

UNLOCKING PAKISTAN RAILWAYS DEAD CAPITAL

Azwar Muhammad Aslam

(CGP #04-138)

3RD RASTA CONFERENCE

Thursday 14th & Friday 15th September 2023

Gun & Country Club, Islamabad

This document is unedited author's version submitted to RASTA.



RESEARCH FOR SOCIAL TRANSFORMATION & ADVANCEMENT

Competitive Grants Programme for Policy-oriented Research

Pakistan Institute of Development Economics

ABSTRACT

Pakistan Railways (PR) has land holdings throughout major cities in the country at the most lucrative spots. The study endeavors to present PR land holdings in terms of various classifications and uses. Most of these land holdings with enormous revenue potential via commercialization are being grossly underutilized constituting dead capital. This study, looks into the legal structure that governs PR, more specifically, its land holdings with an aim to identify the impediments in the utilization of railway land on commercial lines. The analysis is carried out through the review of acts, ordinance and S.R.O.s, complemented with the insights from relevant case law analysis including judgments of supreme court and high court of Pakistan pertaining to land enriched with insights from key stakeholders. The study identifies, non-provision of commercialization in acts and ordinance, frequent changes in statutes related to commercialization, title disputes between federal and provincial government, rules for disposal and implications of provisions of land acquisition acts to be significant hurdles causing gross underutilization of PR land. Lastly, we present, comprehensively, the evidence on redevelopment of railways from the globe, specifically of stations, to identify the arrangements that led to their successful completion.

PREFACE

Pakistan railways owns significant land holdings across Pakistan, that are underutilized and represents huge dead capital. The objective of the study is to identify the legal impediments in the commercialization of Railway land, along with the identification of PR land holdings across major cities of Pakistan. The study also provides an overview of redevelopment of railway station across globe, in order to identify the stakeholders and objectives involved in the projects.

The study presents statistics regarding PR land holdings and analyzes the legal structure of PR. The legal structure is reviewed through the analysis of relevant case law pertaining to PR land, along with the review of acts and ordinances and statutes enacted over the years. This helped in identification of legal issues acting as an impediment to PR land commercialization and redevelopment. Insights from key stakeholders further enhanced the findings of the study. Redevelopment of railway stations emerged as a significant tool for revitalization of urban spaces and increasing efficiency of transportation. This report presents comprehensive literature review complemented by diverse case of railway station redevelopment from across the globe to understand the practices and objectives behind redevelopment.

The study is funded and supported by Research for Social Transformation and Advancement (RASTA), the author is thankful to Mentors Dr. Ahmed Waqar and Mr. Omer Siddique for their insights and support that helped greatly in shaping and improving the study. I want to express my gratitude to Mr. Adeel Ahmed for his assistance and dedication to this project, which went above and beyond his role in the project and Mr. Zarak Jamal Mirdad Khan for being instrumental in providing some important resources. I would also like to thank Miss. Aqsa Gul for her hard-work throughout the duration of the project.

TABLE OF CONTENTS

ABSTRACT	i
PREFACE.....	ii
TABLE OF CONTENTS	iii
INTRODUCTION	1
1.1 Research objectives	1
RAILWAYS AND LAND.....	2
2.1 Railway Land Statistics	3
REDEVELOPMENT	11
3.1 Across different strands of Redevelopment approaches	11
3.1.1. Transit Oriented Development.....	12
3.1.2. Railway Stations as catalysts for urban Redevelopment	12
3.1.3. Redevelopment in the context of Nodes.....	14
3.1.4. Railway Land Usage	16
3.1.5. Public-Private Partnership & Redevelopment	18
3.2 Summarization and Evidence Analysis	19
3.2.1. Station Size	19
3.2.2. Objectives of Redevelopment.....	20
3.2.3. Model of Financing:.....	20
3.2.4. Land Use Post Redevelopment:	20
3.2.5. Actors Involved	21
3.2.6. Economic Gains or Outcomes	21
3.3 Key Takeaways.....	21
3.3.1. Redevelopment of Pakistan Railways.....	21
DEAD CAPITAL.....	22
4.1 Housing Schemes.....	24
LEGAL REVIEW.....	26
5.1 Land Ownership: Provincial Vs Federal jurisdiction	27
5.2 Land Commercialization	29
5.2.1. Railway land and Property Rules	30
5.2.2. Railway Land Disposal.....	31
5.3 Caselaw Analysis – Impediments, Issues & Practices.....	32
5.3.1. Title Dispute – Between Federal and Provinces.....	33
5.3.2. Commercial Utilization	34

5.3.3. Housing Societies	34
5.3.4. Procedural Mismanagement	35
5.3.5. Unauthorized occupation	35
5.3.6. Sludge	36
5.4 Key Insights from stakeholders.....	36
5.4.1. Railway Land Management.....	37
5.4.2. Sludge	38
5.4.3. Legal Hurdles.....	38
5.4.4. Analysis Paralysis.....	38
5.4.5. Human Resource & Efficiency.....	38
CONCLUSION	39
POLICY RECOMMENDATIONS.....	40
REFERENCES.....	43

LIST OF FIGURES

Figure 1 PR land holdings in District Rawalpindi	7
Figure 2 PR Land Holdings in Rawalpindi City.....	8
Figure 3 PR Land Holdings in Taxila City.....	8
Figure 4 PR Land Holdings in District Jhelum	8
Figure 5 PR Land Holdings in Jhelum City.....	9
Figure 6 PR Land holdings in Sargodha District.....	9
Figure 7 PR land holdings in Sargodha city	10
Figure 8 PR Housing for Railway employees.....	23
Figure 9 Pakistan Railway Co-operative Housing Schemes Rawalpindi	26
Figure 10 Railway Land ownership	29
Figure 11 Commercial Utilization.....	32
Figure 12 Themes Case Law Analysis	33
Figure 13 Themes - Key Informant Interviews	37

LIST OF TABLES

Table 1 PR Land Holding Across Provinces.....	3
Table 2 PR Revenue from Business	4
Table 3 PR land Use Classification	4
Table 4 PR Land holdings by possession.....	4
Table 5 Lease and encroachment by type.....	5
Table 6 PR land use in district.....	5
Table 7 PR land Holdings by possession in districts	6
Table 8 PR leases and encroachments in districts	6
Table 9 Exclusion and Inclusion Criteria of Railway Stations.....	11
Table 10 PR land holdings in Rawalpindi city.....	24
Table 11 PR Land on lease for housing Co-operative societies.....	24
Table 12 Exclusion and Inclusion Criteria of Case law analysis	27
Table 13 Summaries of Case law	Error! Bookmark not defined.
Table 14 Redevelopment of Railway stations- Across Globe	Error! Bookmark not defined.

LIST OF ABBREVIATIONS

PR	Pakistan Railways
TOD	Transit Oriented Development
PREC	Pakistan Government Railway Code for the Engineering Department 1962
PPP	Public Private Partnership

INTRODUCTION

State-owned-entities are developed with the vision to provide necessary services with an objective of society-wide inclusion in a manner that is appreciative of resource efficiency. As a society evolves, so does its needs and to cater to those needs these entities must also evolve accordingly to keep a balance between the cost incurred and the benefit provided. These entities, normally, are substantial in size and over time become resistant to change for various reasons which makes them either under-perform or be under-utilized or both. As a result, they tend to quickly become a burden to the taxpayer, hampering overall growth.

Within the landscape of state owned assets in Pakistan, Pakistan railway stands out owing to its substantial land holdings that are scattered across the country. Despite having considerable potential, these land holdings suffer from gross underutilization, resulting in significant financial losses. DeSoto (2001) terms such unproductive asset use as 'dead capital' i.e., those assets from which state is unable to extract sufficient benefit, as the intrinsic value and opportunity of such assets is high compared to its utilization. The debate at the heart of this argument revolves around the peculiar nature of these assets that hinders their convertibility into other forms of more usable capital. Thus, most of these assets are seen from the perspective of their physical attributes rather than the potential they hold in terms of their value addition in the economic process (Haque, 2017). Haque (2021a; 2021b, 2015) argues that the state-owned land in Pakistan fits the definition of 'Dead Capital' carrying sizable potential which if tapped into can provide substantial gains for the economy, providing opportunities for innovation, entrepreneurship and community. For this study, we build on Haque (2017) and argue that it is necessary to 'unlock' dead capital by allowing it to evolve and enable its convertibility into productive capital.

Even though status of land holdings under PR have been defined to a certain extent in its governing laws along with the context in which it can be used, yet this has not been evolved to cater the needs and opportunity that this land presents property. Also, most of the constructed and unconstructed portions of the properties have not become a source of revenue for PR because most of them are lying idle, not fit for use and have not been upgraded for ages. For this inability to generate any revenues from its properties and inadequate revenues from its legacy functions i.e., commuters and freight, PR is already in a dismal state. This makes PR a perfect case of 'dead capital' and 'unlocking' that dead capital through effective commercial utilization will provide much-needed financial support and economic activity.

Most of the railway's infrastructure and its governing laws in Pakistan have been inherited from the British Empire. Surprisingly, seven decades after independence, much of that infrastructure and laws still stand without little to no upgrades except for a minor administrative amendment. British constructed most railway stations strategically within the cities to serve military and commerce purposes for which substantial amount of land was undertaken. As cities have expanded over time due to growing population, these vast spaces around railway stations present an opportunity for investment in various ways adding to those for which they were initially built.

1.1 Research objectives

The Research objectives of the study are as follow.

- Identification of Pakistan Railway land across major cities of Pakistan.
- What are the legal impediments in the commercialization of Railway land?
- Literature review of redevelopment along with test case of an alternative use through case study on a parcel of Railway land.

RAILWAYS AND LAND

The British Empire, in 1849, authorized to build Railways after about a decade of promotional activities. It materialized the first short track just five years after in 1853. For the next five decades Government of India built a railway network that spread over 24,000 route miles along with many stations, mainly, either with the purpose of security¹ and as symbols of power and pride² (Kerr, 2003). By 1908, Indian Railways became the single largest investment project of the British Empire that was about 80% of their total industrial investment (Sweeney, 2009) and fourth biggest railways network of the world (Bogart & Chaudhary, 2013).

The decision to build a railway network in the subcontinent was embedded in the political, security and economic concerns of the British Empire that were strongly argued by Dalhousie (Thorner, 1955). Given the sheer land mass of the subcontinent, building a project meant connecting all major markets and economically viable destinations. Serving the political interest of the empire and keeping the threats at its border manageable (Satya, 2008).

The construction of railways in the British India can be divided into four phases (Thorner, 1951). In the initial phase that lasted about twenty years from 1849-69, the biggest challenge was to attract investment that was big enough to finance project of this scale, era of guaranteed- interest system. The British Empire encouraged their own public to invest in the stocks of private railway construction companies by promising them 5% guaranteed return on their investments (Bogart & Chaudhary, 2012). This meant that all the profits of the railway companies would go back the shareholders, however, all losses were to borne by the taxpayer. That was a classic case of private investment at public risk (Satya, 2008).

In the second phase that went on for the next ten years from 1870-80, the government also started to construct and operate side-by-side the private railway operators. Third phase of the railway construction that stretches from 1880-1924, brought out big changes in terms of how railway was envisioned to operate in the subcontinent. The British Empire modified the guarantee percentage from 5% down to 4% (Thorner, 1955) and bought out all but 20% of the shareholders of the private railway companies and became the owner of largest stake in railway in the subcontinent. This happened primarily because of the poor performance of the private railway companies. Fourth phase started around 1924, with the complete brought out of East India railway and complete state ownership and management. Post-partition, this policy of state management stayed in India as well as Pakistan.

The investment needed to build railways in the subcontinent was massive but so was the amount of land that was required to build it on. While guaranteeing dividend on shareholding in private companies was debated, there was understanding on part of the government that they had to be the provider of land for the construction of railways because it was argued to be in the favor of the government without being a financial burden (Bogart & Chaudhary, 2013; Sarkar 2010).

The availability of land and its possession with the private railway companies was the pre-requisite for starting railway construction. As government had to provide land it soon realized that Land Acquisition Act (1824) Regulation I didn't provide enough support for the acquisition of land by the government for this purpose because railway construction was not designated as the 'public works' (Shankar, 2018) and the acquired land couldn't be transferred to private railways for construction (Sarkar, 2010). Government could still acquire the land but the terms of acquisition could be

¹ Lahore Railway Station was built in 1862 in a fortified style with security concerns in mind after the mutiny of 1857.

² Bombay Victoria Terminus was constructed in 1887 in a very luxurious fashion that was to serve as the symbol of class, power and pride of the British rule.

challenged. Subsequent changes in the Land Acquisition Act (1824) allowed for the government to not only take possession of the land but also to value it and do both of them separately. This enabled the government to acquire land for railway construction quickly and transfer it to private railway companies. By 1870s government was given unrestrained powers to acquire land and only its valuation aspect could be contested.

As for the acquisition of land, railways officers were not authorized to acquire land for construction purposes rather the revenue officials (Mukerji & Sharma, 1990). Railway engineers classified their land plans separately for permanent and temporary land as temporary land was to be handed back to the revenue authority after use. The revenue authority, however, classified land into four distinct categories (Sarkar, 2010) i.e., Category A – to be used for permanent structures such as railway lines, stations, bridges etc., Category B – to be used for the execution of works e.g., ancillary structures, Category C – to be used for the preparation of materials such as bricks or storing materials and Category D - to be used for roads and workshops away from railway station but leading to it.

In return for the provision of land free of cost to the private railway companies (Mukherjee, 1966), Government reserved the right to buy back these companies and their assets after the end of either twenty-five or fifty years. After the construction of railways government, always exercised this right mainly due to the poor performance of the private companies and by 1908s owned the largest share in railways in the subcontinent. The mode in which these companies were overtaken were that they were paid equal to the accumulated capital they had invested in constructing their part of the railways.

2.1 Railway Land Statistics

Pakistan Railways (PR) owns 169,128 acres of land across Pakistan, out of which half of it is situated in Punjab while the rest of it is divided among Sindh, Baluchistan and Khyber Pakhtunkhwa. A percentage-wise distribution of PR land among provinces is presented in the following table.

Table 1 PR Land Holding Across Provinces

PR Land Holding Across Provinces	
Punjab	49.3%
Sindh	27.1%
Balochistan	14.0%
Khyber Pakhtunkhwa	9.7%
Total	100.0%

Source: Ministry of railway year book 2020-2021

PR landholdings are, primarily, designated to be used for its ‘operational use’³ – a fact that exists by design as reflected by PR’s business strategy. Lands held for operational purposes, such as railway tracks, stations etc. make up around 80 percent of PR’s total land mass, is the backbone of PR’s core business of transporting passengers and goods that has been earning it approx. 90 percent of its total income for the past few years. The rest of the 20 percent land holdings are tied to PR’s income from its non-core business e.g., land leases, rent for hire, stalls, manufacturing etc.

³ The land that is held for operational use includes land for right of way, and land required for the core operations of Pakistan Railways. It also includes the residential land used for housing railway employee.

Table 2 PR Revenue from Business

PR Revenue Earnings Core & Non-Core Business			<i>Rs in Billion</i>
Description	2019-20	2020-21	2021-22
Core Business	43.7	44.3	54.981
Non-Core Business	3.89	4.37	5.111

Source: Financial Statements of PR 2019-20 to 2021-22

Even though PR's revenue from its non-core business has been rising steadily yet, lands held for non-operational uses, that are further employed to raise structures to facilitate operations and for other minor uses such as agriculture, stacking, parking etc., holding substantial revenue potential for PR but have not been prioritized in terms of revenue generation. Big portions of these lands are situated in and near the city centers in districts all over Pakistan with significant economic potential. To paint a clear picture of the PR land holdings and the its revenue potential, we present statistics on land classified by use and possession at Pakistan level, Rawalpindi Division, Rawalpindi District, Sargodha District and Jhelum District level.

Table 3 PR land Use Classification

PR Land Classification by Use						<i>values in Acres</i>
	Operational	Builtup	Agriculture	Other		
				Stacking	Parking	Misc
Pakistan	136431	11513	16862	144	34	3722
Rawalpindi Division	14610	771	673	13	4	406

Source: Pakistan Railway

Approximately 10 percent of PR's total land holdings are situated in Rawalpindi Division which is one of the largest in Punjab in terms of area, 9 percent of which is held for non-operational purposes classified by use as shown in the table 4 above. The true picture of this land held for the purposes classified as built-up, agriculture, stacking, parking or miscellaneous in terms of its ability to generate revenues for PR is revealed once we look at it in the context of possession of these lands. Looking at PR's land classification with respect to possession is also important from the context of redevelopment. Our analysis reveals that even though PR is in possession of 90 percent of its land in the Rawalpindi Division. A substantial 10 percent of it is either leased out at sub-optimal rates or taken over by other government departments, encroached or held by katchi abadis resulting in absolute revenue loss.

Table 4 PR Land holdings by possession

PR Land Classification by Possession			<i>values in Acres</i>
	Pakistan	Rawalpindi Division	
Operational	136431	14610	
Official Buildings	4446	416	
Railways	140877	15026	
Lease	10750	857	
Encroachment	9985	180	
Other Gov. Dep	6954	405	
Katchi Abadi	562	9	
Total PR Land	169128	16477	

Source: Pakistan Railways

Statistics show us that a whopping one-third of total non-operational land held by PR and 12 percent of non-operational land held in Rawalpindi Division currently stands encroached resulting in continued revenue loss. Moreover, approximately one-fourth of the total non-operational land as well as in Rawalpindi Division is in the possession of various government departments at the national, divisional and district levels generating sub-optimal revenues. Only one-third of this land overall and one-half in the Rawalpindi Division is leased out to private parties.

Table 5 Lease and encroachment by type

PR Land Under Lease & Encroachment				
	Pakistan		Rawalpindi Division	
	Leased	Encroached	Leased	Encroached
Agriculture	9279	5526	659	13
Residential	955	3310	114	93
Commercial	233	770	52	56
Other	283	379	32	17
Total	10750	9985	857	179

Source: Pakistan Railways

In context of its revenue generating capabilities, the discussion on the classification of PR land with respect to its use and possession largely revolves around leased and encroached areas. A close inspection of the distribution of PR land among leased and encroached with respect to its used classification is presented in the table above. Data suggests that agriculture remains the biggest attraction for land leased by PR and also for the encroachment with about 55 percent of the total encroached land falling in the agriculture category. There is much less leasing in terms of commercial and residential concerns, however, encroachment of PR's residential and commercial property remains alarmingly high. In Rawalpindi Division, PR leasing follows the same pattern as the national level, there is much more encroachment in residential property compared to agriculture or commercial property.

For a deeper look at the land statistics, we also take a look at the data at the individual district levels to see whether PR's land classification patterns hold or not. The data is presented in tables below:

Table 6 PR land use in district

PR Land Classification by Use						
	Operational	Builtup	Agriculture	Other		
				Stacking	Parking	Misc
Rawalpindi District	2026	387	208	0.15	1.5	205
Sargodha District	2914	25	142	0.5	0.3	47
Jhelum District	4343	67	29	10	0.1	74

Source: Pakistan Railways

District level data on land holdings provide a more detailed picture of its use classification where operational purposes remain the primary and the largest use of PR lands. In non-operational uses, Rawalpindi District has a comparatively higher ratio of built-up structures whereas Sargodha has a higher ratio of agriculture related activities. A detailed classification of land by possession is given in the following table.

Table 7 PR land Holdings by possession in districts

PR Land Classification by Possession				<i>values in Acres</i>
	Rawalpindi District	Sargodha District	Jhelum District	
Operational	2026	2914	4343	
Official Buildings	256	23	47	
Railways	2282	2937	4390	
Lease	333	146	58	
Encroachment	77	2	12	
Other Gov. Dep	131	44	59	
Katchi Abadi	5	0	4	
Total PR Land	2828	3129	4523	

Source: Pakistan Railways

Data shows that, out of the total PR land in Rawalpindi District, about one-fifth is held for non-operational purposes. Out this non-operational land 60 percent of it is on leased while approximately 14 percent of it is encroached. A significant portion of that land is also been occupied by other government departments. In comparison to Rawalpindi District, Sargodha and Jhelum District hold much less land for non-operational uses but they do follow the pattern where much of that land is either leased or is occupied by other government departments while a portion of it is encroached. This pattern becomes the basis of the argument that PR has not been able to effectively manage its land assets to the fullest to earn maximum revenues. We also look at the non-operational PR land in context of possession with respect to leasing and encroachment and find some interesting patterns.

Lease for agriculture remains the main use for non-operational land in Rawalpindi, Sargodha and Jhelum Districts. However, there is an alarmingly high percentage of encroachment to non-operational land in Rawalpindi District compared to Sargodha and Jhelum and most of that encroachment is concentrated in the residential land and some of it in commercial land.

Table 8 PR leases and encroachments in districts

PR Land Under Lease & Encroachment							<i>values in Acres</i>
	Rawalpindi District		Sargodha District		Jhelum District		
	Leased	Encroached	Leased	Encroached	Leased	Encroached	
Agriculture	205	1.03	143	0	29	0	
Residential	114	61.92	0	0.58	0	8.7	
Commercial	12	9.27	2.3	0.03	16	2.6	
Other	2	4.81	0.8	0.9	12.5	1	
Total	333	77	146	1.5	58	12	

Source: Pakistan Railways

Overall, the data from selected districts and Rawalpindi Division suggests that management of the non-operational land is not a priority for the PR even though it is about 10 percent of the total PR land assets and hold potential for a substantial revenue stream.

We have also made an effort to geo-locate PR land assets in the selected districts. Railway landholdings are mostly found in and near the city centers. Location of land coupled with significant size of land holdings presents an optimal case of dead capital. Which can be unlocked through redevelopment and repurposing of the railway land and can generate significant revenue for the PR and economy. The pictorial depictions are presented in the figures below.

Figure 1 PR land holdings in District Rawalpindi

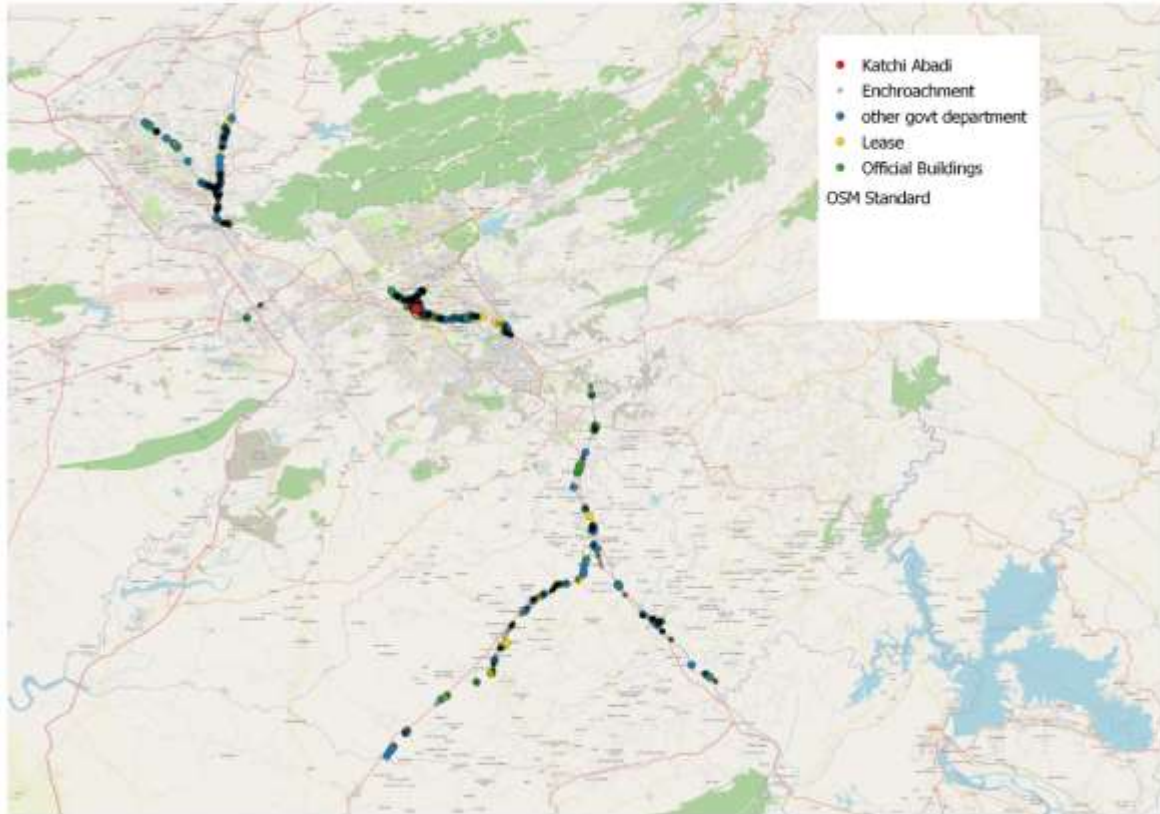


Figure 2 PR Land Holdings in Rawalpindi City

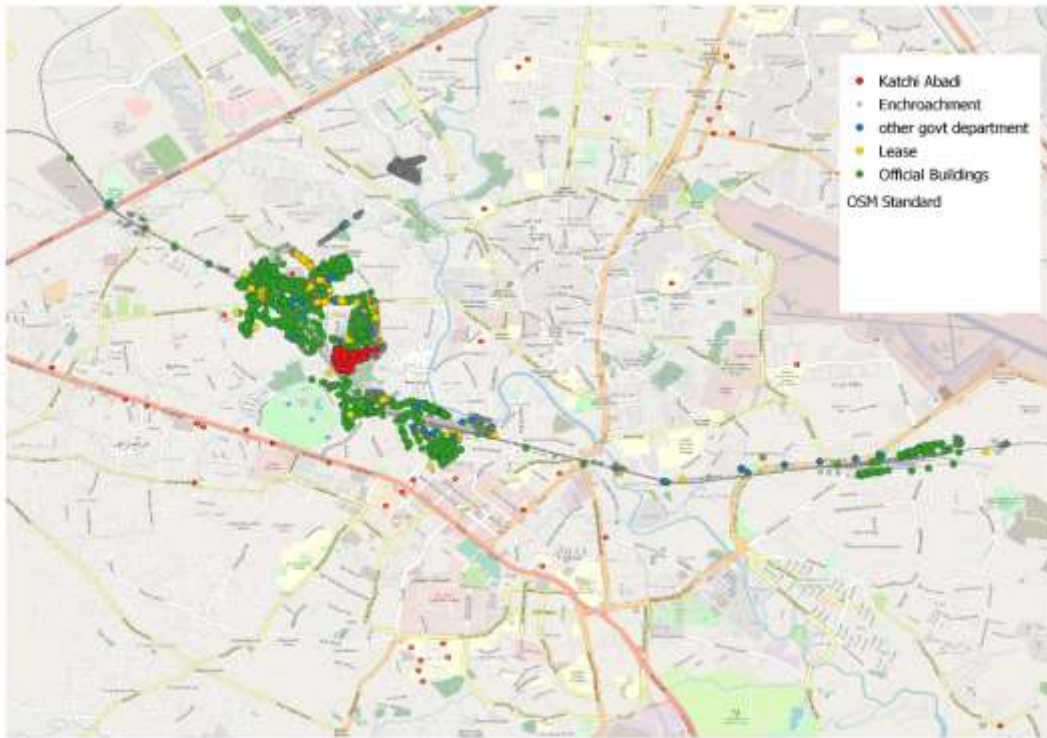


Figure 3 PR Land Holdings in Taxila City



Figure 4 PR Land Holdings in District Jhelum

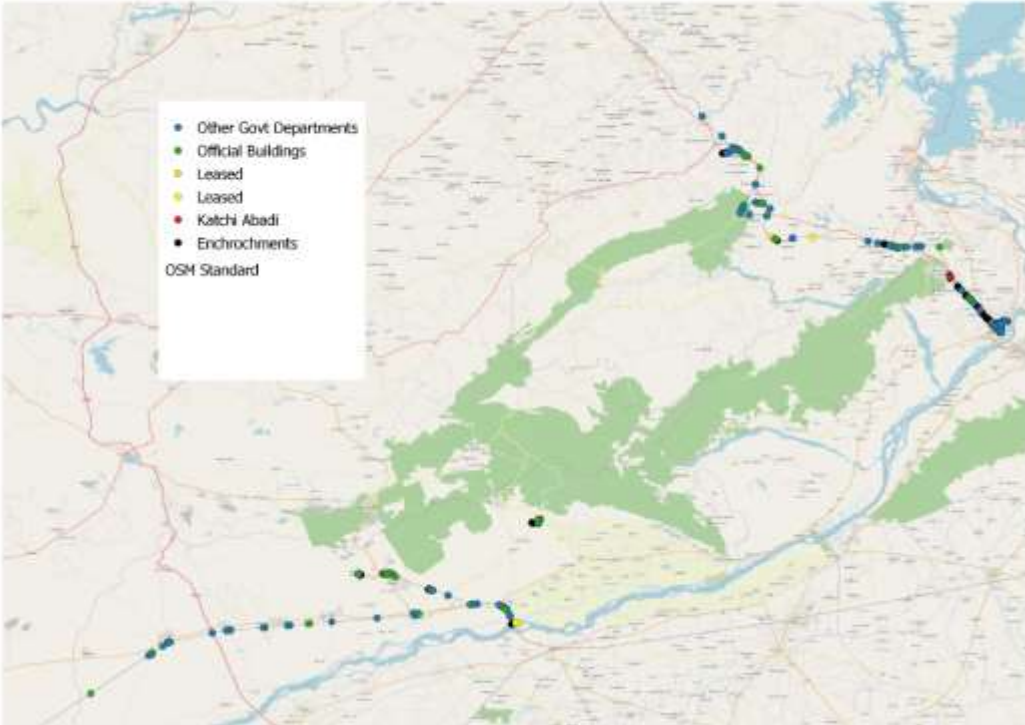


Figure 5 PR Land Holdings in Jhelum City

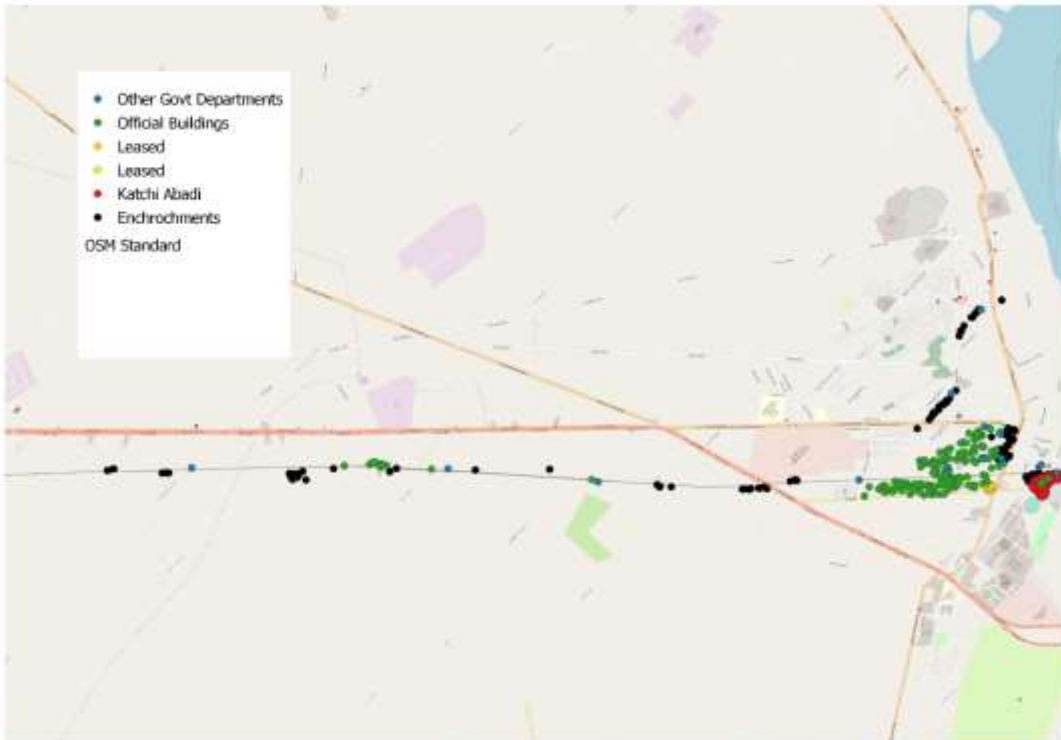


Figure 6 PR Land holdings in Sargodha District

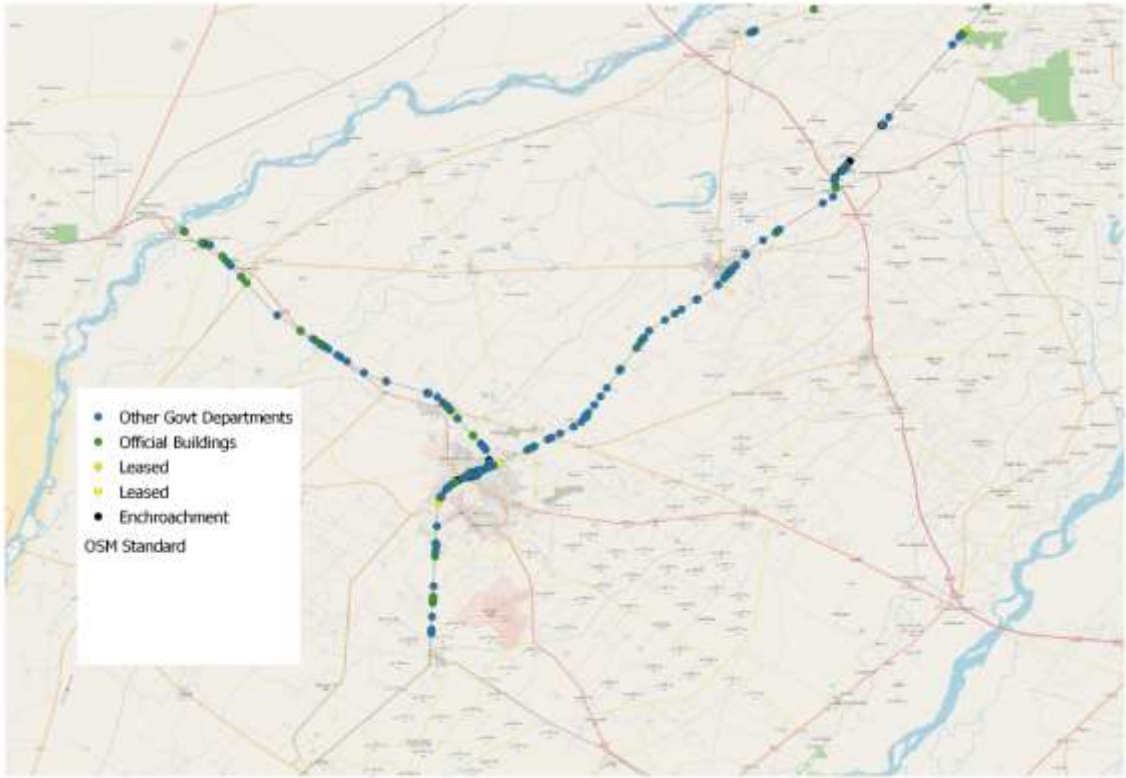
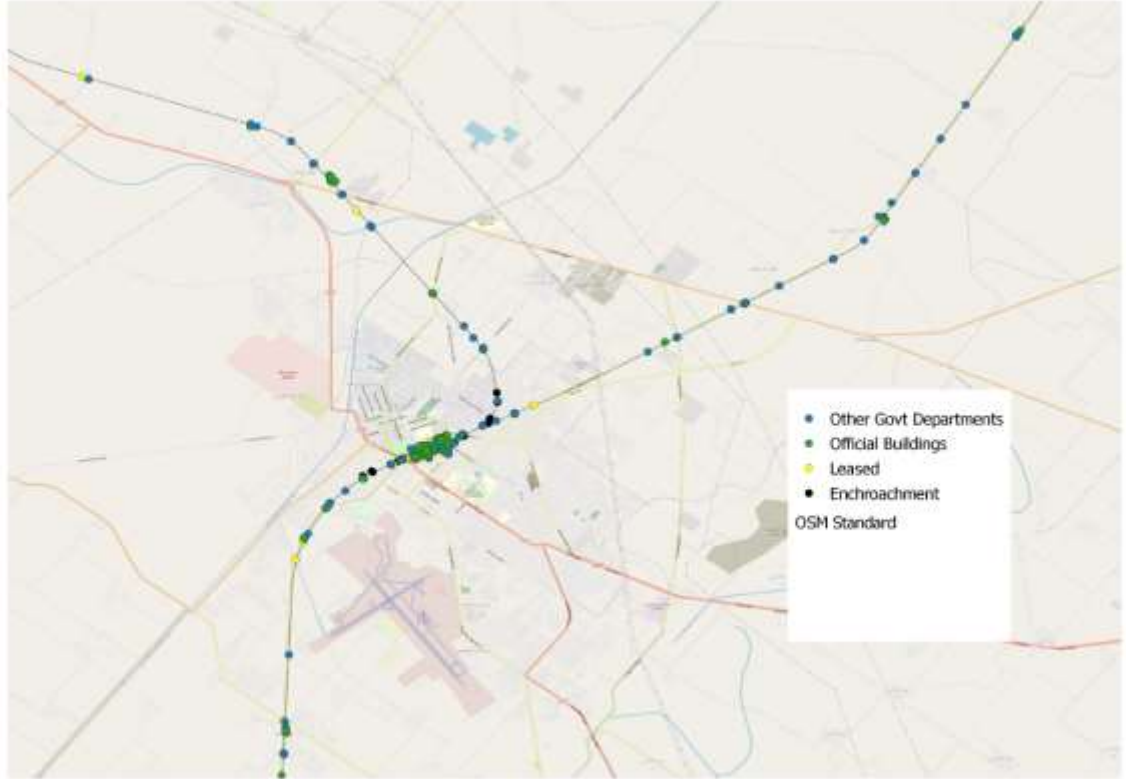


Figure 7 PR land holdings in Sargodha city



REDEVELOPMENT

In real estate and urban planning, redevelopment refers to the replacement, restoration, or repurposing of existing infrastructural developments on a site that has already undergone development. Pakistan Railways redevelopment and reform is one of the most emphatically proposed reform agendas by public policy experts (Ahmed et al., 2021; Ch., 2013; Elvik, 2006). The successful execution of a large-scale railway overhaul program requires a detailed execution roadmap, proper organization and governance structure, new and suitable capabilities, robust analysis and modelling, funding, and continuous interaction with many stakeholders. All of this is not practical without seeking insights from the best practices employed by successful railway redevelopment programs globally. Many Railway systems across the world have or are trying to redevelop and transform railway stations. This chapter examines the global practices in greater detail by carrying out multiple case studies of selected railway station redevelopment projects. Through these case studies, unique considerations and variables that aren't easily quantified, like project management, various modes of station development and funding models, governance, and land usage, among other factors, emerge as significant factors warranting a close and detailed inspection.

Railway redevelopment projects vary from city to city across countries by number of stations, station volumes, length of platforms, systems, train yards, facilities, number of actors and entities involved, etc. Thus, comparing projects strictly on a singular metric basis might miss important details. Therefore, this study employs collection of information on many aspects of individual projects, such as management, objectives of the project under study, execution strategies, modeling, funding, and interaction of a large number of stakeholders, economic benefits, and land usage post-redevelopment initiative; to examine these projects in greater detail. The inclusion and exclusion criteria of the study is presented in the table below.

Inclusion & Exclusion Criteria for a Collective Case Study of Redevelopment of Railway System	
Inclusion Criteria	Exclusion Criteria
Redevelopment Projects Only (in the context of urban redevelopment)	New construction project
Railway station project	Under-developed regions
Developed Countries only (with the exception of India & Hong Kong due to their large metropolises and mobility)	General TOD project (Railway track/line construction)
Project evaluation studies for wider policy perspective	or any development without regard to urban redevelopment
	Practical considerations: (privacy policies, access restrictions, confidentiality)

Table 9 Exclusion and Inclusion Criteria of Railway Stations

3.1 Across different strands of Redevelopment approaches

Within the context of railway station redevelopment, the literature presents a diverse spectrum of perspectives, approaches, and ideas. There is a need for a comprehensive and integrated approach to

understanding urban redevelopment processes, which considers the multiple perspectives offered by different literary strands.

This study involves navigating through the literature to map the evidence from various angles. This examination focuses on the three key aspects: transit-oriented development, redevelopment in nodes contexts, and railway land use. Through these lenses, we unravel the intricate layers that shape the evolution and discourse of railway station redevelopment.

3.1.1. Transit Oriented Development

Transit-oriented development (TOD) has become an increasingly popular strategy in modern urban redevelopment discourse as cities seek to create more sustainable, livable, and equitable communities by focusing on building dense, mixed-use developments around public transportation infrastructure. Transit-oriented development has emerged as a promising approach to urban redevelopment, with its potential to address the challenges of urban sprawl, reduce greenhouse gas emissions, and create more livable and sustainable communities.

The process of concentrating housing development, employment sites, facilities, and services around stations, stops, and junctions on transportation routes, which Calthorpe (1993) identified as transit-oriented development (TOD), has been occurring since the mid-19th century, even though the term was coined in the late 1980s. These places are desirable and profitable for urban development due to their high accessibility (Knowles et al., 2020). The integration of transportation and land use development at railway stations is a top priority for state and local governments in cities around the globe. Constructing transit lines to connect existing and prospective areas of growth, and concentrating urban development around stations to facilitate transit use is the fundamental idea that is similar all over the globe (Curtis et al., 2009).

The TOD strategy, relies on approaches used in the United States and Europe during the late 19th and early 20th centuries, when the building of streetcar and metro lines was combined with urban development. After the Second World War, planners were able to direct suburban expansion into satellite suburbs along transport routes. A third generation of TOD strategies has arisen in recent years for instance, TOD has dominated the urban growth planning landscape in the United States since 1990's (Papa & Bertolini, 2015).

Urban mega-projects are characterized by two distinct bodies of literature. On one hand, there is current research on infrastructure mega-projects that offers sharp criticisms of reckless and ineffective public investment techniques and policies, specifically in the transportation sector (Altshuler and Luberoff 2003; Flyvbjerg et al. 2003; Flyvbjerg et al. 2008). However, these works largely concentrate on roads, tunnels, or train lines and discuss little about railway stations and the effects they have on urban redevelopment (Peters, 2009).

The literature on urban redevelopment, on the other hand, is vast and commonly focuses on projects like shopping malls, stadiums, urban entertainment centers, or other high-profile "starchitecture" flagship projects as typical urban interventions in globalized, postindustrial times of international locational competition. Moreover, such flagship projects frequently take place in grey and brownfield areas, which may include operating or abandoned railyards (Peters, 2009).

To conclude, TOD has gained momentum as a sustainable urban redevelopment strategy, diverse literature and interdisciplinary approach unveils the broader context of urban mega-projects' transformative impact on cities.

3.1.2. Railway Stations as catalysts for urban Redevelopment

The development of railway stations is linked to urban development, as railway stations can serve as catalysts for urban redevelopment by attracting economic activity and creating new opportunities for

commercial and residential development in the surrounding areas. Redevelopment of the railway station area through construction of mega-projects is an important example of planned, large-scale, strategic interventions into the modern urban fabric intended to improve connectivity and breathe new life into important inner-city areas. They represent an essential but under-examined component of urban core post-industrial transformation.

At the end of the 20th century, the growth of the railway system took a new direction. Policymaking in Europe has focused heavily on the redevelopment of rail station neighborhoods. There are numerous instances of the redevelopment of railway station districts, such as in England (Liverpool), France (Euralille), Germany (Berlin), and the Netherlands (Amsterdam South Axis). Large sums of money are invested around the globe to upgrade the railway infrastructure, particularly through the building of high-speed rail lines. Rail becomes more competitive when the road network is congested. Additionally, a lack of capacity in the aviation network increases demand in high-speed rail connections as a substitute for feeder flights, which subsequently strengthens the position of railroads for international travel.

Rail mega-projects have the ability to drastically alter and reconstruct mobility patterns in the larger metropolitan area and beyond, because they are both significant real estate developments and public infrastructure projects at the same time, this fact has not received sufficient attention in literature (Peters, 2009). Combining the perspectives of several disciplines, with economics and spatial sciences being the two most significant, is essential for understanding the dynamics of the redevelopment of railway station areas.

Redevelopment projects for railway stations aim to address the lack of connectivity and interoperability between infrastructures while also enhancing the regional economy by constructing a brand-new, high-quality, multifunctional urban environment (Bruinsma et al., 2008). According to Bruinsma et al, 2008 the installation of new railway systems—the high-speed train and the light rail systems—has accelerated the redevelopment of railways as well as of their often-outdated immediate surroundings. Transit-related nodal areas, in particular inner-city railway stations serve as hubs for urban redevelopment. However, modern urban discourse reflects that the dynamics of rail station area redevelopment is an understudied issue.

Intermodality which is the organizing principle of present-day stations, intended to improve the complementarity between modes of travel and making different networks more interdependent. The station is clearly a political organization. Politics, economics, local and regional development, technology, corporate strategy, and other fields are among the relevant stakeholders participating in the inter-modality of present-day station. The station is the center of this "intermodality," requires rules such that all the participants can work together to provide effective linkages, accurate, up-to-date information, integrated fares and tickets, and a unified image of the entire rail industry. Haxton & Dupeyras, 2016 sees the station as a crucial component of development strategy. The balance of the townscape around the station can be redefined, re-concentrated, and densified, becoming a fundamental element in town planning strategy, by improving connections to open up specific regions and by developing new urban centers.

Railway stations have utmost potential to catalyze urban redevelopment, breathing new life into surrounding areas through economic activity and enhanced opportunities. In essence, the evolution of railway stations into intermodal hubs acts as a nexus of politics, economics, and technology - reshaping urban landscapes and fostering cohesion between diverse stakeholders. This multifaceted role underscores the railway station's pivotal significance within contemporary urban development strategy.

3.1.3. Redevelopment in the context of Nodes

Traditionally, railway stations are defined as places where transit related facilities and station facilities are located; where station facilities entail businesses, the neighborhood, performance centers, conference halls etc. The railway station concept consists of three aspects which are: being a place of passenger boarding on transit services, acting as a switchyard where freight is loaded and unloaded, and finally as a signal station where trains cross and are shunted (Choi, Hwang et al. 2007). Zemp, Stauffacher et al. (2011) conducted a very thorough examination of railway stations in Switzerland and the results condensed the functions of the railways into the following five generic functions: (i) link catchment area and transport network, (ii) support transfer between modes of transport, (iii) facilitate commercial use of real estate, (iv) provide public space, (v) contribute to the identity of the surrounding area.

Other researchers classify railway stations on different aspects as Juchelka (2002), classify railway stations into three types depending on the functions. The primary function, which is to serve as an interchange for multiple modes of transportation, is necessary for all stations. Medium-sized stations also serve additional secondary functions such as commercial, leisure, or cultural activities. Large stations have additional tertiary functions, such as serving as a central hub within a city. Choi, Hwang et al. (2007) categorized railway stations based on several factors, including: the type of operations (passenger-only, freight-only, or mixed use), the development type (multi-story, redevelopment, or new city section), the size (small, medium, or large), and the function (urban hub, transportation hub, or metropolitan hub).

The modern railway station is more than just a center of travel for trains and has emerged as a hub of business activity and contributes to the emergence of new spatial patterns in their locations. Keeping this in mind, the performance of railway station areas plays a crucial role in determining the competitiveness of cities in Europe, as competitiveness is essential to attract and retain capital flows.

Railway stations act as both: a node of transport connectivity and non-transport networks; and a place which affects the multitude of residential, corporate and commercial establishments in its immediate vicinity. This alludes to the various stakeholders of this compressed space of the stations and their individual, unique demands from this space (Bertolini 1996). Meijers (2000) concluded that any national transportation policy should promote the creation of not only nodes in the physical sense but also in spatial-functional, social, and institutional networks. More specifically, he stresses the importance of considering the transportation node as a potential meeting place. Policy makers consider the node-place concept useful because it helps structure the debate between land use and transport actors. This debate is seen as essential for achieving coordinated planning around stations (Peek, Bertolini et al. 2006).

Another model proposed by Peek & Louw, (2008) argues that multitude of different actors representing both node and place aspects, are involved in the process of station redevelopment including local and national governments, railway authorities, businesses, real estate developers, end users etc. These actors all have differing interpretations, objectives and opportunities within the redevelopment framework and this leads to the four different approaches in the context of railway stations. These approaches are typified as: connector, transportation node, meeting place, and as urban center. Further they argue that a multi-disciplinary approach, based on collaboration of the different actors, is necessary to harmonize and coordinate the four approaches and the multi-disciplinary approach can distinguish successful projects from unsuccessful ones.

Accurate identification of physical and functional usages of nodes is essential to achieve true integration between development and livable, safer urban environment. Integration between the railway networks and physical spaces can be better understood by identifying railway stations as an interchange of several transport networks, each with varying dynamics of urban rank and

functionality, and as places which sponsor networks and host a multitude of relations. The redevelopment goals may be achieved efficiently through multi-field planning and usage of well-designed public-private partnerships. In the case of the redevelopment of the Bologna Central Station, it was observed that coherent and shared planning allowed success in transformation control procedures and overall achievement of targets. Greater integration amongst the functions of the railways stations, the stakeholders involved and the various phases of development have been identified in literature as being pre-requisites of successful railway station redevelopment (Conticelli 2011).

Railway station redevelopment is often found to be a part of greater urban restructuring efforts, as evident in the case of Brno for example (Drkošová and Machalová 2008), and thus have been tied to complex urban dynamics of the modern world. Vreeker, De Groot et al. (2004) concluded that railway redevelopment projects are aimed at creating multi-purpose land usage which integrates transit networks with business and residential land usage purposes. Most recent European city renewal plans have had railway stations as cornerstones of redevelopment efforts due to their ability of improving connectivity, providing sustainable transportation alternatives and serving as symbols of urban sustainability.

Train/railway station area development (TSAD) have a more expansive reach and quicker connections across international borders, more prominently in Europe after the advent of high-speed rail. A study of 136 TSAD projects in Europe concluded that the fundamental component of effective implementation of TSAD objectives is long-term political and financial backing, as well as successful coordination among major public and commercial stakeholders (Peters and Novy 2012). Train station area redevelopment projects in Europe are commonly based around the upgradation of the transportation ability to support high speed train systems. In this regard, de Jong (2009) conducted a thorough examination of eight HST train stations in North-Western Europe and concluded that HST themselves are not as important to station area development as is normally assumed, rather it is the investment in local transport services to establish connection to the HST station that is key. The extent of accessibility to HST station helps determine how successful the station area will be. The establishment of HST connection almost always leads to further developments that target regional transport in and around the station.

Japan is always regarded as a particularly good example of railway station area redevelopment due to its long history of such projects and relative success. The evolution of Japanese rail transit hubs over a century provides a good reference on planning, construction, and redevelopment efforts. The Japanese government has placed great emphasis on sustainable urban regenerative policies and enacted several laws to enforce this concept since the turn of the century (Zacharias, Zhang et al. 2011). Considering the statistics from the Urban Redevelopment Law, that over 60% of urban development programs are associated with rail transit hubs. The work of Yang, Yao et al. (2019) conclude that the redevelopment projects work in tandem with overall urban planning policies to better traffic efficiency and overall vitality of the city. Moreover, redevelopment leads to higher floor area ratio in the immediate vicinity (500m) of the station, the formation of multi usage composite blocks that optimize functions, and the development of efficient vertical and horizontal multi-levelled pedestrian flow infrastructure, making inter-modal transfer much more efficient, along with promoting urban greenery and utilization of the three-dimensional space in stations.

In the case of Tokyo, Cao (2022) identified that the 1987 privatization, which led to division of operations of Japan National Railway(JNR), led to better quality and variety of train services, alongside better stations and facilities, all of which led to increased ridership levels. Crucially, JNR was legally allowed to operate non-rail businesses (for example: department stores) and it repaid its debt by selling land for commercial use. This was corner stone in station area redevelopment. The key lessons to ensuring the reciprocal relations between station area redevelopment and rail transit

networks include the timing of entry into the market. Transit infrastructure has been utilized, critical JR nodes have been transformed into multi-usage, high-density land usage areas that became major commercial attractions. This in turn has become the source for more travel demand creating a reciprocal relationship between the node and place.

Banerjee (2022) analyzed railway station redevelopments in the context of transport-oriented development in India and concluded that there are some expected roadblocks that are firmly embedded in the country's social, economic, and political institutions and are likely to hinder the effective execution of ambitious development schemes. These include redeveloping railway stations that are inclusive of lower-income households through the provisions of low-cost and inclusive social organizations. Transportation barriers in the form of low efficiency of transport systems, weak transit infrastructure and limited supply. Accommodating high-density spaces in an already saturated urban density environment of Indian cities. Problems with the implementation of PPPs present their own set of challenges and the lack of political continuity may generate a substantial obstacle for the successful and continued execution of megaprojects.

In the context of urban redevelopment, railway stations emerge as potent nodes capable of shaping multifaceted urban landscapes. Their significance is underscored by their dual role as transit infrastructure and centers of economic and social activity. The interrelation between stations and cities goes beyond traditional roles, creating interconnected urban centers, transformation cities into the economic hubs through complex interplay of transportation networks, land use, and the vision for a dynamic urban future.

3.1.4. Railway Land Usage

Railways own large swathes of valuable land according to World Bank, globally there are two major approaches that are commonly followed to leverage this land:

- (i) **Railway Right-of-Way:** The space along the railway tracks can be used for public utilities like communication lines, electricity transmission lines, and water pipes. For example, in India, RailTel, which is the subsidiary of Indian Railway, utilizes railway land by setting up optic fiber cables along the tracks and selling telecommunication services to private companies. In another example, in the US, the Southern Pacific Railroad did something similar and created a telecommunications network that is now become the third-largest wireless network operator in the country (Lawrence, et al., 2014).
- (ii) **Real Estate and land value capture mechanisms:** Railways also have land around their stations, which they lease or develop for commercial purposes by partnering with private land developers, auctions. For instance, in Japan the MTR Corporation leases space in and around its stations for retail and advertisements. They acquired the right to build residential and commercial buildings within and around the stations. This led to development of 94,000 housing units and more than 2 million square meters of commercial space, generating a substantial operating profit of US\$1.1 billion in 2013, providing vitality to the railway's core activities. Furthermore, the developments around MTR stations also contribute to increased metro ridership by generating additional metro trips. This model is now being explored for implementation in metros across China.

In Japan, land value capture mechanisms have been extensively applied alongside other funding arrangements for railway development. This approach varies based on location and stakeholders involved. Notably, private railways in Japan have successfully executed land re-adjustment projects around stations by acquiring land reserved for new town development and internalizing real estate capital gains to fund railway investments. Additionally, they have collaborated with private developers and building owners to share the costs, exemplified by the case of Yokohama MM21 Line.

The strategic transfer and sale of former rail yards in central Tokyo through public auctions and other transactions have been instrumental in mitigating the debt burden arising from the network expansion.

The effective utilization of railway land assets through partnerships, Joint ventures for development, and value capture mechanisms demonstrates the railway's capacity to unlock hidden potential while fostering economic growth and supporting operational activities. The case study of railway land use in Windsor, Ca shows that railway land adjacent to railway lines represents broad range of non-railway land uses. These are primarily divided and clustered into: residential and institutional land use; commercial and industrial land use; a mix of uses and open space (Lawrence, Ollivier & Paul, 2014).⁴ With the development of railway infrastructure, the land near the stations becomes more valuable due to accessibility. However, it's important to note that unless the railway investment attracts new private capital and investment into the region, the impact on land value is mostly just moving money around without creating new value (Cervero, 2020).

When railways are built or operated, the value of the land around them often goes up. This increase in land value results in higher property tax revenue for the government. However, this indirect way of generating income is not entirely reliable for the railway companies and public transit operators because the property tax money usually goes to the city's funds and not directly to paying off the debt incurred in building the railways (Cervero, 2020). To have a more dependable source of income for the railways, there are other strategies that can be used to capture the increased value of land (Cervero, 2020). These strategies fall into four main categories:

- (i) **Special Assessments and Betterment Taxes:** Special Assessments and Betterment Taxes are ways to raise funds for certain urban improvements, such as sewer, water, and sidewalk projects. These have been used in the US to co-finance additional improvements, like underground utilities and road expansion, around railways and bus-malls. For example, Los Angeles levied assessments on commercial properties near railways, generating around \$180 million, and Portland used betterment taxes to pay for 20% of the downtown streetcar's construction costs.
- (ii) **Tax Increment Financing & Impact Fees:** Tax Increment Financing (TIF) is another funding method where increased property tax revenue resulting from railway investments is used to revitalize distressed neighborhoods. Impact Fees are charges applied to new developments to cover the cost of expanding public services, and they have been used in San Francisco and Broward County to support transit operations.
- (iii) **Joint Development:** Joint Development is a value capture approach where a public transit agency partners with a private developer to build a real estate project on transit-owned land. The transit agency receives revenue or cost-sharing in return, making it a "win-win" arrangement.

All these methods have different benefits and limitations, and their suitability depends on the availability of land, the scale of the project, and the specific goals of the transit agency and the region.

The earnings of Indian Railways from its core business of running freight and passenger trains have been declining due to a decrease in freight and passenger traffic. To fund its capital expenditure, the Indian railways rely on budgetary support from the government and external borrowings (Kataraki, 2020). To overcome this financial challenge, the railways aim to increase their non-fare revenue (revenue from sources other than fares) from 5% to 20% of total earnings. For this purpose, a new

⁴ Non-Railway Uses of Railway Land- City of Windsor

non-fare revenue policy was introduced in 2017, proposing to monetize various assets such as trains, passengers, station platforms, buildings, land, and tickets.

Indian Railways has a significant amount of vacant land (approx. 43,000 hectares)⁵ which is not needed for operational purposes soon. Indian railway has planned to monetize this land by handing it over to the Rail Land Development Authority (RLDA) for commercial development. This will enable Indian Railways to earn non-tariff earnings without any cost through upfront lease premium or by creating assets like Railway Colonies and Railway Stations. RLDA's business model involves developing railway colonies and Multi-Functional Complexes (MFCs). They have already started re-developing 84 railway colonies and approximately 25,000 staff quarters. The revenue generated from leasing out these properties will be a significant source of earnings for Indian Railways. Furthermore, RLDA is re-developing 51 railway stations on a Public-Private Partnership (PPP) model, leveraging commercial development of spare railway land and airspace around the stations. The MFCs being developed at various railway stations will provide facilities like shopping, food stalls, book stalls, ATMs, budget hotels, parking spaces, and other amenities for rail users, further contributing to the railway's earnings.

Japan Railways, (JR East) achieved significant growth in non-transportation business by creating dedicated subsidiaries to manage retail, real estate, hotels, and IT businesses. They also collaborated with the government on station development projects using the Land Value Capture model of financing (Kataraki, 2020).

Hong Kong and Tokyo represent the examples of Land Value Capture model of financing. In both cities, private railway companies have been involved in building urban rail systems and generating profits through property development directly, instead of relying on deals with private land developers.

Hong Kong's public transport system, operated by MTR Corporation, is profitable because of its "Rail+Property" program (R+P). The program involves capturing the increased land value near railway stations by purchasing development rights for land and generating profits through property development. MTRC is a private corporation that sells shares on the stock market and operates on commercial principles. It finances and operates railway services with income from both fare revenue and real estate development (Cervero, 2020).

MTRC's involvement in property development has contributed significantly to its revenue, even more than fare income. The company has improved station-area environments by creating high-quality, pedestrian-friendly Transit-Oriented Developments (TODs). This proactive approach has led to sustainable urbanism and better financial returns for the R+P projects. The benefits of these pedestrian-friendly projects have been reflected in higher land prices (Cervero, 2020).

A study by (Bon, 2021) has shown that there exists a global trend where public land reserves are being turned into commodities. Urban authorities are seeking to maximize the value of land and unlock its potential for profit. The process of turning public land into private property is complex and involves both possession and dispossession. The way land is commodified varies and is not simply about private property taking over from local communities. Land is seen as an investment and is treated as a resource with different values and relations. The process of commodification doesn't always lead to full privatization, as central administrations, like the Indian Railways, still maintain some control despite external pressure.

3.1.5. Public-Private Partnership & Redevelopment

Long-term development is centered on sustainable means of transportation, and many nations and urban centers have realized that the future is in developing attractive, multifunctional, and generally

⁵ Indian Railways: <http://www.indianrailways.gov.in/>

car-free environments surrounding transportation hubs. Public investment can be financed by commercial gain through means like business rate supplements and developer contributions by capturing the growing property prices resulting from the synergies of effective placemaking (Lambert, 2017). Worldwide, many railway systems have, or are attempting to redeveloped and transform their stations through PPPs. Redeveloped stations not only improve the passenger experience but also increase revenue. Up to 20% of the overall revenues in many railway systems come from ancillary sources (Garg & Chaudary, 2017).

A PPP railroad project is considered a wise strategy for boosting the economy and performance especially in light of the absence of financial support for the railway infrastructure in underdeveloped nations (Jinyoung & Jinsu, 2014). PPP projects can offer extra financial capability in addition to providing public infrastructure. The government's budgetary restrictions can be eased by reducing financial investment in Social Overhead Capital (SOC) and allocating that money to other industries. Applying a productive PPP to a railway project reduces the cost of building infrastructure. For example, Korean govt introduced legislation on Public-Private Partnership in Infrastructure in January 2005, following which subjects and implementation procedures of PPP project were added to the new law. Public-Private Partnership (PPP) projects have demonstrated substantial impacts in developed countries. The UK's state treasury indicates that 21 PPP initiatives led to a nearly 17% budget reduction. US reports suggest that PPP arrangements can lower costs by 30-40%. Similarly, Australia highlighted cost-effectiveness, although the reduction in time was noted to be minimal. (Ministry of Strategy and Finance, 2009).

With over 2,700 acres of encroachment-free land available for commercial development, Indian Railways has ambitious plans to renovate 400 stations across 100 towns under PPP (Garg & Chaudary, 2017). Indian railway stations are far less capable of handling commuters than stations in Europe. There are inconsistencies in the utilization of land resources that are available for the construction of infrastructure. Anand & Gupta (2017) suggests that air space over stations be used to create commercial or mixed-use developments based on PPP mode in order to capture value. (Anand & Gupta, 2017).

Countries can benefit from the Japanese redevelopment approach. The Japanese train stations display a very effective land use strategy that makes the most of the area beneath, above, and adjacent to the stations. Due to the restricted land resources available, the necessary facility concentration turned into one of the redevelopment's best qualities. Japanese Interest is focused on the development's future stage through PPPs. The transformation of the station into a significant hub of production and exchange provides an appealing model for the construction of transportation hubs elsewhere with the usage of PPP mode of financing.

3.2 Summarization and Evidence Analysis

The study compares and contrast the different redevelopment projects across the globe, making it easier to identify commonalities and differences among them. Several key variables were identified related to the redevelopment of railway stations across different countries. These variables include station size, objectives of redevelopment, model of financing, land use post redevelopment, actors involved in decision making, and economic gains or outcomes of the redevelopment projects. Here are some key findings:

3.2.1. Station Size

The size of the stations varies significantly, ranging from smaller stations such as Bijwasan, Swansea, Corby and Burnham on Crouch railway stations, including a number of smaller railway stations in the UK, which are really small and localized with limited number of platforms to huge multi modal transportation hub stations with multiple platforms and extensive areas such as Tokyo Station, the

West Kowloon and New York Grand Central. It can be deduced that station size is dependent on the nature of urban agglomerations and the demand for passenger rail service within the perspective of overall urban design and transit needs.

3.2.2. Objectives of Redevelopment

The objectives of the redeveloping railway stations have been found to be as diverse as improving transit efficiency, increasing revenues, enhancing the retail and commercial spaces, creating multi-modal transit hubs, and promoting sustainable growth or simply aiming for futuristic landmarks of architecture and design and developing technologically advanced public amenities. One such example of futuristic approach to redevelopment is West Kowloon and Tokyo Station which can be hailed as world's most technologically advanced railway stations. The design of the train station, especially that of the platform itself, has an influence on the pedestrian movements. The objectives of redevelopment are also strictly dependent on the specific challenges faces by the station in terms of capacity, passenger service, and revenue generation.

3.2.3. Model of Financing:

The financing models used for the redevelopment projects differ across countries and stations. Public-Private Partnerships (PPPs) are commonly employed, involving collaboration between government entities and private sector actors. In our selected sample, it was found that some stations were government-funded, while others involved joint ventures or compete-and-cooperate models. The financing models totally depend on the local development agendas and forms of government. In India, for example, the new wave of redeveloping railway stations by Indian Railways has shunned PPP's due to its less efficient outcomes in India. Indian authorities are employing EPC and other variations of PPP models preferably over PPP modes of financing (Garg & Choudary, 2017). While in some of the mega railway stations of the world, such as West Kowloon, Melbourne Southern Cross and Incheon Airport Railroad Express, mode of financing was predominantly PPP. PPP is successful for assets which have high commercial viability (Garg & Choudary, 2017). However, some railway investments were least attractive to private business such as Germany's Dresden Hauptbahnh, Osaka Station and Cardiff railway station due to their surrounding urban landscape and commercial ecosystem.

The size of a station influences the choice of financing model for redevelopment. Larger stations with extensive infrastructure requirements and higher costs may necessitate more substantial financial resources. Public-Private Partnerships (PPPs) are often considered for large-scale redevelopment projects as they allow for private sector investment and expertise. Smaller stations may rely on government funding or simpler financing models due to their relatively lower costs. The choice of financing model is influenced by the financial feasibility and the need to attract private investment based on the size and potential revenue-generating capacity of the station.

3.2.4. Land Use Post Redevelopment:

The land use post redevelopment varies depending on the specific station and its objectives set out for redevelopment. Examples include integrated bus terminals, office districts, commercial spaces, retail hubs, urban centers, and public entertainment spaces including art studios, museums, theatre and cinemas and shopping malls. From the cases under examination, it is evident that world railway stations are now have become a lot more than the regular passenger rail activity i.e., being used beyond transportation. Modern rail stations perform a diversity of functions and serve better integration in the urban landscape by offering inter-modal connectivity, multi-dimensionality and sustainability. The efficient use of space above stations, construction of skywalks, and construction of buildings involving mixed use and multiple use of land is the need of the day owing to increasing demand for space in urban centers.

3.2.5. Actors Involved

Various actors are involved in the redevelopment projects, including government entities, railway authorities, private sector companies, property developers, architects, and transportation corporations. The specific actors and their roles differ from station to station and across countries depending on the governance and administrative systems. Each stakeholder is important in such a program and knowing their point of view can be helpful for right design and successful execution. The key takeaway is that a mix of both private and public actors is required to redevelop the railway stations because railway stations across the globe remain a public good till date.

3.2.6. Economic Gains or Outcomes

The economic gains and outcomes of the redevelopment projects are diverse across stations, but they generally aim to increase revenues, attract investments, create employment opportunities, enhance the attractiveness of retail spaces, improve transit services, and contribute to the overall growth and development of the surrounding areas.

It was found that the choice of financing model can impact the post-redevelopment land use and economic gains. When private sector participation is involved through financing models like PPPs, there is often an emphasis on revenue generation and commercial viability. This can lead to the inclusion of more commercial and retail spaces in the post-redevelopment plan. Private investors typically seek to maximize their returns on investment through the development of retail hubs, office spaces, and other revenue-generating activities within the station area. Certain financing models prioritize mixed-use development around stations. This approach integrates various land uses, including residential, commercial, and recreational, in the post-redevelopment plan. The financing model may incentivize the inclusion of diverse land uses to create vibrant and sustainable station areas that cater to the needs of the community.

3.3 Key Takeaways

The key lessons drawn from these twenty-five case studies and many other experiences across the world include the following:

- Investment in stations development need to be undertaken in a planned and integrated manner. It takes time to develop the overall assets.
- Customer interest is kept foremost in any design and redevelopment project.
- A mix of Public and Private funding is required to redevelop the overall portfolio of stations—Railways remains a public good.
- A strong institutional setup with a dedicated organization to maintain and manage stations development is a global norm
- Creation of a separate and specific entities assists in simplifying the transaction and making it attractive for private players
- PPP is successful for assets which have high commercial viability.
- Dispute resolution mechanisms and frameworks should be actively incorporated in agreements.

3.3.1. Redevelopment of Pakistan Railways

To extract lessons specifically for the redevelopment of Pakistan Railways, we need to consider the unique context and challenges faced by the railway system in Pakistan. However, based on the findings of the comparative analysis of the case studies, it is recommended to:

- i. **Identify Specific Objectives:** Define clear objectives for the redevelopment of railway stations in Pakistan, taking into account the capacity constraints, passenger service improvements, revenue generation needs, and local development agendas.
- ii. **Explore Financing Models:** Assess various financing models such as Public-Private Partnerships (PPPs) or joint ventures, to determine the most suitable model for the redevelopment projects in Pakistan. Consider the local development context, financial viability, and potential private sector participation. Engaging the private sector in the redevelopment of railways is the need of the day, as it can provide significant financial resources for railway redevelopment projects. This will relieve the burden on already drying up public budget of Pakistan railway and will allow for the timely implementation of redevelopment plans. Furthermore, private investment often brings efficiency and innovation while at the same time allowing for the sharing of risks between the public and private entities to railway redevelopment projects.
- iii. **Optimize Land Use:** there is a need to shift focus on efficient land use above and around railway stations in Pakistan to accommodate mixed-use and multiple-use development. Large swathes of railway land in Pakistan lay idle. Emphasize the integration of different functions such as commercial, retail, office spaces, public amenities, and cultural facilities to create vibrant and sustainable urban centers. The ideas of '*smart stations for smart cities*' need to be put in practice now.
- iv. **Foster Collaboration:** Engage relevant stakeholders, including government entities, private sector companies, architects, transportation corporations, and local communities, in the decision-making process. Encourage collaboration and partnerships to ensure the successful execution of redevelopment projects.

By considering these lessons and tailoring them to the specific needs and priorities of Pakistan Railways, it is possible to drive successful redevelopment initiatives that improve transit services, promote sustainable city growth, and enhance the overall urban landscape in Pakistan.

DEAD CAPITAL

Government land in its current state is dead capital with an opportunity to revive the economy through unleashing its untapped potential (Haque, 2021; Haque, 2017; Haque 2015). The underutilization of land through unproductive use despite having potential for productive activities turns it into dead capital (De, Soto, 2001; Haque, 2017). Government around the world are mostly inefficient in the utilization of state-owned assets, and are looking upon these assets from budgetary point of view, which seem cheap since the opportunity cost is not part of the budgetary cost (Tanzi & Prakash, 2000). Traditional approaches for valuation of public land ensures misuse of public assets (Detter & Folster, 2016). Only Professional management of the public assets and balance sheet can ensure gains for the state (Mehmood, 2022).

Similarly, the present state of PR land holdings portrays a grim picture, the management of land is not efficient and the purpose for which land is being utilized is not productive. PR land is found at prime locations with high market value, and in most cases is found at the centers of the cities. Majority of the PR land in cities under its possession is used for providing housing to its employees, and at locations with potential for significant commercial activities.

Railway stations around the globe are now treated as the catalyst for the change, and keeping that in view the land around the stations is redeveloped to cater the needs of growing cities. This also provide significant revenue for the state and railways through commercial utilization. However, in the

case of Pakistan the situation is different as presented in the figure 12 below which depicts the railway station and its surroundings. The land highlighted in red is the railway land under the possession of PR which is solely used for the purpose of providing housing to its employees. According to estimates the land highlighted in red is approximately 160 acres. The land is still used for the purposes for which it was initially allocated in the railway land plans in the British era. Such land use constitutes gross underutilization (Haque, 2017; 2015) the employees can be monetized against housing instead of providing accommodation (Haque et. al., 2021). The freed-up land can be utilized for dense high-rise mixed-use purposes prioritizing commerce, this will enable commercial activity and generate significant revenue and employment (Haque & Nayab, 2007) thus unlocking dead capital. The other option can be the redevelopment of land through high-rise construction and accommodating the current employees in high-rise apartments while utilizing the rest of the land for other revenue generation purposes.

The presence of commercial market in the shape of Sadar Bazaar and the location of PR land, provides opportunities for commercial utilization of land in the shape of shopping plazas and hoteling etc. But that demands either the land be released to private sector or entrusted to professional management entity for redevelopment and commercial exploitation.

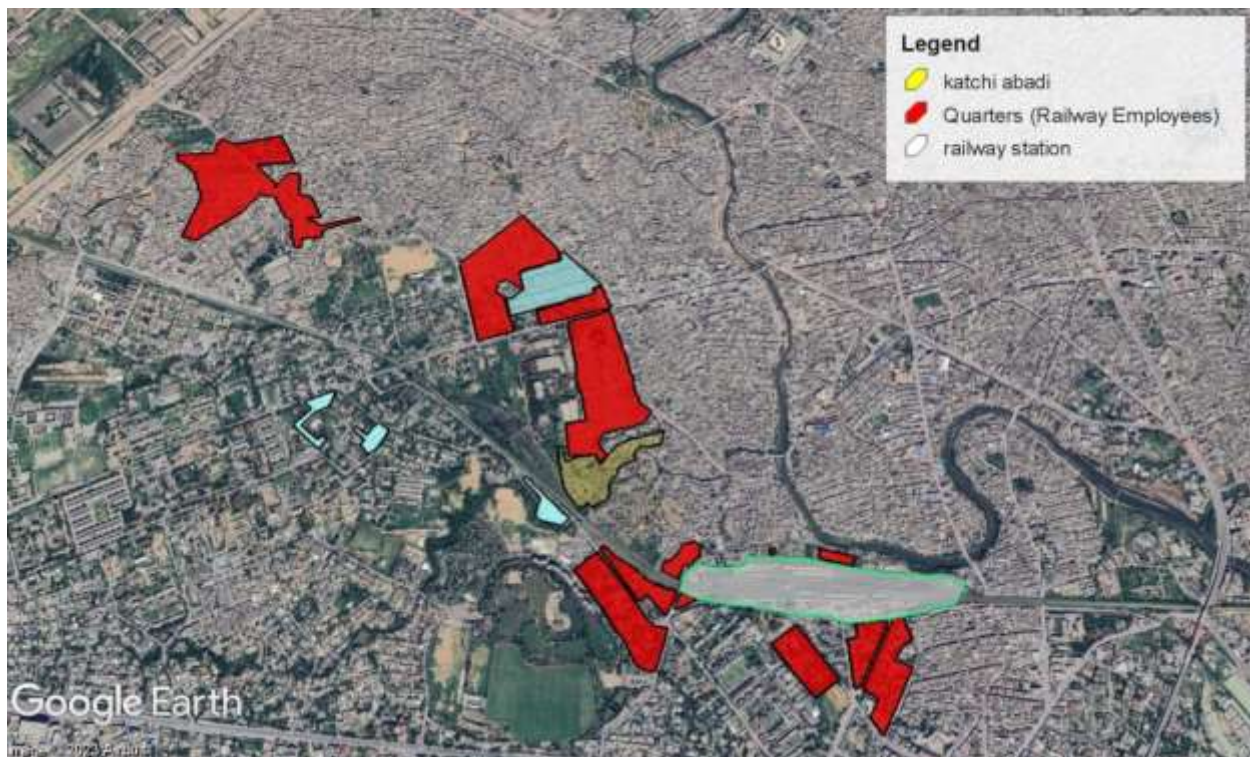


Figure 8 PR Housing for Railway employees

The land that is used for accommodating railway employees is categorized under the operational use of PR. The classification of residential land under operational use doesn't allow its redevelopment and neither can be used on commercial lines. For the utilization and redevelopment of residential land held by PR at prime locations it needs to be re-classified so that it can fall under the ambit of rules and statues for the purposes of commercial utilization. In Rawalpindi 66% of PR land under its possession (excluding right of way) is used for residential purposes that too for providing housing to its employees at prime locations. The land that is under possession of offices and other services is 45% only, all these are categorized under official buildings which is held for operational purposes.

The land holdings under the possession of PR for operational purposes in Rawalpindi are presented in the table below.

Table 10 PR land holdings in Rawalpindi city

Type	Percentage
Residential	66%
Services (Offices)	11%
Services (Public Use)	1%
Shed/store/workshop	2%
Welfare	7%
Others	13%
Total	100%

4.1 Housing Schemes

Present state of Pakistan railway demands effective utilization of its land considering its financial health, and given the location of Pakistan Railways land holdings in the city, i.e., in and near the centers, with high market value demands professional land management. PR auctioned its land at prime location on long term lease for the purpose of cooperative housing schemes. There are eight railway co-operative housing societies, which are registered under co-operative act 1925 across Pakistan. Among all the societies 550 acres of land is leased to schemes in Karachi, followed by Lahore, which is 195 acres. The city wise area and number of projects is presented in the table below.

Table 11 PR Land on lease for housing Co-operative societies

Name of Society	No. of projects	City	Area (in acres)
LARECHS	24	Lahore	195
FRECHS	9	Faisalabad	147
RIRECH	3	Rawalpindi	116
PRECHs	2	Peshawar	26
QRECHS	3	Quetta	55
KRECHS	15	Karachi	550
HRECHS	8	Hyderabad	41
MRECHS	1	Mirpurkhas	19

Total	1150
-------	------

Source: National assembly secretariat [1322139760_391.pdf \(na.gov.pk\)](#)

The railway as per the railway act 1890 is not permitted to use its land for the purposes of private societies and there exist clear guidelines from supreme court of Pakistan regarding the construction of private housing societies and allotment of land to railway employee. As per the directions of supreme court PR cannot lease out its land for the purposes of private housing societies and cannot allot land to its employees. Despite the direction, 1150 acres of high-value Railway land across Pakistan still remains in the possession of the co-operative housing schemes.

Since 1980's Pakistan Railways have leased out its land for the purpose of housing societies through auction. Only in Rawalpindi the yearly rent on average that PR receives from the lease of land for co-operative housing societies is approximately Rs 11000. The total area under the possession of co-operative housing societies in Rawalpindi is 116 acres, which is at prime location and possess the potential for alternative activities. Considering the area occupied, location and the revenue PR is getting out of it, it constitutes gross underutilization of PR land.

Through repurposing of the land even for residential purposes PR can generate a revenue of RS 37,480 million⁶ through auction, which can be higher given the competitive nature of the auctions. As per estimates the land has the potential to host 27 high-rise buildings for residential purposes, with total number of 17640 apartments. The investment that will be generated as a result of construction activity will be RS 90.9 billion, which will contribute significantly in economic growth and employment generation.

⁶ Authors estimates based on zameen.com



Figure 9 Pakistan Railway Co-operative Housing Schemes Rawalpindi

LEGAL REVIEW

The commercialization of railway land in Pakistan is a complex issue, that is plagued by the legal structure governing railway and its land. Despite having significant land holdings railway is unable to unlock its dead capital, and to generate revenue alongside upgradation and modernization of railway infrastructure. Therefore, the examination of railway law is important to identify the factors impeding the potential of railway land.

This section aims to identify the issues pertaining to commercialization of railway land causing its underutilization. Acts, S.R.O.'s, ordinances and rules that are approved from time to time are reviewed to examine the law regarding the commercialization and disposal of railway land. All this is supplemented by the analysis of case law (key judgments of high-courts and supreme courts of Pakistan related to land). The criteria for selection of case law is presented in the table below.

Inclusion and Exclusion Criteria of Selection of the Cases	
Inclusion	Exclusion
<ul style="list-style-type: none"> Land Disputes 	<ul style="list-style-type: none"> Pension Related Cases
<ul style="list-style-type: none"> Cases Related to Lease 	<ul style="list-style-type: none"> Promotion related Cases
<ul style="list-style-type: none"> Case Related to Allotment 	<ul style="list-style-type: none"> Recruitment/hiring Related Cases
<ul style="list-style-type: none"> Cases Related to Land Auction 	<ul style="list-style-type: none"> Cases related to the Procurement and Transportation of Goods and Machinery
<ul style="list-style-type: none"> Cases related to Encroachment 	<ul style="list-style-type: none"> Cases related to Outsourcing (Dining, catering, booking agency, wagons etc.)

Table 12 Exclusion and Inclusion Criteria of Case law analysis

Lastly key stake holders are interviewed, including railway officials and legal experts to elicit rich qualitative data. This helped in capturing the perspectives, experiences, and insights of these stakeholders regarding the challenges faced by PR regarding land commercialization and redevelopment. This approach resulted in a holistic understanding of the issues faced by Pakistan Railways and facilitates a deeper exploration of the underlying issues, perspectives, and potential solutions.

5.1 Land Ownership: Provincial Vs Federal jurisdiction

Railway land was regularized under the Land Acquisition Act 1894. These lands, however, were not transferred to the centralized railways rather they remained in the ownership of the British Crown. Indian Act 1935, article 172 later, explicitly classified all railways assets to be under the ownership of the central government which were previously vested in the crown. In 1947, the partition of subcontinent into Pakistan and India also resulted in the partition of railways assets previously held by the British Crown. These assets were transferred in the ownership of the federal government to

be held for the use of railways, as Pakistan provisional constitution order 1947 adopted the article-172 of Indian Act, 1935

The newly formed State of Pakistan gave its first constitution for its subjects in 1956 and in that specified the 'One Unit' scheme whereby the whole territory was divided into two provinces i.e., West Pakistan and East Pakistan (now Bangladesh). The fifth Schedule of the constitution included railways as a provincial subject and Chapter V of the constitutional bill 1956 had a provision for the provincialization of railways, however, the decision was not according to the provincial demands. Subsequently, Section 7(a) of the Presidential Order No. 33/1962 divided Pakistan Railways lands along with other assets into Eastern Railways and Western Railways to be held for the purpose of railways by the respective government of these provinces. Provinces had financial autonomy and Pakistan Railways land records were transferred⁷ to the provinces and some of them remained with the federal government, but railways remained the user of these lands in every case. Presidential Order No. 33/1962 was repealed by Presidential Order No 1&2/1970 and under P.O. 1 of 1970, section 37 railway lands were rendered as the subject of the President of Pakistan for the purpose of new province⁸. With PR having substantial amount of land under its control the need to put the land that was more than its operational needs was felt to generate revenues in 1990 and subsequently an S.R.O was issued in that respect⁹.

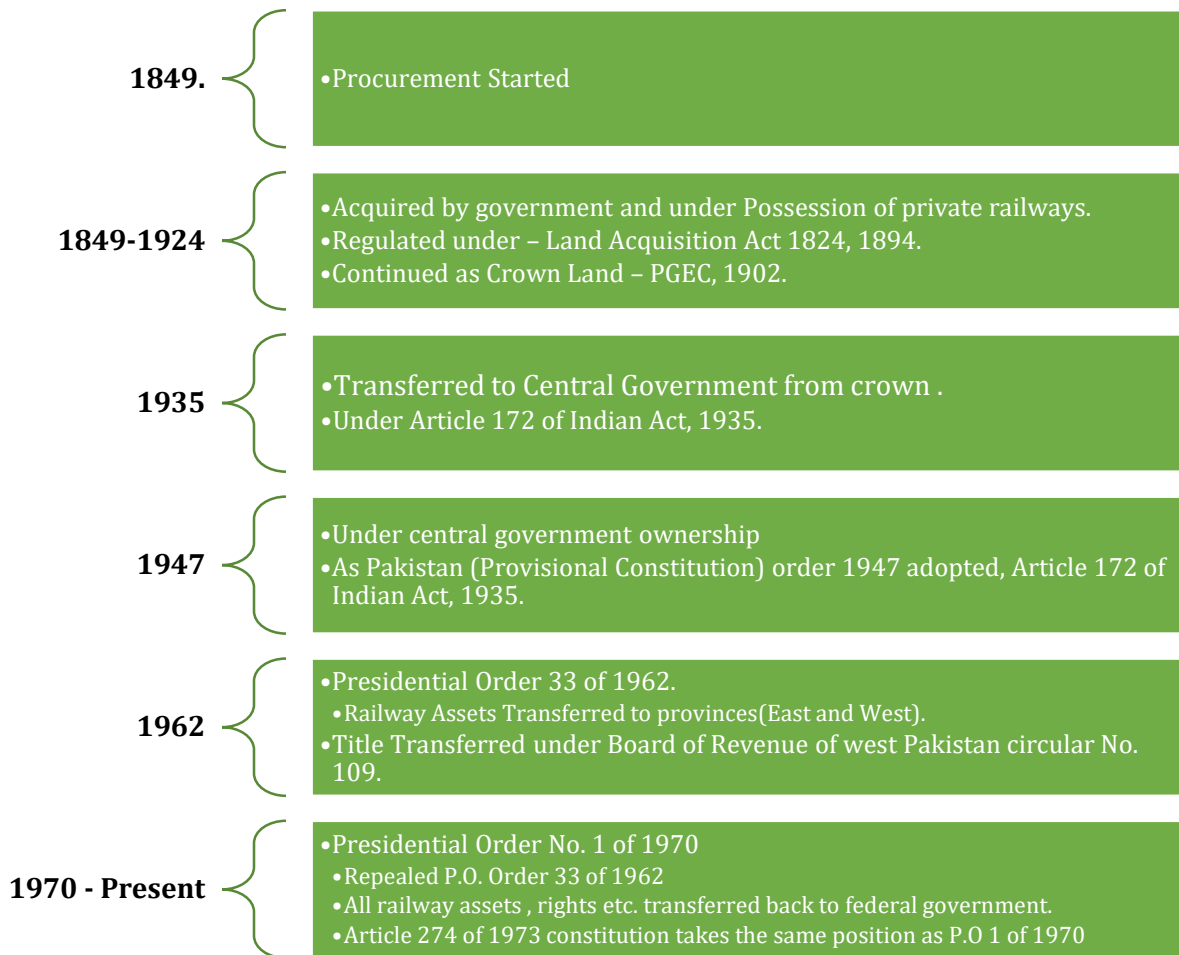
Article 274 of 1973 constitution maintained the same position of P.O. 1 of 1970 with regards to railway land. As the West Pakistan unit dissolved and old provinces were reinstated in 1975, federal government maintains that railway land was to be handed back to the federal government but that transition never occurred in revenue records, in most cases. Federal government also contests that railway lands and other assets are its property in that those lands were acquired at fair market value pre-partition by the crown and had been handed over to the federal government of Pakistan post-partition. Since none of that land has ever been 'surrendered' or 'abandoned', provinces cannot assume ownership of such lands unless federal government chooses to abandon them or puts them up for sale. Even in the case of a sale of such land, provinces can acquire such land only by paying fair market value. Federal government in its capacity as the owner over such lands can, however, classify such lands as available for alternate uses as it deems fit.

⁷ Circular no.109 of Board of revenue of West Pakistan, stated that the title of railway land shall be transferred in the name of the province.

⁸ Section 172 of the Government of India Act (1935) was added to the Pakistan Railways Engineering Code (1962) that expressly mentions that all land buildings vested in his Majesty before April 1937 and were then used for purposes which thereafter became purposes of the Central Government. In post-independence Pakistan, same status of these assets stood vested with the Federal Government.

⁹ S.R.O.No.693(I)/90 dated 27.06.1990 calls for surplus operational land to be used for commercial purposes through its 'Property Development Management'.

Figure 10 Railway Land ownership



5.2 Land Commercialization

Railway land was meant to be used for operational purposes when it was acquired in the sub-continent. The land at that time was acquired for public works, having purpose of facilitating railway operation and future expansion. As commercial utilization of land was not envisioned at that time. Therefore, Railway Act 1890 and ordinances which were enacted afterwards do not provide any provisions for the commercial utilization of Railway land. Railway act 1980 also does not explicitly restrain Pakistan railway from commercial utilization of already acquired land. The changing dynamics and role of stations, and to utilize large land holdings for revenue different Statutory Regulatory Orders (S.R.O.) and notifications were issue for commercial utilization of land.

The first guideline for railway land commercial utilization is from the Pakistan government railway code for engineering department (PGRC) 1962, which are the rules set under the provision of railway act (1890). Therein Item number 807 of PGRC,1962 states the commercial utilization of available PR land for revenue generation purposes. Later, S.R.O. 692 (1) /90 gives general manager the power for acquisition, lease and disposal of land, but the S.R.O. does not provide any guidelines or provision for commercial utilization of railway land. The legal standings for utilization of Pakistan Railway land for commercial purposes were given through an S.R.O No 693(1)/90. It allowed Pakistan Railways to use its land for commercial purposes by setting up property development and management unit as a separate entity. It also provided directions for identification of land for commercial utilization along with commercial exploitation of railway land, in line with PPRA rule and guidelines. The leasing of

railway land was to be conducted under the rules set out in Pakistan government railway code for engineering department (PGRC) 1962, rules were framed under the provision of railway act 1890.

The provision to dispose of railway land that was surplus to its need was also provided through a cabinet and National Security Council notification no. 3/JM/99-D. It allowed Pakistan railways to release its land by sale that is not required for operations of Pakistan railways and is surplus to its need.

Pakistan railway was using its land for commercial utilization on the basis of above-mentioned legal provisions. Until, supreme court barred PR from leasing its land for not more than period of five years. In a subsequent judgement¹⁰ supreme court barred Pakistan railway completely from selling, leasing and transfer of its land, on grounds that the railway land can only be used for operational purposes¹¹ of railways. PR land was severely affected by supreme court decision. The leases that were about to end or ended after the decision, were not renewed, leading to encroachments on land and land lying idle. Even though land was underutilized but the sub-optimal revenue it was generating decreased.

In a recent judgement¹² Supreme court allowed Pakistan railways to lease out its land for up-to 5 years, with direction to get legislative framework approved by cabinet or national assembly for utilization of land on commercial lines. This led to the approval of S.R.O 768(I) 2023, in order to provide legal standing to leases, licensing and concessioning of railway land.

5.2.1. Railway land and Property Rules

Through S.R.O 768(I)2023, federal government approved “*Railway land and property rules, 2023*” to govern PR land for revenue generation purposes and to ensure safety of its land from encroachers. The rules have explicitly barred Pakistan railways from selling its land. The land is only to be leased through short term, medium term and long-term leasing, licensing and concessions.

LEASE PERIOD

Short term leases are only for period of up-to 5 years, medium term will be for up-to 21 years and long term will be for up-to 33 years. The time period against the land type, is less than what is required in most cases, as establishment and operations by the lessee will require more time to get returns from the activities carried out on the land. Leases etc., for such time period are not sufficient enough to attract huge investments, and will discourage the development of PR infrastructure.

SLUDGE

The new rules empower the divisional superintendent for approvals of site plans and the execution of bids. The procedure laid out regarding the process demands the approval, at least in the case of short-term leases, from directorate of land management after identification of the site by divisional superintendent. The execution of agreement by the divisional superintendent is also subject to the approval of competent authority. All these processes add up to the friction that already exists in the system, leading to sludge.

VALUATION

The new rules state the valuation for benchmark for the auction of land to be an average between the market rate and the DC rate. The evaluation on the basis of District commissioner (DC) rate for setting the benchmark is a flawed approach i.e., instead of market value of the land in most cases the undervalued DC rate will be used. This will not only decrease the revenue from the commercialization of PR assets but will also understate the price of the land, eventually leading to its underutilization.

¹⁰ 2022 SCMR 105

¹¹ As directed in Railway Act 1890

¹² C.M.A 7139/2019

The evaluation for all the cases must be based on market value of the asset, ensuring maximum revenue generation.

5.2.2. Railway Land Disposal

Railway is required to use all of its available¹³ land for commercial purposes and is directed to release the land that is not required by it. The directions¹⁴ are to limit its land holdings to its actual requirements, however so far Pakistan Railways is unable to reduce its land holdings. At present Pakistan railways land that is not used for its core operations and is either lying idle or is leased against low returns.

The guiding rules states that the land that is no required for effective discharge of its their duties also include the "*Land and buildings in the possession of railways but lying idle and not actually required for railway purposes in the near future*" and "*Lands and buildings rented out for the purposes unconnected with the working of railways*". Going by the stated criteria the leased-out land to the private sector is better be disposed if not utilized to its true potential leading to suboptimal returns. The procedure laid out in the PGRC, 1962 rules for disposal of land is such that it discourages efficient disposal of the railway land. Step by Step procedure for disposal is stated below.

1. Firstly, Land should be offered to any department possessing land in vicinity of the land to be disposed.
2. If the land to be disposed is not in vicinity of any central Government department or is not accepted by any central government department when offered, in this case it shall be offered to provincial government.
3. In case central government departments and provincial government departments decline the offer than the land is to be disposed in the best way possible¹⁵. In this the case the procedure for disposal adopted by Pakistan Railways as mentioned in Item No. 827 is
 - a. In the first place, asking provincial government to undertake the process of disposal and railway is to just be in agreement with the agreed upon terms.
 - b. If the process of sale negotiations is not undertaken by the provincial government, then Pakistan Railways should undertake the process and request provincial government to conduct the final transaction upon arranged terms.
 - c. If the provincial governments decline to undertake the sale for negotiations than or even carry out the transaction, then Railway administration undertake the whole process.

However, in case that the agricultural and pastoral lands that is to be disposed of was acquired previously, than the rule follows the provisions laid down under land acquisition act. And the manner in which it is to be disposed of is as follow.

1. At first offering to the persons from whom the land was acquired or their legal heirs if discoverable.

¹³ According to Item No. 807 of PGRC, 1962 Railway land that is not eligible for disposal and is lying idle is termed as available land.

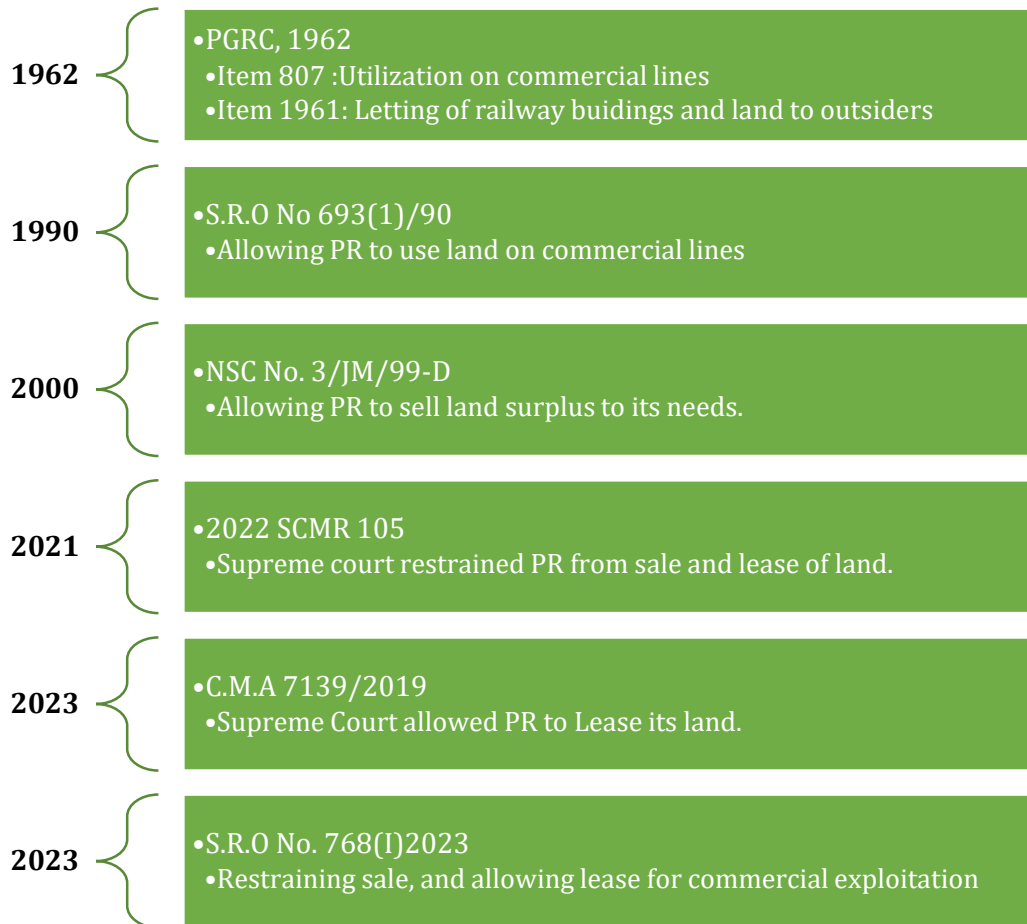
¹⁴ According to Item No. 823 of PGRC, 1962 Railway administration is required to limit its land holdings and justify the retention of land under its possession, if unable to do so shall dispose of it land.

¹⁵ If no reasonable offer is received than according to Item no. 826 of PGRC, 1962 the land must be retained and managed by Railway Administration.

2. Offering to owner of adjacent land in case the plot size and dimensions are such that they are only of value to the adjacent land owner.

The manner in which Pakistan railway is to sell its land is cumbersome and lengthy, and not feasible, ultimately discouraging Pakistan railways from disposing off its land, and its continued retention in underutilized state.

Figure 11 Commercial Utilization



5.3 Caselaw Analysis – Impediments, Issues & Practices

The case law pertaining to various land and other assets related issues under PR gives us useful insights into the nature of matters surrounding PR land and legalities around it. Upon careful and in-depth review of selected case law we have categorized these disputes down to its main themes that correlate with the issue under discussion in this report.

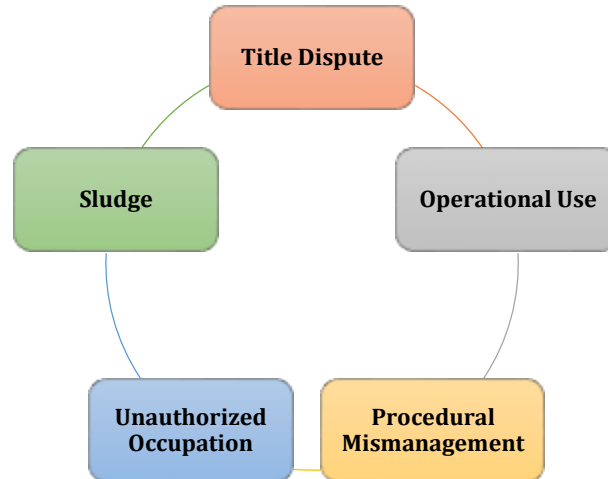


Figure 12 Themes Case Law Analysis

5.3.1. Title Dispute – Between Federal and Provinces.

Perhaps the most glaring disputes on PR land lies between the Federal Government and Provincial Governments, both claiming rights on land in their respective jurisdictions. Federal Government has long maintained that all lands held for the purpose of PR falls under its jurisdiction therefore any matter related to its lease, transfer, sale, declaration etc. also, naturally, falls under its purview. However, after the creation of the 'one-unit' (as previously discussed) and its subsequent dissolution, provincial governments were to transfer possession of all lands held for PR back to the Federal Government which after the passage of several decades has not yet completed. The mutation of railway land has also not reverted back in the name of PR in revenue records by the provinces which was due after the dissolution of one unit, leading to unnecessary litigation and encroachments.

Since the ownership of PR land claimed by provinces is contested by the Federal Government, any use of it in terms of leasing or disposal as well as revenues arising thereof is also contested¹⁶. There is a recurring pattern of use of PR lands for housing schemes and 'katchi abadi' by provinces that have a self-claimed¹⁷ right to these lands. Thus, in matters related to lease, transfer, sale or declaration of these lands, Federal Government and Provincial Governments are often in dispute with each other^{18,19}. Also at times, development authorities and other provincial departments have also disputed the ownership of land by PR and have proceeded to occupy, auction/utilize²⁰ them as they saw fit. It is therefore not too rash to argue that this title dispute often leads to the opportunity for parties to either encroach PR lands or occupy them without reasonable compensation.

Citing these issues, any attempt by the Provincial Governments or other parties to unilaterally declare the land held under PR for purposes other than that specified by PR²¹, has been disputed by the Federal Government where the honorable courts have noted that no party other than the Federal Government holds absolute ownership of the lands under PR and thus have no power to declare such lands for alternative uses. The honorable Supreme Court notes that:

¹⁶ P.L.D 1991 Karachi 359

¹⁷ 2006 YLR 1556

¹⁸ 2001 YLR 2131

¹⁹ 1987 MLD 1402

²⁰ 2003 SCMR 563

²¹ 2006 YLR 1556

“18. ... The land in question admittedly stood acquired and vested in Pakistan Railways/Federal Government. Under what authority of the law were the provincial authorities undertaking allotments/sub-divisions of the same and issuing NOCs and approvals remains a mystery...” [2022 SCMR 785]

5.3.2. Commercial Utilization

One of the biggest legal hurdles in commercialization of PR land is a very narrow classification of the ‘allowed’ land use only for the purpose of railway operations. This make it very hard if not impossible for authorities to repurpose PR land for commercial purposes to unlock its dead capital and earn revenues. The acts and ordinances since do not provide any provision for the commercial utilization of railway land, which prompted the court to restrain Pakistan railways form utilizing its land on commercial grounds.

“22. ...Not an inch of Railways’ land shall be sold, transferred, leased or by any means, given to any private person or to any of its employees. All Railways land is required to be used for Railways operational purposes and for no other purposes. We, therefore, direct that no Railways land shall be sold by the Pakistan Railway or transferred, leased, or allowed to be occupied by any person and shall be used only for Railways’ operational purposes.”

[2022 SCMR 105]

The important point to be noted here is that even though railway act 1890 doesn’t allow for commercial use of PR land yet it also doesn’t expressly prohibit any such use either thus a pattern of provision of commercial utilization and welfare housing through S.R.O and cabinet notifications can be seen from time to time but not in acts and ordinance. The rules governing PR land, however, allows for the ‘surplus assets’ to be either leased out or given under license for use²². However, since commercial utilization of PR lands does not have an air tight legal cover, it easily becomes the target of subsequent litigation. In a subsequent judgement Supreme court allowed Pakistan railways to lease its land for up-to 5 years and directed to get appropriate legal frame work approved by the cabinet, or parliament if needed.

5.3.3. Housing Societies

Pakistan Railway’s land that is located on prime and lucrative positions with significant economic potential is either encroached upon by individuals outside PR or is illegally used for the purpose of building unauthorized private employee housing societies. There are even instances where the land is allotted by Pakistan railways to its employees for which there are no provision available in the law. The gravity of the issue noted in Karachi, where substantial portion of land is either let to be encroached upon or is converted into housing societies. The misuse of the courts have further complicated the issue as at times courts are misrepresented²³ by employee housing authorities to get interim orders. An observation by supreme court highlights the legal standing of the issue at hand, which is produced below.

“9. ... We have gone through the Railway Act, 1890, Railway Board Ordinance, 1959 and also the Railway Regulatory Authority Ordinance, 2002 and have not been able to find any provision in them where the Railway can allow any of its land or infrastructure to be converted into that of a private housing society. There is no provision in these laws, where the Railway

²² See 2020 SCMR 1001

²³ 2020 SCMR 622

may have been allowed to acquire land for making of a private housing society for its employees. If there is any provision for acquiring of a land, the same has to be for the purpose of Railways, its operations, and infrastructure and nothing beyond that.”

[2020 SCMR 622]

The land use classification in the legal framework is important. The absence of provision for commercial utilization of railway land in the acts turns railway land into dead capital. Similarly, non-commercial utilization of the railway land through construction of housing societies at prime locations also results in their unproductive use.

5.3.4. Procedural Mismanagement

A substantial portion of the case law related to land related issues of the PR is indicative of the fact that most disputes could have been avoided had the correct procedural requirements been followed in these matters. The commercialization of the railway land is greatly affected by the actions on part of administration, where due procedure is not followed and the terms of agreement are not determined²⁴, and honored²⁵.

It has been noted several times in judgments of the honorable courts that PR officials failed to observe established rules and regulations. The failures is noted to span in various domains, including formation of review committees²⁶, instances abound where officers allowed unauthorized occupation and issuing NOC's without possessing the requisite authority *ibid.* ²⁷. Additionally, arbitrary and unilateral decisions have been issued without notice^{28,29}, side stepping the principles of fairness and transparency.

Even the fundamental process of allotment for residential quarters³⁰ is subject to irregularities. In some cases, the allotment of land is made merely by oral arrangements³¹. As a result of such procedural oversights, inquiry into the validity of the claim by parties takes a back seat to the inquiry into the insufficiency of the procedural requirements.

5.3.5. Unauthorized occupation

The issue of illegal occupation continues to plague PR and its operations. Illegal occupation of the residential units and lands held for use under license³², even after the expiry of the agreement and license is a major issue highlighted in the case law. The situation arises as individuals have forcefully occupied PR residential units without proper authorization^{33,34,35} or by using fake documents³⁶ or illegitimate claims of inheritance³⁷. The involvement of PR employees both as an occupier and facilitator has further complicated the matters.

²⁴ PLD 1971 Karachi 35

²⁵ 2017 CLC Note 42

²⁶ See 1983 PLC 399

²⁷ 2014 CLC (C.S.) 356

²⁸ See 1988 CLC 1525

²⁹ See 2003 CLC 331

³⁰ See 2020 SCMR 1001

³¹ See 2021 CLC 1771

³² See PLD 1982 Quetta 134

³³ See 1983 PLC 118

³⁴ 1983 PLC 399

³⁵ 2003 SCMR 1957

³⁶ See 2012 CLD 706

³⁷ See 2020 MLD 1310

The issues are further compounded by the manner in which illegal occupation is dealt with. In most cases Pakistan railways refrains from evacuation of the occupied property from encroachers and occupiers before repurposing initiatives. The matters triggers courts cases leading to stay orders against repurposing of land and halting the initiatives. Consequently, the land which could have otherwise contributed to PR growth, remains locked in legal battles as dead capital.

5.3.6. Sludge

Even in those matters in which PR has taken initiative to repurpose its 'acquired' surplus land for commercial purposes, it has been noted that law does not allow a completely clean authority to transfer the title to such land without prejudice³⁸. The disputes arising because of this discourages initiatives by PR for commercialization of its land.

The sludge that arises due to NOC's demand by district authorities, and delay at the end of Pakistan railways cause loss of interest and engagement by stakeholders in the commercialization process³⁹. The fiction created due to sludge is also seriously affecting the function of Pakistan railway in the matters that involves financings⁴⁰. It was also noted by the supreme court, as quoted below.

".....Pakistan Railways seems to have unending paperwork that needs to be done, including that of financing, before it actually starts working on the KCR..... " [2020 SCMR 622]

The complexities stemming from the legal and bureaucratic bottlenecks affects overall operational efficiency and vitality of PR. Casting a shadow over the initiatives aimed at utilization of available land for commercial purposes.

5.4 Key Insights from stakeholders

During and after the course of our analysis on Pakistan Railway's dead capital, we interviewed key personnel from within the Railways department, academic scholars who have worked on issues related to PR, professionals who have worked in these field and legal experts for their opinion on wide range of topics concerning PR's redevelopments, impediments and a way forward. Interview questions were designed keeping in mind certain themes based on the objectives of this study and we have taken the liberty of summarizing the views and opinions of our participants under each theme for the reader.

³⁸ See 2001 YLR 2856

³⁹ 2017 CLC Note 42

⁴⁰ 2020 SCMR 622

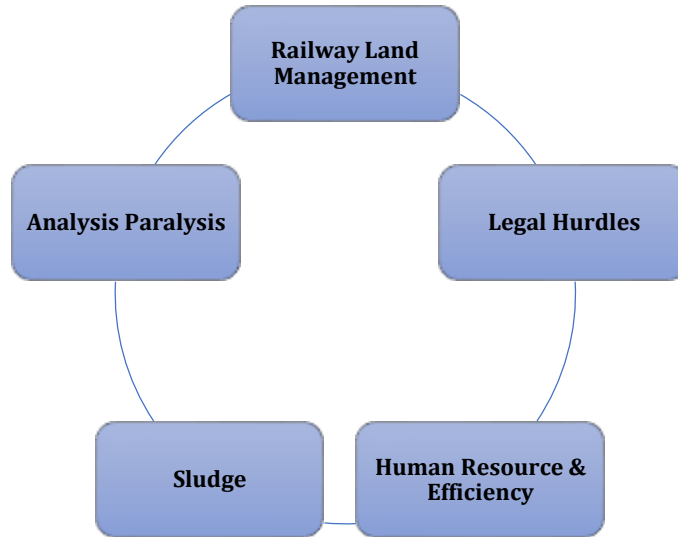


Figure 13 Themes - Key Informant Interviews

5.4.1. Railway Land Management

PR's land assets have a peculiar history that predates the creation of Pakistan. Crown owned lands of the railways network in the subcontinent were envisioned and designated for the purposes that served its core functionalities e.g., transport of passengers and goods. But modern railways all over the world today has come a long way since the British era. Railways in any economy typically holds large chunks of land for its operations and now do not only serve to transport but have appropriate uses for its land holdings to provide a host of services for its customers such as hotels, shopping malls, lodgings etc. In Pakistan, even though we have vast chunks of land under PR's management yet we have failed to re-imagine its use to provide wide range of services to its customers and generate revenue for its overall betterment.

Participants of our interviews unanimously acknowledge the fact that re-imagining the use of PR's land has been the major failure. With many reasons that impede PR's redevelopment, poor management of its assets have come up over and again in the discussions. The fact of the matter is that while PR is an entity whose core function is to transport passengers and goods, it lacks the professional understanding and expertise for asset management in the modern age. Overtime, there have been multiple suggestions from academia and professionals to reform PR's land management by either completely privatizing, or entrusting this job with a public-private partnership or creating independent specialized departments to perform this function rather than keeping the ownership and experimenting with half cooked policies.

PR has not been very receptive of ideas that lead to complete privatization of its land holdings. Technically, since longer-term leases of land in Pakistan are synonymous to outright sales, PR is more interested in leasing out its property for long-term leases but keep the title with them. In a recent policy, PR has increased the maximum duration of lease to 33 years extendable to successive terms. However, to ensure a suitable and stable revenue stream, PR has to adopt practices to ensure only market values are considered in land related transactions instead of benchmark or DC rates.

PR, historically, has managed land either through its land directorate or very recently through REDAMCO which is a land management subsidiary of the ministry of railways. However, subpar performance of REDAMCO in recent years has raised questions on whether PR should manage its assets through a private asset management group, a public-partnership or itself.

5.4.2. Sludge

The centralization of the PR's administrative structure has its roots in the legacy of the British Raj. A vertical administrative system with many layers not only tends to concentrate decision-making power at the top but also makes timely decisions an impossibility due to the unnecessary inclusion of administrative layers with none of them having enough authority to resolve the matter. If a matter of approval for a 'khokha' on PR land has to hop several administrative layers to get a decision, then it should be no question that the whole system is administratively inefficient.

Participants have over and over again stressed that due to the centralized nature of decision-making at PR matters that require urgent attention are often neglected and result in a pileup of unresolved issues and a loss of revenue for PR. There is thus an urgent need for an overhaul of the administrative setup from a top-down to a setup that has devolved authority at the department level to speedily decide on matters and ensure that operations run smoothly.

5.4.3. Legal Hurdles

The basic legal code that governs PR today is the Railways Act 1890. Though there have been some changes and amendments to this act, the core of this act has not changed that represents the vision and the purpose of Railways. The needs and functionalities of PR have, however, evolved overtime and the need for a comprehensive code that deals with matters of modern railways is felt the most.

In most matters regarding land issues, PR has been on the backfoot because the current state of legislation around railways tends to provide loopholes for parties to exploit agreements with PR or outright abuse stipulations of the law to their advantage. Our participants from the railway department stressed the need for a comprehensive overhaul of the legal aspect of these matters where courts provide stay orders on land issues to parties against PR delaying the resolution when the Recovery of Land Act provides that no stay can be provided in matters relating to federal lands. There are other loopholes that are exploited on the basis of practices that have benefitted people such as 'Katchi Abadis' and their subsequent regularization by the government. It makes the job of the PR many times harder because of the loopholes in law that strengthen the case for parties against PR in disputes.

5.4.4. Analysis Paralysis

Government's footprint in Pakistan's economic landscape is a substantial one. Whether government contesting the marketplace with private entities is efficient or not is a separate debate, however, the sheer size of this intervention has been responded with calls for reduction in size of the government. The reason for the calls for reduction in the size of the government is in context of regulation where government tends to over-regulate operations. A similar situation unfolds at PR.

Our interviews suggest that PR's decisions and actions in the context of commercialization and re-development are overly scrutinized. Due to their part-political nature that attracts changing regimes to target and shuffle decision-making structures. This leads to two kinds of issues: one, it stalls the decision-making process because an initiative needs to be vetted for approval by any number of regulatory agencies and second, it deters the decision makers to make any decision at all for the fear of push-backs. PR has struggled in this regard for the interviews give this indication that many decisions are not made for the simple reason that there might be push-back from regulatory agencies like NAB etc. The way forward in this regard is to liberate the decision-making structure from unnecessary regulatory pressure.

5.4.5. Human Resource & Efficiency

Since 1947, PR has mainly been a service provider – transport of goods and passengers. The evolution of PR in terms of commercialization and re-development context has brought the PR's human capital

under a great deal of stress. Opinions from our interviews suggest that this evolution has caused confusion in PR whether they should see themselves as a commercial entity or a service provider as both entail very different mindset and decisions. It is also a matter of concern whether PR in its current state has the capacity in terms of its human capital to take matters such as commercialization, re-development, management of assets etc. that are not part of their core operations. Opinions in this regard indicate both towards a deficiency with respect to efficiency and vision. The efficiency with which the whole administrative structure works is very low and a part of that problem works in tandem with the lack of vision what a modern railway should look like. PR, for the most part, despite consistently making losses for the past 40 plus years, has been trying only enough to keep its operations running rather than trying to re-imagine and reform railways for it to prove itself an entity worthy to be called railways of the 21st century. The way forward can be either improvement PR's human capital and skill development or PR can consider delegating the non-core functions to a more specialized third party for management.

CONCLUSION

Pakistan Railways owns 169,128 acres of land of which approximately 17 percent is employed in its various non-core operations. Despite classifying a substantial portion of land for activities such as rent, lease, etc. most of this land is dead capital. Majority of the land is in and around city centers, with significant potential for commercial activity. There is surprising lack of structured efforts towards commercialization for realization of competitive/market-based revenue streams. Because of this, most of this land if utilized, is being used either for agricultural purposes or leased at rates far below market rates or leased to other government departments taking away PR's potential to generate itself substantial income.

The classification of land use is also preserving the railway land state of dead capital, as the land under operational use category cannot be considered as available for any commercial activity. Under the operational use umbrella the land classified as official buildings also includes the land under the possession of railway employees for residential purposes i.e., quarters and bungalows etc. The share of residential land within the official buildings category is 66% only in Rawalpindi, representing huge dead capital.

The legal construct around this land, both internal (policies and practices) and external (Act, Rules and Procedures), pose the biggest hurdle from a multitude of issues facing commercialization and redevelopment of PR assets. Externally, the rigidity of the laws governing PR e.g., Acts and Rules pose a challenge towards its potential evolution with regard to commercialization and redevelopment of railway land. The rules and laws with regard to disposal of land are cumbersome, time consuming and non-competitive, ultimately discouraging PR from commercialization of land. The implication of land acquisition act also acts as an impediment as it discourages PR to declare any of its land for commercial purposes, both for disposal or commercialization by lease etc. The acts and ordinances surrounding PR does not provide any explicit provision to guide commercialization of railway assets. Rather than properly legislating a way forward, rules are notified through statutes from time to time. These statutes have created uncertainty, evident from frequent changes in stance on commercialization of PR land over the years.

The dispute of title between PR and provinces/provincial departments is another issue, that hampers the utilization of land on commercial lines, and at times leading to litigation. The legal structure also makes the commercialization of land harder, as stays are granted and litigation continues for years. Owing to the litigations, land remains in unauthorized occupation or unproductive for years.

Internally, PR has been a victim of the unprofessional conduct of its own administrative staff indulging in procedural misconducts leading to unfavorable eventualities. In other instances, the PR's inability to protect its land from encroachment and unauthorized occupation is a glaring example of the incapacity of its operations. Upon all that, PR reinforces and protects a top-down style of management with several un-necessary administrative layers to increase sludge and discourage timely and effective decision making.

Globally, modernized railways use their lands to build a consumer-centric eco-system that becomes the key tool for economic growth. In Pakistan, however, most of the land surrounding key operational facilities such as stations and rails are either converted into residential areas - housing for railway employees - or leased out at surprisingly low rates for residential purposes. The case for Rawalpindi railway station is no different as it is surrounded by approximately 160 acres of land that is used for hosting Pakistan railways employees. Another 1150 acres of PR land across Pakistan is leased out to co-operative housing schemes for railway employees at sub-optimal rates. In Rawalpindi PR have leased 116 acres of land to co-operative housing societies at 11000 average rents, which is gross underutilization of land. This land can generate a revenue of Rs 37,480 million for PR through auction and possess the potential to host 27 high-rise residential buildings, generating an economic activity of RS 90.9 billion through construction.

Ideally, it is hard to find a reason for PR to hold and manage land that does not come under the use of its core-operations for the simple reason that PR is not an asset management company and thus lacks the vision, will and expertise to bring its use to its full potential. Even when there is a will, the decisions makers do not feel confident to take the next step simple because changing regime comes with changed priorities. If PR is to be successful in achieving this feat of evolution into a commercial entity or the modern age, an overhaul of the legal construct surrounding it is of the utmost importance but with it a complete overhaul of its human resource as well.

POLICY RECOMMENDATIONS

Modern railways infrastructure has, come a long way from just carrying goods and passengers. Transport of goods and passenger still remain the core functions but have evolved even further to provide a commercial user experience by building an eco-system of amenities. This vision for the evolution of railways, places it at the heart of industrial and commercial growth of any economy.

PR infrastructure and its governing laws, after more than seven decades, have shown little change, at least in its vision and operations. This, somewhat rigid attitude has left PR unable to meet the needs of the modern economic setup, uncompetitive and a loss-making entity. There is, thus, an urgent need to re-imagine and reform Pakistan Railways for it to enable Pakistan's economy to realize its economic and geo-political potential. But there is no magic wand or any quick fixes as the evolution of PR requires a comprehensive multi-faceted approach for its revival. Below we take the liberty to discuss a few policy avenues and recommendations that are informed by the analysis in this report.

a) Provisions of commercialization/Redevelopment through amendment to Act/Ordinance.

The main law that governs PR is the Railways Act 1890. Though it has been amended from time to time, yet it lacks in covering certain aspects of the modern needs due to the underlying vision with which it was made. One glaring example of it is that Railways Act, though it doesn't prohibit, it doesn't provide explicit provisions to enable commercialization and redevelopment of PR land which makes it necessary to amend the law to allow for such activity so that PR could earn suitable revenues from its assets. This will also add certainty with regards to commercial utilization of land.

b) Land acquisition act provisions.

Moreover, the land acquisition act that oversees the acquisition and disposal of PR land presents a substantial challenge to repurpose railway land according to best market practices both for disposal and for lease. For PR to earn market-based revenues from disposal and lease of its surplus land and available land, rules need amendments primarily to repurpose any parcel of land without any prejudice to its authority, ownership or claim. Secondly, explicit provisions need to be added to make the whole process market-based and competitive.

c) Enforcing mutation of Railway land titles.

The mutation of railway land shall be enforced by the provinces, so that the railway land that is under the ownership of provinces in the record of rights is reverted back to PR.

d) Re-Classification of Land use.

The land under operational use cannot be used for any commercial activity, and is considered to be used only for core operations of railways. There for railway needs to re-classifying its land use, and exclude the residential land for railway employees from operational use category. Afterwards, making it available for commercial utilization and redevelopment. The majority of such land is near railway station and possess the potential for commercial activity it will help PR to generate much needed revenues.

e) Repurposing of the land.

PR land that is leased out to the co-operative housing societies must be re-purposed as it is causing significant revenue losses to PR and is without any legal standings. Repurposing of all such land will help PR to put this land to profitable use.

f) Increasing the leasing time period.

At present the rules laid down for leasing/licensing does not provide enough time to build trust with the lessee, in order to attract sizeable investment. The time period of short and medium term leases shall be increased.

g) Decreasing administrative sludge.

PR administrative structure at present is very centralized in nature. Certain functions and responsibilities that should ideally be decentralized at a much lower level in the administrative hierarchy are still bound to a centralized file culture. Thus, forcing the decision-making process to unnecessarily travel through several administrative layers that not only increases the decision time but also causes inefficiencies. Delegation of function and responsibilities with appropriate level of authority is the way to improve this administrative sludge in PR.

h) Staff capacity enhancement.

The very conception of PR as a state owned public good provider has over the years caused it to be an entity that has been complacent in the face of global standards of competitiveness and efficiency. This complacency is reflected in the state of PR's human capital we well. PR over the years had to suffer at the hands of the unprofessional conduct of its employees either due to lack of education, training or violation of rules. There is a need to train PR's staff on an urgent basis to build up their capacity to carry out their designated functions properly.

i) Redevelopment through clear goals and through PPP.

The study of a few noticeable test cases reveals that clarity in goals from development and enabling ownership of the public are two of the most important aspects of its success. PR, despite having substantial assets under ownership has been unable to reimagine and justify its existence as a 21st

century service provider. There is thus a dire need to re-visualize PR's central importance in Pakistan's growth prospects and redevelop by joining hands with the private sector.

j) Policies consistency.

The basic set of rules that governs PR to this day is the Railways Act 1890, the goals with which this Act was promulgated to regulate railways in the subcontinent is much different from the set of needs that PR faces today. Rather than completely overhauling the Act according to the modern needs of PR, there has been a persistent culture of temporary legal arrangements. This not only creates confusion as to the direction in which PR needs to move but also the credibility of these arrangements. Consistency in policies is imperative regarding PR land utilization and management and over all governance.

Perhaps the most contentious of the issues concerning PR's land is settling on a potential land management model. Suggestions from the academic and the professional circles range anywhere from a Railway subsidiary owned centralized management model to completely privatized management model in the form of a Railway endowment fund. In between these two extremes, a management model based on public private partnership or management through a third-party asset management company could be explored. Our study indicates that both extremes are not a suitable model for land management but as complete privatization can hurt PR future expansion concerns and centralized management leads to poor management and revenue generation. We recommend that PR stands to gain from entrusting its land management to a third-party asset management company that ensures the provision of expertise and vision for its commercialization while also keeping intact the ownership of PR.

REFERENCES

- Abellio. (2014). Fixing the Link: Making good the walking route from station to town centre.
- Anand, R., & Gupta, S. (2018). Productivity of Railway Stations: Case Study - New Delhi Railway Station. 7th Transport Research Arena TRA 2018.
- August, M., & Walks, A. (2017). Urban Redevelopment. In D. Richardson, N. Castree, M. F. Goodchild, A. Kobayashi, W. Liu, & R. A. Marston (Eds.), *International Encyclopedia of Geography: People, the Earth, Environment and Technology* (pp. 1–11). John Wiley & Sons, Ltd.
<https://doi.org/10.1002/9781118786352.wbieg0516>
- Banerjee, I. (2022). "Railopolis: City within A City." *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*: 1-21.
- Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: A case of the tail wagging the dog? *BMJ*, 322(7294), 1115–1117. <https://doi.org/10.1136/bmj.322.7294.1115>
- Bell, H. (1894). *Railway policy in India*. Rivington, Percival & Company
- Bertolini, L. (1999). "Spatial development patterns and public transport: the application of an analytical model in the Netherlands." *Planning practice and research* 14(2): 199-210.
- Bertolini, L. and T. Spit (2005). *Cities on rails: The redevelopment of railway stations and their surroundings*, Routledge.
- Bertolini, L. J. E. P. S. (1996). "Nodes and places: complexities of railway station redevelopment." 4(3): 331-345.
- Bogart, D., & Chaudhary, L. (2012). Regulation, ownership, and costs: A historical perspective from Indian railways. *American Economic Journal: Economic Policy*, 4(1), 28-57.
- Bogart, D., & Chaudhary, L. (2013). Engines of growth: the productivity advance of Indian railways, 1874–1912. *The Journal of Economic History*, 73(2), 339-370.
- Bruinsma, F., Pels, E., Rietveld, P., Priemus, H., & van Wee, B. (Eds.). (2008). *Railway Development*. Physica-Verlag HD. <https://doi.org/10.1007/978-3-7908-1972-4>
- Cao, Z. J. U. R. T. (2022). "Integrating Station-Area Development with Rail Transit Networks: Lessons from Japan Railway in Tokyo." 8(3): 167-174.
- Cervero, R. (2020). *Urban Development on Railway-Served Land: Lessons and Opportunities for the Developing World*. <https://escholarship.org/uc/item/71v7m90b>
- Choi, H. J., et al. (2007). An Analysis about the Effects of Railway Station on Regional Economy: Related to Standard of Location. *Proceedings of the Eastern Asia Society for Transportation Studies Vol. 6* (The 7th International Conference of Eastern Asia Society for Transportation Studies, 2007), Eastern Asia Society for Transportation Studies.
- Conticelli, E. J. P. E. (2011). "Assessing the potential of railway station redevelopment in urban regeneration policies: an Italian case study." 21: 1096-1103.
- Crepedia, Commercial Real Estate Dictionary:
<https://www.crepedia.com/dictionary/definitions/redevelopment/>
- CREpedia. (n.d.). Redevelopment. In *Commercial Real Estate Dictionary*.
<https://www.crepedia.com/dictionary/definitions/redevelopment/>
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, 11(1), 100. <https://doi.org/10.1186/1471-2288-11-100>

- Curtis, C., Renne, J. L., & Bertolini, L. (2009). *Transit oriented development: Making it happen*. Ashgate Publishing Limited.
https://books.google.com.pk/books?hl=en&lr=&id=afDiim_RVAUC&oi=fnd&pg=PR7&ots=2QVEpeCW2u&sig=2SDnuI-F8segtzvrnZX7tFcsjT0&redir_esc=y#v=onepage&q&f=false
- de Jong, M. (2009). European high-speed train station areas: The renaissance of the railway station. *European Transport Conference, 2009 Association for European Transport (AET)*.
- Doolin, B. (1998). Information Technology as Disciplinary Technology: Being Critical in Interpretive Research on Information Systems. *Journal of Information Technology*, 13(4), 301–311.
<https://doi.org/10.1177/026839629801300408>
- Drkošová, M. and I. Machalová (2008). *Europoint–Railway Junction Redevelopment–A Chance for Brno, na*.
- Feliu, J. G., Taniguchi, E., & d’Arcier, B. F. (2014). Financing urban logistics projects. From public utility to public-private partnerships.
- Flower, L., & Hayes, J. R. (1984). Images, Plans, and Prose: The Representation of Meaning in Writing. *Written Communication*, 1(1), 120–160. <https://doi.org/10.1177/0741088384001001006>
- Garg, A., & Chaudary, R. (2017). INDIAN RAILWAYS STATIONS REDEVELOPMENT: TRANSFORMING RAILWAYS AND CREATING WIN-WIN OPPORTUNITIES.
- Garg, A., & Choudary, R. (2017). *Indian Railways Stations Redevelopment: Transforming Railways and Creating Win-Win Opportunities*. The Boston Consulting Group & FICCI.
- Garg, R. (2016). Methodology for research I. *Indian Journal of Anaesthesia*, 60(9), 640–645.
<https://doi.org/10.4103/0019-5049.190619>
- Gotham, K. F. (2001a). Redevelopment for whom and for what purpose? A research agenda for urban redevelopment in the twenty first century. In *Research in Urban Sociology* (Vol. 6, pp. 429–452). Emerald (MCB UP). [https://doi.org/10.1016/S1047-0042\(01\)80016-7](https://doi.org/10.1016/S1047-0042(01)80016-7)
- Gotham, K. F. (2001b). Urban redevelopment, past and present. In *Research in Urban Sociology* (Vol. 6, pp. 1–31). Emerald (MCB UP). [https://doi.org/10.1016/S1047-0042\(01\)80003-9](https://doi.org/10.1016/S1047-0042(01)80003-9)
- Grand Central History: <https://gcthistory.com/>
- Haque, N. U. (2015). *Flawed urban development policies in Pakistan*. Pakistan Institute of Development Economics: Islamabad, Pakistan.
- Haque, N. U. (2020). *Increasing Revenue for Metropolitan Corporation Islamabad*. Retrieved from <https://pide.pk/research/increasing-revenue-for-metropolitan-corporation-islamabad/>
- Haque, N. U. (2021a). The opportunity of Dead Capital. *PIDE’s GUIDE TO POLICY & RESEARCH, II*.
- Haque, N. U. (2017). *Looking Back: how Pakistan became an Asian tiger by 2050*. Kitab (Pvt) Ltd..
- Haque, N. U., & Rizwan, M. (2020). Rethinking mobility (urban transport policy) in Pakistan. Pakistan Institute of Development Economics.
- Haque, N. U., Nayab, D., Siddique, O., & Faraz, N. (2021). *CASH POOR, PERK (PLOTS, PRIVILEGES) RICH!* Retrieved from <https://www.pide.org.pk/pdf/reports/Civil-Service-Compensation-Report.pdf>
- Haxton, P., & Dupeyras, A. (2016). Intermodal Connectivity for Destinations (p. 34) [Policy Paper]. OECD. <https://www.oecd.org/industry/tourism/2016%20-%20Policy%20paper%20on%20Intermodal%20Connectivity%20for%20Destinations.pdf>

- History Grand Central: <https://www.nyc.gov/assets/planning/download/pdf/about/city-planning-history/grand-central-area.pdf>
- Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D., Hearst, N., & Newman, T. B. (2001). Designing clinical research: An epidemiologic approach. *Designing clinical research: an epidemiologic approach*, 336–336.
- Jinyoung, P., & Jinsu, M. (2014). Korea's railway PPP (Public-Private Partnership) Projects. www.koti.re.kr
- Juchelka, R. J. S. (2002). "Bahnhof und Bahnhofsumfeld ein Standortkomplex im Wandel." 1(26).
- Kataraki, P. (2020). *Non-fare revenue in Indian railways: Policy analysis*. <http://repository.iimb.ac.in/handle/2074/18567>
- Kerr, I. J. (2003). Representation and representations of the railways of colonial and post-colonial South Asia. *Modern Asian Studies*, 37(2), 287-326.
- Knowles, R. D., Ferbrache, F., & Nikitas, A. (2020). Transport's historical, contemporary and future role in shaping urban development: Re-evaluating transit oriented development. *Cities*, 99, 102607. <https://doi.org/10.1016/j.cities.2020.102607>
- Lambert, A. (2017). Development around stations Exploring international experience and lessons for the UK.
- Lambert, A. (2017). Development around stations Exploring international experience and lessons for the UK. Campaign for Better Transport.
- Lawrence, M., Ollivier, B., & Paul, G. (2014). *Private capital for railway development* [Text/HTML]. World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/134031468263105814/Private-capital-for-railway-development>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. SAGE.
- Lund, H. M., Cervero, R., & Wilson, R. W. (2004). Travel Characteristics of Transit-Oriented Development in California.
- Majoor, S. and D. Schuiling (2008). New key projects for station redevelopment in the Netherlands. *Railway development*, Springer: 101-123.
- Mason, J. (2017). *Qualitative Researching*. SAGE.
- Mays, N., & Pope, C. (2000). Assessing quality in qualitative research. *BMJ*, 320(7226), 50–52. <https://doi.org/10.1136/bmj.320.7226.50>
- Meijers, E. J. (2000). Knooppunten binnen stedelijke netwerken, KUN, Faculteit Beleidswetenschappen, Planologie.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. SAGE.
- Mukherjee, H. (1966). *The Early History of the East Indian Railway, 1845-1879*. University of London, School of Oriental and African Studies (United Kingdom).
- Nikken Sekkei, K. (2014). *Integrated Station-City Development*, Beijing: China Architecture & Building Press.
- Non-Railway Uses of Railway Land- City of Windsor: A Planning Study. (n.d.). Meridian Planning Consultants. <https://www.citywindsor.ca/residents/planning/land-development/planning-policy/documents/non-railway%20uses%20of%20railway%20lands.pdf>

- on, B. (2021). Making railway land productive: The commodification of public land in Kenyan and Indian cities. *Geoforum*, 122, 118–128. <https://doi.org/10.1016/j.geoforum.2020.12.015>
- Onishi, Y. (1994). Urban commercial redevelopment in Japan and its evaluation. *Journal of Retailing and Consumer Services*, 1(2), 107–112. [https://doi.org/10.1016/0969-6989\(94\)90005-1](https://doi.org/10.1016/0969-6989(94)90005-1)
- Onishi, Y. (1994). Urban commercial redevelopment in Japan and its evaluation. *Journal of Retailing and Consumer Services*, 1(2), 107–112. [https://doi.org/10.1016/0969-6989\(94\)90005-1](https://doi.org/10.1016/0969-6989(94)90005-1)
- Osaka Station District, Invest Osaka : <https://www.investosaka.jp/eng/business/osaka.html>
- Papa, E., & Bertolini, L. (2015). Accessibility and Transit-Oriented Development in European metropolitan areas. *Journal of Transport Geography*, 47, 70–83. <https://doi.org/10.1016/j.jtrangeo.2015.07.003>
- Patino, C. M., & Ferreira, J. C. (2018). Inclusion and exclusion criteria in research studies: Definitions and why they matter. *Jornal Brasileiro de Pneumologia*, 44(2), 84. <https://doi.org/10.1590/S1806-37562018000000088>
- Peek, G.-J. and E. Louw (2008). A multidisciplinary approach of railway station development: A case study of s-Hertogenbosch. *Railway development*, Springer: 125-143.
- Peek, G.-J., et al. (2006). "Gaining insight in the development potential of station areas: A decade of node-place modelling in The Netherlands." 21(4): 443-462.
- Peters, D. (2009). The Renaissance of Inner-City Rail Station Areas: A Key Element in Contemporary Urban Restructuring Dynamics. *Critical Planning*. <https://www.semanticscholar.org/paper/The-Renaissance-of-Inner-City-Rail-Station-Areas%3A-A-Peters/df7e751a7b8dd3f014401bec01fec5ab11598646>
- Peters, D. and J. J. B. E. Novy (2012). "Train station area development mega-projects in Europe: Towards a typology." 38(1): 12-30.
- Peters, D. J. C. p. (2009). "The renaissance of inner-city rail station areas: a key element in contemporary urban restructuring dynamics." 16(1): 163-185.
- Rail Delivery Group. (2017). Regenerating Britain's railway stations: six case studies.
- Ramesh, A., & Raveendranathan, V. (2020). Infrastructure and public works in colonial India: Towards a conceptual history. *History Compass*, 18(6), e12614.
- Sarkar, S. (2010). Land Acquisition for the Railways in Bengal, 1850–62: Probing a Contemporary Problem. *Studies in History*, 26(2), 103-142.
- Satya, L. D. (2008). British imperial railways in Nineteenth century South asia. *Economic and Political Weekly*, 69-77.
- Shankar, D. (2018). Contested lands and contentious lines: Land acquisition for the railways in late nineteenth and early twentieth-century Delhi. *The Indian Economic & Social History Review*, 55(4), 491-513.
- Shaw, K., & Butler, T. (2020). Urban Regeneration. In *International Encyclopedia of Human Geography* (pp. 97–103). Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10349-X>
- Stake, R. E. (1995). *The Art of Case Study Research*. SAGE.
- Sweeney, S. (2009). Indian railroading: floating railway companies in the late nineteenth century. *The Economic History Review*, 62, 57-79.

- The Architectural Review, 2019. Hong Kong West Kowloon Station by Andrew Bromberg at Aedas. <https://www.architectural-review.com/buildings/hong-kong-west-kowloon-station-by-andrew-bromberg-at-aedas>
- Thorner, D. (1951). Great Britain and the development of India's railways. *The Journal of Economic History*, 11(4), 389-402.
- Vreeker, R., et al. (2004). "Urban multifunctional land use: Theoretical and empirical insights on economies of scale, scope and diversity." 30(4): 289-307.
- Weber, R. (2002). Extracting Value from the City: Neoliberalism and Urban Redevelopment. *Antipode*, 34(3), 519-540. <https://doi.org/10.1111/1467-8330.00253>
- Wolff, R. J. B. E. (2012). "The Five Lives of HB Südwest: Zurich's Main Station Development from 1969 to 2019." 38(1): 113-127.
- Yang, C.-H., et al. (2019). "Ultra-high intensity redevelopment of the core area of Japanese rail transit hub station." 14(3): 245-259
- Yang, Y.-R., & Chang, C. (2007). An Urban Regeneration Regime in China: A Case Study of Urban Redevelopment in Shanghai's Taipingqiao Area. *Urban Studies*, 44(9), 1809-1826. <https://doi.org/10.1080/00420980701507787>
- Ye, L. (2011). Urban regeneration in China: Policy, development, and issues. *Local Economy: The Journal of the Local Economy Policy Unit*, 26(5), 337-347. <https://doi.org/10.1177/0269094211409117>
- Zacharias, J., et al. (2011). "Tokyo Station City: The railway station as urban place." 16(4): 242-251.
- Zacharias, J., Zhang, T., & Nakajima, N. (2011). Tokyo Station City: The railway station as urban place. *URBAN DESIGN International*, 16(4), 242-251. <https://doi.org/10.1057/udi.2011.15>
- Zacharias, J., Zhang, T., & Nakajima, N. (2011). Tokyo Station City: The railway station as urban place. *URBAN DESIGN International*, 16(4), 242-251. <https://doi.org/10.1057/udi.2011.15>
- Zemp, S., et al. (2011). "Generic functions of railway stations—A conceptual basis for the development of common system understanding and assessment criteria." 18(2): 446-455.