

The cold chain:

Performance of freight and transport logistics as a driver for employment and exports

The performance of the freight and transportation sector is a powerful driver for boosting local income, workforce development and trade.¹ National logistics operations have supported an nearly USD 7.5 billion increase in export from Bangladesh between 2016 and 2021.² In terms of the overall performance of the logistics sector, The World Bank LPI (Logistics Performance Index) ranked Bangladesh at 108th out of 160 countries in 2014 and then 88th out of 139 in 2023.^{3 4} For regional reference, India's logistics performance was ranked at 38th out of the same 139 countries in 2023.⁵ While Bangladesh has been consistently outperforming its neighbors in most economic development indexes, the logistics performance ranking is not only a blemish, but also carries potential implications for future economic performance. On the flipside, it also means that in addition to maintaining the other economic developments, addressing the gaps in the logistics performance can significantly boost the economy further.

On September 25, 2022, the Ministry of Industries announced the Industrial Policy and for the first time, included logistics as one of the export diversification sectors and considered it a thrust sector. There were 21 logistics sub-sectors which have been included in the policy. This indicates that the government is willing to give more importance to logistics development in the coming years.⁶



Freight container ship loading operation

Optimizing the logistics operations of Bangladesh requires stable infrastructure networks, competitive services in terms of variety and price, consistent service quality and time effective procedures. If optimized, logistics and transportation can play crucial roles in the growth of a broad range of businesses like ready-made garments, seafood, dairy products, fruits/vegetables, technology, pharmaceuticals and more.

Improvements in freight logistics infrastructure and services also have direct implications for export development and growth. According to Policy Exchange Bangladesh, national revenues from total exports in 2021 could have been around 20% higher and would have reached at least USD 63 billion if logistics operations in Bangladesh were improved.⁷ These necessary improvements include but are not limited to:

- 1 Utilizing single window system to harmonize customs checks and other trade-related documentation.
- 2 Establishing inland container depots (ICDs) in industry-dense areas like Dhaka, Narayanganj, and Gazipur.
- 3 Broadening the list of 37 products that ICDs are allowed to handle to increase container handling capacity.
- 4 Revising transport regulations to allow for a safe, yet speedy delivery of products, especially on the Dhaka-Chattogram highway.
- 5 Encouraging and supporting the investment in third-party warehouse and transportation logistics companies to offer diverse and price competitive services.

¹ United Nations Economic Commission for Europe, "The importance of the logistics sector for national economies", United Nations, 2021.

² "Exports of goods and services (current US\$) - Bangladesh", accessed 19 December 2022, <https://data.worldbank.org/indicator/NE.EXP.GNFS.CD?end=2021&locations=BD&start=2001>.

³ "Aggregated LPI - Logistics Performance Index - World Bank", accessed 5 December 2022, <https://lpi.worldbank.org/international/aggregated-ranking>.

⁴ "Aggregated LPI - Logistics Performance Index - World Bank", accessed 1 May 2023, https://lpi.worldbank.org/sites/default/files/2023-04/LPI_2023_report.pdf.

⁵ Ibid.

⁶ <https://thefinancialexpress.com.bd/views/views/national-logistics-policy-for-bangladesh-1666969841>

⁷ Star Business Report, "Better logistics may boost exports by 20%: experts", The Daily Star, 28 July 2022, <https://www.thedailystar.net/business/economy/news/better-logistics-may-boost-exports-20pc-experts-3081476>

Although the ready-made garment industry has been a pillar for the Bangladesh economy, the current logistics facilities of the country may be hindering its further growth and profitability. Research published by Naresuan University in Thailand states that improvements in the logistics capability of Bangladesh, especially for the import of raw materials, are highly likely to improve the financial performance of RMG companies.⁸ These improvements would also positively impact the growth of other sectors and boost the overall trade prospects across different industries.

Developing the logistics sector also provides employment opportunities. The global logistics sector is expected to grow to a market value of USD 13.3 trillion by 2027, with experts anticipating 34% total growth from 2022.⁹ Countries in Asia, like Bangladesh, are the fastest growing logistics markets and will lead the industry.¹⁰ This would lead to increasing local demand for skilled workers, like operators of cranes, forklifts and other machinery, truck drivers, customs officials, customer service, and warehouse operators to fulfill the logistics demands of Bangladesh. In 2011, about 7.3 million people in India were employed in the logistics sector.¹¹ Fast-forward to 2022, 22 million people are being employed in the logistics sector, with another 1.2 million jobs projected for 2025.¹²

Integrating and providing temperature-controlled storage and transportation in the national logistics set-up is also crucial for supporting trade, particularly for perishable goods like fruits, vegetables, fish, meats and processed foods. Cold chain or temperature-controlled logistics (TCL) helps maintain product quality and reduces wastage, improving trade prospects and income opportunities. It is estimated that almost 30% of eggplants and 30% of onions harvested in Bangladesh go to waste before reaching the consumer, increasing costs for them and yet depriving farmers of optimum earning.¹³ Demand projections estimate that by 2031, Bangladesh will need the capacity to store an additional 40,000 metric tons of perishable products to meet domestic and international demand.¹⁴ While it might seem that establishing such facilities is capital-intensive, research shows that a year's worth of financial losses from apple spoilage due to absence of temperature-controlled systems is USD 24 million, which is enough to set-up two state-of-the-art TCL storage and handling facilities with capacities of 8,000 metric tons each.¹⁵

To meet future demand, some key investments are:

1. Chattogram Port:

An end-to-end cold chain facility that provides transportation, cross-docking, and other revenue generating value-added services for perishables products (i.e., labeling, packing, repacking, inventory management and more). A case study for this location estimates that an optimal facility could create up to 86,000 indirect jobs and facilitate better export conditions for USD 1.4 billion worth of products by the 10th year of operation.

2. Hazrat Shahjalal International Airport:

A large-scale TCL facility for import and exports to handle perishable cargo, including life-saving necessities like vaccines and pharmaceuticals. The ideal location would be inside of the airport's custom bonded area. The privately owned and operated TCL hub would provide all services necessary to handle import and export flows. The investment is estimated to facilitate and improve export conditions for USD 256 million worth of products by the 10th year of operations.

3. Key production areas:

Rising domestic demand for perishable products increases the need for cold chain services. It is expected to increase to 1.1 million metric tons by 2031 (200% increase).¹⁶ Interviews with local businesses in the meat, fisheries, dairy, and fruit and vegetable industries confirmed the rising need for greater availability of reliable cold chain services.¹⁷ TCL facilities at peripheral, strategic locations near production zones would reduce the spoilage of the local produce.

⁸ Ibid.

⁹ "Global Logistics Market Report and Forecast 2022-2027", accessed 5 December 2022, ResearchAndMarkets.com.

¹⁰ Fox Chu, Yuanpeng Li, Detlev Mohr, Yuta Murakami, Cuiwei Sun, and Hanish Yadav, "Asia: The highway of value for global logistics", McKinsey & Company, May 2021.

¹¹ PwC, "Transportation and Logistics 2030 Volume 5: Winning the talent race", March 2012.

¹² "Logistics Industry in India", accessed 7 December 2022, <https://vakilsearch.com/blog/logistics-industry-in-india/>.

¹³ Rahman, M.A., Islam, M., Begum, M.M. and Arfin, S., "Technical and economic feasibility of improved postharvest management practices in enhancing the eggplant value chain of Bangladesh", Int. J. Agril. Res. Innov. Tech. 9(2): 35-41, 2019.

¹⁴ Ibid.

¹⁵ Lixia Capsia Gestionis, "Bangladesh Trade Facilitation Investment Options Analysis", LixCap, 2022.

¹⁶ Ibid.

¹⁷ Lixia Capsia Gestionis, "Bangladesh Trade Facilitation Investment Options Analysis", LixCap, 2022.



Public and private initiatives to carry out these recommendations and improve transport/logistics will provide strategic economic advantages in the coming decades, boosting the national economy and increasing Bangladesh's ability to export local products, as well as increasing employment and income opportunities.

The Bangladesh Trade Facilitation project aims to expand cross-border trade in agricultural goods and food products. The objective is to address systemic constraints at Bangladeshi ports; simplify and automate import and export processes; improve the capacity of Government regulatory agencies, laboratories, and warehouses; and to foster investment in cold storage facilities and temperature-controlled logistics.

Implementing Organizations



Disclaimer:

This material is based upon work supported by the U.S. Department of Agriculture, Foreign Agricultural Service under Food for Progress Program, Federal award No. FCC-388-2020/003-00. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.