Labour Migration and Wage Dynamics in Plantation Sector: Evidence from Kerala

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***Abstract*—Labour migration has become a significant feature of Kerala's plantation economy, driven by structural changes in labour supply and wage dynamics. This study examines the relationship between migrant labour inflows and wage patterns in the plantation sector using secondary data from sources such as the Kerala Economic Review and Labour Bureau reports. The findings reveal that higher wage rates in Kerala compared to other plantation-producing states have acted as a major pull factor for inter-state migrant workers. At the same time, declining participation of native labour due to better opportunities in non-agricultural sectors has increased reliance on migrant workers. The study also identifies emerging wage disparities and labour market segmentation within the sector. While migration has helped address labour shortages, rising labour costs pose challenges to plantation profitability. The paper highlights the need for policy measures to ensure equitable wages and improved working conditions.**

***Index Terms*—Labour Migration; Plantation Economy; Wage Dynamics; Migrant Workers; Kerala; Labour Market Segmentation; Wage Inequality; Inter-State Migration**

I. INTRODUCTION

The plantation economy has historically constituted a vital component of Kerala's agrarian structure, contributing significantly to employment, export earnings, and regional development. The state accounts for a substantial share of India's plantation crops, including tea, coffee, rubber, and cardamom, making the sector a key driver of rural livelihoods (Government of Kerala, 2022). It is estimated that more than 4.18 lakh workers are directly engaged in plantation activities, highlighting its socio-economic importance (Centre for Public Policy Research [CPPR], 2023). However, despite its historical prominence, the plantation sector in Kerala has undergone considerable structural transformation in recent decades, marked by declining productivity, rising production costs, and notable changes in labour dynamics.

One of the most significant changes has been the decline in native labour participation in plantation activities. Employment in the sector decreased from 74,281 workers in 2004 to 36,126 in 2015, before showing partial recovery to around 50,148 workers in 2022 (CPPR, 2023). This trend reflects a broader structural shift in Kerala's economy, where local workers increasingly move towards more remunerative opportunities in the service and non-agricultural sectors. Higher levels of education, improved living standards, and changing occupational preferences have further contributed to the reduced willingness of native workers to engage in plantation labour.

In this context, inter-state labour migration has emerged as a critical factor sustaining the plantation economy. Kerala has become a major destination for migrant workers due to its relatively higher wage rates compared to other Indian states. The average daily wage for agricultural labour in Kerala is approximately ₹767, significantly higher than the national average of ₹321, creating a strong economic incentive for migration (Government of Kerala, 2023). In many cases, migrant workers earn two to three times higher wages than in their home states, particularly those from regions such as West Bengal, Bihar, Assam, and Odisha (Dhanam Online, 2024). Consequently, Kerala is estimated to host nearly 40 lakh migrant workers, many of whom are employed in labour-intensive sectors including plantations (Government of Kerala, 2023).

While migrant labour has played a crucial role in addressing labour shortages, its increasing dependence has important implications for wage dynamics and labour market structure within the plantation sector. On the one hand, migration helps stabilize labour supply in a context of declining native participation. On the other hand, it contributes to the emergence of labour market segmentation, wage differentials, and informal employment arrangements, often resulting in disparities between native and migrant workers (CPPR, 2023). Furthermore, rising wage levels have significantly increased the cost of production, making Kerala one of the highest-cost plantation regions in India, thereby affecting the competitiveness and sustainability of the sector (Government of Kerala, 2022).

Against this backdrop, the present study seeks to examine the relationship between labour migration and wage dynamics in Kerala's plantation sector using secondary data. By analysing trends in employment, wage structures, and labour mobility, the study aims to contribute to the broader discourse on labour market transformation and the evolving nature of plantation economies in developing regions.

II. LITERATURE REVIEW

Recent studies have extensively examined the dynamics of labour migration and its implications for regional labour markets in India, with particular emphasis on Kerala. A study by Poovancheri et al. (2022) in the *Journal for Reattach Therapy and Developmental Diversities*, titled *"Economic and Social Determinants of Migration: Insights from Kerala's Experience,"* highlights that wage differentials and labour shortages are the primary drivers of interstate migration into Kerala. The study finds that significantly higher wages—often exceeding national averages by more than 100 percent—have created strong pull factors, leading to increased inflow of migrant labour and consequent restructuring of the labour market (Poovancheri et al., 2022).

Similarly, Azad, Salim, and Sujathan (2021), in their article *"Has Emigration Perked Up Entrepreneurship Among Return Migrants in Kerala?"* published in *The Indian Journal of Labour Economics*, examine the broader labour mobility patterns in Kerala and argue that migration has significantly influenced labour supply conditions, wage levels, and occupational shifts within the state. Their findings suggest that migration-induced labour scarcity has contributed to rising wages and structural transformation in traditional sectors (Azad et al., 2021).

Further, Khan, Alharthi, and Illiyan (2024), in the *Journal of King Saud University – Science*, through their study *"Statistical Analysis of International Labour Migration Strategy from India to the Gulf Countries,"* emphasize the economic motivations underlying migration decisions, particularly wage differentials and employment opportunities. Although focusing on international migration, the study provides theoretical insights applicable to internal migration, especially regarding how wage disparities shape labour mobility and influence labour market outcomes (Khan et al., 2024).

Wagle (2024), in *Comparative Migration Studies*, in the article *"Labor Migration, Remittances, and the Economy in the Gulf Cooperation Council Region,"* highlights the broader macroeconomic implications of labour migration, including its impact on wage structures, labour demand, and economic development. The study underscores that migration flows are closely linked to sectoral labour demand and wage competitiveness, which is particularly relevant in understanding the plantation sector's dependence on migrant labour (Wagle, 2024).

At a more general level, Thapaliya et al. (2025), in the *International Journal of Sciences: Basic and Applied Research*, in their article *"Impact of Foreign Labour Migration on Labour Dynamics in Relation to Agricultural Activities of Migrant Households,"* demonstrate that migration significantly alters labour allocation, wage structures, and productivity in agricultural sectors. Their findings indicate that migration not only redistributes labour supply but also creates imbalances and adjustments in wage systems (Thapaliya et al., 2025).

Moreover, recent empirical evidence from Kerala indicates that higher wages, better working conditions, and structural transformation of the economy continue to drive large-scale in-migration of labour, particularly into labour-intensive sectors such as plantations (Government of Kerala, 2023). These studies collectively suggest that migration plays a dual role—addressing labour shortages while simultaneously influencing wage dynamics and labour market segmentation.

III. RESEARCH GAP

Existing literature largely focuses on labour migration in Kerala from a broad socio-economic or macro perspective, with limited attention to sector-specific analysis, particularly the plantation economy. While several studies examine migration drivers such as wage differentials and employment opportunities, there is a lack of integrated analysis linking labour migration directly with wage dynamics within the plantation sector. Moreover, empirical evidence on wage disparities between native and migrant workers and the resulting labour market segmentation in plantations remains insufficient. Thus, a clear gap exists in understanding how migration influences wage structures and cost conditions specifically in Kerala's plantation industry.

Scope of the Study

The present study focuses on examining the relationship between labour migration and wage dynamics in Kerala's plantation sector using secondary data. It covers key aspects such as trends in labour supply, wage differentials, and the growing dependence on migrant workers. The study is limited to Kerala and plantation crops, with emphasis on recent trends and economic implications. It aims to provide insights into labour market changes, wage patterns, and policy concerns within the sector.

Objectives

- To examine the trends and patterns of labour migration in Kerala's plantation sector.
- To analyse the wage dynamics in the plantation sector, with particular focus on inter-state wage differentials and changes over time.
- To assess the impact of migrant labour on wage structure and labour market conditions in Kerala's plantation economy.

IV. METHODOLOGY

The present study adopts a descriptive and analytical research design to examine the relationship between labour migration and wage dynamics in Kerala's plantation sector. The study is entirely based on secondary data, ensuring reliability and authenticity of information.

Data sources

Secondary data have been collected from various official and credible sources, including:

- *Kerala Economic Review* (various issues)
- *Labour Bureau Reports* (Government of India)
- *Reserve Bank of India (RBI) Handbook of Statistics on Indian Economy*
- Reports from the *Ministry of Labour and Employment*
- Publications and working papers from research institutions such as the Centre for Public Policy Research (CPPR)

These sources provide comprehensive data on employment trends, wage rates, and migration patterns relevant to the plantation sector.

Period of study

The study covers a recent time period, primarily from 2004 to 2023, to capture long-term trends in labour participation, migration, and wage dynamics within the plantation economy.

Analytical tools and Techniques

The collected data are analysed using simple statistical tools such as:

- Percentage analysis
- Growth rate analysis
- Comparative analysis (inter-state wage comparison)
- Trend analysis using tables and graphical representations

These tools help in identifying patterns in labour supply, wage variations, and migration trends.

Variables Considered

The study focuses on key variables such as:

- Labour force participation in the plantation sector
- Wage rates (daily wages across states and over time)
- Migration inflows (proxy indicators based on labour availability and secondary estimates)

Limitations

The study is confined to Kerala's plantation sector and does not include primary survey data. While secondary data ensures credibility, the analysis may be limited by data availability and aggregation issues, particularly in capturing informal employment and undocumented migrant labour.

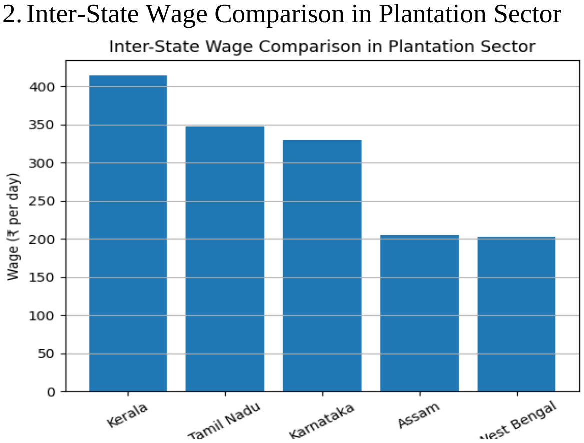
V. ANALYSIS AND RESULTS

1. Trend in Plantation Employment in Kerala

Source: Centre for Public Policy Research [CPPR], 2023; Government of Kerala, 2022

The graph shows a sharp decline in plantation employment from 2004 to 2015, followed by a gradual recovery up to 2022. Employment dropped from 74,281 workers in 2004 to 36,126 in 2015, indicating a significant withdrawal of native labour. This decline reflects structural transformation in Kerala's economy, where workers shifted to better-paying non-agricultural sectors. The subsequent increase suggests the growing dependence on migrant labour, which helped stabilize employment levels in recent years.

2. Inter-State Wage Comparison in Plantation Sector



Source: Labour Bureau, Government of India, 2021; CPPR, 2023

The graph clearly highlights significant wage differentials across states. Kerala offers the highest wage rate (₹414 per day), compared to much lower wages in Assam and West Bengal (around ₹200). This large disparity acts as a major pull factor for migrant labour, attracting workers from low-wage states. However, higher wages also increase production costs, affecting the competitiveness of Kerala's plantation sector.

3. Growth of Migrant Labour in Kerala

Source: Government of Kerala, 2023; Economic Review, various issues

The graph shows a steady increase in migrant labour, rising from 25 lakh in 2010 to 40 lakh in 2023. This trend reflects the increasing reliance of Kerala's economy on migrant workers, particularly in labour-intensive sectors such as plantations. The growth is primarily driven by higher wages, labour shortages, and better employment opportunities in Kerala.

VI. RESULTS AND DISCUSSION

The analysis of secondary data reveals significant transformations in Kerala's plantation labour market, particularly in relation to labour migration and wage dynamics. The findings are discussed under three major dimensions: employment trends, wage differentials, and migrant labour dependence.

1. Declining Native Labour and Changing Employment Structure

The observed decline in plantation employment between 2004 and 2015, followed by a moderate recovery, indicates a structural shift in labour participation. The withdrawal of native workers from plantation activities can be attributed to the availability of more remunerative employment opportunities in the non-agricultural sector and overseas migration.

This finding is consistent with the argument that economic development and sectoral diversification reduce dependence on traditional labour-intensive industries (Azad et al., 2021).

The partial recovery in employment in recent years suggests that the plantation sector has increasingly relied on migrant labour as a substitute for native workers. This transition reflects a broader trend of labour market restructuring, where migrant workers fill gaps created by local labour shortages. Similar observations have been made in earlier studies, which highlight migration as a response to regional imbalances in labour supply (Poovancheri et al., 2022).

2. Wage Differentials as a Driver of Migration

The inter-state wage comparison clearly demonstrates that Kerala offers significantly higher wages than other plantation-producing states. This supports the neoclassical theory of migration, which posits that labour mobility is driven by wage differentials across regions. The substantial gap between Kerala and states such as Assam and West Bengal acts as a strong economic incentive for workers to migrate.

The findings align with empirical evidence suggesting that migrant workers are attracted to regions with higher earning potential and better working conditions (Khan et al., 2024). However, while higher wages benefit workers, they simultaneously increase the cost of production, placing financial pressure on plantation owners. This dual effect highlights the complex role of wage dynamics in shaping both labour supply and sectoral sustainability.

3. Increasing Dependence on Migrant Labour

The steady rise in migrant labour population in Kerala indicates a growing dependence on migrant workers across labour-intensive sectors, including plantations. This trend reflects the inability of the native workforce to meet labour demand, thereby necessitating external labour inflows. Migration, in this context, acts as a stabilizing mechanism, ensuring continuity in production despite labour shortages.

However, the increasing presence of migrant labour has also led to labour market segmentation, where differences in wages, job security, and working conditions may exist between native and migrant workers. Such segmentation is often associated with informal employment arrangements and limited bargaining power among migrant workers. This finding is consistent with earlier studies that highlight the emergence of dual labour markets in migration-intensive regions (Thapaliya et al., 2025).

4. Implications for Plantation Economy

The interaction between labour migration and wage dynamics has important implications for the sustainability of Kerala's plantation sector. While migrant labour helps address labour shortages and supports production, rising wages contribute to higher operational costs, reducing competitiveness in both domestic and international markets.

Thus, migration plays a dual role—it is both a solution to labour scarcity and a factor influencing cost structures. This underscores the need for a balanced approach that ensures labour availability while maintaining economic viability. The findings contribute to the broader discourse on labour mobility, wage determination, and structural transformation in developing economies.

VII. CONCLUSION

The present study examined the relationship between labour migration and wage dynamics in Kerala's plantation sector using secondary data. The findings reveal that the sector has undergone significant structural transformation, characterized by a decline in native labour participation and a growing dependence on inter-state migrant workers. The analysis confirms that wage differentials across states have been a primary driver of migration, with Kerala's relatively higher wage rates attracting labour from economically less developed regions.

At the same time, the study highlights that migration has played a critical stabilizing role in addressing labour shortages and sustaining plantation activities. However, the increasing reliance on migrant labour has also contributed to labour market segmentation, wage disparities, and the informalization of employment conditions. Furthermore, rising wage levels have significantly increased production costs, posing challenges to the competitiveness and long-term sustainability of the plantation sector.

Overall, the study underscores the dual nature of labour migration—as both a solution to labour scarcity and a factor influencing wage structures and cost dynamics. These findings contribute to a deeper understanding of labour market transformation and the evolving role of migration in plantation economies.

VIII. POLICY RECOMMENDATIONS

Based on the findings of the study, the following policy measures are suggested:

1. Ensuring Fair Wage Practices

The government should implement and strictly monitor uniform wage standards to reduce disparities between native and migrant workers. Transparent wage policies can help prevent exploitation and promote equity in the labour market.

2. Improvement of Working and Living Conditions

Plantation employers and policymakers must focus on improving housing, healthcare, and social security benefits for migrant workers. Better working conditions will enhance productivity and ensure labour welfare.

3. Skill Development and Training

Introducing skill development programmes for both native and migrant workers can improve labour efficiency and productivity in the plantation sector, thereby offsetting rising labour costs.

4. Promotion of Mechanization

To address rising labour costs and shortages, there is a need to encourage appropriate mechanization and technological adoption in plantation activities, without displacing labour excessively.

5. Labour Market Regulation and Data Monitoring

Establishing a comprehensive labour database on migrant workers will help in better policy formulation and monitoring of labour flows, wages, and employment conditions.

6. Incentives for Native Labour Participation

Policies aimed at attracting native workers back to plantation activities—such as improved wages, social benefits, and flexible work conditions—may help reduce excessive dependence on migrant labour.

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