

Modernising Public Sector Recruitment: A Study Of Recruitment Management In Indian Railways

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Abstract

Indian Railways, one of the world's largest public sector employers, has modernized its recruitment process through the Railway Recruitment Boards (RRBs) by adopting technology-driven and merit-based practices. The present study examines the recruitment procedures and recent recruitment trends in Indian Railways using secondary data.

The study adopts a descriptive research design and is based entirely on secondary data collected from Ministry of Railways Annual Reports, Railway Recruitment Board (RRB) notifications, Railway Recruitment Control Board (RRCB) publications, Press Information Bureau (PIB) releases, official government websites, and relevant academic literature. Descriptive statistics, trend analysis, and qualitative content analysis were employed to examine recruitment policies, technological reforms, and recruitment performance.

The findings indicate that the recruitment system has become more transparent, efficient, and standardized through the implementation of online applications, Computer-Based Tests (CBTs), Aadhaar-based authentication, biometric verification, and centralized recruitment procedures. Since 2014, Indian Railways has recruited more than 5.56 lakh candidates, reflecting sustained efforts to strengthen its workforce. The introduction of the Annual Recruitment Calendar and digital recruitment initiatives has further improved workforce planning and recruitment efficiency. However, challenges such as high application volumes, litigation, and delays in document verification and medical examinations continue to affect recruitment timelines.

The study concludes that the Railway Recruitment Boards have significantly transformed public sector recruitment by integrating digital technologies with merit-based selection practices. The findings provide useful insights for policymakers and public sector organizations seeking to enhance recruitment governance, improve workforce planning, and strengthen human resource management through technology-enabled recruitment systems.

Keywords: *Human Resource Management, Indian Railways, Railway Recruitment Boards, Recruitment, Computer-Based Test, Digital Recruitment, Public Sector.*

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I. Introduction

Human resource management is one of the most critical functions of any public sector organization. The success of public administration largely depends upon the availability of competent, skilled and motivated employees. Recruitment therefore acts as the foundation of organizational effectiveness by ensuring that suitable candidates are appointed through transparent and merit-based procedures. Indian Railways represents one of the largest integrated railway systems in the world, operating over **68,000 route kilometres** and serving millions of passengers daily. It is also one of India's largest employers with a workforce of approximately **1.2 million employees**, requiring continuous recruitment to replace retirements, accommodate network expansion and address emerging technological requirements. (www.pib.gov.in).

Indian Railways follows a highly structured, standardized, and merit-based recruitment system through the Railway Recruitment Boards (RRBs). Recruitment is coordinated by the Railway Recruitment Control Board (RRCB), which ensures uniform recruitment policies and procedures across all 21 RRBs. The process begins with workforce planning, where railway zones identify manpower requirements and submit vacancy indents based on operational needs, retirements, technological changes, and network expansion. These vacancies are then approved by the Ministry of Railways and advertised through a Centralised Employment Notification (CEN). To manage recruitment effectively, the Ministry of Railways established 20 Railway Recruitment Boards (RRBs) under the coordination of the Railway Recruitment Control Board (RRCB). These boards conduct recruitment for Group 'C' and Level-I posts across different railway zones and production units using standardized recruitment procedures. (Reserve Bank of India)

The recruitment system generally follows these stages:

- Manpower planning
- Vacancy assessment
- Centralised Employment Notification (CEN)
- Online registration
- Computer Based Test (CBT)
- Skill or Aptitude Test (where applicable)
- Document Verification
- Medical Examination
- Final empanelment and appointment

The shift from paper-based examinations to CBTs, biometric verification, and centralized digital processes has significantly enhanced transparency and operational efficiency. The recruitment procedure consists of several sequential stages designed to ensure transparency, fairness, and merit-based selection:

Step 1: Vacancy Assessment and Notification: Recruitment starts with manpower planning by zonal railways. After assessing staffing requirements, vacancies are consolidated and published through Centralised Employment Notifications (CENs), providing details on posts, eligibility, reservation policies, age limits, educational qualifications, examination patterns, and application schedules. Standardized notifications ensure uniformity across all Railway Recruitment Boards.

Step 2: Online Registration: Candidates submit applications through a centralized online portal. The digital application system has replaced manual submission, reducing paperwork and improving accessibility for candidates across India. Online registration includes Aadhaar-based identity verification, document uploads, and digital fee payment, enhancing the accuracy and security of candidate records.

Step 3: Computer-Based Test (CBT): The introduction of Computer-Based Testing (CBT) represents one of the most significant reforms in the recruitment process. Depending on the post, candidates undergo either a single-stage or multi-stage CBT to evaluate general intelligence, reasoning ability, mathematics, general awareness, and technical knowledge. The Ministry of Railways has expanded CBT-based examinations for both direct recruitment and departmental examinations to improve transparency, standardization, and speed.

Step 4: Skill, Aptitude and Physical Tests: Candidates shortlisted through CBTs are required to appear for additional assessments depending on the nature of the post. Technical and operational positions may require aptitude tests or skill tests, while recruitment for the Railway Protection Force (RPF) includes Physical Efficiency Tests (PET) and Physical Measurement Tests (PMT). These additional assessments evaluate practical competencies relevant to specific job roles.

Step 5: Document Verification and Medical Examination: Successful candidates undergo document verification to confirm educational qualifications, identity, age, caste or category certificates, and other eligibility criteria. This is followed by a comprehensive medical examination conducted according to Indian Railways' prescribed medical standards to ensure fitness for safety-sensitive operational duties.

Step 6: Final Empanelment and Appointment: Candidates who successfully complete all recruitment stages are empanelled based on merit and allotted to railway zones according to vacancy availability and applicable reservation policies. Appointment letters are issued after successful verification and medical clearance.

Table 1: Recruitment done in Indian Railways during 2004-05 to 2013-14 vis-à-vis during 2014-15 to 2025-26 is given as under:

Period	Recruitments
2004-2005 to 2013-2014	4.11 lakh
2014-2015 to 2025-2026	5.53 lakh
2026-2027 (upto 30.06.2026)	5.56 lakh (cumulative)

Source: Ministry of Railways. (Press Information Bureau)

Interpretation: Table 1 indicates a significant increase in recruitment by Indian Railways during the period 2014-15 to 2025-26, with **5.53 lakh** appointments compared to **4.11 lakh** recruitments during 2004-05 to 2013-14. The cumulative recruitment figure reaching **5.56 lakh** by 30 June 2026 reflects the Government's continued efforts to strengthen workforce capacity and address manpower requirements through sustained recruitment initiatives.

Table 2: Workforce Strength of Indian Railways

Particulars	Statistics
Total Workforce	Approximately 1.2 million
Route Kilometres	Approximately 68,000 km
Railway Zones	18 Zonal Railways
Railway Recruitment Boards	20
Nature of Recruitment	Group C & Level-1 Posts

(Source: Ministry of Railways Annual Report.)

Table 3. Recruitment Process Adopted by RRBs

Stage	Descriptions
Vacancy Assessment	Indent from Railway Zones
CEN Notification	Advertisement
Online Registration	Candidate application
CBT-I	Screening examination
CBT-II	Main examination
Skill/Aptitude Test	Applicable posts
Document Verification	Verification
Medical Examination	Fitness
Final Appointment	Joining

(Source: Ministry of Railways Annual Report.)

Interpretation: Table illustrates that the Railway Recruitment Boards (RRBs) follow a well-defined, sequential, and merit-based recruitment process, beginning with vacancy assessment and concluding with the final appointment of selected candidates. The structured recruitment framework, incorporating Computer-Based Tests (CBTs), document verification, and medical examination, ensures transparency, fairness, and uniformity in the selection process across Indian Railways.

Need Of The Study

Indian Railways is one of the largest public sector employers in the world, requiring a robust, transparent, and efficient recruitment system to meet its extensive workforce demands. The Railway Recruitment Boards (RRBs) play a pivotal role in ensuring that qualified candidates are selected through a standardized and merit-based recruitment process across various railway zones. In recent years, the recruitment system has undergone significant transformation with the adoption of digital technologies such as online applications, Computer-Based Tests (CBTs), biometric verification, and centralized recruitment procedures. These technological advancements have enhanced transparency, efficiency, and accessibility while reducing manual intervention and opportunities for malpractices.

Despite the strategic importance of the Railway Recruitment Boards in the human resource management framework of Indian Railways, there is a limited body of academic research that comprehensively examines their recruitment practices from an HRM perspective. Most existing studies focus broadly on public sector recruitment or e-governance, with comparatively little attention given to the operational mechanisms, technological reforms, and governance aspects of railway recruitment. Furthermore, the increasing availability of secondary data through official reports, government publications, parliamentary documents, and Railway Recruitment Board notifications provides an opportunity to systematically evaluate recruitment trends, policy reforms, technological adoption, and operational performance.

The present study seeks to bridge this research gap by providing a comprehensive analysis of the recruitment management system of the Railway Recruitment Boards based on secondary data.

II. Review Of Literature:

Over the past decade, studies on transport infrastructure have increasingly emphasized the pivotal contribution of railways to economic transformation, regional development, and employment creation. Indian Railways (IR), as one of the world's largest public-sector employers and a critical logistics network, has received considerable scholarly and policy attention. Research consistently demonstrates that investments in railway infrastructure generate substantial direct, indirect, and induced employment effects, while simultaneously reducing logistics costs and expanding market access (Pradhan, 2017; World Bank, 2018). The macroeconomic role of transport infrastructure is well established in development literature, which shows that improved connectivity strengthens productivity through market integration and reduced transaction time (Banerjee, Duflo, & Qian, 2020). These findings provide an analytical foundation for studying the expanding socio-economic role of IR. **Papola, T. S., & Sahu, P. P. (2012)** examined the trends and structure of employment in India with particular emphasis on the post-liberalization period. The study highlighted the challenges of generating productive employment in both the public and private sectors and emphasized the need for efficient recruitment mechanisms to ensure quality employment. The authors suggested that strengthening institutional recruitment

systems is essential for improving workforce productivity. However, the study did not specifically examine the recruitment framework of Indian Railways or the role of Railway Recruitment Boards, thereby indicating the need for sector-specific research.

Jain, A., & Akhouri, A. (2020) analysed the adoption of advanced technologies in Indian Railways and discussed how digital transformation has improved operational efficiency, service delivery, and organisational performance. The study highlighted the growing use of information technology, automation, and digital platforms within railway operations. Although the research emphasised technological modernization, it provided limited discussion on how these technological advancements have transformed recruitment practices within Railway Recruitment Boards, leaving scope for further investigation.

Kashi, K., & Zheng, C. (2013) examined the effectiveness of e-recruitment in improving organisational recruitment outcomes. The study concluded that online recruitment systems reduce recruitment costs, shorten hiring time, improve transparency, and expand the pool of qualified applicants. The authors argued that digital recruitment systems enhance fairness and efficiency in employee selection. These findings provide a theoretical foundation for understanding the adoption of Computer-Based Tests (CBTs) and online recruitment systems by the Railway Recruitment Boards.

Singh, P., & Finn, D. (2003) investigated the impact of electronic recruitment practices on organisational recruitment performance. Their study found that internet-based recruitment significantly improved organisational efficiency by reducing administrative costs and increasing accessibility for job seekers. The authors also noted that e-recruitment promotes transparency and standardisation in the selection process. However, the study focused primarily on corporate organisations and did not address recruitment systems within large public sector institutions such as Indian Railways.

Ministry of Railways (Annual Reports, 2023–24) provides comprehensive information regarding workforce strength, recruitment policies, technological reforms, and digital initiatives undertaken by the Railway Recruitment Boards. The report highlights the implementation of Computer-Based Tests, Aadhaar-based authentication, biometric verification, Annual Recruitment Calendar, and centralized online recruitment processes aimed at enhancing transparency and administrative efficiency. While the report provides extensive statistical information, it does not offer an academic analysis of recruitment reforms from a human resource management perspective, thereby justifying the present study.

Research Gap: Although several studies have examined public sector recruitment and railway administration, limited research has analysed the recent transformation of Railway Recruitment Boards after the introduction of Computer Based Tests, Aadhaar authentication, biometric verification and centralized recruitment. This study attempts to bridge this gap using recent official secondary data.

III. Objectives Of The Study

1. To analyse the recruitment procedures adopted by Indian Railways.
2. To examine recent recruitment trends in Indian Railways using secondary data.

IV. Research Methodology

The present study adopts a **descriptive research design** to study the recruitment procedures and recent recruitment trends of the Railway Recruitment Boards (RRBs) of Indian Railways. A descriptive approach has been employed to systematically explain the recruitment process and trends based on available secondary data. Since the study based on secondary data. The data for the study have been collected from authentic and reliable sources, including Ministry of Railways Annual Reports, Railway Recruitment Control Board (RRCB) publications, Railway Recruitment Board (RRB) notifications, Press Information Bureau (PIB) releases, official railway websites, peer-reviewed research journals, books, conference proceedings, and other relevant academic and policy documents. These sources provide comprehensive information on recruitment policies, recruitment statistics, and digital reforms implemented by Indian Railways. The study employs descriptive statistics, trend analysis and qualitative content analysis to interpret recruitment reforms, technological interventions and recruitment statistics obtained from official government publications. While **content analysis** was undertaken to interpret policy documents, reports, and official notifications related to recruitment reforms. The findings are presented through tables to provide a comprehensive understanding of recruitment management in Indian Railways and to support evidence-based conclusions and policy recommendations.

Recent Recruitment Trends In Indian Railways

One of the most significant trends is the increase in the number of recruitments after 2014. Between 2004-05 and 2013-14, approximately 4.11 lakh employees were recruited, whereas 5.53 lakh recruitments were completed during the period from 2014-15 to 2025-26. By 30 June 2026, the cumulative number had reached over 5.56 lakh recruitments, indicating a substantial increase in hiring to address workforce requirements.

Another important trend is the implementation of an Annual Recruitment Calendar, under which recruitment has been initiated for more than 1.61 lakh vacancies across recruitment cycles for 2024, 2025, and 2026. This reform is intended to improve workforce planning and ensure regular recruitment rather than sporadic vacancy notifications.

Recruitment during FY 2025-26 also demonstrates significant progress. A total of 47,084 vacancies were notified across six major categories, and 43,781 candidates had been empanelled by June 2026. Assistant Loco Pilot (18,799 vacancies) and Technician (14,298 vacancies) constituted the largest recruitment categories, reflecting the operational requirements of Indian Railways. Junior Engineer/DMS/CMA (7,951 vacancies), Constable (4,208 vacancies), Paramedical Staff (1,376 vacancies), and Sub-Inspector (452 vacancies) were also recruited in substantial numbers.

The recruitment process has also experienced rapid technological advancement. Since late 2024, the Railway Recruitment Boards have conducted Computer-Based Tests for more than 1.86 crore candidates under multiple Centralised Employment Notifications. Measures such as Aadhaar authentication, biometric verification, allocation of examination centres closer to candidates' residences, and the use of electronic jammers have strengthened examination integrity and reduced opportunities for unfair practices.

Transparency has emerged as another major trend. The publication of answer keys, candidate response sheets, objection windows, and final merit lists has increased accountability and public confidence in the recruitment process. Simultaneously, digital communication through online portals has improved access to recruitment information and reduced administrative delays.

Despite these improvements, the secondary data also identify persistent challenges. High application volumes, legal disputes, delays in document verification and medical examinations, and occasional technical issues continue to affect recruitment timelines. The Ministry of Railways has therefore emphasized continuous modernization, including expansion of tablet-based testing and further digitization of recruitment processes.

Table 4: Recruitment Trends In Fy 2025-26

Category	Vacancies Notified	Candidates Recruited
Assistant Loco Pilot	18,799	17,193
Technician	14,298	13,416
Junior Engineer/DMS/CMA	7,951	7,333
Constable	4,208	4,205
Sub-Inspector	452	450
Paramedical	1,376	1,184
Total	47,084	43,781

Source: Ministry of Railways. (Press Information Bureau)

Interpretation: Table shows that **Assistant Loco Pilot** and **Technician** positions accounted for the highest number of vacancies and recruitments during FY 2025-26, reflecting the operational manpower requirements of Indian Railways. Overall, **43,781 candidates were recruited against 47,084 notified vacancies**, indicating a high recruitment completion rate and the effectiveness of the Railway Recruitment Boards in filling sanctioned posts.

V. Findings Of The Study

The study reveals that the recruitment system of Indian Railways has undergone significant transformation over the past decade, with the Railway Recruitment Boards (RRBs) adopting standardized, transparent, and technology-driven recruitment practices. The introduction of Computer-Based Tests (CBTs), Aadhaar-based authentication, biometric verification, online application systems, and digital document verification has substantially reduced manual intervention, enhanced examination security, and improved the overall transparency of the recruitment process.

The study further indicates a considerable increase in recruitment activities after 2014. Official data show that approximately **5.56 lakh candidates have been recruited since 2014**, reflecting the Ministry of Railways' continuous efforts to address workforce requirements and operational demands. The implementation of an **Annual Recruitment Calendar** has further streamlined recruitment planning by ensuring regular notifications and improving manpower management across railway zones.

Another important finding is that the recruitment process has become more candidate-centric through the adoption of digital communication systems, online publication of answer keys, candidate response sheets, and objection mechanisms, thereby strengthening accountability and public confidence in the selection process.

Despite these advancements, the study identifies several operational challenges. High application volumes, prolonged litigation, delays in document verification and medical examinations, and administrative bottlenecks continue to extend the recruitment cycle. The analysis also indicates that although technological interventions have significantly enhanced efficiency and transparency, further improvements in recruitment

planning, inter-departmental coordination, and digital infrastructure are required to ensure timely appointments and reduce vacancy backlogs.

Overall, the findings suggest that the Railway Recruitment Boards have successfully modernised public sector recruitment by integrating technology with merit-based selection procedures. However, continuous reforms are essential to address emerging workforce requirements and further strengthen recruitment governance in Indian Railways.

VI. Policy Implications:

- The findings provide evidence for policymakers to strengthen recruitment governance through technology-enabled recruitment systems.
- The study highlights the importance of workforce planning and annual recruitment calendars in reducing vacancy backlogs.
- The analysis offers practical insights for public sector organisations seeking to adopt transparent, merit-based, and digitally integrated recruitment practices.
- The study may serve as a reference for future reforms aimed at improving recruitment efficiency, reducing administrative delays, and enhancing candidate satisfaction.

VII. Conclusion Of The Study

The present study examined the recruitment system of the Railway Recruitment Boards (RRBs) of Indian Railways using secondary data from official government reports and published literature. The findings indicate that the recruitment process has evolved into a transparent, standardized, and technology-driven system through the adoption of Computer-Based Tests (CBTs), online applications, Aadhaar-based authentication, biometric verification, and digital evaluation, thereby enhancing efficiency and fairness in recruitment. The study also highlights a significant increase in recruitment activities in recent years, reflecting the Government of India's efforts to strengthen the workforce of Indian Railways. However, challenges such as high application volumes, litigation, delays in verification procedures, and vacancy backlogs continue to affect recruitment timelines. Overall, the study concludes that while the Railway Recruitment Boards have made substantial progress in modernising public sector recruitment, continued technological innovation, effective workforce planning, and administrative reforms are essential to further improve recruitment efficiency and strengthen human resource management in Indian Railways.

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