

Labour Insecurity among Tea Plantation Workers in North Bengal: A Multidimensional Assessment

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Abstract: *The tea plantation sector of North Bengal has long been characterised by persistent labour vulnerabilities despite its economic significance. Drawing on the ILO's labour security framework, this study examines the nature and regional variation in labour security among tea plantation workers in the Dooars and Darjeeling regions of North Bengal. The analysis is based on primary data collected from worker households and assesses labour security across seven dimensions: economic, income, employment, workplace, health, social, and representation security. Dimension-specific security scores were constructed using normalised indicators and analysed using descriptive statistics and independent sample t-tests. The findings reveal a highly uneven labour security profile among tea worker households in North Bengal. While economic, income, and Employment Security recorded relatively higher scores, workplace, health, and social security emerged as the most vulnerable dimensions. Significant regional differences were observed in employment, workplace, health, and representation security, whereas economic, income, and social security showed no statistically significant variation. Importantly, relatively favourable outcomes in certain dimensions coexisted with persistent livelihood vulnerabilities. This study argues that estate-based welfare provisions and employment continuity often mask deeper insecurities associated with low wages, poor working conditions, and limited livelihood opportunities. These findings underscore the need for a multidimensional approach to labour welfare and livelihood security in plantation economies.*

Keywords: Labour Security, Tea Plantation Workers, North Bengal, Dooars, Darjeeling, and Labour Vulnerability

INTRODUCTION

The Indian tea industry occupies a distinctive position in India's agrarian economy, serving as an important source of employment and livelihood for millions of workers and their families. Among the major tea-producing regions of the country, North Bengal is one of India's most important tea-producing regions, with the Dooars and Darjeeling belts accounting for a substantial share of tea cultivation and employment. Historically, tea plantations have served as the primary source of livelihood for generations of workers and their families. Despite their contribution to the regional economy, plantation workers continue to face a range of socioeconomic challenges, including low wages, inadequate healthcare, poor working conditions, and limited livelihood opportunities. The persistence of these challenges has raised concerns regarding the nature and extent of labour security within plantation communities in the region.

Existing studies on tea plantations have largely focused on specific issues such as wages, gender disparities, health, migration, and livelihood distress. While these studies have generated valuable insights into the conditions of plantation workers, relatively little attention has been paid to labour security as a multidimensional concept encompassing economic, employment, workplace, health, social, and representation-related dimensions. Furthermore, limited empirical evidence exists on how these dimensions vary across the Dooars and Darjeeling tea belts, which differ in their historical development, geographical characteristics, and labour arrangements.

Against this backdrop, the present study adopts the International Labour Organization's People's Security Survey (PSSs) Framework of multidimensional labour security to examine the conditions of tea plantation workers in North Bengal. This study contributes to the existing literature by moving beyond single-dimensional assessments of workers welfare and demonstrating how relatively favourable outcomes in certain dimensions may coexist with deeper forms of labour vulnerability within the plantation system.

Accordingly, this study seeks to:

- i. Assess the level and pattern of labour security among tea plantation workers in North Bengal
- ii. Identify the major dimensions of labour insecurity experienced by plantation workers
- iii. Examine regional variations in labour security between Dooars and Darjeeling tea plantation regions

REVIEW OF LITERATURE

The notion of labour security has gained increasing importance in understanding workers' well-being in an era marked by economic restructuring, labour market flexibilisation, and declining social protection. Studies such as Anker (2002) and Standing (2002) conceptualise labour security as a multidimensional phenomenon encompassing income security, labour market, work insecurity, job security, health security, skill reproduction security, and representation security. Similarly, the ILO's Decent Work framework emphasises productive employment, rights at work, social protection, and social dialogue as essential components of workers' well-being (ILO, 1999). Standing (1999) argues that labour insecurity erodes institutional safeguards, exposing workers to economic and social vulnerability, suggesting that employment alone does not necessarily guarantee secure and dignified livelihoods.

The relevance of this perspective is particularly evident in plantation economies, where workers remain attached to long-term employment arrangements while continuing to experience various forms of insecurity. Historical studies show that the tea plantation system in India evolved through labour regimes characterised by dependence, restricted mobility, and paternalistic welfare structures that tied workers and their families to plantation employment (Guha 1977; Mishra et al. 2011). Breman (1996) further argues that workers' choices are often constrained by limited livelihood opportunities and economic dependence, making labour security a valuable lens for understanding plantation labour relations in India.

Despite legislative interventions such as the Plantation Labour Act of 1951, significant deficits persist in the living and working conditions of tea workers. Studies have documented inadequacies in wages, housing, healthcare, and working conditions, demonstrating that employment security does not necessarily translate into improved well-being (Besky, 2014). Research on plantation labour further highlights the contradiction between stable employment and insecure livelihoods, where workers remain attached to tea estates despite limited opportunities for occupational mobility and economic advancement (Standing, 1999; Besky, 2014). Women workers, who constitute the backbone of plantation labour, remain concentrated in low-paid and labour-intensive tasks while facing multiple forms of economic and social disadvantages (Gurung & Mukherjee, 2018). The literature points to a paradox within plantation economies, where workers may enjoy employment continuity and access to certain welfare provisions while continuing to experience significant livelihood insecurity.

Studies on plantation communities in North Bengal have documented problems relating to low wages, insecure livelihoods, distress migration, poor access to welfare services, and deteriorating working conditions (Bhowmik 2015; Sarkar 2019; Barman 2025; Kakati 2026; Kirti & Kishlay 2025). These vulnerabilities have been aggravated by periodic tea garden closures associated with market instability and declining tea prices, exposing workers to employment uncertainty, income loss, and weakened social protection (Golay & Handan, 2024).

While tea plantations have been widely studied, research has largely focused on wages, gender, health, and migration. Comparatively, little attention has been paid to labour security as a multidimensional concept encompassing economic, income, employment, workplace, health, social, and representation-related dimensions. Moreover, limited empirical evidence exists on how these dimensions vary across the Dooars and Darjeeling plantations. Addressing this gap, the present study adopts a multidimensional labour security framework to examine the nature and regional variation of labour security among tea plantation workers in North Bengal.

METHODOLOGY

Data Source and Methodology

This study is based on a primary household survey conducted among selected tea estates in North Bengal. A multistage sampling approach was used. In the first stage, six tea gardens from the Dooars and Darjeeling tea belts were purposively selected to capture regional diversity. In the second stage, three tea gardens each from the Darjeeling and Dooars tea belts were identified based on the operational status of the tea garden to capture variations in labour conditions and socio-economic characteristics across plantation units. In the final stage, households were selected from the identified tea gardens using systematic and random sampling. A total of 360 households were surveyed, with equal representation from the Dooars and Darjeeling regions. Information was collected from household heads through a structured survey schedule covering socio-economic characteristics, employment conditions, labour insecurities, migration behaviour, and access to social protection.

Measurement of Labour Security

The measurement of labour security in this study draws upon Standing's (2002) seven work-based securities and the ILO's People Security Survey (Anker, 2002). The survey informed the selection of work-related dimensions of security relevant to workers. While Standing (2002) identifies the Labour Market, Employment, Job, Work, Skill Reproduction, Income and Representation security as key dimensions of labour security. These dimensions were adapted to reflect the realities of the tea plantation labour context.

Accordingly, as shown in Table 1, labour security was assessed through seven dimensions: economic, employment, income, workplace, social, health, and representation security. Each dimension was measured using indicators selected from the existing literature and adapted to the plantation context. Individual indicators were normalised using the min-max method to ensure comparability across different measurement units. Inverse normalisation was applied to negative indicators so that higher values consistently represented higher levels of security. Dimension-specific scores were computed by averaging the normalised indicators to construct dimension-specific security scores ranging from 0 to 1, where higher values indicate greater levels of security. Mean scores were calculated to assess the relative positions of each security dimension.

Table1: Classification of Labour Security dimensions

1)Economic Security	a. Dependency Ratio
2)Employment Security	a. Permanent
	b. Temporary
3)Income Security	a. Timely payment of wages
	b. Timely and full payment of bonus
4)Workplace Security	a. Leave facility
	b. Access to welfare amenities
	c. PF deduction
	d. Opportunities for Promotion
	e. Covered under any Insurance
5) Social Security	a. Retirement or Pension benefit
	b. Maternity Benefit
	c. Crèche facility
	d. Child Education support from the estate
6) Health Security	a. Provision of treatment for work related injuries and illness
	b. Provision of Ambulance Facility
	c. Access to Separate Toilet
	d. Incidence of work related pain & fatigue
7) Representation Security	a. Member of any Union
	b. Participation in Protest, strikes

Source: Compiled by the author based on the ILO decent work framework, Kantor et al. (2006), Saha et al. (2019) and field survey data

Data Analysis

Descriptive statistics were employed to examine the pattern and level of labour security among tea plantation workers. Mean security scores and ranking methods were used to identify the most and least secure dimensions of the data.

Independent samples t-tests were performed to assess regional variations between the Dooars and Darjeeling regions. The findings were interpreted within the broader framework of labour vulnerability and livelihood security in plantation economies.

RESULTS

Socio-demographic profile of the respondents

Table 2 shows that the surveyed tea garden households of the Dooars and Darjeeling regions were characterised by low education levels and moderate household sizes of three to six members with limited earning opportunities. Although tea plantation work remained the primary source of livelihood, a proportion of households reported supplementary income from non-plantation activities such as clerical posts in government jobs, low-level private jobs such as taxi drivers, private tutors, NGO workers, migration, petty businesses such as hawkers, street vendors, food stalls, handicrafts, agriculture, or daily wage work. Moreover, the per capita income reflects that the majority of households in Dooars tea gardens earned between Rs.1500 and Rs. 2999, whereas households of Darjeeling tea gardens earned between Rs. 3000 and Rs.4999, reflecting continued dependency on plantation work and limited economic capacity among plantation households.

Table 2: Socio-Economic characteristics of Tea Plantation Households

Variable	Category	Dooars	Darjeeling
Family Size	Large	3(1.7)	5(2.8)
	Medium	127(70.6)	102(56.7)
	Small	50(27.8)	73(40.6)
Earning Members	Average earning members	1.9	2.3
Education	Illiterate	146(21)	107(15)
	Primary	145(21)	68(9)
	Middle	127(18)	110(15)
	Secondary	148(21)	156(22)
	High secondary	83(12)	147(20)
	Diploma	35(5)	100(14)
	Graduate	14(2)	18(2)
	Post graduate	7(1)	15(2)
Sources of livelihood	Plantation Work	228(67)	269(66)
	Migration	70(21)	45(11)
	Small Pvt. Job	10(3)	26(6)
	Govt. Job	0(0)	19(5)
	Petty Business	8(2)	19(5)
	Agriculture	0(0)	3(1)
	Daily wage work	7(2)	16(4)
	Others	17(5)	11(3)
Monthly per capita income	Below 500	15(8)	1(1)
	1500-2999	87(48)	36(20)
	3000-4499	63(35)	71(39)
	4500-5999	12(7)	33(18)
	6000 and above	3(2)	39(22)

Source: Field Survey Data

Note: Figures in the parentheses refer to percentage

Mapping Labour Security among Tea Plantation Workers

Tea plantation workers are exposed to a range of insecurities that can be classified into several dimensions. Table 3 below presents the mean scores of the labour security dimensions among tea plantation workers in North Bengal. The results reveal considerable variation across dimensions, suggesting that workers experience labour security unevenly across different aspects of their working and living conditions.

Income Security (0.75) ranked highest, as regular employment in tea estates provides a degree of income stability despite low wages. However, field studies report wage inconsistencies and uncertainty in bonus payments, especially in sick and closed tea gardens which have severely affected workers ability to cope with the burden of consumption expenditure, household needs, and unforeseen financial expenditure. Therefore, despite the relatively favourable overall performance of Income Security, inconsistencies in wage and bonus disbursement continue to undermine workers' economic well-being, revealing an important area of vulnerability. Among the dimensions examined, Economic Security (0.69) also recorded one of the highest mean scores, indicating the relatively favourable economic position of the surveyed households. The result is based on the inverse dependency ratio, which captures the number of earning members relative to dependents within the households; a higher score suggests a lower

dependency burden and a greater capacity to support household consumption needs. However, the result warrants cautious interpretation, as in the context of tea plantation communities, a higher inverse dependency ratio does not necessarily imply improved economic well-being. Rather, it reflects the participation of multiple household members in income-generating activities, mostly informal and lower paid in nature, in response to the inadequacy of tea wages and the dire need to supplement household earnings. Consequently, the relatively higher level of economic security observed in the study may partly reflect a strategy of livelihood adjustment rather than the presence of secure and remunerative employment. Furthermore, Employment Security (0.66) recorded a relatively better position among the labour security dimensions. This finding may be attributed to the predominance of permanent employment among the surveyed workers, many of whom have remained attached to tea plantation work for a prolonged period. Despite garden work, workers continue to face concerns relating to low wages, limited opportunities for occupational mobility, and challenging workplace conditions. Thus, employment security in the plantation context reflects the stability of employment rather than its quality. This finding suggests that workers remain securely employed within a labour regime that continues to be characterised by economic constraints and workplace vulnerabilities. The moderate score of Representation Security (0.62) indicates the presence of a workers representation mechanism, although its effectiveness in addressing workers' concerns appears constrained.

In contrast to the favourable scores mentioned above, Workplace Security (0.30) emerged as the lowest-ranked dimension of labour security among the tea plantation workers. The findings point to irregularities in the leave facilities and Provident Fund deductions, the absence of insurance coverage, and a lack of basic workplace amenities such as safety kits, toilet facilities, and canteens, reflecting persistent concerns regarding the quality of working conditions within plantation estates. The low Social Security scores (0.48), especially due to the lack of maternity care, crèche facilities, and childcare support, especially in sick or closed tea gardens, clearly demonstrate that while households may have a relatively better earning-member ratio, workers continue to face significant vulnerabilities within their immediate work environment, especially women who have to bear the extra burden of domestic work along with garden work. Moreover, Health Security (0.33) also ranked relatively low, indicating continuing deficiencies in healthcare access, such as hospitals, staff, medication, and health-related protection. Given the physically demanding nature of plantation work, these shortcomings can adversely affect both workers' health and livelihood security, as inadequate medical support compels them to incur additional health care expenses.

Overall, the findings indicate that labour security among tea plantation workers reflects a complex interplay of relative strengths and persistent vulnerabilities. Relatively better employment and economic security, along with severe deficits in workplace, health, and social security-related dimensions, underscores the continuing challenges plantation workers face in achieving secure and dignified livelihoods.

Table 3: Mean Scores of Labour Security among Tea Plantation Workers

Security Dimensions	Mean Score
Work place Security	0.301833
Health Security	0.339333
Social Security	0.481167
Representative Security	0.624167
Employment Security	0.665333
Economic Security	0.686
Income Security	0.75

Source: compiled by author from the field Survey

Regional Variations in Labour Insecurity

To understand the deprivation of the tea garden livelihood, it is important to analyse the insecurities of workers across the regions of Dooars and Darjeeling, as shown in Table 4.

Table 4: Classification of Labour Security among Tea Plantation Workers

Labour Security Dimension	Dooars	Darjeeling	t-value	p value
Workplace Security	0.253333	0.350333	0.064	<0.001***
Health Security	0.373333	0.305333	4.309	<0.001***
Social Security	0.462333	0.5	-1.7	0.09*
Representation Security	0.575	0.673333	-3.774	<0.001***
Employment Security	0.691667	0.639	-2.052	0.041**
Economic Security	0.678	0.694	-0.637	0.525
Income Security	0.75	0.75	0	1

Source: compiled by author from the field Survey

The results reveal that while certain dimensions of plantation workers' labour security are broadly similar across the two belts, others exhibit statistically significant differences, indicating the influence of region-specific labour conditions and institutional arrangements.

No significant regional differences were observed in economic and income security. The similarity of scores across these dimensions suggests that plantation households in both regions experience comparable levels of household economic capacity, income-related security, and social protection. Therefore, these dimensions appear to be shaped by the structural features of the plantation economy that operate across regional boundaries. In contrast, significant regional differences were observed in employment, health, workplace, and representation security.

Workers in the Darjeeling region reported lower levels of Employment Security than their counterparts in the Dooars region. The difference was statistically significant ($p < 0.05$), indicating that a higher score in Dooars may reflect the presence of a larger number of earning members relative to dependents within the households. Rather than indicating greater prosperity, this pattern indicates that multiple household members engage in income-generating activities in response to economic pressure and livelihood

constraints. In this sense, the relatively higher level of Economic Security observed in Dooars may be sustained through greater labour force participation rather than improved earnings.

A statistically significant regional difference was observed in Representation Security, with better representation of workers issues by the union in Darjeeling compared to Dooars ($p < 0.01$). This suggests that opportunities for workers participation, collective voice, and grievance redress are not uniform across the plantation sector. Similarly, Social security scores were marginally better in the Darjeeling region than in Dooars, and this difference was statistically significant ($p < 0.10$), indicating limited maternity and childcare support in both regions. The Health Security score was higher in the Darjeeling region than in Dooars and was statistically significant ($p < 0.01$). This outcome reflects the expansion of healthcare centres; however, they remain inadequately equipped with medical facilities, medicines, and healthcare personnel. Similarly, a statistically significant difference was observed in the Workplace Security scores, with a higher workplace security score in Darjeeling than in Dooars ($p < 0.01$). This finding highlights the importance of local institutions and managerial contexts in shaping plantation labourers' quality of work experience.

Taken together, these results demonstrate that labour insecurity in North Bengal's tea plantations operates at multiple levels. While Economic, Income and Social Security concerns appear to be common across both regions, significant differences in employment, health, workplace, and representation-related dimensions point towards the influence of region-specific regimes.

Therefore, the findings underscore the need to view plantation labour not as a homogenous system but as one characterised by varying experiences of security and vulnerability across different regional contexts. However, the inadequacy of welfare measures remains prominent in North Bengal's tea gardens.

CONCLUSION

This study examined the labour security of tea plantation workers in North Bengal using a multidimensional framework. The findings reveal considerable variation across dimensions, with Economic, Income and Employment security recording relatively better scores, while Workplace, Health and Social security emerged as the most vulnerable areas. Significant regional differences were observed in Employment, Health, Workplace and Representation security, highlighting variations in labour conditions across tea plantation regions.

However, higher scores in certain security dimensions should not be interpreted as evidence of a secure livelihood. In the plantation context, welfare provisions and long-standing employment arrangements may provide a degree of protection while masking deeper vulnerabilities associated with low wages, poor working conditions, and limited alternative opportunities. Thus, labour insecurity continues to be a persistent feature of plantation life across North Bengal.

Addressing these challenges requires a broader approach to labour welfare. Policy efforts should focus on strengthening workplace safety, improving healthcare

facilities, and expanding livelihood opportunities beyond plantation employment to enhance workers overall well-being and security.

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