

Reforming Trade and Transport Connectivity

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Abstract

This paper focuses on the predicament of transport connectivity in Pakistan in its own domestic context and with regards to South Asian and Central Asian regions. It appraises the impact of the derelict transport infrastructure within Pakistan on the ease of transit and the movement of goods and services. Through engagement with various stakeholders, particularly those employed in the various Transportation Ministers, we seek to conduct an appraisal of the efficacy of transportation modes in the country. Furthermore, an extensive review was conducted in order to accurately gauge and assess the current obstacles being faced in this arena and the plausible reforms which can be pursued. Pakistan's socio-economic growth and development is heavily contingent on the refurbishment and expansion of its road, railways, aviation and naval networks. Moreover, an efficient transportation network, though, allowing for seamless transit trade would magnify Pakistan's role in the immediate region and the entire world.

Keywords: *Multi-Modal Transport, Transit Point, Logistics, Regional Integration*

JEL-Classification: O18, F1, R4

1. Introduction

The path to greater regional integration in Pakistan is primarily obstructed by the poor quality of the transportation infrastructure within Pakistan and across its South Asian neighbors. Inefficiency in the provision of adequate transportation services raises the cost of transportation and considerably inflates the transaction costs, limiting gains to South Asian economies from a liberal trading environment. Currently, the high transportation costs, in-adequate cross-border infrastructure, poor institutions and the absence of trade facilitation and regional transit trade agreements, have a dampening effect on regional trade and integration. However, given the geographical contiguity of the South Asian region, there exists great potential for Pakistan to boost co-operation in the arena of connectivity. Rudimentary yet extensive transportation

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networks and linkages do exist in Pakistan as it is a part of the contiguous South Asian subcontinent. The dominant mode of regional transport is through the roadways, which cater to approximately 65-70% of the freight movement in the region. Total length of rail lines in South Asia is more than 79,000 km (WDI, 2016) but the region has yet to be benefited from it as per the potential (Kumar, 2015). The regional ports also play a crucial role in regional connectivity by linking hub ports to allow for the dispersion of bulk goods through main line and deep-sea container and feeder ships.

While improving regional transport systems in South Asia and specifically Pakistan is a formidable task, the benefits from improved regional transport systems in the region are substantial. Road corridors are important in a sense that it helps in promoting trade facilitation and integration in economic zones which ultimately establish economic corridor (Samad and Ahmed, 2014). A World Bank study shows that the impact of implementing efficient transport and trade facilitation measures within South Asia, to imitate successful international examples, would lead to large to a 60% rise in intraregional and 30% increase in interregional trade. However, existing infrastructure gaps hamper the regional trade and transit across border (Ahmed and Javed, 2016).

Thus, since the 1990s, Pakistan has been a part of multiple agreements on augmenting connectivity, comprising its neighbors, with the most significant ones being the South Asian Free Trade Agreement, Afghanistan-Pakistan Transit Trade Agreement (APTTA), ECO (Economic Co-operation Organization) Transit Transport Framework Agreement (TTFA), Quadrilateral Traffic in Transit Agreement (QTTA) and the Central Asian Regional Economic (CAREC) and the China Pakistan Economic Corridor (CPEC). Yet, despite these regional accords, constituent countries have been lagged in adopting and implementing these agreements.

In particular, Pakistan, a country with considerable geostrategic importance for the region, has due to the sheer absence of adequate transport arrangements within the country, squandered the lucrative opportunity to serve as the trade and transit conduit for Central Asia and South and South East Asia. Helping serve the needs of surrounding countries won't have only benefited Pakistan's economic growth but also stabilized its geopolitics. In fact, due to the derelict state of sea, road, rail and air transportation, Pakistan hasn't even been able to fully formalize and realize its trade potential with its immediate South Asian neighbors like India and Afghanistan. Thus, the country hasn't profited from the geographical proximity and contiguity inherent to intra-regional trade. Moreover, the quality and capacity of Pakistan's infrastructure, both in the domestic context and in cross-border areas, is certainly a matter of concern.

Therefore, this study attempts to ascertain the prospects and challenges Pakistan faces in enhancing regional connectivity and trade facilitation in South Asia. In this research, we aim to address the physical infrastructure issues pertaining to roads, railways, maritime and air transport, as well as the non-physical infrastructure issues including custom clearance, cross-border transit facilitation measures and policies and

regulations. Moreover, we also identify key reforms and policy steps which can be undertaken to improve the state of infrastructure of Pakistan.

We seek to answer the following research questions in this study:

- To explore the current state of Pakistan's transportation infrastructure
- To identify the key obstacles of multimodal transport for Pakistan in domestic and regional context.
- To identify key reforms and policy measures for the improvement of Pakistan's, domestic and regional transport connectivity

2. Research Methodology

The design of the study consists of four-pronged approaches, as data was collected from three different sources. Firstly, the vast body of theoretical literature, pertaining to roads, railways, seaports and air transport services, is consulted. In particular, to give a detailed insight into the transportation infrastructure, the Pakistan Economic Survey, 2016-17, is extensively consulted. Secondly, a comprehensive desk review was carried out to extract data on transport sectors such as rail, road, ports and aviation from Pakistan's perspective. To accomplish this, annual reports of Ministry of Railways, Ministry of Ports and Shipping and Pakistan Civil Aviation Authority were used.

Thirdly, in-depth interviews with public officials and private stakeholders were conducted. These included officials from the National Transport Research Center, Ministry of Communication and as well as officials from the Ministry of Railways, Ministry of Ports and Shipping, Aviation division, Ministry of Defence, Ministry of Foreign Affairs, National Logistic Cells and National Highway Authority.

Additionally, another source of information for this research were the interactions with the representatives of various South Asian countries at the Kathmandu Summit as well as the seminars pertaining to transport connectivity, which were held under the exegesis of the 20th Sustainable Development Conference.

3. Current States of Transport Infrastructure

3.1 Pakistan's Transport Connectivity

The inefficiencies of Pakistan's transport sectors such as rail, road, port and aviation are estimated to cost its economy over 4% of GDP (Ahmed et al. 2013). While various governments have tried to pump capital in maintenance of the infrastructure with the help of development partners, capacity to implement these programs has remained weak.

The lack of efficacious transport infrastructure has caused the transaction costs to spike and reduced total factor productivity, and increased inefficiencies. Pakistan has been unable to integrate itself into the wider regional value chains, as, not only does the country lack the requisite transportation network, it's often unable to meet the standards of its regional neighbors (Kumar, 2015; Taneja, 2013). The complex procedures and administrative setup and corruption restricts the effective

implementation of APTTA and it results in lower trade volume between Afghanistan and Pakistan (PAJJI, 2013).

The lack of suitable human resources, poor planning and management skills and an inability to attract external implementation resources has led to time and cost overruns. Over half of the annually trained engineers migrate abroad for employment and declining economic growth has made it impossible to reverse this brain drain (Mehmood et al. 2013).

Hurdles to transport connectivity exist despite Pakistan’s membership in multiple regional transport agreements with South and Central Asian countries. Recently, the National Transport Corridor, has assigned \$5 billion from \$9 billion to be directed towards the improvement of highways. Similarly, while an additional \$1.5 billion is to be devoted towards the upgradation of the Pakistan Railways, the rest is to be directed towards revitalizing the ports and airports. (Samad & Ahmed, 2014)

In the latest report by the World Economic Forum, the Global Competitiveness Index has been used to illustrate crucial information regarding the overall economic performance of all countries, gauged through the use of various metric. Pakistan is ranked of 110th place out of a total of 137 countries, in terms of its infrastructure, the second pillar of its economy. Specifically, it is ranked 82nd in terms of its overall infrastructural quality, standing at, the 74th place in road quality; 52nd place in railroad infrastructure; 73rd and 91st places in terms of naval and air transportation. The rankings, along with the respective values that Pakistan scored out of 7 are depicted in Table 1 below.

Table I: Infrastructural Quality in Pakistan

Index	Overall Quality of Infrastructure	Quality of Roads	Quality of railroad infrastructure	Quality of port infrastructure	Quality of air transport infrastructure
Rank	82	76	52	73	91
Value	3.8	3.9	3.3	4.0	4.0

Source: World Economic Forum, 2017

a. Road Sector

Pakistan has witnessed a sluggish yet continuous modernization of its road infrastructure. While, the national highways constitute 4.2 percent of the total road network in Pakistan (Economic Survey of Pakistan), it deals with 85 percent of all road traffic. Highways are concentrated along the North-South corridor with the N-5 alone carrying 55 percent of inter-city traffic.

The derelict state of the road network is primarily due to, “poor maintenance, vehicle overloading, overinflated truck tires and the significant shift from railways to roads in both passenger and freight transport.” The prevalence of corruption in the traffic police leads to lax enforcement of traffic laws creates inefficiencies in road development projects. (Ahmed et al. 2013)

Pakistan’s trucking sector, which carries cargo through roads, is highly informal and unorganized. Total 260,000 trucks are registered in the country (Economic Survey, 2017-18) however most of them are owned by individual truck drivers, while the rest of them have been contracted out to companies. The biggest problem in the trucking industry is that the insurance costs aren’t factored into the overall cost for the truckers. Furthermore, there are routes which are logistically and practically impossible for the trucks to traverse. (Business Recorder, 2017)

Table II: Total Length of Roads in Pakistan (kms)

Years	Category		Total
	Low Type	High Type	
2012-13	91910	171505	263415
2013-14	79635	184120	263755
2014-15	78879	185063	263942
2015-16	76020	188192	264212
2016-17 (July-March)	76070	188331	264401

Source: Pakistan Economic Survey 2016-17

The total length of roads increased marginally from 263,415 kilometers in 2012-13 to 264,401 kilometers in 2016-17. This masked the different changes in low type and high type road. As the low type or unpaved roads decreased by 15,840 kilometers and the high type or paved roads increased by 16,826 kilometers from 2012-13 to 2016-17.

Pakistan’s National Highway Authority (NHA) has been instrumental in augmenting economic growth through the integration of the disparate road networks in the country. This network now constitutes “39 national highways, motorways, expressways and strategic roads totaling to 12,131 kilometers.” Additionally, 3 sections of Pakistan Motorway, the M-1, which connects Peshawar to Islamabad; the M-2 which links Islamabad-Lahore; the M-3, which extends from Pindi-Bhattian to Faisalabad, are currently in use.

b. Recent Developments

There are 50 ongoing projects and 28 new schemes as of 2016-17, with a cost of Rs. 1,605.6 billion and Rs. 440.60 billion which have been envisaged under the ambit of the NHA. Additionally, the NHA has prioritized and completed the rehabilitation of 3,934.04 kilometers of road since 2012. Work on adding sections to the Motorway is ongoing, with M-4 (Faisalabad-Khanewal-Multan) and M-9 (Karachi-Hyderabad) being constructed on Build-Operate-Transfer or Private-Public Partnership. The NHA has successfully attracted investment from the private sector in 5 projects worth Rs. 144.1 billion.

To further boost the mobility of people, goods and services, the NHA has been tasked with implementation projects valued at Rs.700 billion, connecting Khunjrab to

Gwadar. (Pakistan Economic Survey, 2016-17). To further reduce the burden on the highways, oil shipments shall be transported through the Gwadar-China oil pipeline as part of CPEC. Special Economic Zones (SEZs) and industrial park are major projects under CPEC which will improve the logistics infrastructure and transport network in Pakistan (Hussain et al., 2017).

c. Rail Sector

The railway network in Pakistan is still the preferred mode of transport for long distances and for the large scale movement of people and freight. Pakistan Railways provides a cost-effective and environment friendly way to travel. In addition, it has also supported trade by reducing its transaction costs and complemented national integration by connecting to remote rural areas with major towns and cities.

Presently, one of the major issues in the railways sector is the safe and opportune delivery of merchandise to the country's southern seaports. The conventional role of the Pakistan Railways (PR) has been undermined by the National Logistic Cell (NLC), created in 1978 to clear goods from Karachi's ports. Although, now, the commercial role of the NLC has significantly receded as they've lost their rolling stock and the private sector has engaged in crude competition with the NLC due to the tax exemption on the NLC.

As opposed to the cargo load on other transportation sectors, PR due to its inefficient performance only carries 3-4 percent of cargo, and may conceivably augment it to 6-8 percent of the total cargo load. In fact, the maximum the railways carry, even in the developed world, is 10 percent. Still, the railways sector must be accorded greater priority because it forms an integral part of Pakistan's supply chain capability (Business Recorder, 2017).

Bleak law and order situation has reduced business activity and government revenues from the railways sector, reducing the wages paid to employees. (Haque et al., 2011). Other significant issues which have and are inhibiting railways include the lack of active locomotives, the ill maintenance of Chinese engines, the delay in disbursements by the Public Sector Disbursement Program (PSDP), forcing the closure of various routes in the past several years (Ahmed et al. 2013). PR currently possesses 451 Locomotives, 1,732 passengers' coaches and 15,948 freight wagons, while the network extends over 7,791 kilometers.

Source: Pakistan Economic Survey 2016-17

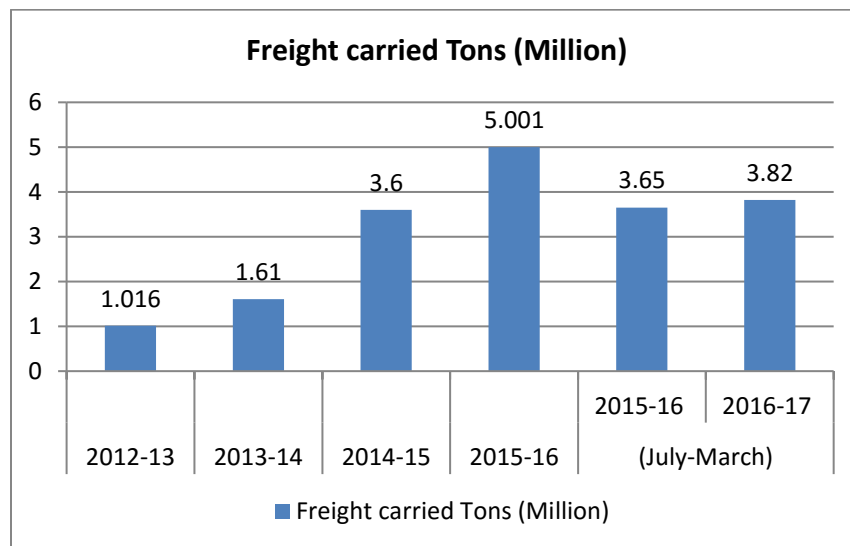
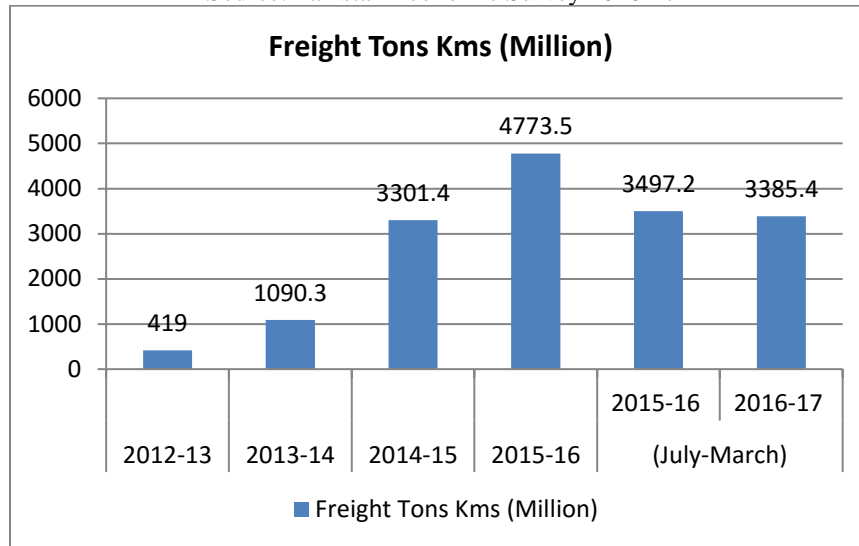


Figure 1: Passenger and Freight Traffic in Pakistan

For July-March 2016-17, a minimal decrease in earnings were registered in the records of Pakistan Railways as the earnings reduced from 26436 Rs. Million to 26268 Rs. Million. There was a 1.51% decrease in the number of passengers carried as compared to the previous period last year (July-March 2015-16). For the same time

period freight tons kms fell by 3.19% and the gross earnings declined by 0.63%. Thus in order to remedy the present state of Pakistan Railways, Pakistan's government, for the financial year 2016-17, assigned Rs. 41 billion as part of the PSDP.

d. Recent Developments

To satisfy the needs of commuters, new trains have been started under public-private partnerships. The private sector has also been taken onboard with regards to the management and operation. The first successful example of such collaboration is the Prem Nagar dry port in Lahore. The upgradation and dualization of Mainline-1 which runs from Peshawar to Karachi and creation of Havelian Dry port and cargo facilities is envisaged under the Early Harvest Projects of the China Pakistan Economic Corridor (CPEC). To this end, framework agreements have been signed between the Governments of China and Pakistan. In order to further assist rail commuters, E-ticketing has been introduced.

e. Aviation Sector

All matters pertaining to the aviation sector in Pakistan are governed by the Pakistan International Airlines Corporation (PIAC). The PIAC started off as a Public Sector Organisation in 1955 but, due to the Pakistan International Airlines Limited (PIAL) Act 2016, it transitioned from a statutory organization to a company governed by companies 1984. (PIA, 2015)

The PIA has a share of 34% in handling domestic cargo and 10% in handling international cargo (Pakistan Civil Aviation Authority, 2017). Flights are operated to a total of 50 destinations serving 28 domestic and 22 foreign destinations. The aviation sector's contribution in Pakistan's GDP is a fraction of 1% even though it accounts for 3.4% of the international GDP. (Hasan, 2015) Most of the air traffic is handled by the Jinnah International Airport in Karachi while the airports in Islamabad and Lahore have also become busy thoroughfares for local and foreign travelers.

The predominant role of PIA is evident through the fact that not only does it account for 73% of the passenger traffic but also approximately covers the entire freight market. PIA dominates the domestic market in Pakistan due to a variety of protectionist governmental policies incentivizing the operations of the PIA and discouraging new entrants from staying in the domestic market. There are a multitude of such measures ranging from the allotting of preferential routes to tax breaks. Due to such an environment, the total number of airlines operating in Pakistan has largely remained stagnant in the past few years. (Ahmed et al. 2013)

f. Recent Developments

The new National Aviation Policy (NAP) announced in 2015, after a hiatus of 15 years, is deemed to be 'forward looking'. Various measures like elimination of investment taxes have been introduced to incentivize investment from investors. To eliminate financial losses, fuel costs have been lowered while taxes on PIAC's revenues shall curb corruption.

The introduction of 20 years old A-310 has lowered the mean age of PIA’s fleet to 8% from 10%. Paid-up capital has increased from Rs. 100 million to Rs. 500 million for an airline operation. In addition, airlines, in order to operate domestic and international flights shall be required to have at least 3 and 5 aircrafts, respectively. The government is keen that infrastructure of airports will be refurbished according to international standards (Ghauri, 2015).

g. Maritime Sector

Njinkeu et al (2004) indicate that the trade facilitation through improving the port efficiency increases the trade flows. Pakistan National Shipping Corporation (PNSC) is responsible for managing the Maritime Transport in Pakistan. Since the PSNC is generally efficient when managing risks and is characterized by consistent historical performance, it has a credit rating of AA, indicative of the capacity of meeting its financial dues in a timely fashion.

The introduction of the 24/7 custom operations and establishment of banks in the vicinity of ports has attracted warehousing companies and subsequently strengthened the supply chain (Business Recorder, 2017).

Source: Pakistan Economic Survey 2016-17

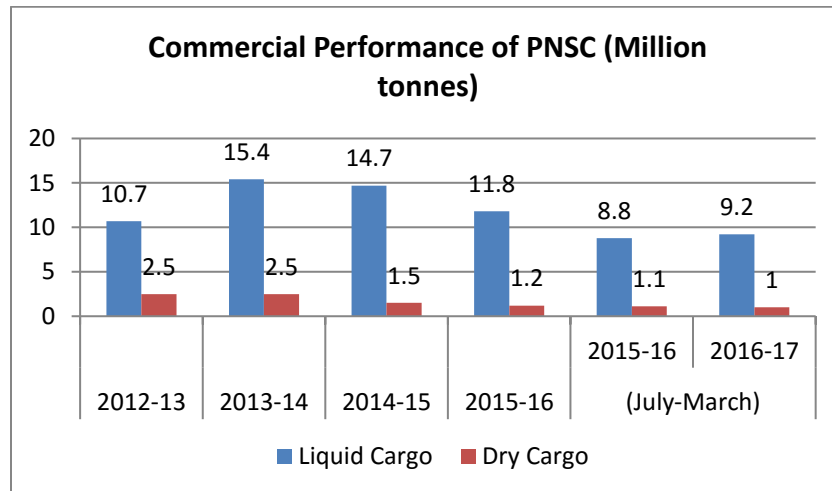


Figure 2: Commercial Performance of PNSC

From the latest data available of July-March 2016-17, records of the PSNC’s commercial performance showed that the total cargo lifted was 10.2 million tonnes out of which 9.2 million tonnes of liquid cargo and 1.0 million tonnes of dry cargo was lifted.

Source: Pakistan Economic Survey 2016-17

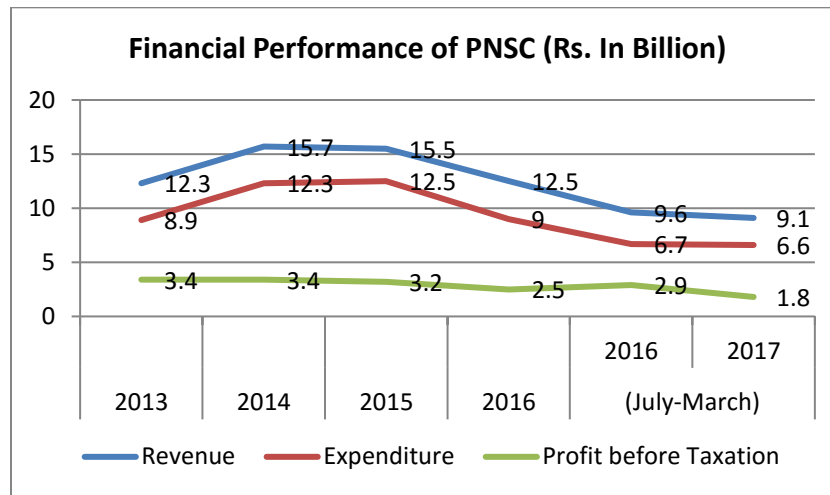


Figure 3: Financial Performance of PNSC

As far as the as the financial performance of PSNC was concerned, all the financial results registered for July-March 2016-17 were the lowest since 2012-13. PSNC’s revenues stood at Rs. 9.1 billion, whereas the expenditure was Rs. 6.6 billion with the Profit before Taxation.

In spite of the credit crunch faced by the global shipping industry, the PSNC mitigated the adverse effects by a focus on more profitable ventures. The revenues from foreign tankers grew substantially at 45% and at 24% for slot charter businesses, nearly compensating for the losses emanating from the dry bulk segment. Conversely, the reduction in finance expenses was primarily a result of the benefits derived from swapping and negotiating expensive loans.

h. Major Sea Ports in Pakistan

Of Pakistan’s three major sea ports, Port Muhammad Bin Qasim is the oldest port and Gwadar Port the newest port, the Karachi Port Trust (KPT) is by far the busiest sea port in Pakistan. The KPT alone handles almost 60% of the country’s total trade volume. The cargo handled during July – March 2016-17 rose by 6.7% over the same period last year due to an improvement in economic activity. During the same period of FY17 exports grew by 8.2 percent and imports declined by 2.2 percent as compared to FY16.

Another major port, the Port Qasim Authority handled 26.677 in July-March 2016-17 as opposed to 23.785 million tonnes in the corresponding last period, reflecting an increase of 12.2 percent. Import cargo during July-March 2016-17 rose by 19.4

percent to 21.604 million tons from 18.092 million tons. The exports handled, fell by 10.6 percent, to 5.072 million tons in FY-17, from 5.677 million tons during FY-16. On the other hand, the Gwadar Port, is a strategic warm water sea port, situated in the province of Balochistan. This Port was launched in 2007 as a joint Pakistan-China venture, with the start of bulk cargo imports in 2008. As of July-March 2016-17, the recorded port operations show total imports at 53,320 million tonnes and total exports at 1,925 million tonnes. Under CPEC, projects are planned for Gwadar Port City which will promote economic opportunities in Pakistan especially in Balochistan.

3.2 How does Transport Connectivity impact transit trade in Pakistan?

A multitude of issues like the limited transportation routes, cap on tradable goods, dated transportation protocols, as well as the lack of rail wagons, storage facilities and procedural clearance, often inhibit Pakistan’s transport infrastructure and stunt transit trade between Pakistan and its neighbors, especially India. (Taneja, 2007; Sahai & Laxmi, 2014) The presence of regulatory impediments at the border crossings within major transport corridors adversely affects the export competitiveness, cost, quality, time and reliability but also prevents it from realizing its comparative advantage. (Wilson & Tsunehiro, 2007; Taneja, 2013).

A huge chunk of planning regarding regional connectivity was done under the tutelage of SAARC. Currently the planned regional roadways, maritime gateways and rail corridors, remain to be materialized. The limited capacity and constrained scheduled of the railways, the fragmented land transport network and over-capacitated Integrated Check Post (IPC) impedes transit trade between Pakistan and India. Due to these constraints, it is 20% cheaper for India to trade with Brazil than Pakistan (Sahai & Laxmi, 2014; World Bank, 2016; Taneja, 2017).

There exist diplomatic tensions between Afghanistan and Pakistan which should be removed so that Pakistan can operationalize prior trade agreement with Afghanistan and through it augur its transit trade with the Central Asian and Middle Eastern economic corridors. If the regional and sub-regional connectivity is to be enhanced with Pakistan’s neighbors, then geopolitical issues should be resolved first so that SAFTA, SAARC, CAREC, CPEC, APTTMA, can be fully operationalized. In order to fortify regional value chains in Pakistan, trade facilitation measures involving the provision of transportation networks should be expedited and normalcy should be restored in inter-governmental diplomatic relations. (Ahmed et. al, 2015; Business Recorder, 2016; Pakistan Economic Survey 2016-17)

Table III: Trade Logistics

2016	LPI	Cust oms	Infrastr ucture	Internationa l Shipments	Logistics Competence	Tracking & Tracing	Timeli ness
Rank	68	71	69	66	68	67	58
Score	2.92	2.66	2.7	2.93	2.82	2.91	3.48

Source: World Bank. 2016

Table 3 shows, the scores that Pakistan achieved on various metrics of the Trade Logistics. Pakistan ranked at the 68th position out of 160 countries in terms of its logistics performance index. It scored 2.66 in customs, 2.7 in infrastructure, 2.93 in international shipments, 2.82 in logistics competence, 2.91 in tracking and tracing of goods, 3.48 in timeliness, for a total of 5 points. Pakistan’s position in this index signifies that to boost trade growth the country should move towards seamless and sustainable logistics at a more efficient pace as trade flows will increase through better logistic performance and trade facilitation (Hoekman and Nicita, 2008).

Table IV: Trading across borders

Year	Trading Across Borders	Border Compliance				Documentary Compliance			
		Exports		Imports		Exports		Imports	
		Time (hours)	Cost (USD)	Time (hours)	Cost (USD)	Time (hours)	Cost (USD)	USD	Hours
DB 2018	41.94	75	406	129	937	55	257	143	735

Source: World Bank, 2017

According to the Doing Business Report, 2018 published by the World Bank in 2017, while Pakistan has made incremental improvement across various measures in fostering a business environment conducive to trade, substantial progress is still needed. Trading across borders now stands at 41.94 in terms of the distance to frontier, 100. For instance, the time and cost of documentary and border compliance of Pakistan for imports and exports, as illustrated in the table above were significantly higher than that for South Asia and OECD countries.

4. Field Responses

The data gathered from key informant interviews reveals challenges in auguring transit trade through the fragmented transportation networks due to an inefficient national logistics commission. Pakistan can only be economically integrated with its geographical brethren if it modernizes and upgrades the multimodal transport linkages along with the requisite soft infrastructure.

4.1 Lacunas of Pakistan’s Domestic and Regional Transport Connectivity

Based on the first-hand experience of relevant officials in the various transportation ministries, transport connectivity suffers due to certain constraints which are discussed below:

4.1.1 Barriers in Road Corridors

There is insufficient capacity of national road transport corridors to serve intraregional traffic in Pakistan. The lack of road bypasses near major towns and cities, and inadequate road access to border constitute additional challenges to the

road transport. The roads providing accessibility to the border points are poorly maintained, narrow and below the capacity needed to handle international traffic.

In Pakistan, basic infrastructure such as parking, warehousing, scanner, testing laborites and other border facilities like customs and immigration, are often inadequate and in poor conditions. Furthermore, only a limited number of road routes have been opened up for trade. For instance, for trade between India and Pakistan only one road route, the Attari/Wagah route is available and open. Besides, only a limited number of goods are allowed to be traded between both countries. At the road borders, traffic, including trucks carrying exported or imported goods as well as passenger cars and pedestrians, often has to stop at the border gates which leads to considerable congestion and delays the timely transit of goods and leads deterioration of entire consignments. Strict technical and phyto-sanitary standards cause trade to be routed completely bypassing land routes.

Besides, there are virtually no bilateral or multilateral agreements, with the notable exception of CPEC, governing road connectivity between Pakistan and its neighbors. One of the key hurdles in promoting road connectivity between Pakistan and India, Iran or Afghanistan, is the tense and volatile relationship Pakistan shares with these countries. This holds particularly true for India, a country with which political and trade ties have often been suspended due to incidents of cross border violence, resulting in the closure of the land routes. That the land routes connecting Pakistan with Iran and Afghanistan, are in areas vulnerable to terrorist attacks, and drastically reduces the incentive of cross border contact.

Due to the lack of optimally cordial ties, visa regimes between Pakistan and its South Asian neighbors are characterized by inflexibility. Often, the visas issued for the purposes of tourism or business are restricted to certain cities and limited to a short time period. This acts as a deterrent for people of the respective countries to make use of the road links between Pakistan and its neighbors.

4.1.2 Barriers in Rail Corridors

A substantial share of those interviewed from the Railways Ministry laid particular emphasis in claiming Pakistan Railways to espouse great potential as a mode of surface transport for long distance freight and passenger traffic movement across South Asia. In Pakistan, the rail transit is hindered due to technical problems and the absence of regional agreements for direct intra-regional movement.

Officials in the Ministry of Railways, cited the lack of standardized technology and operation and maintenance practices; braking systems; inadequate loop lengths; missing links of shorter lengths in the border areas; lack of physical infrastructure at interchange points; load restrictions on bridges; lack of coordination for gauge conversion and capacity constraints, as the major issues riddling the railways sector. Other issues stymieing PR were, the dismal quality of rolling stock for cross-border trade, as wagons, locomotives and coaches are poorly maintained.

Currently, only limited rail routes are operational for cross-border trade. This is largely because of the differences in track gauges and braking system on the Indo-Pak border and restrictions on the types of wagons that can be used. Indian railways and Pakistan railways have the same border gauge railways but due to problems in the wagon balancing systems and inadequate infrastructure facilities at the rail cargo stations, only Pakistani railways carries cargo among Amritsar and Lahore. Though, the outdated stocks of Pakistan's railways adversely affect the performance of the trains at different routes. Particular issues like the inaccessibility of wagons, the necessities of wagon adjusting, the non-containerized rail wagons and the inadequate framework at the rail cargo stations also curtail the commercial purposes of the railways.

4.1.3 Barriers in Maritime Transport

According to maritime officials, the main issues stymieing maritime transportation in Pakistan comprise the lack of cargo and ship handling equipment, outmoded technology, varying levels of siltation at the navigation channels due to tidal fluctuations, inadequacy and poor maintenance of channel marketing and floating old crafts.

Besides, Maritime transportation is inefficient because of the lack of professional management, insufficient computerization of relevant material and the disengagement of laborers. Even though, the automated customs clearance at sea ports is still efficient than that at land ports, complications arise due to the cumbersome nature of port documentation. Radical improvements are needed in the operational efficiency and intermodal connectivity of maritime gateways.

The Pakistan Shipping National Corporation Group (PSNC) has recently experienced intense competition from dry and wet markets. As per its annual report, published in 2016, market competition is more pernicious now because of depressed freight rates as the shipping industry is cyclical and subject to recurrent fluctuations. Though, the local shipping environment gained from favorable conditions of previous years, demand suffered a shock due to the global financial crisis of 2008-09. This in turn has negatively impacted the principal segments of the shipping industry including the freight, asset values and demolition prices.

Therefore, there exists a substantial risk of counterparty default in contemporary markets as the PSNC remains particularly susceptible to the turbulence of the global shipping market. Shipping demand for dry bulk commodities depends on economic trends which are determined by consumer spending patterns. Conversely, the supply of tonnage is contingent on the access to liquidity which differs in every economy. As the balance between demand and supply in the shipping industry depends on the stability of fundamental yet volatile market conditions it's rendered extremely unpredictable and elusive to achieve.

The PSNC also faces operational risks including the risk of counterparty default, technical risks, collision and grounding risks and environmental risks as well as becoming embroiled in legal disputes. The country's naval fleet only consists of

PNSC tankers which are exploitative due to higher freight charges. The business environment in the shipping and ports industry is dismal due to “issues in doing business in terms of customs, immigration, the foreign remittance rules by the central bank, etc”, inhibiting competition.

Globally, ships routinely complete their loading and unloading within a span of 2 days, yet Pakistan still gives 10 free days for the performance of this task on state-owned land incurring huge expenses for the government. Borrowing by the Ministry of Maritime Affairs has amplified the effects on rate, cost, and value, leading to financial risks, while changes in the official taxation system have had detrimental changes. Besides, having expanded its role from exclusively focusing on the ships and ports in the country, the Ministry needs to ensure efficiency in its operations.

4.1.4 Barriers in Aviation Gateways

There are several hurdles to the growth of Pakistan’s Aviation sector faces major hurdles in its regional and international growth. The country’s airports suffer from tremendous capacity constraints for both passengers and cargos. Often, parking areas for aircrafts are missing as are passengers handling areas, with the cargo processing as well as security and baggage handling facilities being largely insufficient. According to an aviation official, there is a dire need for pilots and ground handling staff in airports.

Currently, no Pakistani airline flies directly to any African or Latin American country and the only flights connecting the country to Southeast Asia are two direct flights per week operated to Malaysia. Even the direct flights from Pakistan to India and Bangladesh are only scheduled twice in a week. In spite of the availability of connecting flights to other destinations, there is a great deal of uncertainty in their arrival and departure times.

Due to excessive security checks on airlines flying via Pakistan and the recent slowdown in the aviation sector, international airlines remain generally hesitant to explore the Pakistani market. Domestic connectivity is also constrained by the inept systems of airport handling and lengthy check-in procedures frequently leading to lengthy delays in flights. Even the domestic airports situated in major cities often have insufficient facilities in the case of toilets or lack functioning equipment like scanner machines.

Thus, along with the exorbitant ticket prices, air travel becomes highly inconvenient for domestic travelers as well as for international travelers. A new National Aviation Policy (NAP) only came into place in 2015, a period 15 years and even then only a few budgetary measures were implemented up until now. The sluggish pace of policy formulation and implementation in the aviation sector is further aggravated by the poor state of Pakistan’s economy, political instability and the lack of law and order.

4.2. Key Reforms for the Improvement of Domestic and Regional Transport Connectivity in Pakistan

This section deals with the desired regulatory reforms in transportation sector and possible entry points that can facilitate and augment the expansion of trade and transit facilitation in Pakistan. To address the various barriers, the remedial measures were identified. The measures which could be taken to boost multimodal transport connectivity comprise:

4.2.1 Reforms in Road-Networks

An agreement stipulating the opening of new border points for trade and transit, to be drawn up and implemented. Such an agreement should also involve Pakistan and its neighbors assigning transit rights to provide access to the markets and people of neighboring countries helping boost regional trade.

Moreover, Pakistan should modernize its infrastructure of its ICPs. The inclusion of spacious loading zones to accommodate trade consignment should be made mandatory at the various border crossings. Limitations on the size and type of transportation need to be dismantled to ensure that the flow of goods and services through the direct land routes is efficient and cost effective. An improved transportation network would prove conducive for the entire region's growth by rejuvenating regional agreements like SAFTA, CAREC, APTTMA, etc.

Pakistan's Custom authorities have announced the creation of an online national single window of the exemption and concession certificates to improve the ease of doing business. Moreover, Pakistan should adopt a Regional Transport and Transit Agreement with other countries in South Asia to facilitate smooth movement of freight and passengers vehicles across the border through the development of modern physical facilities at border crossing between Pakistan and its neighbors. The NLC can invest in the infrastructure of transport corridors, to consolidate transport supply chains in and beyond Pakistan.

Pakistan should also endeavor to upgrade the road infrastructure of the portion of the Asian Highway 1 route, extending from Lahore to Torkham and become involved in the revival of the Grand Trunk Road. In addition, alignment to International Transport of Goods Under Cover of TIR Convention can help Pakistan International Freight Forwarders Association (PIFFA) to fortify the Afghanistan-Pakistan-India-Bangladesh-Myanmar (APIBM) corridors and others, transforming into a transit point for Central Asian, South East Asian and Middle Eastern markets.

4.2.2 Reforms in Railways

Those who work in the railways sector propose a multitude of solutions to remedy the problems plaguing the railways sector. Their suggestions include the adoption of multilateral rail transport agreements; the simplification of documents; the standardization of technology including, track expansion and construction for missing links, rolling stocks and signaling; operation and maintenance; as well as the provision

of adequate loop length. Adequately addressing these problems, will enable Pakistan to boost the railways linkages within and beyond the country.

There is a need to develop and adopt the multilateral rail transport agreements by the government of Pakistan to facilitate smooth movement across the South Asian countries. Such an agreement should encompass the provision of, standardized documents; data transfer through IT; adequate loop lengths; multiple interchange points and the elimination of double custom checking. This will make the clearance of goods and vehicles at border crossing extremely efficient enabling the bulk transit and trade.

As opposed to the roads sector, improvements in the railway network connecting Pakistan with India, Afghanistan and Iran might entail greater effort due to the issues of gauge mismatch and multiple missing links between these countries. To have greater connectivity, extensive renovations are required to ultimately achieve an uninterrupted and standardized railway network is an imperative. Yet, according to a railway official, a container train already operates between Islamabad and Istanbul in Turkey, also passing through Tehran, the capital of Iran. If the problems with the rail gauge are solved, a direct container train can operate between Islamabad and Dhaka passing through Lahore, Delhi and Kolkata in between. Ultimately, this can help link Dhaka with Istanbul through Islamabad, thus helping Pakistan play an instrumental role in linking West Asia to South Asia, thereby gaining immense geostrategic importance.

4.2.3 Maritime Reforms

The PSNC seeks to engage in dealings with only those parties in the private sector who are financially and commercially sound. The high interest burden on current debt has already been efficiently reduced. The State Bank, should further reduce the interest rate on debt financing that is levied on the shipping sector and rationalize taxes (sales, incomes, etc.) levied on imports and liberalize the usage of foreign currency.

Measures to revamp port infrastructure to raise the efficacy and cost-effectiveness of port operations are being undertaken to improve utilization capacity of the KPT, Bin Qasim Port and Gwadar Port. Additionally, the PSNC aims to reduce lay-can time, expand its fleet and meet the rising demand of petroleum products through the procurement of oil transportation vessels.

The India-Pakistan Shipping Protocol, 1975, should be revised to allow for direct transshipments, rather than trade being routed through a third country. Ferry services from Karachi-Gwadar and Karachi-Iran for the purposes of tourism and business should be introduced. The old naval management and workforce, should be replaced with competent managers and workers.

Future plans for the KPT involve the reconstruction of berths, the construction of an elevated port expressway, the establishment of the Karachi Harbor Crossing, the establishment of a cargo village and an industrial park. The construction of South Asia

Pakistan Terminal as well as the Ketu Bunder will lower the burden and costs on the roads and seaports.

Under CPEC, Chinese investors have expressed interest in the refurbishment of the Gwadar Port to establish a “Marine Silk Route”, linked with the heavy industries in the Gwadar Free Zone. Further, the construction of the “Gwadar Port Eastbay Expressway” and an adjacent railway is envisaged to augment the connectivity between the seaport and the land transport networks.

4.2.4 Aviation Reforms

Pakistan can initiate several reforms in the aviation sector to augment its connectivity with the regional aviation gateways. With regard to aviation, Pakistan airports suffer from tremendous capacity constraints, on-shore and off-shore, for both passengers and cargo, in terms of runways, parking areas for aircrafts, passenger handling areas, cargo processing facilities, as well as security and baggage handling facilities. There is urgent need of pilots and ground handling staffs in airports. South Asian countries may also jointly set up a regional aviation training institute in the region. In addition, an Open Sky Policy for airlines originating from within the region may help in strengthening the connectivity between important cities.

For advancing regional and global aviation connectivity, a stronger regional cooperation is needed in South Asia. Such cooperation may encompass important areas like aviation safety such as cooperative development of operational safety and airworthiness, development of infrastructure, standards, cooperation among air traffic controls, etc. South Asian region may follow the ASEAN template of regional aviation cooperation as these countries have adopted a Multilateral Agreement on the Full Liberalization of Air Freight Services and a Roadmap for the integration of Air Travel Services.

5. Conclusion

Pakistan faces unique problems in proliferating and consolidating multi-modal transport across and beyond the country. Most significantly, the negligence of successive governments has allowed long-standing issues to fester and aggravate. Pakistan’s government has remained willfully oblivious to the innumerable benefits that Pakistan can receive if it moves towards achieving regional and domestic integration through investment in transport networks. Despite incremental improvements in various mode of transport, the country’s airways, maritime, roads and railways remain underutilized.

Several issues have contributed to the lack of viable transportation systems making it exceptionally hard to augment the flow of goods, services and people through Pakistan. Often times, there are no facilities as far as parking, warehousing, scanner, testing laborites, money exchangers, telecommunication services, etc. are concerned. Other amenities often happen to be particularly insufficient due to the rigidity of the visa framework and the stringency of customary and procedural process. The latter

issue is exacerbated by recurrent changes in the quality standards and TBT and SPS restrictions.

Various stratagems can be adopted and utilized to remedy the prevalent situation at the Pakistan's borders. These may include clarity and concurrence on sanitary and technical measures as well as ease in obtaining visas, speeding up the process custom clearances and the universal provision of communication and financial services at border points.

To ensure optimum use of transport facilities, for the purposes of the transportation of passengers and freight goods, within and outside of its borders, concerted efforts need to be made to resolve the multitude of problems stymieing this sector. For such a goal to be attainable, the ruling government needs to be at the forefront of mobilizing political support of senators and across party lines and among their constituencies. Furthermore, a non-partisan research and development institute, consisting of members of academia and experts on transport, should be tasked with conducting the socio-economic appraisal of any proposed infrastructure projects.

Besides, the government can involve and enlist the help of the private sector in the infrastructure projects that are launched. The Build-Operate-Transfer (BOT) scheme which is already in place mainly for the construction of roads can be extended to other ongoing and potential projects in the railways, maritime and aviation sector. While the issues that often arise in the operation and execution of the various means of transport are identical. This may signify that different government ministries can co-ordinate their efforts and jointly cooperate to address these issues.

On the regional level, Pakistan should restart and reinvigorate bilateral and multilateral trade and transit agreements. Though, prior to this, Pakistan needs to establish cordial relationships with its neighbors especially Afghanistan and India so as to avoid the disruption of transport services in the region. Treaties involving Pakistan and pertaining to regional multi-modal transport infrastructure should be given precedence at the highest levels of regional and global forums by the country.

To ensure effective implementation, the treaties/agreements should be ratified with the government devising feasible action plans with attainable deadlines for greater assimilation of the plethora of transportation networks that exist in South Asia. Moreover, due to Pakistan's unique geo-strategic location, the country stands to monumentally benefit if it proceeds to embrace the global trend of greater integration, as it will gain access to the skilled peoples and expansive markets of its immediate neighbors but also of countries in Central Asia, the Middle East and South East Asia.

Finally, CPEC programme could be leveraged for overall improvement in logistics supply chain. This will require expediting the establishment of CPEC authority to oversee timely completion of projects, agreement of China and Pakistan on financing of ML-1 railway line, and development of port cities other than Gwadar which can overtime provide greater capacity to service transit goods for Afghanistan, China and central Asian economies (Ahmed,2019). Overtime these efforts are also going to benefit the development of Special Economic Zones (SEZs) under CPEC programme

and help SEZs to connect with Chinese markets. Along with this, CPEC will also develop financial market integration among China and Pakistan (Manzoor et al. 2019).

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