

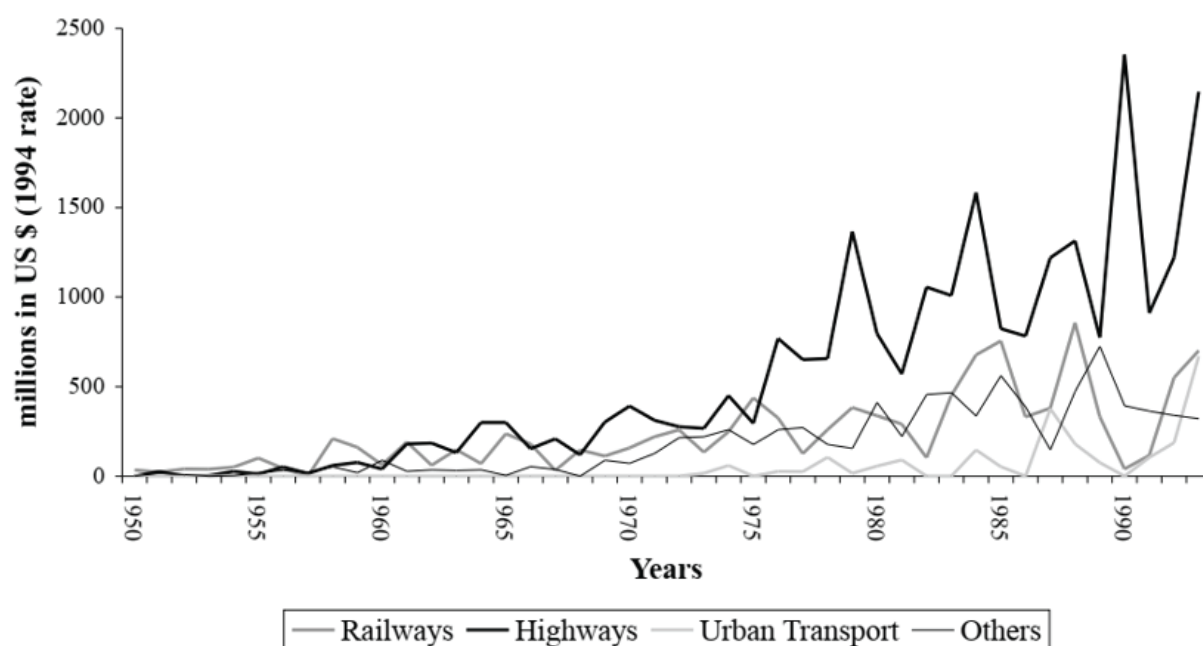
HARD VS SOFT INFRASTRUCTURE? BLUE PRINT OF PARADIGM SHIFT



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It all started in the mid-1950s to early 1960s, these years represented a pivotal moment in Pakistan's transport development, often referred to as a 'critical juncture.' This period occurred when international development organizations, along with their consultants, introduced Five-Year Plans to advance the country's transport systems as part of broader economic development efforts to stimulate growth. Pakistan, benefiting from substantial foreign financial and technical assistance from bilateral and multilateral agencies during this period, made key decisions regarding its transport future. Although various options such as railways, non-motorized transport, and road development were available, the country ultimately prioritized road infrastructure and private vehicle use over other alternatives such as rail and non-motorized modes of transport. (Imran and Low, 2005). The financial assistance from the World Bank increased in favor of road development as can be seen in the figure on next page

Fig 1: IBRD and IDA commitments to the Transport Sector (1950-93)



Source: World Bank, 1994.

These plans were made in 60's, one wonders what has sustained the policy for the next seven decades within a complex institutional system where 9 federal ministries and 22 departments are responsible for decision making in transport sector? The answer lies perhaps in story lines that emerged from the real understanding of the problem by different institutions as per their interpretation and biases.

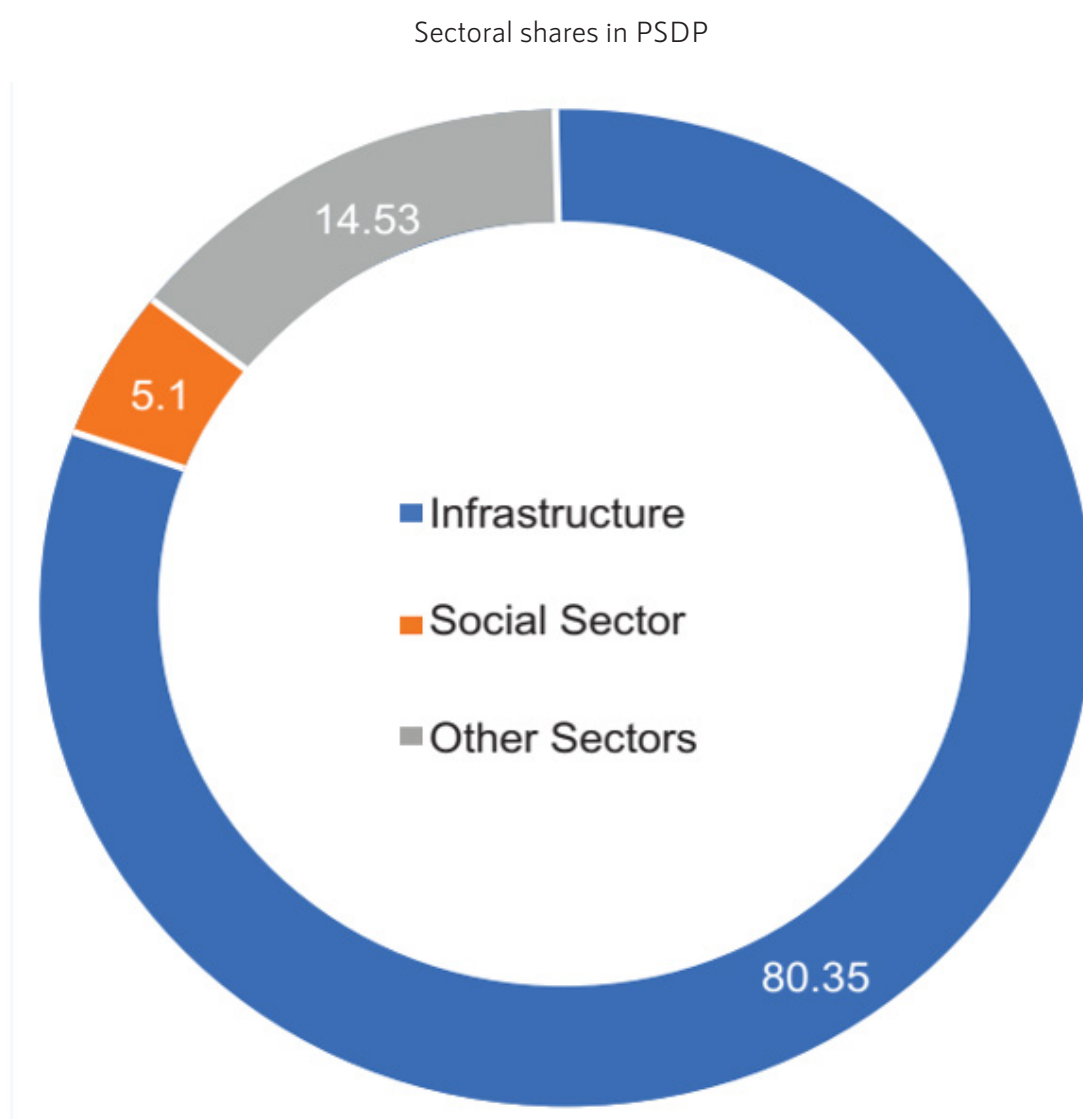
The story lines of 70's was "economic growth/development needs transport infrastructure" or "investment in transport infrastructure brings economic growth" stating economy and transport development as complements. Though the emphasis should have been on efficiency, the "road development as a vision for prosperity" took the lead. This was supported by "poverty reduction through road development" in 80's and "motorization will bring more economic wellbeing" in 90's. The environmental concerns, gave birth to construction of more road infrastructure to alleviate congestion. However, the empirical evidence between road infrastructure, investment and growth nexus depends primarily on local circumstances and could be positive, negative or neutral as has been observed in Pakistan's case.

This path dependency in transport sector reflects the broader trends in development policy of Pakistan. The over reliance of Pakistan development programs on foreign financial and technical assistance was long been recognized, unfortunately no solutions were ever proposed. The international development institutions, foreign experts and intellectually

dependent bureaucracy continued to shape the policy making pushing Pakistan to prioritize “hard infrastructure” over soft infrastructure such as capacity building of decision making institutions.

Doing Development Better - Shifting the Paradigm

A major breakthrough came from the PIDE’s conference on doing development better in 2020. The conference provided a much needed review of the growth system in Pakistan indicating that growth and productivity has been declining since the last four decades. Around 80.35 % of the PSDP projects are used to finance infrastructure projects (box 1). Thus there is an urgent need to accelerate growth in a sustainable manner by reevaluating the Haq/HAG approach to shift the paradigm of growth policy (Haque, 2020) . The centrality of cost-benefit analysis, asset management for maximum returns, and the consideration of PSDP funds as loans for the project were some of the proposals that were considered a must to accelerate productivity and growth.



The way forward should be based on reform and deregulation to accelerate productivity, private investment and entrepreneurship (Haque, 2020).

PIDE Growth Strategies – Reforms and Sustained Growth

Under the leadership of Dr Nadeem Ul Haque, PIDE subsequently introduced several growth strategies which could serve as an alternative to the HAG/Haq model. The PIDE reform agenda for accelerated and sustained growth, launched in 2021, emphasized on the need for immediate reforms in civil services, judiciary, and regulatory bodies. The agenda stressed that Pakistan must develop markets in agriculture, energy, real estate, and cities while also advancing reforms in openness, internet access and tax simplification. PIDE's one-year growth strategy, launched in 2022, presented a comprehensive growth plan centred on software development. It identified the internet for all as the fundamental pillar of growth alongside other initiatives such as regulatory audit, unlocking dead capital and encouraging youth involvement in sports. Transforming Economy and Society, launched in 2023, highlighted the reforms needed in different sectors of society. A focus on strong digital infrastructure to promote innovation and technology-based solutions both in services and manufacturing was emphasized to reduce reliance on traditional sectors like agriculture and textiles.

Paradigm Shift in Transport Sector – A Blue Print

Similar out of box reforms and suggestions were proposed for the car-dependent transport sector. In “Rethinking Mobility (Urban Transport Policy) in Pakistan” launched in 2020⁶³, Nadeem ul Haque and Muhammad Rizwan contested that urban transport is experiencing a paradigm shift in how mobility problems and their solutions are defined and evaluated. The contemporary approach is for compact and connected urban growth that increases livable density by creating mixed-use land development where people can live, work, study, shop, and have fun without excessive travel and synchronise this with citywide public transport. This integrated planning allows for more efficient use of resources, greater prosperity, and social inclusion at lower costs. In Pakistan, however, with its car-dependent suburban style urbanisation, urban transport policy primarily hinges on building more roads and signal-free corridors (flyovers and underpasses), seldom focusing on other modes. With roads taking up most of the budget, city administrations rarely spend on buses, which are a primary mode of transport connecting various city neighborhoods. The contemporary approach to urban mobility treats streets as public spaces that connect people to neighborhoods and facilities. They allow mobility and access to street vending, art, and other community services. It is grounded on sustainable and inclusive urban transport modes, viz walking, cycling, paratransit¹, buses, trucks, cars, motorbikes, and urban railways, which are all part of the system. Pakistan's Urban transport policy must follow suit and move away from a car-centric approach.

⁶³ Haque, N. U., & Rizwan, M. (2020). Rethinking mobility (urban transport policy) in Pakistan. Pakistan Institute of Development Economics (PIDE).

How to promote Cycling and Bus Usage

To encourage cycling in cities, it is essential to create safe bicycle tracks and crossings, ensure access to affordable, high-quality bicycles, provide parking racks at key locations and within buildings, and develop recreational cycling facilities. To promote bus usage in cities, it is important to provide direct routes, adhere to timetables, ensure passenger safety, offer affordable fares through alternative revenue streams, build accessible bus stops, integrate buses with other transport modes, improve first and last mile connectivity through bike sharing and offer real-time service updates.

Do we need BRT?

Mass transit projects are not sustainable through fares alone; key revenue sources were identified which included real estate value capture from private developers, rental income from retail facilities in stations, payments from developers for station access, advertising on trains and in stations, and special bookings by the entertainment industry. BRT is already operating in a few Pakistani cities with more cities adding it soon. However, the million-dollar question is whether we have evaluated other alternatives and picked the best solution. Spending Rs.30 billion on a locally-funded BRT line serving 5-10% of a city's population is not an effective use of resources, if instead, 2,000 normal buses can operate in the same amount, in Karachi or Lahore for example. The authors insisted that we should have a standard bus coverage before building a BRT system.

Why we need a Regulatory Regime for Paratransit

As standard paratransit is a component of urban transport system, its easy availability is important in limiting private vehicle usage. However, a policy ensure that fares of paratransit are high enough to make usage of public transport preferable due to it being more economical. Thus, for a paratransit system to be successful, it must adhere to a regulatory regime. Indeed, one reason why taxis have never flourished in Pakistan is that no regulatory authority monitored their operation.

Freight transport

The study also highlighted the key elements for managing urban freight transport. These include assessing current and future needs through surveys and stakeholder engagement, creating logistics spaces to support urban growth, integrating freight movement with transport and land-use planning, and enforcing restricted operating hours for heavy vehicles.

How to Forecast Transport

Urban transport planning and investments should not be made on guesswork and personal preferences but through a macro planning process commonly known as '4-stage Travel Demand Forecast' modeling. Planning tools help identify current and future transport needs and provide a quantitative analysis of current and alternate future scenarios. Surprisingly, no city in Pakistan is actively using macro models for transport planning. The major hindrance is the insufficient data and information on travel behavior.

Transport Planning – The Basics.

Thus to create an efficient and sustainable transport system, independent and professional decision-making at the city level is essential, fully supported by all tiers of government. Public sector teams must have the qualifications to match consultants in order to monitor projects effectively. Urban transport agencies should be given legal and financial autonomy to manage services, while a central organization under city management should oversee all aspects of transport, from planning to operations. It is also crucial to integrate urban planning with transport planning, involve public feedback, and implement clear performance evaluations, tracking metrics such as new bus routes, pedestrian infrastructure, public transport use, and emission reductions, with regular progress updates made available to the public.

How to Manage Congestion

Over the past few years, urban authorities in Pakistan upgrade road infrastructure wherever they see congestion. This is not urban transport planning but a reaction to car-based congestion. Hafeez ur Rahman Hadi⁶⁴(2021) discussed the importance of having a car policy for Pakistani urban centres. When new roads are built, they seamlessly facilitate cars, and people find it easy to own a car for traveling to homes, schools, offices, and city centres. This policy tilt towards cars not only takes up a significant chunk of the city's valuable (often meager) resources in road construction, but it also leaves little space for other more affordable, inclusive, and sustainable modes of transportation (walking, biking, public transport).

The world's cities are quickly realising their 'planning mistakes' of expanding the spaces for cars while shrinking public spaces; they are now reversing the phenomenon by recognizing streets and roads as public spaces (Toderian, 2020).

Our Flyover Obsession?

Obaid Khan⁶⁵(2021) also claimed that building flyovers to address congestion provides some relief, however, their private and societal expenses render them impractical for Pakistan, a nation grappling with limited financial resources. Opting for more economical roundabouts instead of flyovers is advisable. But above all, Pakistani cities can also employ parking fees and congestion charges, amongst other measures, as a tool for revenue generation, moving old fleets of cars out of the cities, and encouraging the use of public transport.

Paid Parking in Detail

A detailed study on parking fee in 2023⁶⁶, posited that free parking is a subsidy to car owners in the sense that motorists undervalue the cost of driving resulting in car use beyond the optimal level. Evidence suggests that paid parking reduces car use, yet the policy response to more cars on the roads has been to increase the number of parking spaces – thus instead of demand management, the focus is on augmenting the supply.

⁶⁴Hadi, H. U. R. (2021). Why Pakistan Needs A Car Policy? PIDE Knowledge Brief 22:2021.

⁶⁵Khan, O. (2021), "The Obsession with Flyovers in Pakistan – Roundabouts are Cheaper. PIDE Knowledge Brief 37:2021

⁶⁶Khawaja, D., Gardezi, Z., Najib, M. S., & Khan, M. A. (2023). Traffic management & congestion mitigation: Parking policy for Islamabad Capital Territory. Pakistan Institute of Development Economics (PIDE).

Parking spaces are developed on valuable urban land that has competing uses, hence there should be a limit on land that can be allocated to parking – pricing the parking land will determine the limit. The authors argued that just as car owners pay for fuel, insurance, and servicing of their vehicles, they should pay for the cost of parking as well. A parking fee must be charged to reflect, at least to some degree, the value of the space occupied by the parkers.

Bringing about change is always difficult

The car owners will have to be convinced about the benefits of paid parking – lesser congestion, better air quality, and above all a greater chance to find a parking space, if one must commute by car. Based on the demand & supply survey and the willingness to pay survey, PIDE suggested that even at the flat rate of PKR 30 per hour, the paid parking is financially viable in Islamabad. Another option for traffic management is to have free parking during the weekend so that some of the traffic can be diverted to a less busy time. Yet, another alternative option is to price the weekend traffic heavily during certain hours of the day to minimize the number of cars during that time. For digital collection of parking fee, the authors also identified several parking meters available in the market and also developed a prototype of the potential payment app that may be developed. To achieve traffic mitigation through paid parking, the availability of adequate alternate mobility means is vital. Thus, an efficient public transport system is at the helm of urban mobility globally.

Reform Agenda for Railways

Pakistan Railways (PR) is another example of the extent to which poor governance and undue political interference can derail any sector of the economy. The losses incurred by Pakistan Railways during the five years period (2015 – 2020) have amounted to a prodigious 144 billion PKR. The stiff competition from road transport and inability of PR to adopt a customer centric business plan because of complex bureaucratic structure, has led to an inefficient, underfinanced and overstaffed public agency, grappling with the challenges of 21st century despite several repeated rounds of halfhearted reforms, since last three and a half decades. In 2021, PIDE organized an eight webinar series, a thorough all-rounder, on Pakistan Railways. For the first time in Pakistan, the webinar series brought together experts from world bank, consultants, the Chinese railways experts, the ex-chairmen of Pakistan railways, the advisor on institutional reforms, the private partners of railways, the ML 1 team and indulged in the rich discussions that is cited by the Pakistan Railways officers. There is an enormous freight potential that can help the PR to turn the balance sheets in its favour. Two main recommendations were as follows. The freight analysis reveals that there is a potential of 58 daily freight trains, which is equivalent to the loss of almost PKR 5 million per day to PRs. The open-access regime can still be a good starting point for a comprehensive business model of PR⁶⁷. Secondly. Nationwide, Pakistan Railways has under its ownership 167,690 hectares of land. Financially viable alternatives can be sought and the potential of “Dead Capital” can be unlocked to avoid land encroachments with amendments

⁶⁷Anwar, S (2021), Track Access Regime: The International Practices and Pakistan Railways, PIDE Knowledge Brief # 47:2021.

in Railways Act 1890. PR must also reclassify its land, excluding residential areas for employees from operational use, thereby opening them up for commercial redevelopment⁶⁸.

Logistics for Domestic Commerce

In Pakistan, the modal shares are highly skewed towards roads. Roads are the predominant source of transportation in Pakistan accounting for more than 92 percent of passengers and 96 percent of freight. This imbalance has increased the cost of transportation through congestion, pollution, and expenditure on the maintenance of roads. PIDE focusing on the modern multimodal logistics mapped and analyzed all components of seamless logistics network highlighting the issues in each sector. While, these are governed by different ministries and authorities, the lack of coordination between them and the absence of an institutional framework has tremendously impeded the growth of the modern logistics sector. The main recommendation is to establish a unified Department of Transport responsible for creating and executing a comprehensive National Transport Policy (Haque and Anwar, 2024)⁶⁹. This can also be achieved by creating digital dash boards.

The labour unions in these public sector organizations have played a major role in resisting reforms, ensuring inefficiencies and substantial losses to the exchequer. The “Pakistan Post” stand out as a success story which after banning the union and establishing an autonomous, high powered board was able to embrace the vision to provide every household with efficient and affordable communication and business services. The major difference between these public sector organizations and their private sector competitors is the use of cutting edge latest technology which is driving the growth of services sector globally. The dry ports are regulated by the respective provincial board of revenues. The growth and potential of Pakistan’s dry ports is constrained by the presence of a government player and 0.9 percent cess on total value of the shipment purchase order. The inland water potential is subjected to the institutional framework as the Indus River traverses three provinces—Khyber Pakhtunkhwa, Punjab, and Sindh. Maritime transport is also in dire need of updated policies.

Conclusion

These extensive studies by PIDE under the visionary leadership of Dr Nadeem ul haque, highlighted the critical challenges and potential solutions for Pakistan’s transport and logistics sector, emphasizing the need for a paradigm shift from the traditional focus on “hard infrastructure” like road development to “soft infrastructure,” which includes capacity building, efficient decision-making, and sustainable multi-modal transport planning. PIDE, in fact, successfully provided blueprint of how that transition can be made. These PIDE studies is another “critical juncture” in the path dependency of transport policies, providing indigenous solutions to indigenous problems, paving way for further debate amongst policy makers for a sustainable multi modal transport and logistics infrastructure and services. PIDE research agenda over the last five years offers several compelling story lines for this.... enough of “Brick and Mortar” and “Internet for All” being two of them.

⁶⁷Aslam, A, M (2023), Unlocking Pakistan Railway Dead Capital, RASTA CGP 0.4

⁶⁸Haque, N. U., & Anwar, S. (2024), Transport and Logistics. PIDE Research Report.

⁶⁹Haque, N. U., & Anwar, S. (2024), Transport and Logistics. PIDE Research Report.