main Dimension	Variable	Ref. Category	Coefficient	Odds Ratio
Family head characteristics	Age (X_1)		0.027**	1.027**
			(0.012)	(0.012)
	Gender (X_2)	Female		1
	Male		−0.542	0.581
			(0.401)	(0.233)
	Education (X_3)	Illiterate or primary schooling		1
	Upper primary schooling		−0.145	0.864
			(0.414)	(0.358)
	High schooling		−0.402	0.668
			(0.344)	(0.230)
	Senior secondary		0.146	1.157
			(0.476)	(0.551)
	College or above		−0.007	0.992
			(1.314)	(1.304)
Household composition characteristics	Child (X_4)	No		1
	Yes		−1.281***	0.277***
			(0.332)	(0.092)
	Member_1 (X_5)	No		1
	Yes		0.506	1.660
			(0.374)	(0.622)
	Member_2 (X_6)	No		1
	Yes		1.012***	2.753***
			(0.278)	(0.765)
	Member_3 (X_7)	No		1
	Yes		0.555**	1.743**
			(0.262)	(0.458)
	Member_4 (X_8)	No		1
	Yes		1.168***	3.218***

			(0.293)	(0.945)
	Member_5 (X_9)	No		1
	Yes		0.870***	2.388***
			(0.313)	(0.749)
Household economic characteristics	Landholding (X_{10})	Marginal household		1
	Small household		−0.586*	0.556*
			(0.315)	(0.175)
	Semi-medium household		−0.719**	0.486**
			(0.348)	(0.169)
	Medium household		−0.576	0.562
			(0.598)	(0.336)
	Agricultural profit (X_{11})		−0.00002***	0.999***
			($6.91e^{-06}$)	($6.91e^{-06}$)
	MPCE (X_{12})		0.0002*	1.000*
			(0.0001)	(0.0001)
	Household liability (X_{13})	No		1
	Yes		0.779*	2.180*
			(0.446)	(0.973)
Institutional access	KCC loan (X_{14})	No		1
	Yes		−0.655	0.519
			(0.613)	(0.318)
	Job card (X_{15})	No		1
	Yes		−0.059	0.942
			(0.327)	(0.309)
	PDS (X_{16})	No		1
	Yes		0.340	1.405
			(0.328)	(0.461)
	Constant		−2.527***	0.079***
			(0.857)	(0.068)
	No. of observation		400	400
	LR $\chi^2(21)$		118.75	118.75
	Probability $>\chi^2$		0.000	0.000
	Pseudo R^2		0.214	0.214
	Log likelihood		−217.836	−217.836

Note: Significance level ***p<0.01, **p<0.05, *p<0.10. Figures in the parentheses represent the standard errors. Ref. stands for reference

Table 4: Result of Probit Estimation

Main dimension	Variable	Coefficient	z
Family head characteristics	Age (X_1)	0.016** (0.007)	2.34
	Gender (X_2) (female = ref.)	−0.321 (0.235)	−1.37
	Education (X_3) (illiterate or primary schooling = ref.)		
	Upper primary schooling	−0.108 (0.247)	−0.44
	High schooling	−0.229 (0.203)	−1.13
	Senior secondary	0.077 (0.277)	0.28
	College or above	−0.059 (0.820)	−0.07
Household composition characteristics	Child (X_4)	−0.771*** (0.197)	−3.91
	Member_1 (X_5)	0.300 (0.222)	1.35
	Member_2 (X_6)	0.603*** (0.162)	3.72

	Member_3 (X_7)	0.322** (0.155)	2.08
	Member_4 (X_8)	0.690*** (0.173)	3.99
	Member_5 (X_9)	0.513*** (0.185)	2.77
Household economic characteristics	Landholding (X_{10}) (marginal household = ref.)		
	Small household	−0.367* (0.188)	−1.95
	Semi-medium household	−0.463** (0.205)	−2.26
	Medium household	−0.361 (0.355)	−1.02
	Agricultural profit (X_{11})	−0.00001*** ($3.64e^{-06}$)	−3.54
	MPCE (X_{12})	0.0001** (0.00006)	2.04
	Household liability (X_{13})	0.453* (0.257)	1.76
Institutional access	KCC loan (X_{14})	−0.367 (0.353)	−1.04
	Job card (X_{15})	−0.027 (0.195)	−0.14
	PDS (X_{16})	0.184 (0.193)	0.95
	Constant	−1.531*** (0.503)	−3.04

Number of observations=400; LRχ^2 (21)=118.95; Probability>χ^2=0.000; PseudoR^2=0.214; Log-likelihood= -217.741

*Note: Significance level ***p<0.01, **p<0.05, *p<0.10. Figures in the parentheses represent the standard errors. Ref. stands for reference category*

Conclusion

There are limited evidence-based studies in Bodoland except for a few recent studies (12-14). However, the studies of temporary labour outmigration from the household perspective based in Bodoland are rarely found in the literature.

In this paper, we examined how the attributes of a household motivate its outmigration decision in rural villages of Bodoland. Among the characteristics of the family head, only age (X_1) is significant. The gender (X_2) and the levels of education (X_3) attained by the family head are insignificant. Household members having lower level of educational attainment (X_5) is also insignificant. Additionally, none of the variables from institutional access are statistically significant. Statistical insignificance of such variables may be attributed to data constraint. Further research based on larger data set may be conducted to check how these variables motivate outmigration decision of a household in Bodoland.

The findings in this paper show that most of the households are either marginalholders or smallholders and the members of such households have a higher propensity of outmigration to urban areas. From the evidence of owning tiny plot of farmland and outmigration from the villages in Bodoland, it may be claimed that families are adopting the strategy of outmigration to address the livelihood vulnerability. It may also support the conclusion that this region is experiencing agrarian distress–a typical hardship faced by the peasant households in the countryside. Increasing inequality in landholding and land alienation are the main reasons behind the emergence of class differentiation and undergoing proletarianization–a manifestation hitherto absent in Bodoland (12).

Drawing on this context, interventions from the stakeholders in respect of strengthening agriculture infrastructures as well as optimization of technology use in agriculture (41), and diversification of crop portfolios which enhances the efficiency of farmers (44) may improve the livelihood sources in the countryside. Outmigration is not a panacea for the problems faced by rural households. In fact, it reduces the probability of local microenterprise establishment at the place of origins (45). If the crisis in agriculture-social relations faced by the rural households are left unhindered, it may aggravate further in long-run. Leaving land and agriculture behind may lead a peasant household deviating from the land itself which is currently undergoing among the tribals in Bodoland. To avoid the drift from land and agriculture, incentivizing the farming with technology penetration and diversification of crop portfolios–untouched

aspects for the majority of tribal peasants, may boost the farming and their family incomes. The way Bodoland–which has powers to enact laws and their executions, prepare budgets and mobilize its own revenues, addresses the simmering agrarian distress within its jurisdiction merits for further research.

Abbreviations

BTAD: Bodoland Territorial Area District, BTR: Bodoland Territorial Region, CDB: Community Development Block, KCC: Kisan Credit Card, MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act, MPCE: Monthly Per Capita Consumer Expenditure, NELM: New Economics of Labour Migration, PDS: Public Distribution System.

Acknowledgement

We thank all the village headmen who allowed us to visit their villages and the heads of families who answered our questionnaires.

Author Contributions

Conceptualization, methodology, data collection, analysis or interpretation and the original drafting of the paper were performed by Sanjit Muchahary. Critical revision of manuscript including modifications in methodology and interpretations were provided by N. B. Singh. Both authors did the revisions and approved the final version of the paper.

Conflict of Interest

The authors declare that they have no conflict of interest.

Ethics Approval

Not applicable.

Funding

This study received no funding from any institutions or organisations.

References

1. De S. Internal migration in India grows, but inter-state movements remain low. World Bank Blogs. 2019. https://blogs.worldbank.org/peoplemove/internal-migration-india-grows-inter-state-movements-remain-low.
2. Rajan SI, Bhagat RB. Internal migration in India: Integrating migration with development and urbanization policies. KNOMAD Policy Brief. 2021.https://www.knomad.org/publication/internal-migration-india-integrating- migrationdevelopment-and-urbanization-policies.
3. Kumar A, Kumar M. Marginalised migrants and Bihar as an area of origin. Economic & Political Weekly. 2020;55(24):21–24.
4. Khan A, Arokkiaraj H. Challenges of reverse migration in India: A comparative study of internal and international migrant workers in the post-COVID economy. Comparative Migration Studies. 2021;9(1):1–19.
5. Nupur S, Dutta M. Perceived economic well-being among rural Indian households: Investigating the role of remittances. Economic & Political Weekly. 2023;58(9):33–39.
6. Report on Employment in Informal Sector and Conditions of Informal Employment: 2013-14. New Delhi: Government of India, Ministry of Labour & Employment. 2015;4:1-60. https://labour.gov.in/sites/default/files/report_vol_4_final.pdf
7. Lusome R, Bhagat RB. Migration in northeast India: Inflows, outflows and reverse flows during pandemic. The Indian Journal of Labour Economics. 2020;63(4):1125–1141.
8. Debnath M, Ray S, Islam N, Roy R. Determine the regions of outmigration in North-East India: A cross-sectional analysis. Spatial Information Research. 2021;29(5):685–698.
9. Bodoland Territorial Council Accord. Memorandum of Settlement. 2003. https://mdoner.gov.in/contentimages/files/BTC_Accord.pdf.
10. Banerjee N. Tribal land alienation and ethnic conflicts: Efficacy of laws and policies in BTAD area. Refugee Watch. 2011;37(1):44–54.
11. Soereide KN. Mismanagement of land in Meghalaya: Root of communal tensions. Economic & Political Weekly. 2018;53(29):15–16.
12. Daimari M, Bedamatta R. The state of Bodo peasantry in modern-day Assam: Evidence from Majrabari village in the Bodoland Territorial Area Districts. The Indian Journal of Labour Economics. 2021;64(3):705–730.
13. Boro R, Bedamatta R. Can horizontal inequalities explain ethnic conflicts? A case study of Bodoland Territorial Area Districts of Assam. In: De UK, Pal M, Bharati P, editors. Inequality, Poverty and Development in India: Focus on the North Eastern Region. Singapore: Springer Nature. 2017:97–125.
14. Basumatary N, Panda B. Assessing socio-economic development in Bodoland Territorial Area District of Assam in India. International Journal of Social Economics. 2020;47(12):1541–1559.
15. Lewis WA. Economic development with unlimited supplies of labour. The Manchester School. 1954;22(2):139–191.
16. Ranis G, Fei JCH. A theory of economic development. The American Economic Review. 1961;51(4):533–565.
17. Todaro MP. A model of labour migration and urban unemployment in less developed countries. The American Economic Review. 1969;59(1):138–148.
18. Harris JR, Todaro MP. Migration, unemployment and development: A two-sector analysis. American Economic Review. 1970;60(1):126–142.

19. Stark O, Bloom DE. The new economics of labour migration. The American Economic Review. 1985;75(2):173–178.
20. Taylor EJ. The new economics of labour migration and the role of remittances in the migration process. International Migration. 1999;37(1):63–88.
21. Stark O, Taylor JE. Relative deprivation and international migration. Demography. 1989;26(1):1–14.
22. Stark O. Rural-to-urban migration in LDCs: A relative deprivation approach. Economic Development and Cultural Change. 1984;32(3):475–486.
23. Stark O, Yitzhaki S. Labour migration as a response to relative deprivation. Journal of Population Economics. 1988;1(1):57–70.
24. Bhattacharyya B. The role of family decision in internal migration: The case of India. Journal of Development Economics. 1985; 18(1): 51–66.
25. Ellis F. Household strategies and rural livelihood diversification. The Journal of Development Studies. 1998;35(1):1–38.
26. Connell J, Dasgupta B, Laishley R, Lipton M. Migration from Rural Areas: The Evidence from Village Studies. New Delhi: Oxford University Press. 1976.
27. 27. VanWey LK. Land ownership as a determinant of temporary migration in Nang Rong, Thailand. European Journal of Population. 2003;19(2):121–145.
28. Mitra A, Singh GP, Shrivastav PK. How unstable are the sources of livelihood? Analysis based on periodic labour force survey 2017-18 data. Economic & Political Weekly. 2021;56(31):36–45.
29. Shah A. Land degradation and migration in a dry land region in India: Extent, nature and determinants. Environment and Development Economics. 2010;15(2):173–196.
30. Khanal U, Alam K, Khanal RC, Regmi PP. Implications of out-migration in rural agriculture: A case study of Manapang village, Tanahun, Nepal. The Journal of Developing Areas. 2015;49(1):331–352.
31. Rawal V. Changes in the distribution of operational landholdings in rural India: A study of national sample survey data. Review of Agrarian Studies. 2013;3(2):73–104.
32. Dodd W, Humphries S, Patel K, Majowicz S, Dewey C. Determinants of temporary labour migration in southern India. Asian Population Studies. 2016;12(3):294–311.
33. Chandrasekhar S, Sahoo S. Land-holding, participation in agriculture and short-term migration in rural India. Asian Population Studies. 2019;15(2):209–227.
34. Singh K, Singh S, Kingra HS. Agrarian crisis and depeasantization in Punjab: Status of small/marginal farmers who left agriculture. Indian Journal of Agricultural Economics. 2009;64(4):585–603.
35. Singh G. Depeasantization in Punjab: Process and Determinants. Germany: LAP Lambert Academic Publishing. 2012.
36. Lightfoot P, Fuller T, Kamnuansilpa P. Circulation and interpersonal networks linking rural and urban areas: The case of Roi-et, Northeastern Thailand. 1983. Working Paper No. 83. Honolulu: East-West Population Institute, East-West Centre.
37. Keshri K, Bhagat RB. Temporary and seasonal migration: Regional pattern, characteristics and associated factors. Economic & Political Weekly. 2012;47(4):81–88.
38. Tang S. Determinants of migration and household member arrangement among poor rural households in China: The case of North Jiangsu. Population, Space and Place. 2020;26(1):1–12.
39. Monteiro S. Extended family migration decisions: Evidence from Nepal. SN Social Sciences. 2022;2(238):1–22.
40. Ghosh M, Ghosal S. Households' choices and their drivers to rural non-farm livelihood diversification in West Bengal, India. Journal of Asian and African Studies. 2022;57(6):1158–1178.
41. Pradhan KC, Narayanan K. Does climatic risk induce labour migration? Evidence from Semi- Arid Tropics region of India. Journal of Public Affairs. 2022;22(1):1–15.
42. Akhter S, Bauer, S. Household level determinants of rural-urban migration in Bangladesh. International Journal of Social, Human Science and Engineering. 2014;8(1):24–27.
43. Chintamani BG, Kulkarni L. Determinants and effects of international remittances: Evidence from Ratnagiri district of rural Maharashtra. The Indian Journal of Labour Economics. 2023;66(2):617–637.
44. Mandal R, Maity S. Does a diversified crop portfolio make farmers more efficient? A stochastic production frontier analysis of farm-level data from Assam, India. International Journal of Rural Management. 2022;18(1):103–122.
45. Kodwiw WYA, Mensah JV. Effect of the migration option on rural microenterprise establishment decisions in the Mfantsiman Municipality of Ghana. International Journal of Rural Management. 2021;17(1):7–26.