Pegu, A., Sahu, R. and Johari, S., 2025. Assessing factors influencing worker retention in the Indian construction industry. In: Waidyasekara, K.G.A.S., Jayasena, H.S., Wimalaratne, P.L.I. and Tennakoon, G.A. (eds). *Proceedings of the 13th World Construction Symposium*, 15-16 August 2025, Sri Lanka. pp. 167-179. DOI: https://doi.org/10.31705/WCS.2025.13. Available from: https://ciobwcs.com/papers/

ASSESSING FACTORS INFLUENCING WORKER RETENTION IN THE INDIAN CONSTRUCTION INDUSTRY

Akumoni Pegu[1], Rohit Sahu[2] and Sparsh Johari[3]

ABSTRACT

India's real estate and construction sector has grown substantially over the years. Although many technological advancements have occurred to aid construction, a high demand for construction labourers remains. The construction industry faces issues concerning high labour turnover, which threatens project continuity and efficiency. This study assesses the key factors influencing worker retention in the Indian construction industry. The study adopted a mixed methods approach by identifying the factors from the existing literature, a structured survey tool was developed, and field data were collected through a questionnaire with 159 construction workers. The responses were evaluated using a 5-point Likert scale. The results reveal that wage delays, lack of safety measures, poor living conditions, limited social security, and insufficient skill development opportunities are primary deterrents to worker retention. Findings emphasize that improving financial stability, enhancing workplace safety, fostering supervisor support, and providing growth opportunities are essential for workforce stability. The study proposes actionable strategies for construction companies and policymakers to mitigate turnover and improve long-term labour retention. It offers a holistic insight into the socio-economic and organizational challenges construction workers face in India.

Keywords: *Construction worker; Socio-economic factors; Worker retention.*

1. INTRODUCTION

The construction industry is one of the leading indicators of India's economic development, contributing nearly 9% to the national GDP (Construction Skill Development Council of India, 2022). The sector continues to expand rapidly, underscoring its crucial role in infrastructure growth and job creation. Despite such significant importance, the industry faces persistent challenges in retaining its workforce. The construction industry stands vulnerable to this persisting issue, with several studies (Ayodele et al., 2022; De Winne et al., 2018) underscoring the numerous challenges the construction industry faces.

[1] Graduate Student, School of Business, Indian Institute of Technology Guwahati, India, a.pegu@iitg.ac.in
[2] Research Scholar, Department of Civil Engineering, Indian Institute of Technology Guwahati, India, r.sahu@iitg.ac.in
[3] Assistant Professor, Department of Civil Engineering, Indian Institute of Technology Guwahati, India, sparshjo@gmail.com

In recent years, many researchers have focused on why employees voluntarily leave their jobs, exploring the main reasons behind labour turnover (Carmeli & Weisberg, 2007; Hausknecht & Trevor, 2010). Labour turnover is important in human resource management, affecting how companies plan and manage their workforce (Arokiasamy et al., 2013). This is especially crucial in the construction industry, where many workers are involved. High labour turnover can also increase costs and reduce organizational productivity (De Winne et al., 2018).

Studies by Ayodele et al. (2022) and De Winne et al. (2018) have identified core deterrents to retention, including wage delays, unsafe working conditions, inadequate living arrangements, and social security. Workers not within the purview of their primary employers have often faced difficulties accessing protections and benefits. Furthermore, a significant gap exists between the intent of labour welfare policies, such as the Building and Other Construction Workers' (BOCW) Act, and their actual implementation on the ground level.

Effective workforce planning is essential for improving organisational efficiency. Inconsistent planning can lead to employee turnover, which disrupts overall workforce performance and reduces competitiveness (Duda & Zurkova, 2013). Employees often leave voluntarily due to low job satisfaction, lack of job security, alternative job opportunities, and poor work–life balance (Ayodele et al., 2022). These factors are linked to poor performance and low productivity in the construction sector.

The sector heavily depends on migrant and informal workers, who lack job security, social protection, and career growth opportunities (Bora, 2014). This leads to frequent job switching, particularly between project phases, creating difficulties in workforce planning and increasing recruitment and training costs (ILO, 2020). Regional disparities, inconsistent labour policies, and the lack of long-term employment contracts further complicate the situation.

Although existing studies have examined turnover drivers such as pay dissatisfaction, insufficient safety, or weak supervisory support, limited research integrates these diverse factors holistically, especially from the perspective of the most affected workers. Most past studies focus on organizational policies or macroeconomic analysis, creating a significant gap in understanding the nuanced, ground-level realities of labour retention in the Indian construction sector.

This study explores the key factors influencing worker retention in India's construction industry, focusing on workers' perspectives. It adopts a comprehensive, multi-dimensional framework that integrates financial, health-related, work-related, and state-related factors to reflect construction labourers' complex realities, particularly those from informal and migrant backgrounds. The study provides a grounded understanding of retention's most critical issues by analysing these dimensions through structured field data. The findings are intended to support construction firms and policymakers in designing more targeted and effective retention strategies that enhance workforce stability, reduce project disruptions, and promote long-term sectoral growth.

2. LITERATURE REVIEW

Financial stability has consistently emerged as a fundamental driver of worker retention in the construction industry. Studies such as Palaniappan et al. (2023) highlight that pay satisfaction is closely linked to worker well-being and long-term commitment to

employers. Consistent and adequate earnings are often cited as primary motivators, with the widespread preference for overtime opportunities reinforcing the value workers place on supplemental income. Furthermore, research by Ayodele et al. (2022) and Duda and Zurkova (2013) suggests that the loss of skilled and experienced workers due to poor financial incentives can lead to significant productivity losses and increased costs for construction firms.

Worker retention remains a persistent challenge in the global construction industry, driven by complex, interrelated factors such as job satisfaction, wage stability, working conditions, and career growth opportunities. Arokiasamy et al. (2013) highlighted that voluntary turnover in the private sector often stems from dissatisfaction with pay, lack of career advancement, and poor organizational culture, equally relevant issues in the construction industry. Similarly, Lambert and Hogan (2008) established that job satisfaction and organizational commitment significantly shape turnover intentions, while Carmeli and Weisberg (2007) emphasized the role of emotional and psychological attachment in predicting retention.

In the construction context, Ayodele et al. (2022) developed a framework identifying project-specific dynamics, work-life imbalance, and lack of supervisor support as key contributors to labour turnover. These findings are reinforced by Kissi et al. (2024), who found that supervisor support significantly reduces turnover intentions when mediated by worker engagement.

Duda and Zurkova (2013) demonstrated that high turnover disrupts productivity, inflates operational costs, and leads to the loss of institutional knowledge. Ohueri et al. (2018) further noted that motivation strategies, including fair compensation and skill recognition, are essential to improve retention and productivity. These insights are echoed in India's context, where the Construction Skill Development Council of India (2022) emphasized the urgent need to align skilling programs with retention objectives, especially given the sector's heavy reliance on informal, often migrant, labour.

Transformational leadership has also been recognized as critical in improving organizational retention. Bass and Avolio (1994) argued that leaders who inspire, mentor, and provide individualized support can reduce turnover by fostering loyalty and motivation. Furthermore, macro-level studies such as ILO (2020) and OECD (2019) advocate for policy interventions to support fair wages, safe working conditions, and long-term employment contracts to mitigate workforce instability. Samanta and Gochhayat (2023) also identified poor safety practices as a significant deterrent to retention in India's construction sector.

To fill this gap, the study aims to identify and consolidate the key factors affecting the retention of construction workers through a comprehensive literature review, analysing the data through a survey to know actual worker perceptions. This approach highlights the most influential retention drivers and explores potential reasons for any observed discrepancies. The ultimate objective is to provide actionable recommendations for construction firms and policymakers to improve retention rates by developing targeted interventions.

3. RESEARCH METHOD

This study employed a structured questionnaire survey as the primary method for data collection. This approach was selected due to its ability to systematically measure

multiple dimensions influencing worker retention and efficiently capture responses from a relatively large number of participants. The questionnaire was developed based on key themes identified in the literature review and was simplified to suit the literacy levels of many construction workers, ensuring inclusiveness and clarity. Similar methodologies have been adopted in workforce studies by Ayodele et al. (2022) and Ohueri et al. (2018), demonstrating the validity of structured surveys for field-based research in developing countries. As illustrated in Figure 1, the research process consisted of three key phases: identifying influencing factors through literature synthesis, developing and administering the questionnaire, and statistical analysis of collected data.

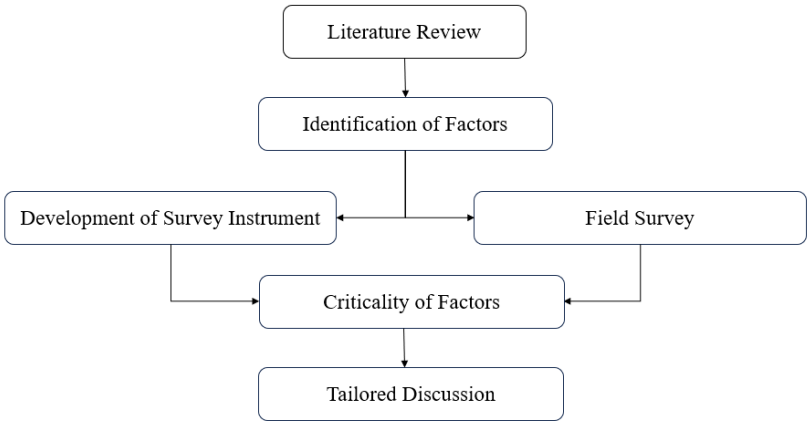

Figure 1: Research methodology

3.1 IDENTIFICATION OF WORKER RETENTION FACTORS

This initial stage consisted of a comprehensive review of scientific literature, industry reports, and policy documents to recognize the key determinants of construction worker retention in India. This process synthesized thirteen retention-related factors, representing the most frequently cited drivers influencing workers' decisions to remain in or leave their jobs. As shown in Table 1, these factors were classified into four thematic dimensions: financial, workplace, state-related, and health-related. This categorization ensures a holistic understanding of the multi-dimensional aspects that affect worker retention in the Indian construction industry.

Table 1: Factors influencing worker retention

Category	Code	Factors	Source
Finance-Related Factors	F1	Wage Satisfaction	Ayodele et al. (2022); Palaniappan et al. (2023)
	F2	Timeliness of Pay	ILO (2020)
	F3	Overtime Opportunities	Ayodele et al. (2022)
	F4	Incentives/Rewards	Duda and Zurkova (2013)
Health-Related Factors	F5	Healthcare Access	ILO (2020); WHO (2016)
Work-Related Factors	F6	Work Relocation Frequency	Zhao et al. (2005)
	F7	Supervisor Behaviour	Kissi et al. (2024); Bass and Avolio (1994)

Category	Code	Factors	Source
	F8	Personal Protective Equipment Kit	Samanta and Gochhayat (2023); ILO (2020)
State-Related Factors	F9	Accommodation Quality	Bora (2014); ILO (2020)
	F10	Welfare Measures	OECD (2019); ILO (2020)
	F11	Skill Development Opportunities	CSDCI (2022); OECD (2019)
	F12	Social Security Benefits	ILO (2020)
	F13	Grievance Redressal Mechanisms	Arokiasamy (2013); ILO (2020)

3.2 DATA COLLECTION

The data for this study were gathered through a structured questionnaire administered to workers engaged in a construction project in Guwahati, India. A total of 159 responses were collected through in-person interactions on a 5-point Likert scale, as shown in Table 2. Due to the low literacy levels among respondents and the absence of prior exposure to formal surveys, each question was explained individually in the simplest and most relatable way.

The ethical principles of voluntary participation, anonymity, and informed consent were maintained throughout the data collection process.

Table 2: Likert scale adapted for criticality rating

Scale	Description
1	Very low criticality
2	Low criticality
3	Moderate criticality
4	High criticality
5	Very high criticality

3.3 DATA ANALYSIS

The collected data were analysed using descriptive statistical methods suitable for exploratory research involving ordinal Likert-scale responses. This approach effectively summarizes participant perceptions and identifies key factors influencing worker retention. Using SPSS, the mean, standard deviation, skewness, and kurtosis for each of the thirteen factors have been calculated. These metrics helped rank the factors based on their perceived criticality among workers.

Descriptive analysis was chosen due to the study's exploratory nature and moderate sample size (n = 159). Similar approaches have been adopted in related construction workforce studies, such as those of Ayodele et al. (2022) and Ohueri et al. (2018), validating their relevance and applicability in similar contexts.

4. RESULTS AND DISCUSSION

This section presents the findings from the field survey and the subsequent statistical analysis of factors influencing worker retention. The data collected through the structured questionnaire were analysed using descriptive statistical techniques widely used in exploratory studies to interpret perception-based data.

This method was selected because it effectively summarizes and ranks multiple variables based on participant responses, particularly when dealing with a moderate sample size and ordinal-scale data such as Likert ratings. Similar approaches have been adopted in construction workforce studies, including Ayodele et al. (2022) and Ohueri et al. (2018), where descriptive statistics were used to evaluate labour-related factors in developing countries.

In this study, each of the thirteen retention factors has been rated on a 5-point Likert scale, and their mean scores, standard deviations, and distribution characteristics (including skewness and kurtosis) were calculated using SPSS software. These statistical measures helped identify which factors were most critical to the respondents and how consistent their responses were across the sample.

Descriptive analysis was considered appropriate given the study's objective of gaining foundational insight into worker retention from a field-based perspective. More advanced statistical techniques were not applied, as the study was exploratory and the available sample size (n = 159) did not support robust inferential modelling. Nevertheless, the chosen approach effectively captured meaningful patterns in worker perceptions and laid the groundwork for future, more detailed analyses.

4.1 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

The surveyed population consisted of all male construction workers, 159 workers in total, reflecting the gender imbalance traditionally seen in India's construction industry. No female workers were present at the selected construction site during data collection. The workforce was primarily concentrated in the 21–40 years bracket, with the highest proportion falling within the 21–30 age group, as shown in Figure 2. This suggests that construction work continues to draw from the labour force's younger, physically active segment. The presence of workers above 40 years, though lower in number, indicates a continued dependence on long-serving labourers who may not have transitioned to more stable or skilled occupations.

Professionally, the survey captured respondents engaged in key trades such as masonry, carpentry, bar bending, tiling, and scaffolding, as shown in Figure 3. Among these, the most common occupation was listed as 'Other', which often includes general helpers and support labourers not tied to a specific skill. This highlights the high prevalence of multi-purpose unskilled workers, whose retention is critical to daily site operations.

Age distribution analysis indicates a relatively young to middle-aged workforce with 34% of respondents falling in the 25-34 age bracket, followed by 29% in the 35-44 category. The 18-24 age group constituted 20%, while workers above 45 represented 17% of the sample. This age distribution aligns with industry patterns where physical labour intensity favours younger and middle-aged workers.

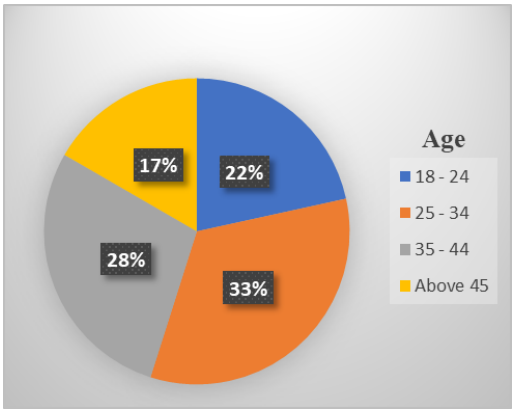

Figure 2: Age distribution of respondents

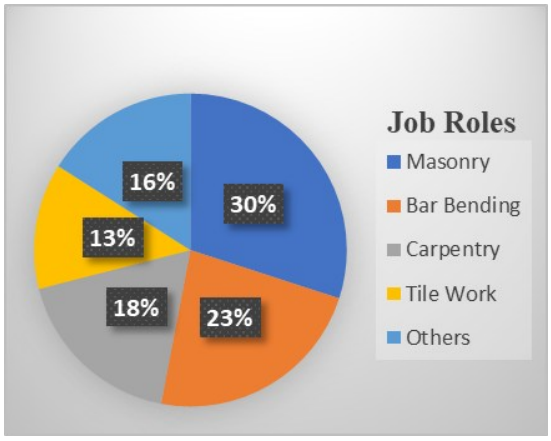

Figure 3: Job role distribution

Regarding job specialization, the respondents represented diverse construction trades, such as 30% of the respondents belong to masonry, 23% bar bending, 18% carpentry, 13% tile work, and 16% other specialized roles, as shown in Figure 3. Work experience distribution indicated that 8% had less than 1 year, 37% had 1-5 years, 42% had 5-10 years of experience, and 13% had over 10 years of construction experience, as shown in Figure 4.

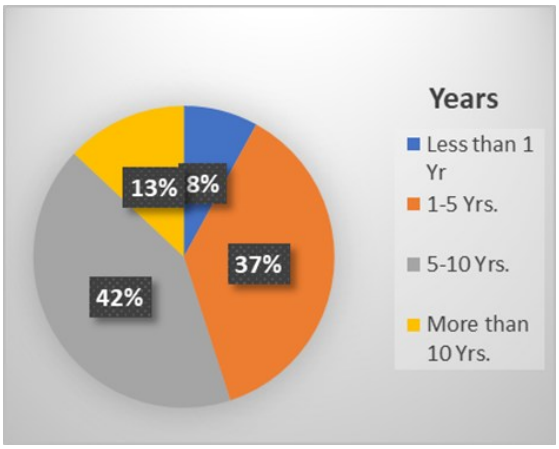

Figure 4: Work experience distribution

4.2 RELIABILITY ANALYSIS

The study, 159 workers were surveyed out of 300 contacted workers, meaning about 53% came forward for the exercise. The reliability analysis was conducted using Cronbach's alpha to assess the internal consistency of the survey instrument. Cronbach's alpha is a prerequisite for ensuring that subsequent analyses, such as criticality assessment, are based on dependable and valid data. The analysis yielded a Cronbach's alpha coefficient of 0.730, exceeding the commonly accepted threshold of 0.7, which indicates satisfactory reliability (Chammout et al., 2024).

4.3 CRITICALITY OF FACTORS

The statistical analysis provides critical insights into the various retention factors. Wage satisfaction and accommodation quality emerged as the most critical factors for worker retention. Workers rated wage satisfaction at an average of 4.38, with responses tightly clustered around this high value, as indicated by the slight variation in responses. Similarly, accommodation quality received an average rating of 4.35, with somewhat more varied responses across participants. The strong negative skewing of responses for both factors confirms that worker opinions were heavily concentrated at the higher end of the scale.

Further analysis revealed that nearly 72% of respondents considered wage satisfaction the most significant, while 70% considered accommodation quality significant. Notably, no workers rated wage satisfaction below a three on the scale, and accommodation quality was rarely rated below a 2, underscoring the universal significance of these factors across the entire construction workforce.

Overtime opportunities also demonstrated relatively high importance, with an average rating of 3.94 and more than half (55%) of workers considering it significant. Though responses tended toward the higher end of the scale, they showed greater variability than the wage and accommodation factors, suggesting somewhat less consensus among workers regarding the importance of overtime availability.

Most factors fell into the moderate importance range (between 2.97 and 3.26), including safety kit provision, healthcare access, skill development, social security, supervisor behaviour, grievance redressal, welfare measures, and work relocation concerns. These factors exhibited relatively normal distributions with skewness values close to zero, ranging from -0.34 to 0.27, and standard deviations between 0.73 and 0.91.

Cross-tabulation analysis revealed interesting patterns within these moderately rated factors. Workers with more than five years of experience assigned slightly higher importance to skill development opportunities, rating it at an average of 3.21, compared to less experienced workers who gave it a lower average rating of 2.87. This difference suggests that career progression becomes more salient as workers gain experience and tenure in the construction industry. Similarly, workers above 35 placed greater emphasis on social security benefits, with an average rating of 3.18, while younger workers rated this factor lower at approximately 2.86. This age-based variation likely reflects life-stage concerns, with older workers increasingly focusing on long-term financial security and benefits as they progress through their careers and take on greater family responsibilities.

Timeliness of pay received the lowest average rating among all factors at 2.81, though this still falls within the moderate importance range. Workers' opinions about this factor

showed considerable variability, as evidenced by the wider spread of responses compared to other factors. This suggests diverse perspectives on the importance of payment timing within the workforce. The mean importance ratings of these factors were ranked on the 5-point Likert scale and are shown in Table 3.

Table 3: Criticality of factors influencing worker retention

Factor	Mean	Standard Deviation	Rank by Mean	Distribution Characteristics	
				Skewness	Kurtosis
Wage Satisfaction	4.38	0.50	1	-1.50	0.38
Accommodation Quality	4.35	1.06	2	-1.35	0.32
Overtime Opportunities	3.94	1.11	3	-0.82	-0.06
Incentives/Rewards	3.26	0.91	4	0.27	-0.02
Healthcare Access	3.05	0.77	5	-0.34	0.79
Safety Kit Provision	3.02	0.73	6	-0.23	0.09
Supervisor Behaviour	3.02	0.74	7	0.06	0.12
Skill Development Opportunities	3.02	0.78	8	0.05	-0.25
Social Security Benefits	3.00	0.79	9	0.00	0.26
Grievance Redressal Mechanism	3.00	0.74	10	-0.10	0.18
Welfare Measures	2.99	0.75	11	-0.08	0.03
Work Relocation Frequency	2.97	0.74	12	0.05	-0.12
Timeliness of Pay	2.81	1.14	13	-0.71	-0.71

5. DISCUSSION

This section examines the key factors considered in the study, how important they were rated, and what they mean for worker retention. It also helps identify which issues need the most attention to improve workforce stability.

5.1 FINANCE-RELATED FACTORS

The finance-related factors adopted in the study are connected to the economic benefits of workers, such as wage satisfaction, timeliness of pay, overtime opportunities, and incentives/rewards. Among all the factors considered in the study, wage satisfaction is the most critical, as indicated by the survey results, underscoring its importance for labour retention. The variation in ratings among the respondents was also drastically less than the other factors, implying that most individuals deem it important. The findings correlate perfectly with financial remuneration directly linked to worker motivation, job satisfaction, and organizational loyalty (Ayodele et al., 2022; Palaniappan et al., 2023).

On the other hand, overtime opportunities are slightly less rated, but individuals differ in their responses. Incentives and rewards are found to be less critical, with variations in responses being on the higher side since their renumeration is subject to various factors within or beyond one's control. Past studies (Duda & Zurkova, 2013) indicate that non-

wage financial rewards can significantly influence employee morale and productivity. However, there might be certain other factors beyond this study's scope.

Interestingly, Timeliness of Pay ranked lowest among all factors, suggesting that while essential, it may be less of a distinguishing factor in environments where workers are habituated to payments getting delayed under subcontracting or working under an arrangement where regular pay is institutionalized. Nonetheless, delayed payments negatively affect worker trust and emotional well-being (ILO, 2020), indicating that this factor's influence may vary by industry or geographic context.

5.2 HEALTH-RELATED FACTORS

Although considered important in various domains, especially construction, where occupational hazards are a primary concern, health-related factors have been rated less critical for sustaining worker retention. In this study, healthcare access reflects a moderate level of importance as perceived by workers. Though not among the top, it has scored above the neutral midpoint, indicating its acknowledged relevance.

Occupational health literature consistently emphasizes the importance of accessible healthcare in mitigating work-related illnesses and ensuring long-term workforce sustainability (ILO, 2020). In this study, healthcare access was rated lower than financial factors, suggesting it may not be a top reason workers stay. However, many construction projects are in remote areas and may offer higher pay, which can influence worker decisions.

5.3 WORK-RELATED FACTORS

In this category, Supervisor behaviour, Work relocation frequency, and PPE kit provision reflect moderate concerns among workers, suggesting that the immediate work environment holds particular value in satisfaction and continuity.

Supervisor behaviour and supportive leadership have been closely associated with fostering trust, enhancing communication, mitigating job stress, and promoting a healthy work environment (Bass & Avolio, 1994). The mean score suggests that while supervisor conduct is valued, it may not be a deciding factor for many, though its latent impact on morale and conflict resolution is substantial.

In this context, Work Relocation Frequency scored lower, implying moderate discontent. However, high mobility often disrupts personal life, impairs community ties, and contributes to job dissatisfaction, especially among older or family-bound workers (Zhao et al., 2007). Organizations that frequently relocate workers without appropriate compensation or support often see higher attrition.

Including safety kit provision under work-related categories also reflects its dual role, as a safety resource and an operational expectation. Its moderate score highlights its continued relevance across domains, though the willingness to comply with safety regulations also rests considerably with the workers. Work-related factors are denoted as moderate to high criticality in this study. Improving supervisory practices and stabilizing work assignments can significantly enhance retention outcomes, particularly when aligned with professional development and well-being strategies.

5.4 STATE-RELATED FACTORS

While external to the employer, state-related factors significantly influence workers' long-term attachment to the labour force. None featured among the top critical factors, but they stand out as relevant given their scores near or just above the midpoint.

Grievance redressal and social security benefits received identical moderate critical scores, indicating a shared perception among workers about their trust in institutional arrangements. Workers are likelier to remain with employers or sectors where their concerns are heard and resolved fairly, strengthening their trust in the state and the judiciary (Arokiasamy et al., 2013). Social Security Benefits, such as pensions, insurance, and retirement plans, form a safety net that enhances workers' social well-being and long-term planning. The ILO (2020) underscores the role of social protection in reducing turnover and sustaining workforce resilience, especially in sectors vulnerable to economic volatility or occupational hazards.

Skill development opportunities scored slightly higher criticality, revealing workers' interest in career progression and a better life. Access to training not only improves retention but also boosts productivity and adaptability (OECD, 2019). Welfare measures, encompassing services like housing, canteens, and childcare, were ranked lowest among state-related factors. This may reflect either a lack of availability or low expectations from the state/employer regarding these provisions.

6. CONCLUSION

This study sought to examine and categorize the determinants of worker retention through a multi-dimensional lens encompassing finance, health, work, and state-related factors. The findings underscore that financial variables, particularly wage satisfaction and opportunities for overtime, are the most critical in retaining workers. Health and safety considerations, including access to healthcare and the provision of personal protective equipment, were moderately rated, highlighting their conditional importance, especially in sectors characterized by physical risk.

Work-related aspects, particularly supervisor behaviour and job relocation frequency, emerged as critical in shaping employees' day-to-day experience. These elements influence job satisfaction and emotional engagement, often as tipping points in retention decisions. Though often external to the organization, state-related factors support institutional trust and future security through grievance redressal, social security, and skill development programs.

Given the moderate to high criticality of many identified variables, this study recommends a prioritized, integrated approach to workforce management that combines fair compensation, safe working conditions, supportive supervision, and robust state support mechanisms. Future research may expand upon this model by investigating sector-specific retention drivers or exploring longitudinal impacts of policy interventions on workforce stability. While this study provides a broad overview of multiple retention factors, future research should focus more deeply on individual categories, such as financial incentives or organizational practices, to uncover more targeted strategies for improving worker retention.

7. LIMITATIONS

While the study provides valuable insights, several limitations should be acknowledged. The data were collected from only Northeastern India, which may not fully capture the diversity of labour dynamics across the country. As the study was done at one point, it cannot show how retention priorities change over time. The moderate sample size and focus on only workers' perspectives may also limit the findings' generalizability to other construction workforce segments.

8. REFERENCES

Arokiasamy, A.R.A. (2013). A qualitative study on causes and effects of employee turnover in the private sector in Malaysia. *Middle-East Journal of Scientific Research*, *16*(11), 1532–1541, https://doi.org/10.5829/idosi.mejsr.2013.16.11.12044.

Ayodele, O.A., Chang-Richards, Y. & González, V.A. (2022). A framework for addressing construction labour turnover in New Zealand. *Engineering, Construction and Architectural Management*, *29*(2), 601–618. https://doi.org/10.1108/ECAM-05-2020-0358.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership,* Sage Publications.

Bora, R. S. (2014). Migrant informal workers: A study of Delhi and satellite towns. *Modern Economy, 5*(5), 507–523. https://doi.org/10.4236/me.2014.55053

Carmeli, A. & Weisberg, J. (2007). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, *9*(2), 191–206. https://doi.org/10.1080/13678860600616305.

Chammout, B., Ahmed, M. O., & El-adaway, I. (2024). Assessing the critical factors influencing worker safety in roadway work zones. *Journal of Construction Engineering and Management*, *150*(12), 04024180. https://doi.org/10.1061/JCEMD4.COENG-15205

Construction Skill Development Council of India. (2022). *Skilling India: Construction sector demand and supply*. https://www.csdcindia.org

De Winne, S., Marescaux, E., Sels, L., Van Beveren, I. & Vanormelingen, S. (2018). The impact of employee turnover and turnover volatility on labor productivity: A flexible non-linear approach. *The International Journal of Human Resource Management*, *30*(21), 3049–3079, https://doi.org/10.1080/09585192.2018.1449129.

Duda, J. & Žůrková, L. (2013). Costs of employee turnover. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *61*(7), 2071-2075, https://doi.org/10.11118/actaun201361072071.

Hausknecht, J.P. & Trevor, C.O. (2010). Collective turnover at the group, unit, and organizational levels: Evidence, issues, and implications. *Journal of Management*, *37*(1), 352–388, https://doi.org/10.1177/0149206310383910.

International Labour Organization (ILO). (2020). *Global wage report 2020-21: Wages and minimum wages during COVID-19.* International Labour Office, Geneva. https://www.ilo.org/global/research/global-reports/global-wage-report/2020/lang--en/index.htm

Kissi, E., Ikuabe, M. O., Aigbavboa, C. O., Smith, E. D., & Babon-Ayeng, P. (2024). Mediating role of work engagement in the relationship between supervisor support and turnover intention among construction workers. *Engineering Construction and Architectural Management*, *31*(13), 102–120. https://doi.org/10.1108/ECAM-06-2023-0556

Lambert, E. & Hogan, N. (2008). The importance of job satisfaction and organizational commitment in shaping turnover intent: a test of a causal model. *Criminal Justice Review*, *43*(1), 96–118, https://doi.org/10.1177/0734016808324230.

Lill, I. (2009). Multiskilling in construction - A strategy for stable employment. *Technological and Economic Development of Economy*, *15*(4), 540–560. https://doi.org/10.3846/1392-8619.2009.15.540-560.

Ohueri, C. C., Enegbuma, W. I., Wong, N. H., Kuok, K. K., & Kenley, R. (2018). Labour productivity motivation framework for Iskandar Malaysia. *Built Environment Project and Asset Management*, *8*(3), 293–304. https://doi.org/10.1108/BEPAM-09-2017-0070

Organisation for Economic Co-operation and Development (OECD). (2019). *Getting skills right: Future-ready adult learning systems.* OECD Publishing. https://doi.org/10.1787/9789264311756-en

Palaniappan, K., Rajaraman, N., & Ghosh, S. (2023). Effectiveness of peer support to reduce depression, anxiety, and stress among migrant construction workers in Singapore. *Engineering Construction and Architectural Management*, *30*(10), 4867–4880. https://doi.org/10.1108/ECAM-03-2022-0269

Samanta, S., & Gochhayat, J. (2023). Critique on occupational safety of construction workers in India: Issues, challenges, and possible solutions. *Materials Today: Proceedings*, *80*(1), 3016–3021. https://doi.org/10.1016/j.matpr.2021.05.707

World Health Organization (WHO). (2016). *Global strategy on human resources for health: Workforce 2030.* World Health Organisation, Geneva. https://www.who.int/publications/i/item/9789241511131

Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*(6), 1265–1272. https://doi.org/10.1037/0021-9010.92.6.1265