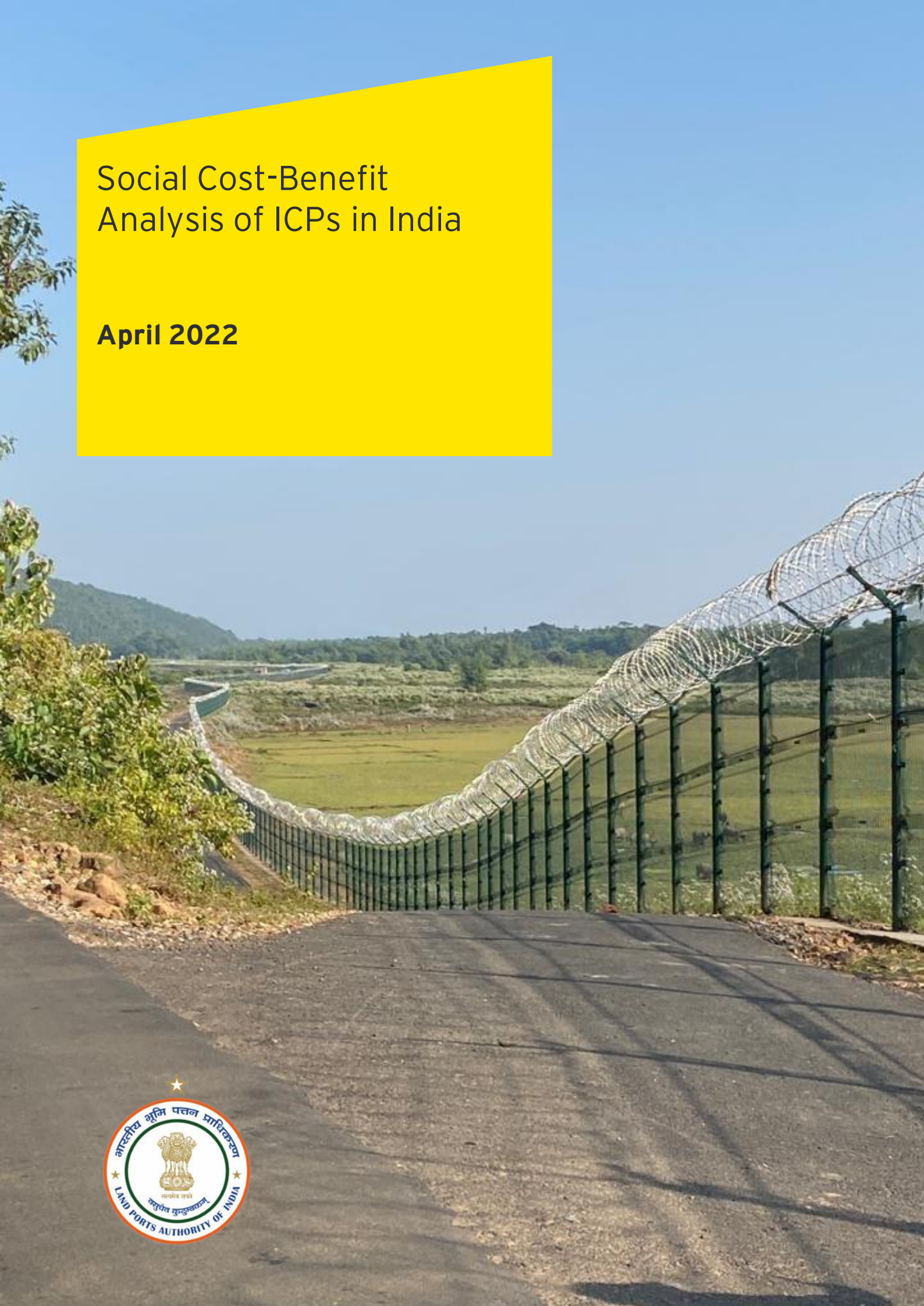
Social Cost-Benefit Analysis of ICPs in India

April 2022



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Abstract

Land Ports Authority of India (LPAI) envisions to provide state-of-the-art infrastructure to facilitate trade and travel. To achieve its mission to build secure land ports on India's borders and to develop seamless and efficient systems for cargo and passenger movement, in order to reduce time and transaction costs, LPAI plans to upgrade Land Customs Stations (LCS) into Integrated Check Post (ICP) in a selective and phased manner.

EY has been engaged by LPAI to carry out a detailed study highlighting the socio-economic cost-benefit analysis of integrated check-posts in India. This study calculates the EIRR of ICP Petrapole and does a qualitative study of other ICPs across India. The study also delves into model sensitivities to check the robustness of returns, and lastly, the study also includes a section on the impact of ICPs on India's bilateral relations with its neighbours.

Key words

Cross Border Trade, Economic Internal Rate of Return (EIRR), Immigration Check Post, Import, Integrated Check Post (ICP), Land Custom Station (LCS), Land Port Authority of India (LPAI)

Acknowledgements

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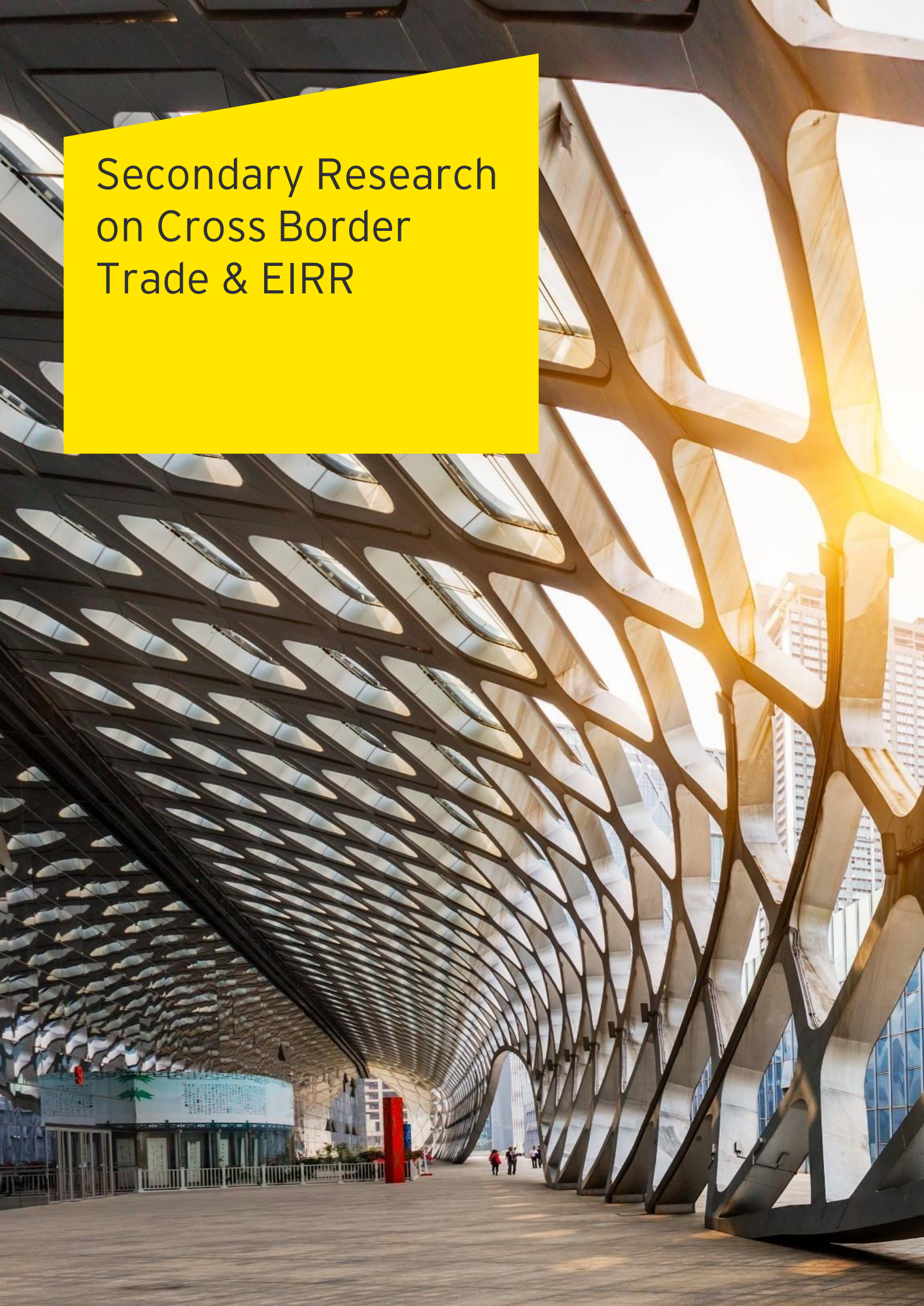
Secondary Research on Cross Border Trade & EIRR



Secondary Research on Cross Border Trade

Cross border trade has been a widely researched topic across the world, particularly in South Asia. Apart from cost benefits, cross border trade leads to immense socio-economic benefits, both tangible and intangible benefits, spanning over short, medium and long terms. Economic Internal Rate of Return (EIRR) is a powerful tool to gauge benefits that cross border trade bring as government bodies, planners, think tanks, trade association are keen to understand the wider ramifications of such trade.

Integrated check posts (ICPs) have been playing a crucial role in seamless cross border trade and passenger movement between India and its neighbouring countries. They have been designed and developed to facilitate smoother cargo and passenger movements through sophisticated technology and infrastructure as compared to Land Custom Stations (LCSs).

In order to understand to tangible and intangible economic benefits of ICPs LPAI wanted to gauge the EIRR of ICPs. This will help LPAI and planners make future plans of upgrading LCSs to ICPs and also create new ICPs. This study conducts EIRR of ICP Petrapole as a case study. In addition, it delves into the progress made by other prominent ICPs, namely, Raxaul, Jogbani, Agartala and a relatively new ICP, namely, Sabroom.

Currently, there is not much literature on EIRR computations pertaining to cross border trade in India. This section provides a brief overview of the emergence of ICPs in India and a summary of EIRR studies of comparable projects across the globe. The layout of this section is as follows:

A. Timeline of ICPs in India
B. Studies on Cross Border Trade in India
C. Studies on Cross Border Trade outside India

Timeline of ICPs in India

The importance of a systematic land border management system in India was realised in 2000 after the Kargil War (1999). Deliberation within the Government of India led to the establishment of the Department of Border Management in 2004, under the Ministry of Home Affairs. The motive of setting up a border management system was largely through a security-oriented approach. In line with these principles, a Group of Ministers set-up by the then Prime Minister, Atal Bihari Vajpayee, recommended the forming of ImCPs (Immigration Check Posts) and LCSs (Land Custom Stations) (which would be linked to Kolkata) at the India-Nepal Border. Further, they also recommended the setting up of ‘a composite check-post’ which would be comprised of law enforcement officers to check smuggling of narcotics/people.

Over the subsequent years, there was a significant push towards modernisation of border management infrastructure via ICPs. Existing literature shows that the impetus to expand border infrastructure was driven by multiple factors like:

- **Growth in trade between India and its neighbours**: Border management infrastructure has experienced a substantial growth in the last two decades due to support from major South Asian countries to build cross-border trade facilities and reap the entailed socio-economic benefits.
- **Dependency on Indian ports**: Larger part of trade of countries like Nepal and Bhutan transits through India. Rising trade levels necessitated improvements in border trade infrastructure.

- **Increase in Chinese investments in neighbouring countries**: In light of an increased involvement of China in other neighbouring countries, India recognised the need to strengthen connectivity with its neighbours. This process was further fast-tracked because of the 'Neighbourhood First' policy initiated in 2014 by the Ministry of External Affairs (MEA).
- **International obligations**: In 2016, India ratified World Trade Organisation's Trade Facilitation Agreement (TFA) thus committing to simplification and harmonisation of cross border trade. India has also formulated a National Trade Facilitation Plan 2020-2023 in order to reduce the transit time for goods passing through borders. This has led to a significant improvement in the border management system in the past few years.

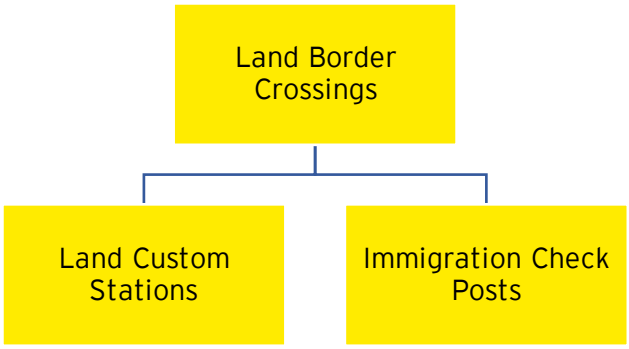


Figure 1: Types of Land Border Crossings

Land border crossings in India are primarily of two types – Land Custom Stations (LCSs) and Immigration Check Posts (ImCPs). While LCSs are border crossings which facilitate trade of goods between India and its neighbours, ImCPs are nodal points for facilitation of passenger movement across India's land, sea and air borders. Land Ports Authority of India is a nodal agency for construction, operation, and management of Integrated Check Posts (ICPs). An ICP is a facility managed by LPAI which contains functions of both, an LCS and an ImCP, albeit with better infrastructure. Various facilities at ICPs include passenger terminal building, currency exchange, a building to process cargo, cargo inspection sheds, warehouse/cold storage facilities, a quarantine laboratory, etc. A wide range of facilities at ICPs leads to the involvement of various stakeholders in its day-to-day activities. Six main stakeholders at an ICP include: customs; immigration authorities; a security establishment (like BSF); Ministry of Agriculture and Farmers Welfare; Ministry of Fisheries, Animal Husbandry and Dairying; Ministry of Health and Family Welfare.

Currently, India has nine operational ICPs that were converted either from an LCS or an ImCP and over 13 other cross-border establishments to be converted to an ICP.A list of operational ICPs and LCSs to be upgraded to ICPs is in the table below.

Table 1: List of Operational ICPs and to-be-upgraded LCSs

Location	State
List of Operational ICPs	
Attari / Wagah	Punjab
Agartala	Tripura
Petrapole	West Bengal
Raxaul	Bihar
Moreh	Manipur
Jogbani	Bihar
Kartarpur	Punjab
Sutarkandi	Assam

Location	State
Srimantapur	Tripura
List of LCSs to be upgraded to ICPs	
Hili	West Bengal
Changrabandha	West Bengal
Ghojadanga	West Bengal
Fulbari	West Bengal
Mahadipur	West Bengal
Dawki	Meghalaya
Kawrpuichchuah	Mizoram
Sabroom	Tripura
Jaigaon	West Bengal
Banbasa	Uttarakhand
Sonauli	Uttar Pradesh
Ruapidiha / Nepalganj	Uttar Pradesh
Panitanki	West Bengal

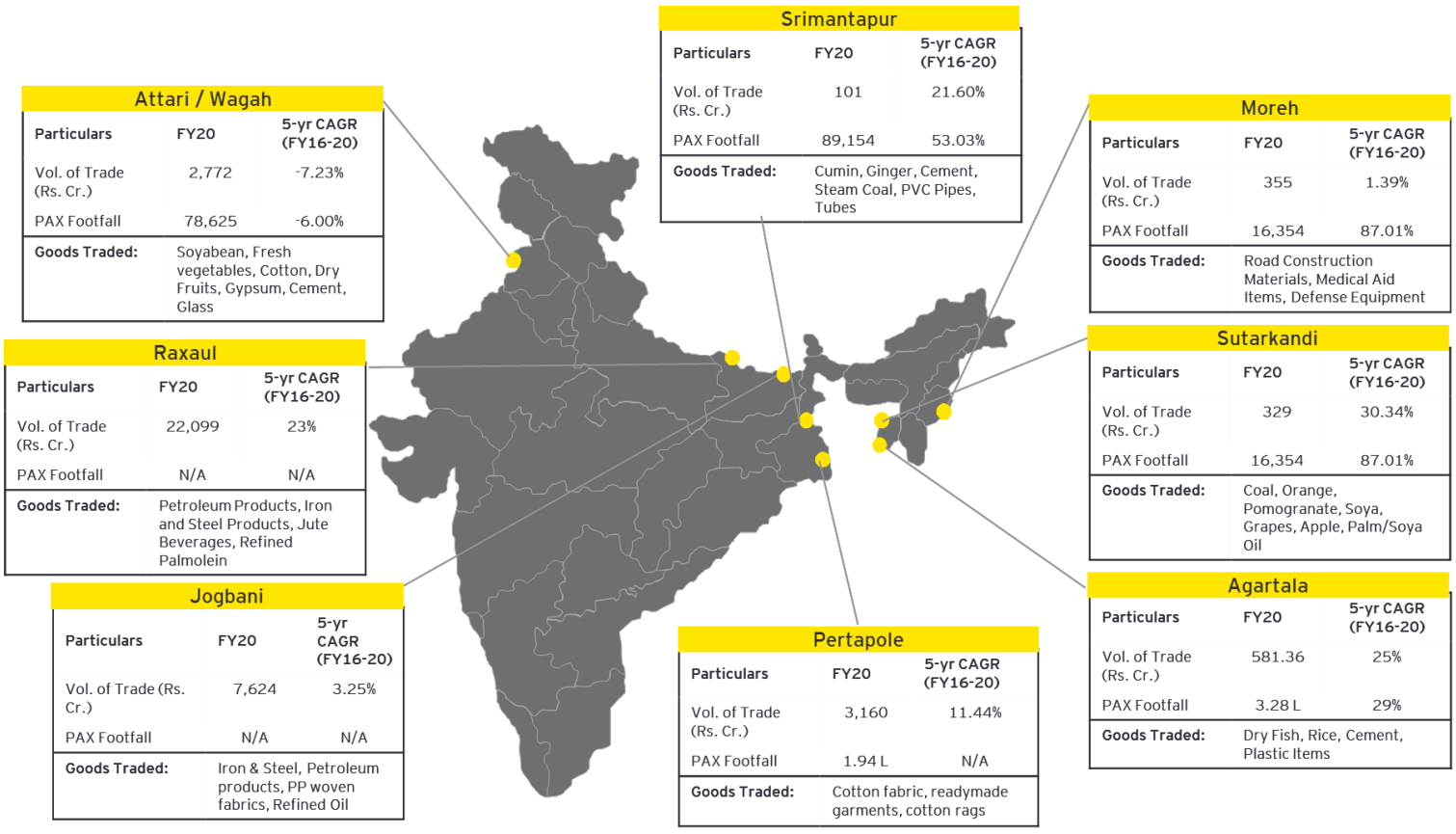


Figure 2: Overview of Operational ICPs in India

Studies on Cross Border Trade in India

Though there is limited literature on direct and indirect socio-economic benefits arising from ICPs, there is a considerable amount of research on the economic impact of cross-border trade. This primary covers the benefits of cross-border trade between India and Bangladesh through *border haats*. *Border haats* are local markets located at the India-Bangladesh border

that enable local communities on either side of the border to trade in small volumes. *Border haats* are an initiative of the governments of India and Bangladesh that intended to restore the economic and cultural ties between the two countries.

A World Bank study showed that *border haats* offered vendors a supplementary source of income. However, the results from the study suggest a significant difference between the way vendors from India and Bangladesh rated the income increases from *border haats.*[1]

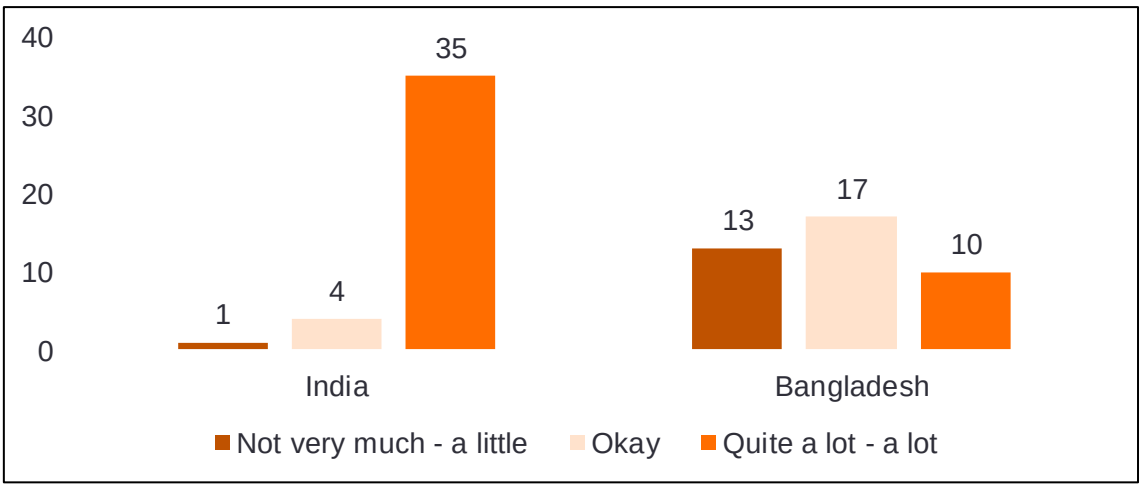


Figure 3: Ratings of income increases from *border-haat* trade between India and Bangladesh

Source: The World Bank (2018)

Figure 3 shows that most of the vendors from India rated the income-increase from *border haat* trade to be significant. On the other hand, very few vendors from Bangladesh rated the income-increase from *border haat* trade to be significant. However, it is important to note that The World Bank study captures the perceptions of vendors on income-increases and not the actual income-increase.

A study conducted by CUTS International in 2019 shows that the average incomes of communities near *border haats* is significantly higher than the average incomes of communities not staying near *border haats*.[2] *Non-haat* income includes income a vendor receives for work that was performed by vendors for securing a livelihood before the *border-haats* began. *Border-haat* income includes the income from *non-haat* related activities as well as income from the *border-haat* per month.

[1] "A Glass Half Full: The Promise of Regional Trade in South Asia", The World Bank, Kathuria, Sanjay, editor. 2018.
[2] "Bordering on Happiness: An Assessment of Socio-Economic Impacts of Bangladesh-India Border Haats" CUTS International, 2019

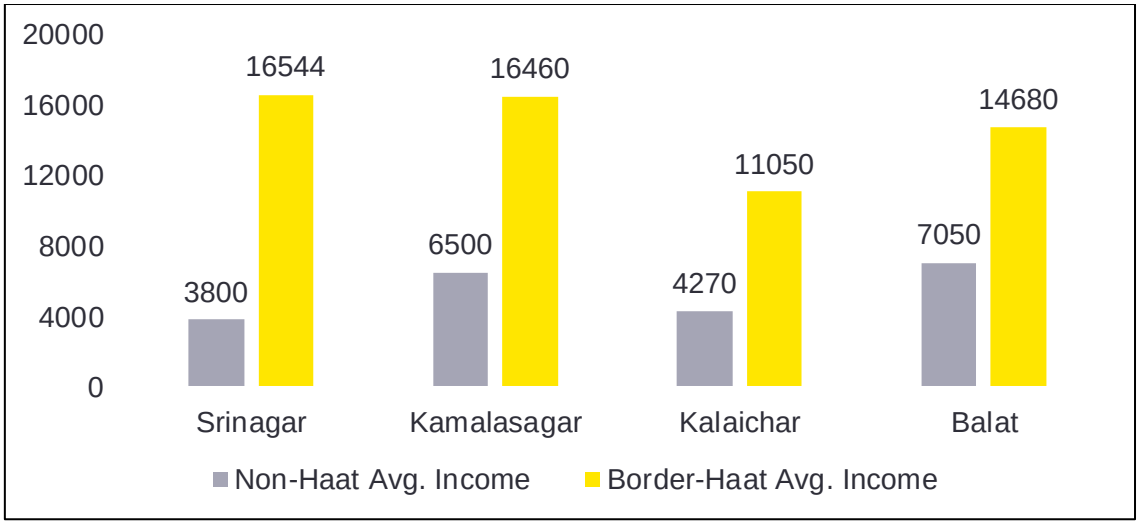


Figure 4: Income of vendors near *border haats* (INR)

Source: CUTS International (2019)

Other key findings from the CUTS International study in 2019 are as follows:

- Increase in average *border-haat* income is due to the rise in new vocations. Stakeholder such as transporters and labourers have also benefitted from the commencement of *border-haats.* This is largely because vendors prefer hiring vehicles to transport their goods.
- Participation rates of vendors on the Indian side of the border is regular.
- Most vendors at the *border-haats* have profitable businesses due to the volume of goods traded.
- Vendors on the Indian side of the border seek infrastructural facilities and assurances from authorities. Vendors are keen on expanding their businesses provided these facilities and approvals are provided.

Asian Development Bank (ADB) had computed the EIRR of a rural connectivity investment program that would construct 9,000 kilometres of all-weather standard rural roads in the states of Assam, Chhattisgarh, Madhya Pradesh, Odisha, and West Bengal, to assess the economic viability of the program. ADB identified the following benefits of the rural connectivity program:

- Increase in diversification of crops and reduction in crop spoilage
- Up to a 50% increase in per capita spending
- Increase in value of agricultural, residential, and commercial land. The increase in value of land was found to be much more significant in West Bengal and Assam (however, this was not considered while computing the EIRR).

ADB had computed an EIRR of 17.69% over 16 years for the four states after considering capital investment, maintenance costs, benefits due to savings in travel time, and benefits due to savings in vehicle operation costs.[3]

The economic evaluation of the transport strategy for the National Capital Region (NCR) conducted by the National Capital Region Planning Board (NCRPB) under the Ministry of Urban Development, GoI also used the EIRR framework. The transport strategy identified eight Regional Rapid Transit System (RRTS) corridors. The EIRR considered cost estimates

[3] "India: Rural Connectivity Investment Program (Tranche 1)", Completion Report, Asian Development Bank, June 2020

of laying tracks, stations, rolling stock, etc., and assumed capital investments to be evenly distributed over the construction years. Benefits of the project that were considered in the computation of the EIRR included travel-time saved, reduction in vehicle operating cost, environmental benefits, and increase in land values. NCRPB computed an EIRR of 43.26% for the eight RRTS corridors.[4]

Studies on Cross Border Trade outside India

It is important to understand the kinds of challenges and opportunities that other countries face with respect to cross border trade. A research paper on cross border trade in Africa finds that an absence of warehousing facilities and quarantine centres have led to higher transaction costs and inefficiencies.[5] The same research found that a lack of communication infrastructure has hampered the flow of market information across borders, and that trade merchants are likely to invest more in cross border trade and other supportive facilities if existing infrastructure is improved. In the Indian context, this would suggest that the establishment of ICPs and the development of existing infrastructure that supports cross-border trade would encourage the participation and investments in cross-border trade.

Another research paper on cross border trade between Sarawak in Malaysia and Kalimantan in Indonesia found that such activities have had a strong social and economic impact in the region though:

- Market integration and price stabilization
- Increase in employment opportunities[6]

However, the research paper also finds informal cross border trade to be a cause for illicit activities such as human trafficking, smuggling, and crime to occur. Other papers have studied cross border trade in Laos, Cambodia, Vietnam, and Thailand[7]; and between Uganda and Rwanda[8], and have found similar observations.

A significant section of literature on cross border trade suggests the need for the following:

- Systematic cross border security
- Well-planned infrastructure
- Structured trade transaction procedure

ADB has assessed the economic viability of infrastructure development of three Border Crossing Points (BCPs) in Pakistan using the EIRR framework. ADB computed the EIRR using the following costs and benefits:

[4] "Functional Plan on Transport for National Capital Region – 2032", National Capital Region Planning Board, Ministry of Urban Development, Government of India, 2016
[5] "Unofficial Cross-Border Trade in Eastern Africa", Peter D. Little, Food and Agriculture Organization of the United Nations, 2010
[6] "Informal Cross-Border Trade Sarawak (Malaysia)-Kalimantan (Indonesia): A Catalyst for Border Community's Development.", Awang, Abd Hair et al., Asian Social Science 9.4 (2013)
[7] "Thailand's Cross-border Trade in the Greater Mekong Subregion: Selected Social Issues", Paitoonpong, S., Center for Contemporary Asian Studies Working Paper, 2007.
[8] "Informal Cross-Border Trade and Arms Smuggling along the Uganda–Rwanda Border", Alusala, Nelson, African Security Review, 2010

Costs	Benefits
▸ Capital costs ▸ Investments ▸ Resettlement costs ▸ Operation and maintenance costs	▸ Time savings ▸ Added revenue through de-congestion ▸ Reduction in illegal activities

Figure 5: Costs and Benefits analysed in other studies

Economic Internal Rate of Return

Economic Internal Rate of Return (EIRR) is a discounting framework which incorporates socio-economic benefits and costs. The core principles of this methodology arise from internal rate of return (IRR) which is used in capital budgeting exercises. While IRR considers only financial aspects of capital projects which have large investments, EIRR attempts to encompass the implication of such capital projects on the surrounding economy.

As far as land ports are concerned, previous literature has highlighted various intangible benefits attributable to development and maintenance of cross-border trade facilities. A few of them include, income generation, fostering the neighbouring local economy, market integration, development of infrastructure and transport, contribution to formal trade, etc. There are various tangible benefits as well, such as an increment in warehousing and processing fees of cross border trade institutions (like LPAI). On the other hand, economic costs include the capital investment, annual expenses to maintain the operational efficiency of the cross-border facility, replacement capex or depreciation, etc. A standard IRR framework would include only the tangible benefits and costs which highlights the financial returns of a capital establishment. However, by including the intangible benefits and costs, the EIRR includes the social returns in its calculations and therefore has wider implications. Since cross border cargo and passenger movements between India and its borders have larger political and diplomatic impacts computing EIRR is more meaningful.

A standard practice is to compare the EIRR with the market-accepted social discount rate. If the EIRR computed is lower than the comparable social discount rate, project is considered to provide lower return than an alternative comparable investment. Similarly, if the EIRR is higher than the social discount rate, the project is considered to over-deliver the socio-economic return vis-à-vis comparable projects. A simplified formula to calculate the EIRR is given as follows:

$$EIRR\ \% = \left(\frac{Tangible\ Benefits + Intangible\ Benefits}{Economic\ Costs} - 1\right) \times 100$$

Equation 1: A simplified formula to calculate EIRR

Comparable social discount rates include those published by the Asian Development Bank (ADB) and the Ministry of Housing and Urban Affairs (MoHUA). The social discount rates considered by each of the bodies is provided in the table below:

Table 2: Social Discount Rate considered by international institutions

Institution	Social Discount Rate (%)
Asian Development Bank	12%
Ministry of Housing and Urban Affairs	14%

Keeping the above rates in mind, this report highlights and calculates the EIRR and its underlying assumptions along with a sensitivity analysis for the future years. It may also be noted that the returns on public infrastructure investments are reaped over a relatively longer timeframe.

Calculating the Economic Internal Rate of Return

Calculating the Economic Internal Rate of Return

EIRR comprises of two major components, namely the economic costs and the economic benefits. This section delves into the economic costs and benefits considered, the underlying assumptions and forecasting methodology. The economic benefits are further classified into intangible and tangible economic benefits. A summary of the model framework developed for ICP Petrapole is provided in the following figure.

Main components		Sub-components
Economic Costs		► Capital expenditure ► Depreciation ► Replacement capex ► Operating expenses
Economic Benefits	Intangible Benefits	► Saving in Time ► Employment Generation ► Indirect contribution to local GDP ► Asset value appreciation ► Enhanced security measures ► Increase in operational efficiency
	Tangible Benefits	► Revenue from ICP operations ► Revenue from commercial activities

Figure 6: Summary of factors considered in the computation of EIRR

A detailed explanation of each of the components above and its working in the EIRR computation is given as follows:

Economic Costs

Economic cost considers the expenses incurred by LPAI in order to develop and maintain the land port over a span of its operational years. The four main sub-components of economic costs are capital expenditure, depreciation, replacement capex and operating expenses. Since the nature of each of these expenses are different, the assumptions and working of each vary. Further, the assumptions also take into account the growth plan of ICP Petrapole based on planning documents and interviews with LPAI officials at ICP Petrapole as well as the LPAI headquarters.

A detailed description of each of these sub-components is as follows:

Capital Expenditure

Rationale: As commonly seen in infrastructure projects, the establishment of a land port requires a large capital outlay. ICP Petrapole, being one of the biggest land ports in Asia, had a capital spend of over Rs. 816.96 Cr. till FY 2020-21 since its inception in FY 2015-16. Key facilities at ICP Petrapole include: passenger building, cargo terminal, quarantine blocks,

rummaging sheds, parking area, weighbridges, etc. This initial capital outlay forms the foundations of the operations at the ICPs and must be included in the EIRR computation.

Methodology and assumptions: The expansion and other work at ICP Petrapole is seen to be done in phases. The capital expenditure for financial years up to FY 2020-21 have been taken based on the actual figures provided by LPAI. The pattern of cashflow for work at ICP Petrapole has had an upward trend since FY 2015-16, with the baseline investment in FY 2015-16 being Rs. 100.92 Cr. and ranging up to Rs. 208.76 Cr. in FY 2020-21.

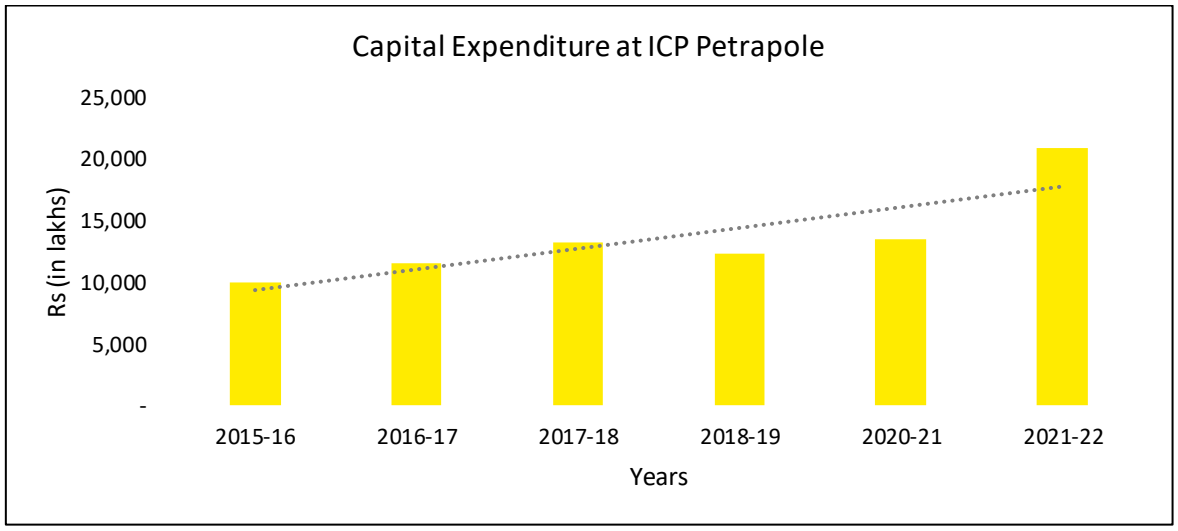


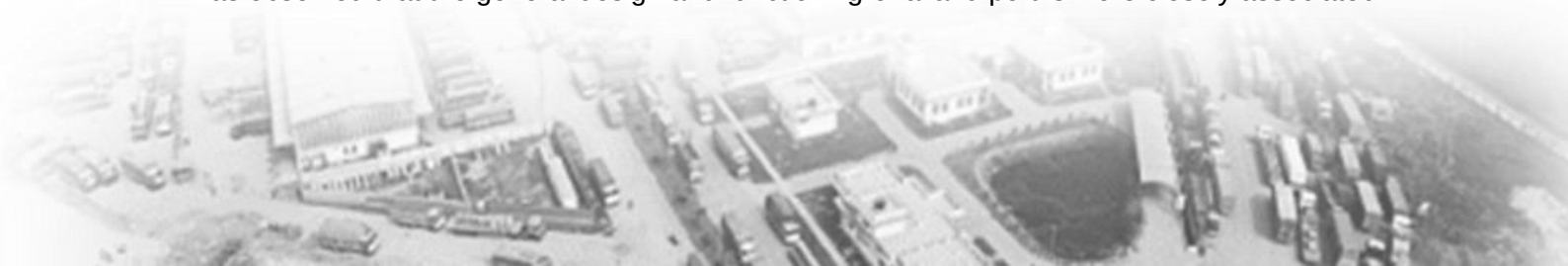
Figure 7: Capital expenditure at ICP Petrapole

For capex projections beyond FY 2020-21, various stakeholders were consulted at ICP Petrapole (including the ICP manager). Based on discussion and the site visit, it was observed that a new Passenger Terminal Building (PTB) was under construction. The capital cost of the new PTB is Rs. 435 Cr. of which the financial progress till date is Rs. 126 Cr. The EIRR computation assumes that the remaining Rs. 309 Cr. worth of capitalisation would be done evenly across FY 2021-22 and FY 2022-23. This assumption is based on estimated month of completion to be December 2022, as per discussion with LPAI. The model assumes a major capital expenditure of Rs. 1,125.40 Cr from ICP Petrapole's inception to FY 2022-23 (including the new PTB). For the remaining years in the forecast period, the model has a separate provision for replacement capex and depreciation which are discussed in the subsequent sections.

Depreciation:

Rationale: Asset bases of large infrastructure projects are subject to depreciation which accounts for normal wear and tear. Since economic costs include accounting costs as well, depreciation must be included in the computation of EIRR in order account for the useful life of assets.

Methodology and assumptions: Conventionally, there are two main ways to calculate depreciation, i.e., straight-line method (SLM) and written-down value method (WDV). For the purpose of computing EIRR, the model uses WDV and calculates the depreciation based on a blended rate considering the composition of asset classes within the net block of ICP Petrapole. The baseline philosophy of computing a blended depreciation rate is to find comparable transport facilities and use its depreciation guidelines. Based on the site visit, it was observed that the general design and functioning of a land port is more closely associated



to that of an airport as opposed to other transport facilities like seaports. Broadly, the assets of a land port can be classified into four categories, i,e;

i. Building
ii. Electrical installations
iii. Furniture and fitting
iv. Vehicles

Based on the site visit and secondary research, a rough break-up of the proportion of assets at a land port is provided in the table below. Further, the table also provides the depreciation rates used for the respective asset classes in the airport sector. This would provide a reliable approximation of the depreciation rate needed to be considered in the EIRR computation.

Table 3: Blended depreciation for computation of EIRR

Asset class	% of total asset base	Depreciation	Weighted Avg.
Terminal Building	75%	3%	5%
Electrical Installations	20%	10%	
Furniture and Fixtures	3%	14%	
Vehicles	2%	13%	
Total	100%		

As seen in the table above, the resultant depreciation rate is 5% which is applied on the net block of the land port. Further, it must also be noted that the depreciation of capital additions in respective years are calculated at 50%, assuming that the asset was capitalised in the middle of the year. A brief illustration of the depreciation working from FY 2015-16 to FY 2020-21 is provided in the following table.

Table 4: Depreciation for FY 2015-16 to FY 2020-21

Particulars (in Rs. Cr.)	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	…
Opening Asset Block	-	98.40	206.68	325.37	429.39	540.00	…
Capital Additions	100.92	116.11	132.34	123.37	135.46	208.76	
Depreciation	2.52	7.82	13.64	19.35	24.86	32.22	
Closing Asset Block	98.40	206.68	325.37	429.39	540.00	716.54	

Replacement Capex:

Rationale: Replacement capex is incurred in order to maintain the useful life of the land port. Moreover, the replacement capex also accounts for the annual small-scale capex that a land port might have to consider in order to maintain its operational efficiency.

Methodology and assumptions: The model assumes a fixed replacement capex of Rs. 5 Cr. per year for the forecast years. This amount is not apportioned for in the historical years since that is accounted for in the actual financials provided by LPAI.

Operating Expenditure:

Rationale: Operating expenses reflect the expenses incurred by an entity to maintain its operational efficiency. For a land port, it would include expenses such as salaries and wages paid to employees, repair and maintenance expenses, office expenses, and other utility expenses. Since operating expenses are recurring expenses for the land port and fall under accounting costs, it must be included in the EIRR computation.

Methodology and assumptions: For the historical years, the model considers the financials provided by LPAI. It can be seen from the graph below that there has been an exponential increase in the operating expenses in the previous five years. This may be attributed to the expanding capital expenditure at the land port. Conventionally, the operating expenditure at an infrastructure/transport facility is directly linked to the size of the asset base.

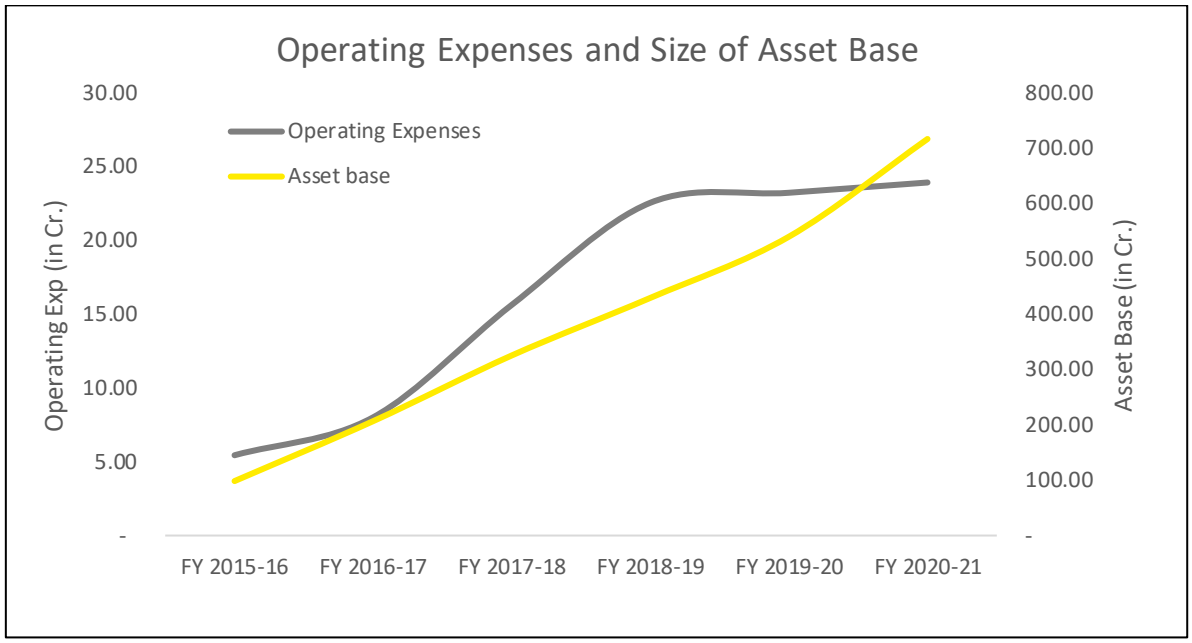


Figure 8: Comparison of Operating expenses and size of asset base

Apart from the new passenger terminal building, no other major capex is planned to be incurred at ICP Petrapole. Keeping this in view, the model is designed to consider an annual growth rate of 3% for future projections. Moreover, it can be seen from the analysis above that the operating expenses form 4-5% of the net asset block, which is in line with the generally accepted principles of transport infrastructures. The subsequent section provides a detailed discussion on the model sensitivities with respect to various assumptions wherein the possibilities of changing the growth rate for operating expenses will be explored.

Converting financial costs to economic costs

When the financial values are converted into economic values, they need to be adjusted for taxes, subsidies, inefficient land or wage markets, and other transfer payments, before performing the economic analysis.

The conversion factors are provided by the Ministry of Housing and Urban Affairs in their guidelines for calculating returns on metro projects. Since land ports fall under the category of transport infrastructure (like metro projects), these conversion factors may be applied to the computation of EIRR for ICP Petrapole as well. The conversion factors used as detailed in the following table:

Table 5: Conversion factors for economic costs

Type of Cost	Conversion Factor
Capital Cost	0.83
Operating Cost	0.87

Economic Benefits

Economic benefits in an EIRR calculation account for the socio-economic benefits that are accrued to the project under consideration. As opposed to financial benefits, economic benefits consider both financial or accounting benefits and social benefits. For the purpose of this report, economic benefits are divided into two categories: intangible benefits and tangible benefits.

Intangible benefits are the benefits that are attributed to the ICP indirectly and are not explicitly accounted for in monetary terms. On the other hand, tangible benefits include the income sought by LPAI for the services it provides. The following sections provide the details of each of the economic benefits (both, tangible and intangible) incorporated in the model.

Intangible benefits

Saving in Time:

Rationale: One of the main motives of LPAI in building ICPs is to improve cross-border trade through streamlining and digitising various transit processes. Initiatives that are targeted towards making the cross-border movement efficient have led to a reduction in the time spent by vehicles at the border. While such benefits are not recorded in the books of LPAI, they can be attributed to time and cost saving enjoyed by transport agencies/trading partners. Keeping in view the attempts to increase the transit speed of vehicles through various initiatives such as zero-point discussions (to address concerns on either side of the border), building new entry/exit gates (as done at ICP Petrapole to accommodate larger traffic), installing large vehicle-size scanning machines (to reduce time taken by custom officials), etc. have led to a significant reduction in time.

Methodology and assumptions: The monetisation of the amount of time saved takes into consideration various factors like the traffic movement at ICP Petrapole, average cost of hiring a transport vehicle, and the time saved per movement. A brief on the historical data and the forecasting methodology is given as follows:

a. Traffic volumes at ICP Petrapole: The historical traffic volumes of ICP Petrapole were taken from the data provided by LPAI. A trend of the traffic movement is provided in the graph below.

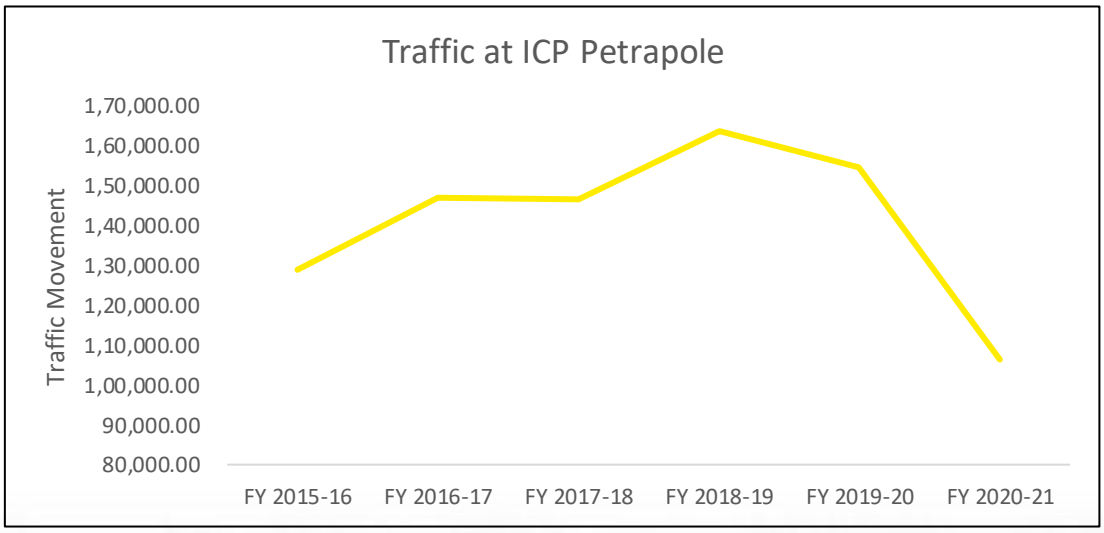


Figure 9: Traffic at ICP Petrapole

As seen across various transport related sectors, the traffic at ICP Petrapole had experienced a slowdown in FY 2019-20 and FY 2020-21 due to the Covid-19 pandemic. However, based on discussions with LPAI officials, the movement of essential goods like medicines, food items, etc. was uninterrupted. In order to compute the traffic forecast, the base of FY 2019-20 is considered to project FY 2021-22 since FY 2020-21 would not be representative of normal circumstances in the transport sector. For other future years, the immediately previous year is taken as the base upon which a growth rate is applied.

The model considers a uniform growth rate of 5% per annum on the traffic movement. This growth rate is considered to be reasonable because of a robust growth in Indo-Bangladesh bilateral trade. As seen in the graph below, trade volumes have increase from ~$7 Bn to over $10 Bn from FY 2014-15 to FY 2020-21. Trade volumes have achieved a 4-year CAGR of 9.77% from FY 2014-15 to FY 2018-19. Moreover, research suggests that only 60% of the bilateral trade between India and Bangladesh happens via land routes. The growth projections take into account the impetus from LPAI to develop ICPs – a potential channel of cross-border trade for the remaining 40%.

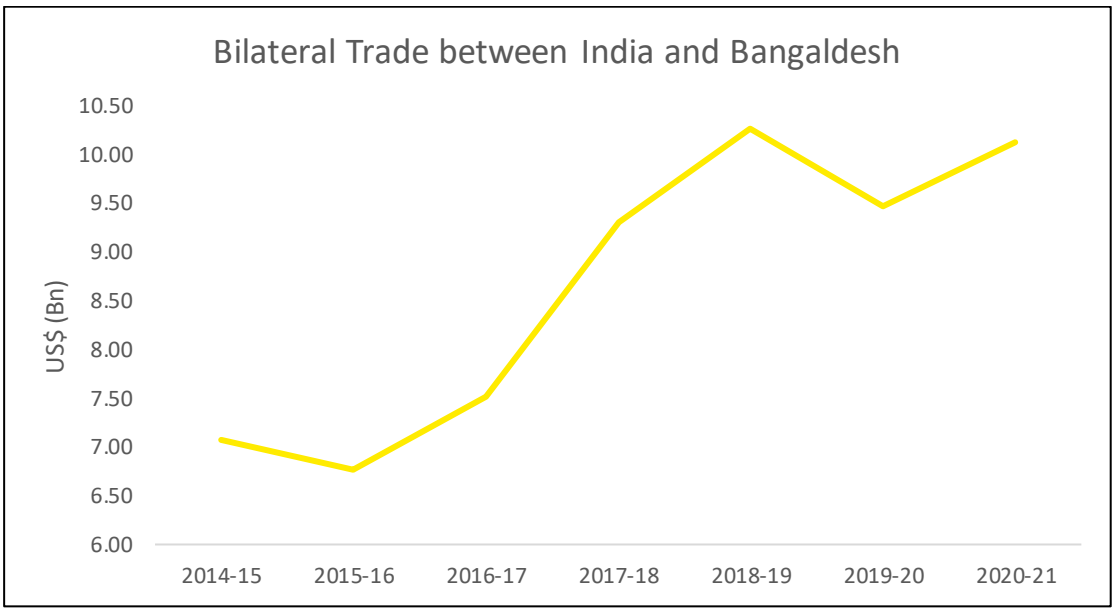


Figure 10: Bilateral Trade between India and Bangladesh

b. Cost per vehicle: Based on secondary research and interaction with stakeholders at ICP Petrapole, a blended cost estimation is derived and fed into the model. A detailed working of the cost estimation is as follows[9]:

Table 6: Cost estimation of transport vehicles

Particulars	Unit
32 FT (14 Tonne)	
Cost per Km	Rs. 80
Average speed	50 km/hr

[9] "Trucks in India: What is the cost per km for these vehicles?", accessed on 28 March 2022

Particulars	Unit
Per hour rate	Rs. 4,000
Average gross margin	40%-50%
Cost per hour	Rs. 2,000
Cost of dormant vehicle (at ICP) [Net of fuel cost, toll charges, maintenance, tyre wear-tear]	Rs. 755
Average cost of dormant truck per hour	Rs. 250 – Rs. 300

Based on the working above, the model assumes a cost of Rs. 250 per hour per truck. Further, a growth rate of 5% per annum is applied to forecast the cost for future years. The 5% growth rate is in line with the inflation expectations (at least, for the short – medium term future).

c. Time saving in hours: After analysing the TRS studies conducted at ICP Petrapole and speaking to stakeholders including CWC, it is realised that streamlining the transit process has led to a time saving of over 300 minutes or 5 hours. Due to lack of substantial data, the historical data is iterated using a growth rate. The model assumes a modest growth rate of 1% increase in time saving per year. Considering the initiatives taken by LPAI to streamline the process, it would be plausible to even consider higher growth rates.

Employment Generation:

Rationale: The establishment of ICPs has led to a significant increase in the number of employees at LPAI. Apart from hiring skilled and semi-skilled employees, LPAI also hires unskilled labour on a daily basis. Since such employment provides LPAI's personnel purchasing power directly, employment generation must be included in the EIRR computation.

Methodology and assumptions: The computation of employment generation can be divided in two parts: (a) for skilled labour and (b) for unskilled labour.

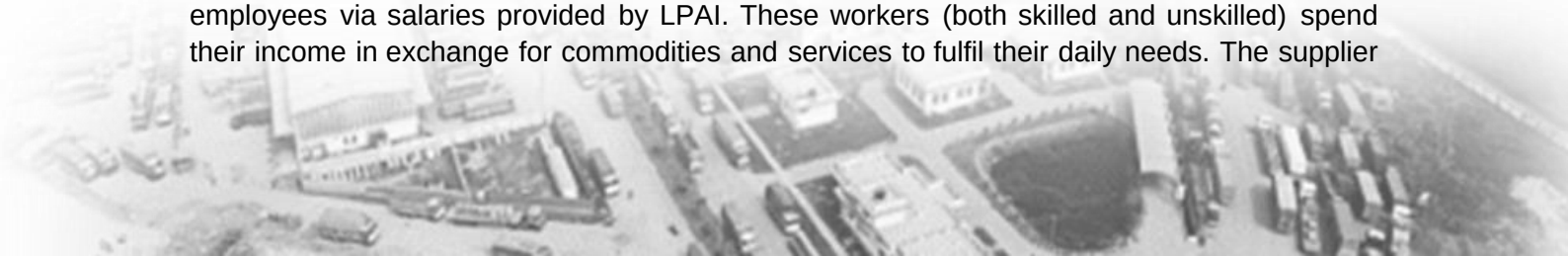
a. Skilled labour: Official accounts of LPAI have been used to incorporate the actual expenses of LPAI till FY 2020-21. For the forecast years, the model assumes an average per employee salary of Rs. 5,00,000 per annum. In addition, the model also iterates the number of employees at ICP Petrapole based on its historical financials. Thus, the per employee salary (skilled) multiplied with the number of employees at LPAI for the respective financial year provides the skilled employment generation for that year.

   Lastly, for the future years, a growth rate of 5% (in line with inflation) is considered for salaries and a 2.5% growth rate is considered for increase in employee base.

b. Unskilled labour: Based on interviews with ICP Petrapole, it was informed that LPAI hired over 700 employees on a daily basis. Keeping this in view, a forecast using a growth rate of 2.5% for employment and 5% for wages is incorporated in the model. For the historical financials, LPAI data is used along with assumptions to split the total employee spend between skilled and unskilled workers.

Indirect Contribution to GDP:

Rationale: Employment generation leads to an increase in purchasing power of the employees via salaries provided by LPAI. These workers (both skilled and unskilled) spend their income in exchange for commodities and services to fulfil their daily needs. The supplier



of the aforementioned commodities and services further spends the money received on other goods and services, and so on and so forth. This creates a chain of spending in the domestic economy leading to an absolute contribution much greater than the initial salary outlay by LPAI. This concept is known as the Keynesian multiplier. A formal definition of the Keynesian multiplier is as follows:

"The Keynesian Multiplier is an economic theory that asserts that an increase in private consumption expenditure, investment expenditure, or net government spending (gross government spending – government tax revenue) raises the total Gross Domestic Product (GDP) by more than the amount of the increase. Therefore, if private consumption expenditure increases by 10 units, the total GDP will increase by more than 10 units."

Methodology and assumptions: The mathematical formula to calculate the multiplier effect is as follows:

$$\Delta Y = \frac{\Delta E}{1 - c}$$

Where;

ΔY is change in GDP;
ΔE is change in expenditure (private or government)
c is the marginal propensity to consume

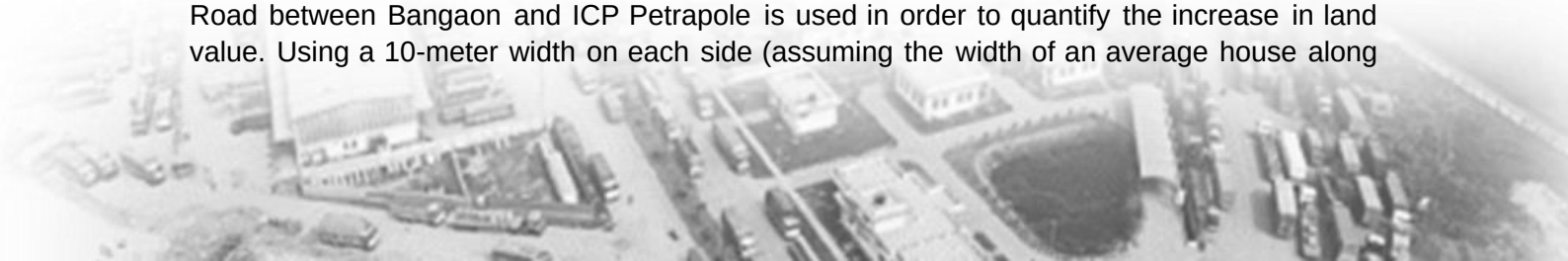
The marginal propensity to consume measures the percentage income spent on every unit of income earned. Since indirect contribution to GDP is a purely intangible benefit, there is no historical data available on the same. Thus, the EIRR model computes the indirect computation for both historical and forecast years. It may be noted that the multiplier effect would be higher for unskilled workers compared to skilled workers since the former spend a larger proportion of their income on consumption. In the computation, we assume that an unskilled worker spends 80% of his/her income and saves the rest. Similarly, a skilled worker spends 60% of his/her income. Using the multiplier formula stated above, the multiplier effect for skilled and unskilled workers is 3 and 5 respectively. In other words, for every rupee spent by a skilled and unskilled worker, the indirect contribution to the GDP is Rs. 3 and Rs. 5, respectively.

Keeping these principles in view, the Keynesian multiplier is multiplied with the monetary value of employment generated per year (as detailed in the previous section).

Asset value appreciation

Rationale: Secondary research and interactions with local people suggested an increase in the value of assets around ICP Petrapole. Similar phenomenon has been observed in other infrastructure projects as well since such projects create a marketplace for buyers and sellers. Primarily, the Bangaon community and the road that leads to ICP Petrapole has seen a sharp uptick in land prices due to an increase in trade. Further, empty plots of land in front of people's houses have been used to provide paid parking services to trucks. The EIRR model estimates the increase in land price using primary research and also uses a forecasting methodology to project an increase in the future years.

Approach and Methodology: An estimate of the empty land on either side of the Jessore Road between Bangaon and ICP Petrapole is used in order to quantify the increase in land value. Using a 10-meter width on each side (assuming the width of an average house along



Jessore Road is 10 meters), it was estimated that the total area whose asset value has appreciated is ~2,10,000 sq m. Based on interactions with businessmen in Bangaon and ICP officials, the cost of one sq m of land was approximately Rs. 4,750 in FY 2015-16 (i.e., before the ICP was established). The cost of land has almost double by FY 2020-21 to Rs. 8,500. After discounting for the land price index (or land price inflation) of 5% per annum, the increase in the land value due to ICP Petrapole is to the tune of 5% per year. However, this 5% increase in land price may not be sustainable over the long term. Thus, based on the analysis of traffic and its expected growth, the model assumes a growth rate of 2.5% per annum. While the benefits of land price increase may be expected to reach Bangaon municipality, a conservative methodology is to estimate the land prices between Bangaon and Petrapole – as done in the EIRR computation.

Enhanced Security Measures

Rationale: Interactions with officials from BSF, LPAI and Customs highlighted an increase in security on both sides of the border. The ICP manager explained that cases of robberies and looting of truck drivers across the border had reduced since LPAI had been allowing truck drivers to cross the border and sleep in the enclosed LPAI facility. Apart from this, customs officials also noted that high compliance costs after the ICP was established led to a reduction in smuggling of contra-band goods. Such benefits are incorporated in the EIRR computation using an appropriate methodology.

Approach and Methodology: The customs department provided a list of the amount of contra-band goods that were seized from FY 2015-16. A trend of the same is provided in the following figure.

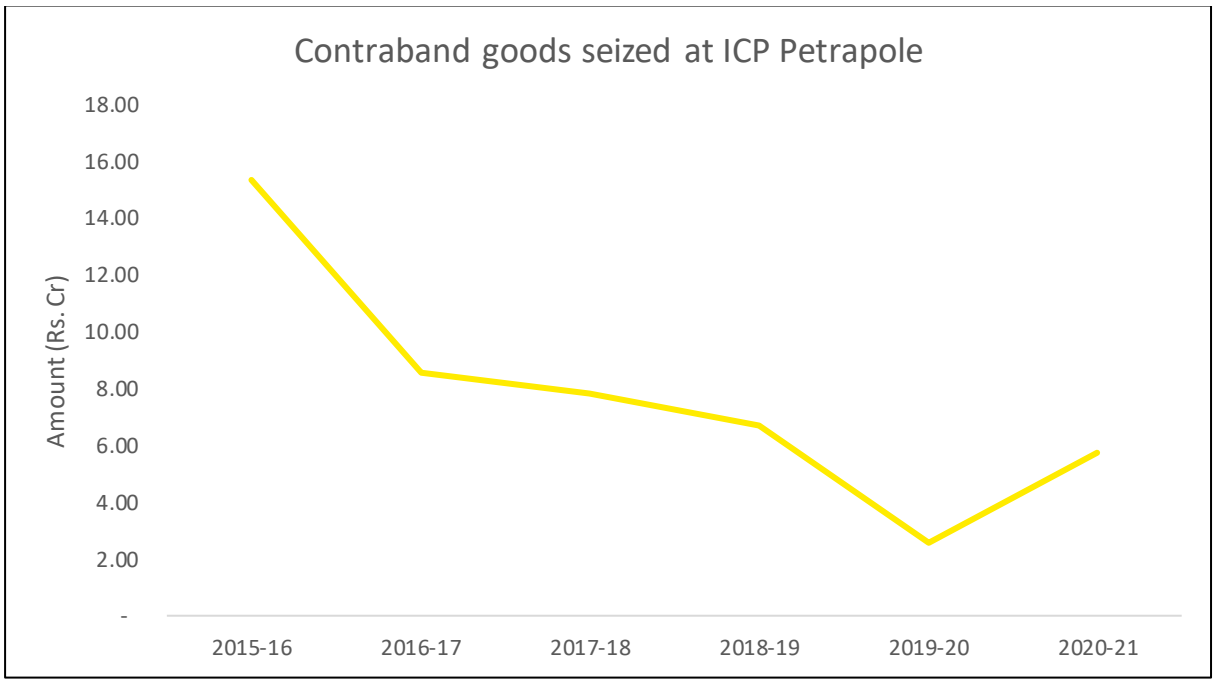


Figure 11: Contraband goods seized at ICP Petrapole

As seen above, there is a clear trend of a reduction in the amount of goods seized. The model assumes that this reduction would persist over the future years. The estimation of the reduction in transit of contra-band goods is done using a baseline of Rs. 15.34 Cr. for FY 2015-16 (based on data provided by customs officials). Out of a 15.34 Cr., Rs. 13.11 Cr. was

seized by BSF and Rs. 2.23 was seized by custom officials. A summary of the estimated benefits is as follows:

For instance, the reduction in seized goods for FY 2016-17 was Rs. 8.56 Cr. This may be interpreted as a reduction in attempt to smuggle goods across the border by Rs. 6.77 Cr. (i.e., Rs. 13.11 Cr. – Rs. 8.56 Cr.). A similar working is done for all future years. The model assumes a 2% and 0.3% average increase in the economic benefits through a reduction in smuggled goods via BSF and customs department, respectively.

Increase in Operational Efficiency

Rationale: Since the inception of ICP Petrapole, there has been a significant reduction in the labour strikes per year. The ICP manager explained that labour strikes lead to a disruption in trade and cause a delay in the supply chain. Since ICP Petrapole is a large trade port with high volumes of trade per day, such labour strikes may cause a large impact for business on either side of the border. The role of LPAI as an umbrella agency ensures smooth co-ordination between all stakeholders, thereby reducing such hindrances. The model uses an estimation methodology to incorporate these benefits.

Approach and Methodology: Based on discussion with LPAI officials, it was understood that there were an average number of 10 strikes per year before/during the initial years of establishing the ICP. By FY 2020-21, the number of strikes have reduced to just around 2 days per year. Furthermore, based on the volume of trade at ICP Petrapole, an average of Rs. 60 Cr. worth of goods are traded per day. The model assumes a 1% cost of delay in case of a strike and estimates the economic benefits of the reduction in strikes (based on the number of strikes in the respective year). The forecast assumptions (as discussed earlier) of trade volumes are also incorporated.

Tangible benefits

Revenue from ICP Operations

Rationale: LPAI charges vehicles a certain fee to facilitate their transit across borders. This is a traditional revenue source for LPAI and is also published in their books of accounts. Since, this is a tangible revenue source, the EIRR computation includes this as well.

Approach and Methodology: Based on LPAI's actual data, ICP Petrapole earns an average revenue of Rs. 1,323 per vehicle as on FY 2020-21. The model imposes the traffic forecast over the average revenue per vehicle to forecast the revenue in the future years. It may also be noted that a flat rate of Rs. 1,323 per vehicle is considered for the whole forecast period. However, in case LPAI increases their rates, the revenue from ICP operations would be higher.

Revenue from Commercial Activities

Rationale: Interviews and surveys of various stakeholders/passengers highlighted the willingness to spend money on other facilities such as shopping areas, malls, lodges, restaurants, etc. if provided at the ICP. Such discussions were highlighted in light of the new passenger terminal building at ICP Petrapole. The new passenger terminal building could be a sustainable way to capitalise on passenger traffic, as done at airports.

Approach and Methodology: The model assumes a phased increase in the number of concessionaires starting from 10 in FY 2025-26 (i.e., after the capitalisation of new passenger terminal building) and ranging to 20 by FY 2044-45. In a similar fashion, the average income from a concessionaire is starting at Rs. 8,00,000 and increasing by 3% year-on-year.

Results and Model Sensitivities

Before we delve into the results, it may be useful to briefly visit the model flow. The EIRR computation consists of two input repositories – (a) EIRR Input (which contains historical data on economic costs and benefits) and (b) EIRR Assumptions (which contains all the forecasting assumptions). The final EIRR calculation takes into account the inputs from the two sheets.

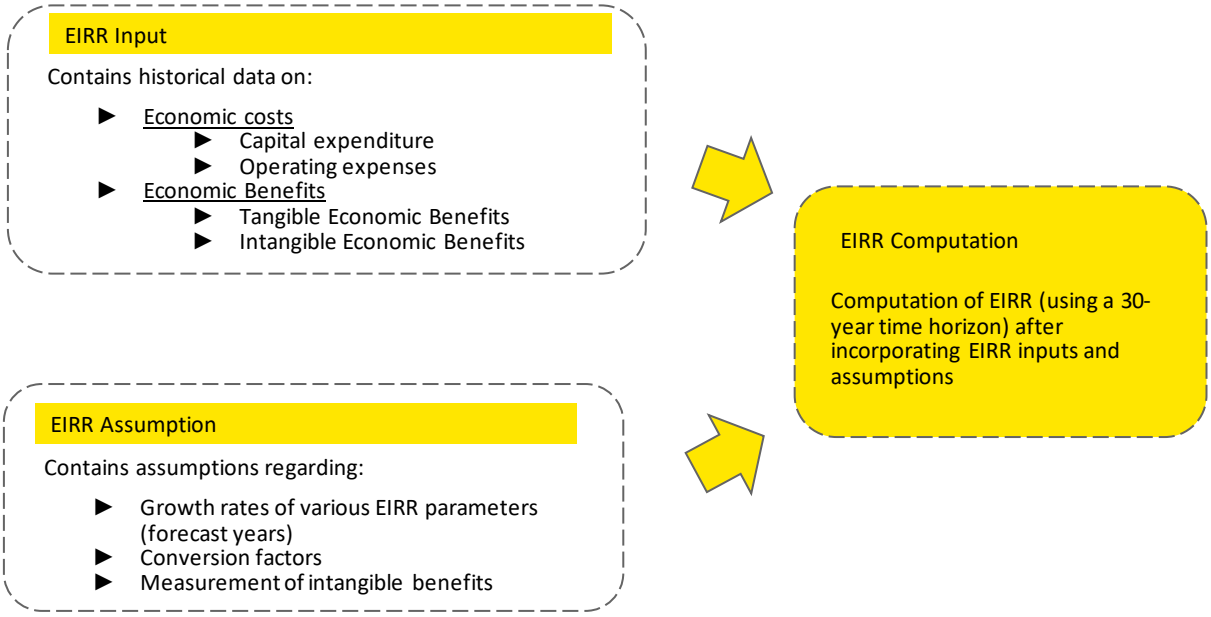


Figure 12: Model flow of the EIRR calculation

The EIRR computation is summarised in the figure below. As observed, ICP Petrapole achieves a healthy EIRR of 17.8% using the baseline assumptions, which is well above the industry accepted benchmarks as discussed earlier.

Main components		Sub-components	
Economic Costs		**Particulars**	**Amt in Cr (non PV terms)**
		Capex	934
		Depreciation	724
		Replacement capex	100
		Operating expenses	824
		Total	**2,582**
Economic Benefits	Intangible Benefits	**Particulars**	**Amt in Cr (non PV terms)**
		Saving in Time	2,401
		Employment generated	892
		Indirect cont. to local GDP	3,465
		Asset value appreciation	362
		Enhanced security	331
		Increase in op. efficiency	174
		Total	**7,624**
	Tangible Benefits	**Particulars**	**Amt in Cr (non PV terms)**
		Revenue (ICP Operations)	1,051
		Revenue (Commercial)	32
		Total	**1,083**
EIRR: 17.8%			

Figure 13: Summary of EIRR computation

Model sensitivities over the EIRR time horizon and traffic scenarios as provided as follows:

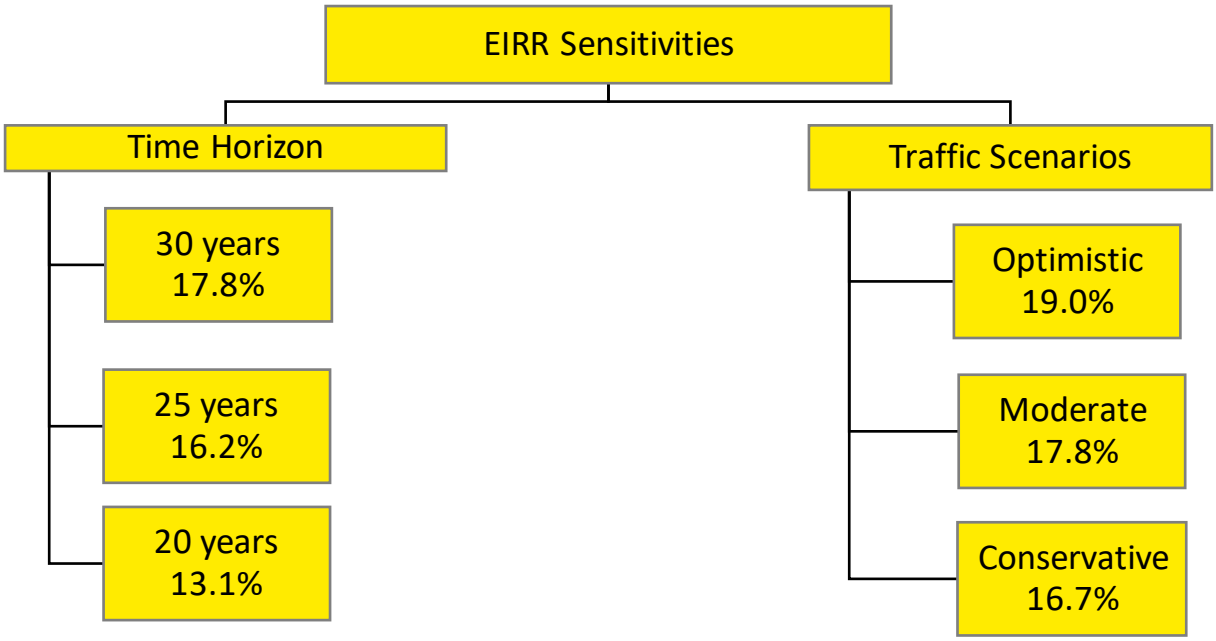
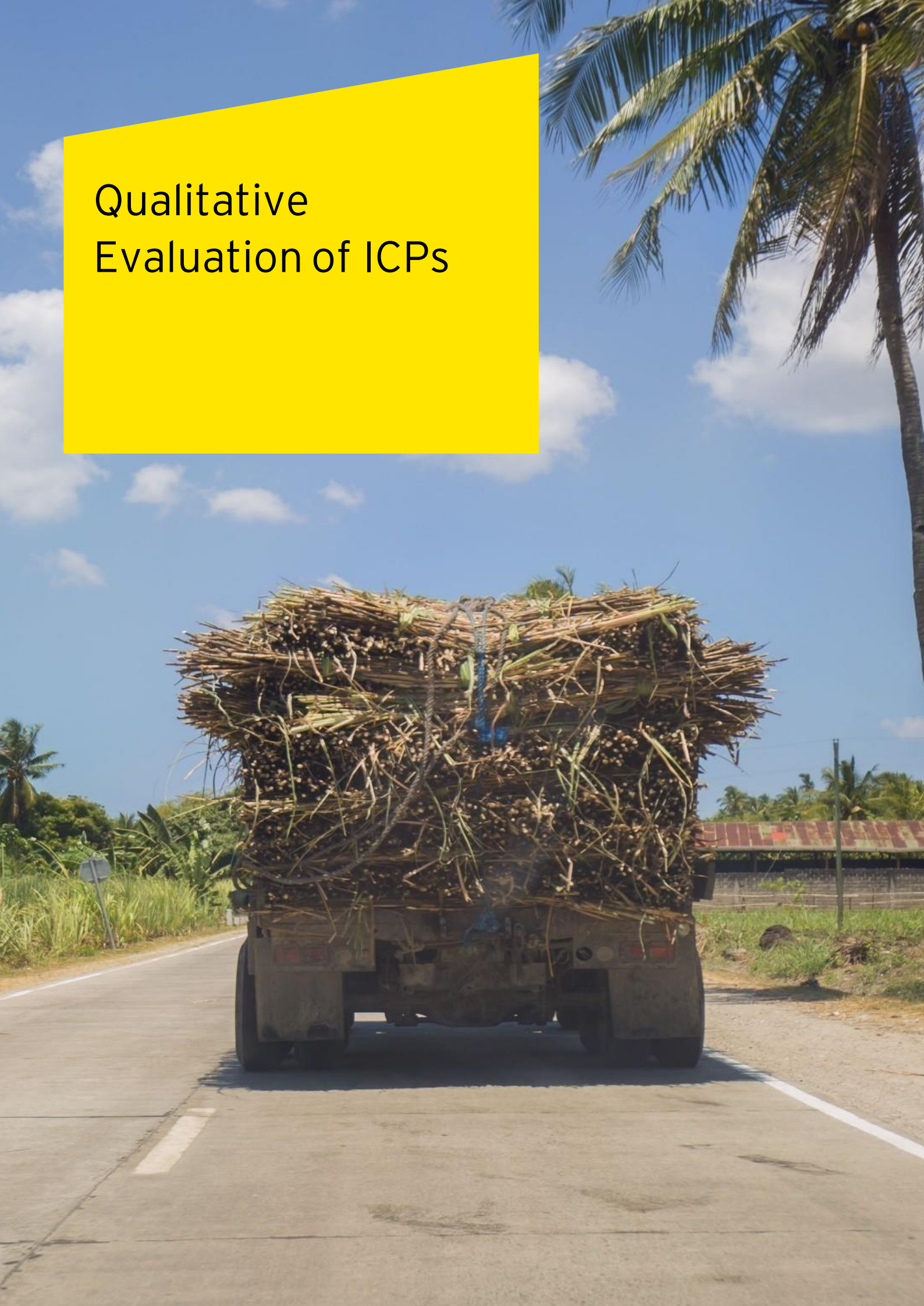


Figure 14: Model sensitivities

As seen above, even after testing for different time horizons and traffic scenarios, the EIRR for ICP Petrapole is well above the 12% benchmark considered by ADB. Therefore, this proves the socio-economic viability of an ICP. Over and above this, there are various qualitative benefits and also certain challenges at ICPs which are discussed in the subsequent chapter.

Qualitative Evaluation of ICPs



This section delves into a qualitative analysis of specific ICPs namely: Petrapole, Raxaul, Agartala, Jogbani and Sabroom. The latter half of this section also explores the benefits of ICPs in establishing strong relations with its neighbouring countries and strengthening its diplomatic ties.

ICP Petrapole

ICP Petrapole is located 83 kilometres away from Kolkata and has been operational since February 2016. Before its operations as an ICP, cross border trade and travel used to happen through an LCS. Petrapole's LCS faced a number of challenges such as limited parking space, road congestion, pilferage due to inadequate monitoring facilities, shortage of storage space, and lack of facilities for testing.

While the ICP's cargo terminal is managed by the Central Warehousing Corporation (CWC), the current terms between LPAI and CWC require the revenue to be split between LPAI and CWC in a ratio of 25:75.

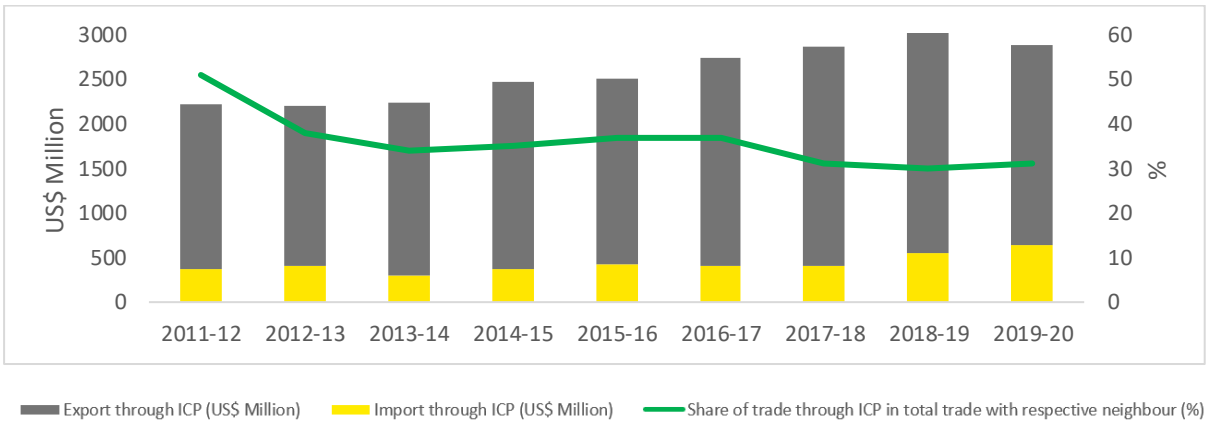
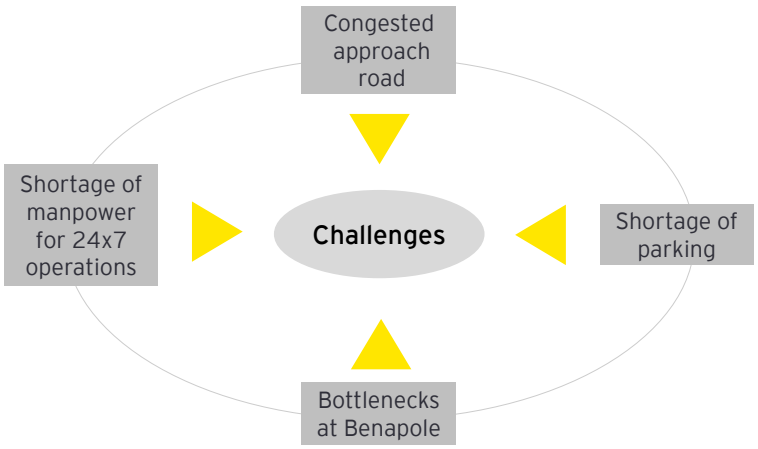


Figure 15: Trade through ICP Petrapole

The main import and export items at ICP Petrapole are as follows:

Import	Export
Readymade garments	Cotton
Briefcases/bags	Chassis
Jute yarn	Steel & iron
Hydrogen peroxide	Chemicals/dyes

ICP Petrapole still faces a few challenges. A close look at Figure 15 shows that the amount traded through Petrapole's ICP has increased only marginally after its operations commenced in 2016-17.



Despite seeing only, a marginal increase in amount traded after the commencement of ICP Petrapole's operations, ICP Petrapole plays a significant role in improving the cross-border movement experience for passengers qualitatively as well as by saving time.

Currently, the construction of a new Passenger Terminal Building (PTB) spread across 14.55 acres at Petrapole's ICP is underway and is expected to be operational shortly. Considering the fact that the ICP already recorded approximately 25 million passengers in 2018-19, and that the ICP's passenger traffic has increased year-on-year since its inception, the PTB will help LPAI in handling high passenger traffic in the future. Presently, however, cross border movement of passengers is happening through a temporary terminal close to the zero-gate and Petrapole-Benapole.

ICP Agartala

The ICP at Agartala is spread over an area of 11.72 acres located in the capital of Tripura. It is one of the busiest ports for trade and passenger movement between India and Bangladesh. Like ICP Petrapole, the Central Warehousing Commission is the cargo operator and is entrusted with the transport logistics. The ICP was inaugurated in in 2013 and has done over USD 328 mn. In trade since its inception. A graph providing a summary of trade across years is given below.

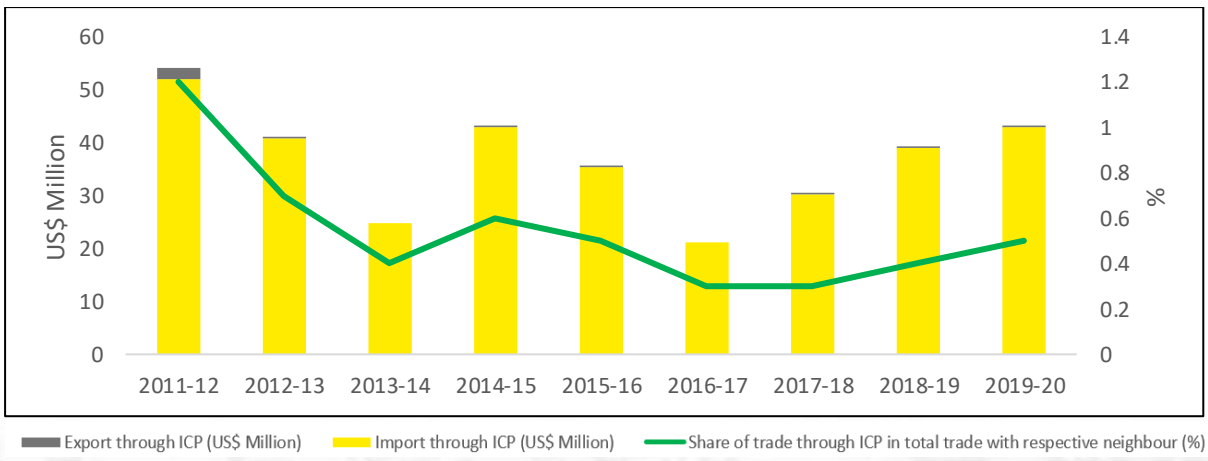


Figure 16: Trade through ICP Agartala

ICP Agartala has been recording a high passenger movement since its inception. However, the growth was severely halted due to the pandemic. ICP Agartala has various facilities like passenger building, cargo building, rummaging shed, cold storage area, public health office, ATM and foreign exchange counter, etc.

The main import and export items of India at ICP Agartala are as follows:

Import	Export
Processed stone	Bamboo
Bricks	Turmeric
Tiles	Ginger
Fish	Marble
Cement	Fruits

Challenges

Inadequate Representation of Partner Government Agencies (PGAs)
Since ICP Agartala has a significant amount of trade in food products, the requirement of FSSAI being at/around the ICP would save a significant amount of time and cost since the food products would be released from the land port earlier (rather than the average waiting period of around 48 hours).

ICP Raxaul

ICP Raxaul is approximately 250 kilometres away from Patna and is the most important ICP for Nepal, accounting for about 60% of the country's foreign trade. The ICP was operationalised in June 2016 and was formally inaugurated in 2018.

Before upgrading the infrastructure at the Raxaul LCS, the average wait time for trucks used to be two to four days due to a shortage in parking space and heavy congestion. Post the operationalising of the ICP, the average wait time has come down to around one-and-a-half days for imports as well as exports.

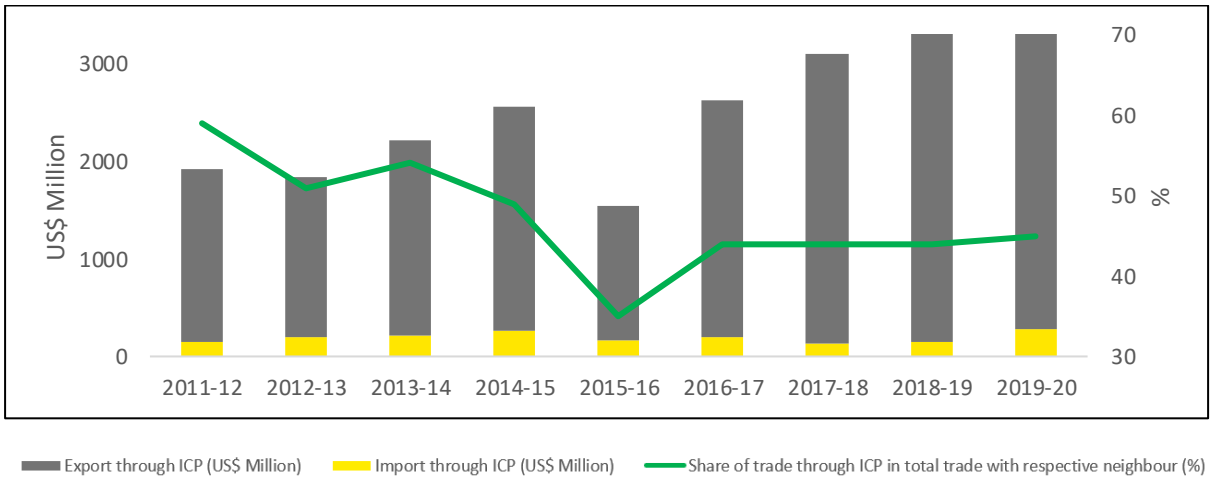


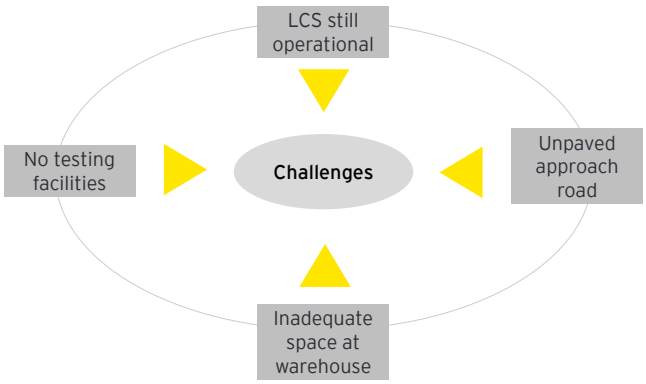
Figure 17: Trade through ICP Raxaul

Before upgrading the infrastructure at the Raxaul LCS, the average wait time for trucks used to be two to four days due to a shortage in parking space and heavy congestion. Post the operationalising of the ICP, the average wait time has come down to around one-and-a-half days for imports as well as exports.

The main import and export items at ICP Raxaul are as follows:

Import	Export
Vegetable oil	Petroleum products
Yarns and fabrics	Iron & steel
Cosmetics	Drug formulations
Leather	Motor vehicles

ICP Raxaul still faces a few challenges.



ICP Jogbani

ICP Jogbani was the second land port established to facilitate bilateral trade between India and Nepal. ICP Jogbani accounts for over 14% of the total trade between the two countries. The construction of ICP Jogbani commenced in 2010 and was completed in 2016. However, since its Nepali counterpart ICP Biratnagar was under construction, ICP Jogbani was operationalised only in 2020.

Since, ICP Jogbani is a relatively new ICP, the passenger traffic is low relative to other old ICPs. While it has a majority of facilities at ICPs, the small duration of its operational period makes it difficult to identify any shortcomings.

A trend of trade over the years is provided in the figure below.

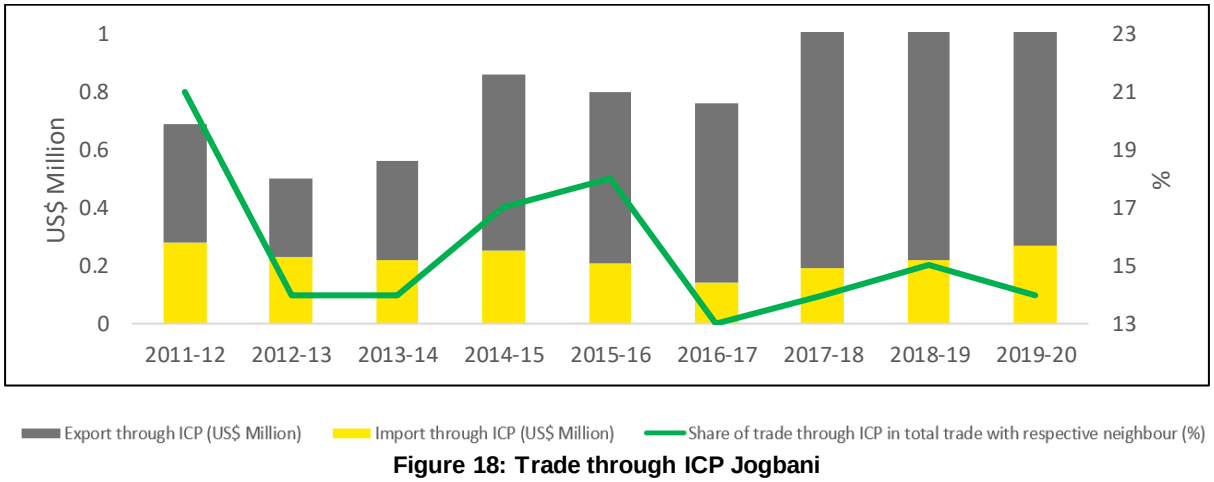


Figure 18: Trade through ICP Jogbani

ICP Sabroom

ICP Sabroom is situated in South Tripura and aims to facilitate trade and people's movement with Bangladesh through Maitri Setu. It would be put in place by the end of 2022. ICP Sabroom is expected to be put in place by the end of 2022 and has already been sanctioned Rs. 250 Crores from GoI. LPAI has finalised the tender for appointment of contractor and has initiated mobilisation activities at the site along with the construction of boundary walls.

The ICP is set to transform Sabroom, a border town of South Tripura district into a logistic hub of Northeast India by using Chittagong port in Bangladesh. Currently, Haldia port in West Bengal is the only option to bring logistics from outside the region.

Relevance of ICPs in cementing relations between India and neighbouring countries

As against sea trade and air trade land border trade help improve diplomatic ties between two countries. This adds on to socio-economic relationship. India being the largest country in geographic and economic terms in South Asia has important role to play as South Asian Association for Regional Cooperation (SAARC) leader and assumes the role of a regional power.

Table 7: Comparison of airports, seaports and land ports

Benefits	Airport	Seaport	Land Port
Diplomatic Relations	✓✓	✓	✓✓✓
	Land port has various provisions like ground-zero talks, retreat ceremony, etc. which add to building diplomatic relations between countries.		
Trade promotion for smaller economies	✓	✓✓	✓✓✓
	A majority of trade from land-locked countries happens via land ports (which acts as a transit route) and then the sea route		
Time Saving	✓✓✓	✓	✓✓
	While air travel is the fastest, travel via land routes is becoming faster because of ICPs (and at an affordable price)		
Cost	✓	✓✓✓	✓✓
	Sea transport is the cheapest amongst the three main travel categories. However, when combined with the time saved, land-based travel is likely to be more suitable		
Passenger travel	✓✓✓	✓	✓✓
	Air travel is the most passenger friendly, but based on survey interviews, passengers are more likely to choose land travel if possible, because of its convenience		

Moreover, good diplomatic relations lead to less spending on keeping the borders safe. For instance, while the army (with higher spending on personnel, capex and infrastructure) and is deployed on India and Pakistan border, paramilitary such as BSF is deployed on India Bangladesh border and Sashastra Seema Bal is deployed at Indo Nepal border.

The below diagram depicts India's expenditure on defence vis-à-vis para military forces in budgetary allocation.

Budget Outlay (FY 2022-23)	Amt (in Rs '000 Cr)	Growth over FY 2021-22
Defence	525.00	9.80%
BSF	22.71	5.70%
Sahastra Seema Bal	7.65	10%
ITBP	7.46	7%

*Defence budget includes Capex

ICPs therefore have a greater role to play besides facilitating cargo and passenger movements. Along with the existing paramilitary forces they act as gatekeepers of the country's borders.

Efficient management of ICPs help reduce cost and improves seamless trade. As observed in the operational efficiency section of this report informal talks between ICPs manager and his counterpart across the border have helped reduce strikes, strife and robbery etc. Apart from monetary benefits such gestures and human touch also generate a sense of national pride and belongingness thus making India play a big brother's role.

Bilateral agreements with neighbours also help save cost and time. For instance, the 2018 bilateral agreement between India and Bangladesh for trans-shipment through Chattogram and Mongla ports is expected to reduce the transit time and cost of cargo movement between the North East and rest of India[10].

According to ADB the transit time for cargo movement from Kolkata to Agartala through Chattogram port would be five days, as against over eight days through the Siliguri Corridor, besides cost savings. Here again, ICPs will help in synchronized development along with rail and road connectivity between trading countries.

Multilateral agreements such as the Bangladesh, Bhutan, India and Nepal Motor Vehicles Agreement 2015, when fully executed, will help result in aligned cargo handling procedures across nations and risk management systems across ports. Chattogram being an important transhipment hub for India and Nepal, its integration with ICPs in India is expected to play a key role.

According to a new World Bank report titled "Connecting to Thrive: Challenges and Opportunities of Transport Integration in Eastern South Asia," seamless transport connectivity between India and Bangladesh has the potential to increase national income by as much as 17% in Bangladesh and 8% in India. ICPs such as Petrapole have a major role to play here. Highlighting the contribution that Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA) will make, the report, discusses regional policy actions countries can take to strengthen the MVA and proposes priorities for infrastructure investments. The report also points out that it is about 15–20% less expensive for a company in India to trade with a company in Brazil or Germany than with a company in Bangladesh[11]. Friendly neighbourly relations add to this fact and ICPs can help boost trade between India and Bangladesh.

According to the World Bank, intraregional trade accounts for barely 5% of South Asia's total trade—just a fraction of the 25 % for the Association of Southeast Asian Nations (ASEAN) region[12]. This suggest the potential that land ports between India and neighbouring countries

Both geopolitical and economic considerations affect regional integration. According to the report, the transport integration agreements in eastern South Asia represent a step toward the

[10] "Using Chattogram Port as a Transhipment Hub for the North Eastern Region of India", ADB, July 2021

[11] "Seamless Transport Connectivity Can Create Significant Economic Gains for Bangladesh and India", The World Bank, March 2021

[12] "Connecting to thrive: Challenges and Opportunities of Transport Integration in Eastern South Asia", The World Bank, 2021

creation of a cross-border integrated transport market in the subregion, with the MVA at the centre.

While trade benefits are intrinsic to development of ICPs passenger facilitation has an important role in improving diplomatic relations between countries. Large number of people from Bangladesh and Nepal travel to India for medical treatment. Most of them have expressed that their experiences at the ICP have been gratifying.

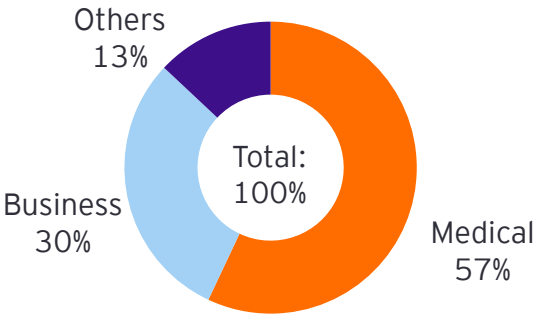


Figure 19: Purpose of visit

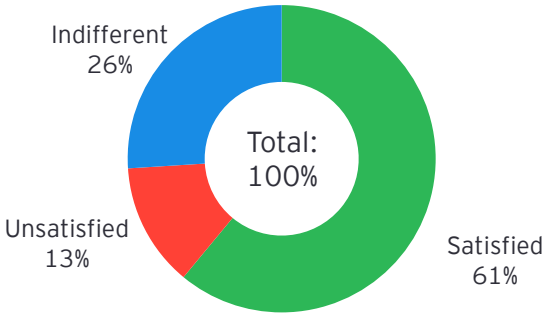


Figure 20: Level of satisfaction

Since socio-economic impact of an investment results in larger intangible benefits the above mentioned World Bank report suggests MVA will lead to more economic opportunities to rural communities, such as farmers, farm related enterprises, women and exporters along the region thus leading to inclusive growth. ICPs have an important role to play in integrating with MVA. As the purpose of ICPs are to 'provide all the facilities required for the discharge of sovereign and non-sovereign functions for smooth cross-border movement of individuals, vehicles and goods' according to Dr Pushpita Das, Research Fellow of Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA).

According to a book brought out by MP-IDSA, authored by Dr Das, India's Approach to Border Management: From Barriers to Bridges before the LCS of Petrapole was upgraded into an ICP, physical infrastructure and the institutional systems for trade and travel in the station were very poor.

ICPs are envisaged to connect the Northeast region transiting via Bangladesh, and further link them with South-East Asia through initiatives such as the India—Myanmar—Thailand (IMT) Trilateral Highway, Asian Highways 1 and 2, the Trans-Asian railway network, among others. As some of these routes intersect at the ICPs, for instance, the IMT route at ICP Moreh, ICPs are expected to play a key role in multi-modal transportation connecting South Asia to Southeast Asia. This is also expected to further improve diplomatic relations between India and its neighbours as also SAARC countries with ASEAN. Larger number of ICPs with wider facilitation will be maojor contributors here.

Hosting National flag at ICPs on a regular basis has been giving a strong sense of national pride to the army and paramilitary forces, besides tourists and local population. Through the change of guards while both the countries extend a hand of peace and friendship, they also realise their limits and the Indian side makes it sure that a zero tolerance policy would apply to cross border crime.

Border trade and check posts are of interest not only to the concerned stakeholders. There is a keen interest by international bodies such as the officials of the World Bank, diplomats, Senior bureaucrats to visit ICPs. A list of delegate visits from August 2021 to December 2021 is as follows.

Table 8: List of delegate visits at ICP Petrapole

Month (2021)	Delegate
August	Shri Ranjan Khanna, IRS, Commissioner of Customs
	Shri Vikram Doraiswami, High Commissioner of India to Bangaldesh
September	Ms. Melinda Pavek, Consulate General of United States of America, Kolkata
October	Shri Arun Arora, GM, Eastern Railways
	Shri Hare Krishna Mishra, Dy. Director, Nepal Intermodal Transport Development Board
November	Shri Anil Kumar Gupta, Chief Commissioner, Customs
December	World Bank Team

Land ports have been playing crucial role in supply of essential food and medicines along with airports. Under India's Humanitarian Assistance and Disaster Relief programmes and Neighbourhood First initiatives India has been supplying essentials across borders to Nepal and Bangladesh. For instance, in 2020 India sent 23 tonnes of essential medicines to Nepal to help it fight the coronavirus (COVID-19 Pandemic). In 2015 India stepped up to supply food, clothing, medicines etc to earthquake ravaged Nepal under operation *Maitri*.

South Asia is particularly vulnerable to natural calamities[13]. Since 1970, the number of disasters in the region has increased five-fold with estimated direct losses amounting to US$80 billion[14]. As India is committed to play the role of First Responder in cases of natural calamities such as floods, cyclones, earthquakes in the sub-continent land ports have been and will continue to be important gateways to extend help and meet neighbours' expectation. ICPs therefore assume bigger role here.

[13] "The Disaster Riskscape across South and South-West Asia: Key Takeaways for Stakeholders", UNESCAP 2019 p. 5

[14] "Disaster Risk Management in South Asia," (Washington DC: The World Bank: GFDRR, 2012)

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