Perspectives in Management and Society
Volume 4, Issue 4, December 2025

Analyzing the Factors behind the Failure of Railway Rehabilitation Efforts in Pakistan

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Abstract

.Pakistan Railways is playing a major role in the transportation and economic development of Pakistan; yet, most efforts of rehabilitation have failed. In this study, a qualitative systematic literature review of the research studies published from 2000 to 2026 was conducted to find out the main reasons behind the failure of railway rehabilitations in Pakistan. 120 studies were initially identified, 82 were screened, 65 were assessed for full text, and 52 studies were included in the final review. The results indicate that the main causes of rehabilitation failure are poor project planning, changes in project scope, financial issues, poor governance, political interference, communication gaps, poor contractor capacity, quality control issues and safety issues. These problems are exacerbated by corruption, poor infrastructure, poor maintenance, and a lack of technology implementation. It is concluded that for sustainable improvement and support to national economic development, the rehabilitation of railways needs robust governance, better project management, sufficient funding, modernization of maintenance techniques, and long-term strategic planning.

Keywords: *Pakistan Railways, Railway Rehabilitation, Governance, Project Management, Sustainability.*

Introduction

In terms of travel, railways play a vital role in the economies of developed countries (Nistor & Popa, 2014). The railway itself is in high demand both for passengers and goods. Taking a certain amount of fair can be utilized for the general public to move from one place to another. When a railway is working effectively, it reduces the rush on roads, bus stops and airports, for travel within the country (Kornhall et al., 2018). Compared to other modes of transport, railways are more economical, cheaper and safer to travel (Solomatina, 2022). For this reason, railways are important for social and economic growth (Wu et al., 2021). Low efforts of a country on railway lead to the waste of time and money. Over the past few years, Pakistan has faced a decrease in development of railway performance from 6.2% to 3.3% which challenges the infrastructure of nation. (Tanveer et al., 2020).

It is widely acknowledged that a better economic development depends on transport system. (Asim & Nafees, 2014). When the British were ruling in the Indian subcontinent, today's "Pakistan Railways" was

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named as North Western State Railways, which was changed to its current name after independence in 1947 and after the partition, 5,048 km of track came under Pakistan. (Asim & Nafees, 2014). Pakistan railways are owned by the government, which is managed by the engineering departments for better infrastructure and to make the travelling easy and safe. (Khan et al., 2023). The railway sector becomes a critical contributor to economic growth once an organization transition comes out of military control. (Ahmed et al., 2020). In the past few years, the railway has gone through various changes. The main purpose of change is to improve performance, increase efficiency and reduce short term losses (Khan et al., 2021).

But its betterment depends upon the funding and finance of government of Pakistan. Therefore, it is a state organized project that has been facing decrease in recent decades. In 2018, the railway had a deficit of PKR 32.6 billion, down from PKR 36.6 billion (Tribune, 2020). In the European countries, the railway is used for the production and distribution of goods and economic services.(Caset et al., 2018). Pakistan railways plays a role in connectivity and accessibility across the State. (Bashir, 2023). Failure of a railway track can result in profit reduction/ financial setbacks, legal obligations, serious interruption in maintenance and eventually, loss of life. (Sharma et al., 2018). Railway infrastructure and administrators are dealing with limited funds to ensure the safety and comfortable services required for the customer. But it is achievable by the adjustment of existing perspectives, utilization, care and shifting from corrective to preventing strategy (Kaiser et al., 2013).

In the corrective strategy the problems are identified after their occurrence rather than prevention but in preventing strategy, it is a design used to stop any damage before its occurrence which leads to less damage. (De Belie et al., 2018). As the world is experiencing a change in industry due to the development of technology, the railway industry must go for digitalization, using AI, the internet of things, and cloud computing for the betterment of the human economy. (Sarp et al., 2024). In short, railway projects and progress requires huge capital, time and resources to undo big losses and multiple risks and identify associated risks. (PMI, 2017). There is a report that declares that railway declines have many causes such as misuse of power and work, weak internal structure, false management figures, and not addressing the actual cause.

In 1970, the decline was started by importing of Chinese locomotives, which included bad intention as well as a huge amount of commission, and later fake parts were replaced in order to get more commission. Therefore, it was all false from the start of its operation till the end of its management. (Aslam et al., 2025). All the departments of the railway have caused its failure. From improper entries of people traveling to selling the track of railway, as it was not maintained properly at a lower rate than the market value, and later, no record of figures was found. There are several scams recorded in National Accountability Bureau (NAB) related to corruption of millions of rupees by the scrap scandal, repair of Chinese engines and handing over Shalimar Railways to a private contractor (Irfan et al., 2014).

Missing financial data in accounting leads to a weak accounting system and affect decision making process owned by government. Railway was also failed due to inadequate competence management, as a good industry requires better competence management, which includes the human factors, such as the maintenance, looking after and construction of railway.(Munawar et al., 2024). Another resources states that the absence of responsibility and assessment causes dishonesty and unethical conduct. (Poverty, 2000)The poor management can lead to financial irregularities, corruption, bad government handling and weak internal structure in Pakistan Railways. (Aslam & Anwar, 2025).

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Literature Review

The railway has been the object of intense study, especially in relation to sustainable transport. Sustainability is defined as living sustainably—that is, making sure that we use up our resources as we need them without impacting future generations (Økland et al., 2021). It is now a principle that has been adopted in infrastructure development. Railways are commonly regarded as an environmentally friendly mode of transport, given their environmental features of low carbon emissions and high capacity, playing a major role in sustainable mobility strategies (Ritchie et al., 2021). But if rehabilitation is unsuccessful, these sustainability gains will be substantially hindered, particularly in developing countries where railway systems are already stressed.

There is extensive research that indicates that failure to rehabilitate is caused in part by maintenance inefficiencies. The change from reactive to predictive maintenance continues to be underdeveloped with interventions only after problems occur and rehabilitation does not always lead to positive results, as stated by Bianchi et al. (2025) in their systematic review on railway infrastructure monitoring. Similarly, ScienceDirect (2024) also points out the huge backlogs in routine maintenance and renewals. The other inefficient maintenance strategy is the time-based maintenance approach, which can cause more defects to occur because it is not always able to identify the root cause of the defect (Sresakoolchai & Kaewunruen, 2023).

Other important factors are also related to technological limitations and no good implementation of modern systems, which leads to rehabilitation failure. Even with these high-tech solutions, such as predictive maintenance systems and digital twins, their practical application is still relatively uncommon. Although technological advances are available, railways are facing difficulties in implementing them (Bošnjaković et al., 2026). This void hinders railway companies to make informed decisions and carry out maintenance regimes. In support of this, (Rodríguez-Hernández et al., 2025) emphasize the ineffectiveness of predictive models due to lack of and inconsistencies in data.

This means that they are not able to identify any defects in the early stages. The railway infrastructure is ageing and operational needs are increasing (Emori et al., 2026). Research has indicated that increases in traffic volumes and environmental stress cause infrastructure deterioration. (McPhearson et al., 2015), have shown that the use of the railways often markedly accelerates the wear and tear, and hence the maintenance needs. Another layer is the climate change (Kasraei et al., 2024). Railway systems are not well adapted for the growing variability and extreme weather (Kaewunruen et al., 2026). Thus, after lines are rehabilitated, they can still fail during floods or hot days. Consequently, interventions are undertaken to fix only the overt damage, and not deeper structural issues.

Railway systems are very complex and interdependent. Failure in one portion of the system often impacts other subsystems very quickly. (Pagani, 2018) refer to this as failure cascades, or failure propagation, that occurs when there are individual failures that cascade through the system. In such cases, isolated rehabilitation is generally not effective as it adopts a 'silo mentality' approach. Besides, lack of co-ordination between maintenance works (Lidén, 2016) and operational planning further reduce efficiency and hinder rehabilitation programs to be successful (Bouillaut et al., 2020). In addition to technical issues, institutional factors are very important in determining whether rehabilitation efforts are successful. Limited competence and corruption result in a drop in system performance, as demonstrated in many developing countries with poor governance and inefficiency (Munawar, 2024).

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Moreover, inadequate policy implementation and political interference limit the impact of reform efforts (Aslam & Anwar, 2025). Financial mismanagement also leads to inefficient use of resources which contributes to the weakness of railway operation (Mak & Ibrahim, 2014). Another major problem with rehabilitation projects is a project management problem. According to Mafokosi (2018), numerous infrastructure projects face challenges related to inefficient management and the poor execution of the projects. The same is confirmed by Flyvbjerg (2013) who shows that cost overruns and delays are common in transport projects. Likewise, with the absence of proper risk management and risk mitigation strategies, the risk of failure is increased (Li et al., 2023).

Research Methodology

In this chapter, the methodology used in conducting systematic review on "Why railway rehabilitation efforts fail in Pakistan?" is described. This methodology comprised the research design, search strategy, data collection, inclusion/exclusion criteria, the process of selecting studies and the data analysis methods used in this research study. The primary aim of this chapter is to make the knowledge about rehabilitation of the railway sector, sustainability of infrastructure, maintenance systems, and governance failure of the railway sector and introduction of modern techniques and technologies for sustainable and competitive development of the railway sector more transparent, authentic and structured: This study has gathered data in the form of information from literature about the common reasons for rehabilitation failures and their implementation to the Pakistan railways.

In this study, qualitative systematic literature review (SLR) is used as a research design. Why the systematic review design was chosen for the present research problem is to critically review, synthesize and analyze existing literature on reasons of railway rehabilitation failures. The review design enables the researchers to collect, study, analyze and synthesize literature pertaining to rehabilitation. Identify institutional, technical, operation related, financial, environmental and governance problems in railway rehab projects that recur in an efficient and unbiased way in the implementation of infrastructure sustainability, maintenance system, technological application and governance failure of railway systems. The railway rehabilitation is a multi dimensional problem, which includes infrastructure, maintenance systems, railway project governance, sustainability and railway system technology innovation: the systematic review can therefore best be used as a framework for the synthesized conclusion.

The study utilizes Pakistan as well as international literature for comparison of best practices and application for the developed railway countries to the operating condition of Pakistan railways and for comparison purposes as well. The research is done in a qualitative and interpretative research design. The adoption of the qualitative design can be explained by the fact that this study attempts to comprehend the underlying reasons behind the failure in rehabilitation project. An interpretivist approach enables the researcher to think about the results, the interpretations, and also to read institution reports and/or policy discussions, as well as opinions from different studies. It allows researchers to understand the impact of governance failure, maintenance inadequacy, the limitations of technology and the financial issues on the rehabilitation project.

The data used in this study is second hand data. This data have been gathered from websites of international, national and governmental institutions as well as from databases and literature databases like Google Scholar, Science Direct, Research Gate, Springer, MDPI, World Bank and Asian Development Bank this is Pakistan Railways European Commission. From these databases following literature has been collected:

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Peer-reviewed journal articles, Conference proceedings, Governmental documents and Railway sustainability studies

According to the institutional reports such as those by the World Bank (2003) and Pakistan Railways (2022), governance and project management are key factors in railway rehabilitation. Studies of both Pakistan and international railways were made and evaluated to find out common problems in rehabilitation of the railway system and also to compare with the operational problems of Pakistan railways. A systematic search of Literature was conducted using different combinations of search strategies and using Boolean operators such as AND, OR, and NOT to identify literature of interest. The following keywords were used in the search process: Railway rehabilitation Pakistan, Pakistan Railways challenges, Railway infrastructure failure, Predictive maintenance, Railway sustainability, Industry 4.0 railway systems, Railway governance and corruption, Infrastructure rehabilitation failure, Digital twin, Railway maintenance, Climate resilience, Transport infrastructure project failure. As per search, keywords combination that was extensively used are listed below:

- Sustainability AND predictive sustainability
- Infrastructure AND climate resilience the railway
- Industry 4.0 AND railway systems
- When governance fails AND transport infrastructure fails
- Failure of governance AND transport infrastructure.

Other search terms were also employed based on the relevance and relevance at the search and selection stages to include or exclude irrelevant literatures. A limited timeframe for the literature has been set up which is 2000-2026 due to which latest literature on latest trends and best practices adopted for railway modernization was considered and included while those published before 2000 were not selected unless extremely necessary.

The Inclusion and Exclusion Criteria for Systematic Review

A total of 120 studies were initially identified through database searches and institutional reports. After removing duplicates and screening titles and abstract, 82 studies were retained for full-text review. Out of these, 65 articles were assessed for eligibility based on the inclusion and exclusion criteria presented in Table 1. Finally, 52 studies met all criteria and were included in the systematic review.

Table 1: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Research focusing on rail system restoration and upkeep	Research not connected to rail transport
Literature covering both Pakistani rail networks and global rail systems	Papers dealing exclusively with fields outside transportation
Articles published in English only	Materials published in languages other than English

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Inclusion Criteria	Exclusion Criteria
Research papers dated from 2000 to 2026	Literature released prior to the year 2000
Scholarly journal papers and reports from official organizations	Non-peer-reviewed content like blogs or popular media
Papers addressing administrative issues, upkeep practices, sustainability, or failures in rail infrastructure	Redundant publications or research lacking complete data

The selected studies were related to the identification of recurring identified causes for the railway rehabilitation and project management. The following studies have been selected from international studies which are used to gain a wider understanding of approaches towards sustainability and modernization of railways internationally. Prior to the writing of this Thesis, all the pertinent sources found in literature search were downloaded. Downloads were eliminated, during which the researcher first reviews all the downloads and identify similar documents based on titles, author and abstract and remove one of them. Title and abstract are then screened to identify relevant papers related to study topics, and exclude those studies not fit with the objective. After careful reading through and filtering for relevance of their topic, all eligible papers have been classified as either of the following groups:

- Railway rehabilitation failures
- Infrastructure durability studies
- Predictive maintenance studies
- Railway system maintenance
- Renewal railway sustainable
- Study of the railway systems
- Technological challenges
- Issues in the railway sector

The review focused on the history of railways and their failure, governance and political issues. This considered selection of studies contributed to the overall open and reliable review process. Relevant information has been extracted from all the selected literature and tabulated and organized according to certain categories listed below to support the analysis. The information that students are asked to choose from each study consists of:

- Author year
- Research questions/objectives
- Study design
- Key focus
- Literature source
- Methodology used the outcome of this key research is summarized here.

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- Failure of the rehabilitation projects – causes for it
- Recommendations proposed etc.

The data gathered have been organized into wider themes of research, due to the similarity of issues identified in each of the selected studies. Selected literature has been analyzed by the method of thematic analysis that is the nature of the process for identifying similar themes in the qualitative data. From the relevant studies analyzed in this research the following major themes have been identified.

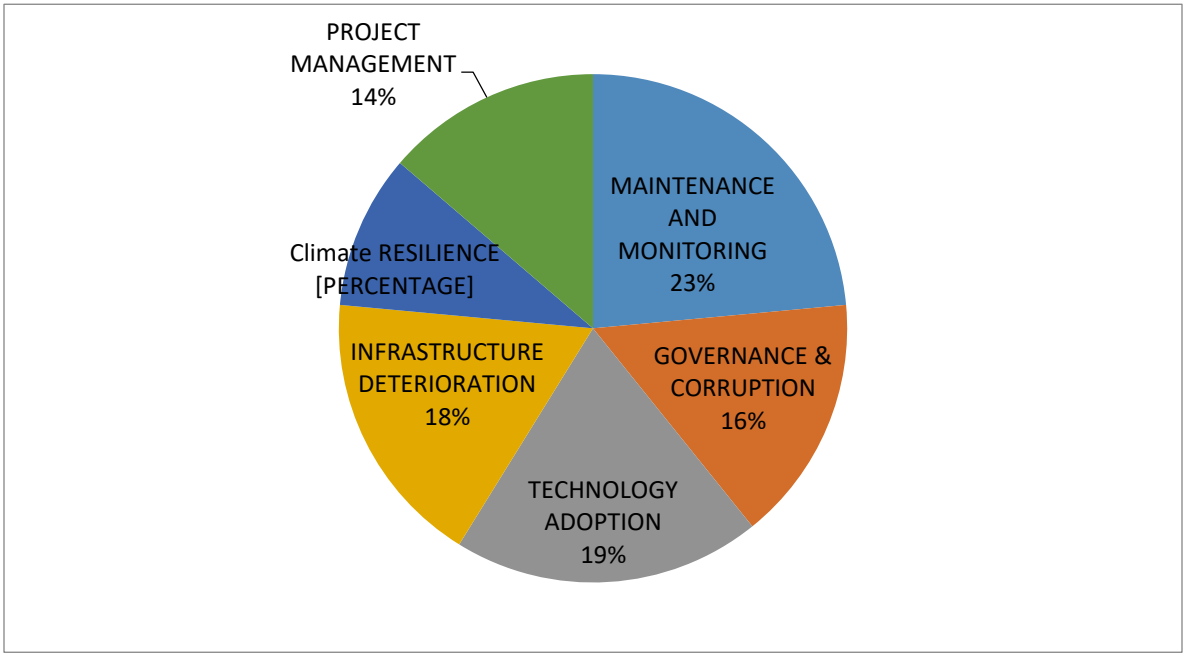


Figure 1: Key Factors Contributing to the Decline of Pakistan Railways

A substantial amount of literature indicates that corruption, undue political interference, weak accountability mechanisms and lack of effective governance, weak implementation of reforms are among the prime factors for the overall downfall and lack of effective rehabilitation of railway systems. (Aslam et al., 2023) stressed issues like institutional failure and financial mismanagement of railway systems. Weak maintenance strategies are a result of lack of sophisticated maintenance and monitoring systems which has led to continuous deterioration and rehabilitation required to maintain operational efficiency in railway systems. reported on the impact of less developed monitoring systems in rapid deteriorating railway infrastructure leading to continuous requirement of rehabilitation interventions at the increased cost.

The problem of over-loading due to the increasing freight and passenger traffic has deteriorated the railway infrastructure, increasing maintenance backlog and rehabilitation costs in the past few decades, studies done by (Auliani et al., 2024) (Bhaumik et al., 2025)also shows that although rehabilitation has addressed several visible problems it may not have addressed underline structural weakness. Challenges of integrating Industry 4.0, digital twins, AI, predictive maintenance systems are major problems in modernizing railway systems due to expensive implementation cost, low quality of data, lack of trained workforce etc. The European Commission (2022) highlight these short comings as hindrances in railway modernization projects.

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Several studies highlight the reasons behind the failure of transport projects, such as late project delivery, cost overruns and inefficient delivery of projects. (Flyvbjerg, 2007)and (Mafokosi et al., 2024)illustrate that ineffective project management contributes significantly to the project failures. Railway sustainability literature show that the increase in climatic variation, floods, stresses and climate change have significantly contributed towards degrading railway infrastructure(Feng et al., 2026) has emphasized the need for climatic resilient railway infrastructure rehabilitation methods. In railway systems one failure can spread into multiple failures due to its interconnected nature. Studies done by (Pagani et al., 2019)demonstrated that localized failures at critical nodes of railway network can lead to massive cascading failure.

Table 2: Comparative table of issues and recommendations

Issue / Failure Factor	What It Means (Realistic Explanation)	Evidence from Literature	Impact on Projects	Recommended Mitigation
Design Faults and Scope Changes	Design flaws happen when a drawing, specification or technical specification includes errors, Scope change is a situation where there is demand for extra work or changes to the project after it has commenced.	Design problem are cited by (Makola, 2023)as being critical to project failure. (Mafokosi, 2018)stated poor planning and scope creep were causes of delay and (Musa et al., 2026) and (Sandhy et al., 2023)were others who have identified design changes and design-risks.	This causes rework, delays, cost over-runs, conflicts, resource waste.Too much redesign will delay project timeline.	Perform detailed design reviews prior to implementation, define project scope, have change control processes in place, and conduct risk assessments during the design process.
Poor Project Planning and Scheduling	Poor planning leads to unrealistic timelines, inappropriate allocation of resources and ineffective coordination of activities. Scheduling is associated with the ability to properly sequence tasks.	Mafokosi (2018) recorded planning shortfalls and schedule delays. Musa (2023) identified planning deficits to be crucial in project failure. (Shrivastava et al., 2019) noted schedule-risks and Ikwueze (2024) failure to construct to program.	Projects get delayed, resources remain idle, projects go over budget, customer satisfaction, and failure to meet project deadlines.	Develop detailed work schedules, use project management software, perform regular schedule monitoring, and involve stakeholders early to establish realistic expectations.
Financial Shortfalls (Funding and Cost Issues)	Funding deficiencies are the result of funding being in appropriate, cash flow issues and cost over-runs.	Cost over-runs and resources shortage ere mentioned by Mafokosi (2018). Delayed payment and increasing cost were noted by Musa(2023) while financial-cash-flow-	This prevents construction, reduces buying, impacts quality and can lead to project cancellation.	Ensure sufficient funding prior to project start, set up contingency reserves, improve financial controls, and ensure good cash-flow

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Issue / Failure Factor	What It Means (Realistic Explanation)	Evidence from Literature	Impact on Projects	Recommended Mitigation
		risks was noted by Shrivastava (2019) and studies of Nigeria did note restricted budgets.		management.
Political and Governance Issues	Political influence, instability of policy, corruption, bureaucratic delays and lack of robust governance arrangements.	Lack of commitment and corruption were issues noted by Mafokosi (2018). Lack of commitment and bureaucratic problems are problems noted by Mussa (2023). Policy inconsistency within Nigeria, highlighted by Ajah (2025), and policy risks within the host countries are problems outlined by Telma(2024).	Investor confidence is lost due to approval delays, funding delays, regulatory conclusion, and deadline.	Involve government stakeholders at an early stage, obtain approvals, improve governance, and meet regulatory requirements.
Communication and Stakeholder Management Problems	Poor communication is a situation where project related information is not transmitted effectively among stakeholders, contractors, consultants and clients.	Lack of communication was a key risk noted by Makola (2023), as were the failures in communication identified by Mafokosi (2018), Ikwueze (2024) and Telma (2024) and coordination problems also identified by Mafokosi (2018) and Ikwueze (2024).	Misunderstandings, conflict, delayed decision making, duplication of effort and decreased effectiveness.	Develop communication plans, hold regular stakeholder meetings, set up reporting systems, and promote open information sharing.
Contractor and Management Capacity Issues	Deals with inappropriate contractors/PM team skills, knowledge, experience, leadership and resources.	Lack of contract management consultancy risk and contractor risk were issues highlighted by Shrivastava (2019). Poor workmanship and contractor negligence, Ikwueze (2024), as well as poor contractor performance, Mussa (2023) were issues noted.	Low productivity, substandard work, delays, accidents and increase product cost.	Thoroughly select contractors, assess technical skills, offer training, and enhance supervision and performance monitoring.
Quality and Technical	Happen if there is lack of controls to	Workmanship problems and	Defects, rework, safety issues,	Establish Quality Assurance (QA)

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Issue / Failure Factor	What It Means (Realistic Explanation)	Evidence from Literature	Impact on Projects	Recommended Mitigation
Control Deficiencies	ensure that quality requirements are adhered to or if technical specifications are ignored when carrying out the project.	specification errors, highlighted by Ikwueze (2024), along with product quality risks noted by Telma (2024) and Shrivastava (2019) were also issues to consider.	customer dissatisfaction, and maintenance expenses will increase.	and Quality Control (QC) systems, conduct periodic inspections and ensure adherence to technical standards.
Safety and External Risks	Workplace accidents, natural disasters, political instability, acts of vandalism, geological complications, and force majeure factors are among the circumstances.	Lack of safety risk and force majeure events were concerns of Makola (2023), where accidents, vandalism, riots and political instability, are noted by Iwueze (2024).geological and geopolitical risks are issue noted by Andri (2019).	Can impact workers injury, stop work, cost escalates, legal risk, and reputation loss of organization.	Implement robust health and safety procedures, risk assessments, contingency plans, site investigations and insurance.

Discussion

Pakistan railway has been facing a vast decline in its service due to poor finances, weak governance and a low rate of service delivery. They all failed due to poor implementation, corruption in politics and a lack of implementation of the policies. A weak structure has reduced the effectiveness of Pakistan railway. Less finances and insufficient investments in capital are leading to railway failure day by day. (Aslam & Anwar, 2025). Many researchers have identified corruption and incompetence as the major cause of railway failure. Railway of Pakistan suffers a lot in a negative perspective, which affects the efficiency and punctuality, one of which also includes poor maintenance.(Granström, 2008). The literature also claims that the government is dealing with major improvements in roads and transport related to it more than the railway.

Many studies claim that lack of competent leadership and poor management continue to delay the rehabilitation efforts.(Organization, 2018). Researchers also found that it remains unsuccessful because of poor planning and implementation. It can be successful if they have strong leadership, reduced political corruption and effectiveness. (Aslam et al., 2023). Pakistan railway is facing weak managerial and poor decision making process, which affects the planning for better rehabilitation and maintenance work. These weaknesses lead to poor project outcomes and weak rehabilitation. Another study claims corruption is systematic than isolated, which causes financial losses, misuse of funds and resources away from needs. Corruption discourage merit based hiring and fail to detect corruption, which leads to despite reforms. (Dahlström et al., 2012).

Another paper claims that a long standing delay in train and system issue can make trains unreliable. The term “dilapidated railway infrastructure” tells that a delay in repair process can cause old and poor tracks,

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insufficient and reduces the speed of train and their punctuality. It also tells about weak management and schedule which bring delays across the internet of modern railway networks. Another risk is identified in study that railway has high risk in frequent accidents and non-safety issues. The level crossing of passengers is the most severe risk, which leads to extreme and intolerable risk (Bianchi et al., 2025). Another paper recommends investment in railway infrastructure and strengthen the management system to reduce long term risks

According to a research paper of Pakistan Railways Time Paradox, Pakistan has faced delay in comparison of international railway systems because of outdated infrastructure, less repairing and weak schedule of handling the system effectively, where international railways go through regular updated schedule, technologies and digital monitoring of system with modern infrastructure (Emori et al., 2026). In another assessment of risk in Pakistan railway network, there is more human error in the major operational risk, but internationally, there is automated railway system that reduces human error, which helps in safety standards.

One of the major issue of corruption discussed in the crisis of Pakistan railway argues that corruption and weak management has become the major barrier for the effectiveness of the track and betterment of railway structure, as it reduces the governance structure, interference of politicians and lack of accountability where in Japan, Germany, China and France is compatible and more strong in terms of governance interference and operate strong management system (Kravchenko et al., 2020). The international railways system takes customer service more serious with punctuality, so that passengers take the railway seriously (Li & Pan, 2020). The systematic literature review shows the research with 20 research articles that are already published. They were published between 2000 and 2026. All the papers claim several repeated themes that are responsible for the failure of Pakistan railway. About the 24% part of research papers, the issue of monitoring and maintenance is discussed repeatedly 16% of the reviewed papers claim that the real issue is governance and corruption, while technology challenges are mentioned as 20% of papers.

The rest is about the climate changes and project management issues. These all explains that the real cause of railway failure is not due to a single factor but many, they can be financial, operational, governance, managerial or technical problems. Another important sight study of the literature is that many projects are rehabilitated because of focusing the defects that are visible rather than addressing the real cause of degradation. Moving forward to other studies, it highlights the mismanagement practice and increasing the cost on its maintenance is a continuous failure (Johnsen & Veen, 2013). In the same manner, the lack of technology, limitation on the improvement of quality, no digital monitoring of system and less rehabilitation efforts are postponement in the development of modern railway management system.

On the basis of the reviewed literature paper, there is a vast range of recommendations in order to improve the railway track, its maintenance, and let people trust again on the transport in the terms of travelling. Government must prioritize to reduce the interference of political pressure and improve check and balance. A fair procedure must be followed in order to measure the anti-corruption activities to ensure the best use of public resources.Long term beneficial techniques must be applied to replace the short term repairing of the system.A handsome investment should be raised to renewal the track, its upgrade and digital modernization. Modern technologies, automatic maintenance tools and AI- based tools must be adopted to improve safety.A good range of training programs must be introduced to improve the staff's

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work, and their feedback must be taken as well. There must be systems arranged to measure the risks and accidents to strengthen the management.The public and private travel of Pakistan railway must be upgraded though good investment, innovation and better performance.A long term strategy for railway should be made with better performance indicators such as punctuality, customer satisfaction and financial betterment.

Overall, the review systematic research paper demonstrates that railway rehabilitation requires a good investment with maintenance and monitoring of the system. It can be improved by the effective practices, including government effectiveness, raising investment and implementation of long term strategy for betterment.

Conclusion

Pakistan Railway is affected in the terms of failure due to institutional, operational, financial, and governance related weaknesses. The studies claim that Pakistan Railways has faced a declining experience because of only working on short term improvements rather that working on the internal structural and administrational problems, which leads to continuous struggle with inefficiency, safety and declining the public concerns and problems (Lu, 2017), (Mafokosi, 2018). A large number of literature declare that Pakistan railway rehabilitation efforts fail because of weak governance issues, low institutional performance and corruption. It not only describes struggling with efficiencies but with systematic, administrative, and sustainable reforms. In terms of corruption and weak competence, political interference and lack of accountability has reduced the organization's efficiency, and the decision making process has reached a negative point.

Mismanagement of public funds, weak planning, and not taking the concerns of the public seriously, the rehabilitation project fails to produce long term benefit (Pagani et al., 2019) Valuing the argument, (Parbo et al., 2016) highlight that government makes it challenging to reduce operational efficiency in Pakistan railways. Their low effort, including accountability system, and political appointments, undermines the modern system and technology (Shrivastava et al., 2019) Similarly, other argue the same for corruption and directly relate to rehabilitation programs. They further say that weak implementation results in poor developmental process and repeated failure of development projects (Ali & Khan, 2022).

Only investment itself cannot improve the system, but it requires a better system handling, day to day monitoring of the track and railway progress can help with developing a strong system with effectiveness (World Bank, 2020). A weak governance structure not only promote corruption but also contribute to poor system safety and maintenance (Khan et al., 2024). Weak maintenance, lack of training, and poor safety measures increase the risks of accidents and failure of system. This increases the financial burden on railway of Pakistan, which leads to high ratio of loan or credit in the governance of Pakistan. Without addressing the issue and working externally on the problems are unlikely to achieve the sustainable success.

Therefore, this paper states that a successful and better Pakistan railway system needs a beneficial transportation sector. If government works effectively and efficiency, including the fair financial investment, modern technology usage and improvement in management projects. It can become a contributor to national development as long as the railway is improved, than it will reduce the cost of transportation, improves the movement of passengers and goods and lower the road pressure. A better railway system and track will attract better investment and support individuals (Roy & Ghorbanzadeh,

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2023). Further suggestions of this review is that the railway can influence a positive view on Pakistan's economy by improving its connection within the country, such as travelling from one city to another, marketing, and sending goods between cities.

A faster and trustworthy transportation system can increase business efficiency and economic activities, and ultimately increasing the GDP growth by higher productivity. While looking at the international experience of railway networks, it is clear that a well-developed railway supports economic growth (Qamar & Saeed, 2016). A successful railway rehabilitation can improve the quality of life of an ordinary citizen. Better railway tracks not only provide safety, but also make it affordable for people to travel between cities. It can become a good transportation option for students, workers, and families by reducing expenses and improving quality, which is only possible with improvement in the punctuality, taking safety measures as their first priority and reduction of time. Railway up gradation can create job opportunities for people and improve the access to education and healthcare for people living in both urban and rural areas.

Hence, the Pakistan rehabilitation must not only be relied on the short term betterment, but it needs a continuous long term strategy for its improvement. Addressing all the major issues must be taken seriously for the better development of future generation

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