

IDLC MONTHLY

# BUSINESS REVIEW

**E-COMMERCE LOGISTICS  
IN BANGLADESH:  
SCALING DELIVERY INFRASTRUCTURE  
TO POWER DIGITAL RETAIL**





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**E-Commerce Logistics in Bangladesh: Scaling Delivery Infrastructure to Power Digital Retail**

The digital transformation of Bangladesh's e-commerce market is showing an upward trend. The logistics sector has become crucial for enabling this digital market growth. The e-commerce logistics sector in Bangladesh is projected to grow from BDT 568.7 billion (USD 5.3 billion) in 2024 to BDT 1.5 trillion (USD 14 billion) by 2026, driven by increasing online shopping and logistics demand (source: e-CAB). The delivery of products requires prompt and trustworthy service due to the 2,700+ e-commerce sites and 300,000+ f-commerce pages operating within the country.

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Womentrepreneur

**Drip Irrigation BD Ltd.**

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### E-Commerce Logistics in Bangladesh: Scaling Delivery Infrastructure to Power Digital Retail

Bangladesh's e-commerce logistics sector has experienced a significant boom in recent years, driven by growth drivers such as the synergy of strong digital infrastructure, changing consumer behavior, and favorable demographics. Robotic warehouses, AI route optimization, and electric drones that save fuel costs by 20% are some of the current trends in this industry in the global context. RedX, Pathao Courier, Steadfast, and Paperfly are the key players in our e-commerce logistics system. These businesses have already been introducing a number of last-mile delivery technologies that have been fueling Bangladesh's e-commerce scene, such as GPS-based vehicle tracking, missed delivery drop-off locations, instant delivery services, AI-powered analytics, and others.

Despite major ongoing challenges such as inadequate infrastructure, regulatory and customs bottlenecks, staff shortages, high operating costs, technological gaps, sustainability and environmental concerns, etc., Bangladesh's logistics sector remains essential to the e-commerce sector's development. Notwithstanding these obstacles, the industry shows significant promise by adopting new technology, government reforms, and other initiatives. With the expansion of its infrastructure and innovative economic projects, Bangladesh is all set to take its e-commerce logistics industry to the next level!

**Akhlaqur Rahman Sachee**

Editor

IDLC Monthly Business Review

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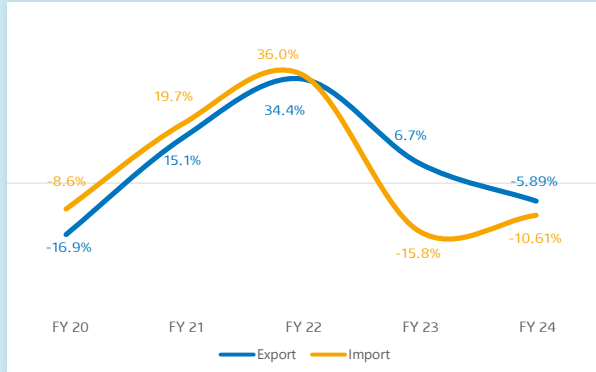
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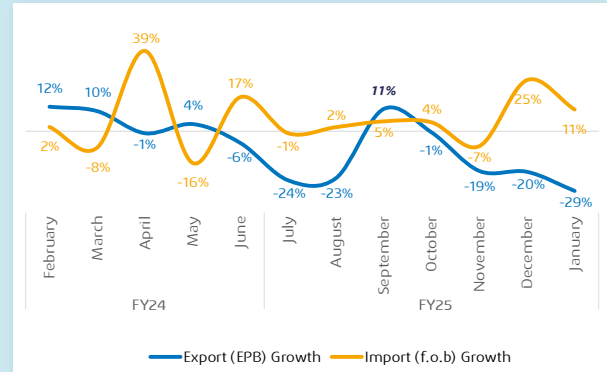
# ECONOMY AT A GLANCE

## EXPORT-IMPORT

Growth in Export-Import Trade (Last 5 Years)

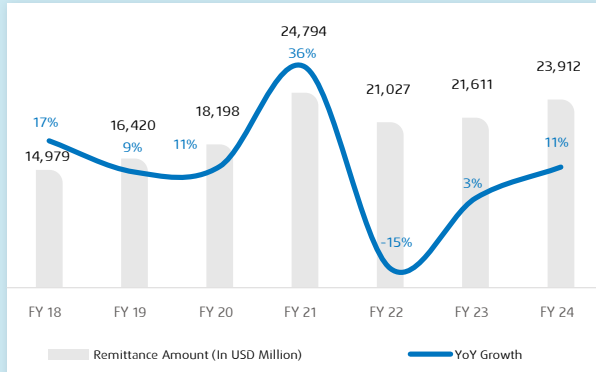


Export and Import Growth (Last 12 Months)

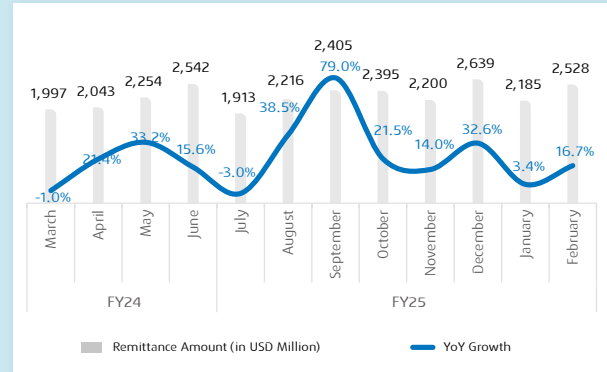


## REMITTANCE

Remittance Amount (In USD Million and YoY Growth)

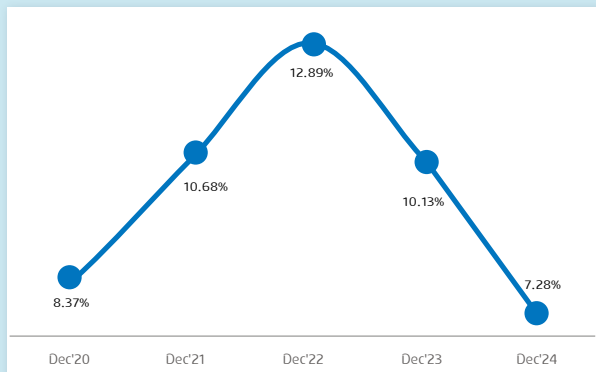


Monthly Remittances (In USD Million and YoY Growth)

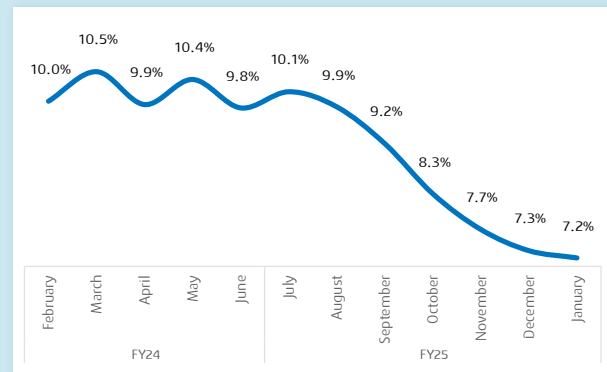


## PRIVATE SECTOR CREDIT GROWTH

Private Sector Credit Growth (Last 5 Years)



Private Sector Credit Growth (Last 12 Months)



Source: Bangladesh Bank



## ■ MONTH IN BRIEF

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● The NBR has reduced the tax at source on the import of raw materials for oncology drugs from **5 percent to 2 percent, aiming to lower production costs and make cancer treatment more affordable.**

● In order to enhance government revenue collection, Business Initiative Leading Development (BUILD) has suggested establishing a flat value-added tax (VAT) rate of **10 percent**, citing complexities in the current system, which includes eight different VAT rates.

● Bangladesh Bank has further relaxed its loan exit policy, reducing the initial down payment requirement **from 10 percent to 5 percent for defaulters** looking to clear loans in phases.

● **Bangladesh Bank has mandated 27 percent of loans for the CMSME sector over the next five years**, allowing f-commerce and e-commerce businesses to access loans up to BDT 0.5mn.

● Bangladesh's potato exports nearly doubled in the first eight months of FY25, reaching **24,000 tonnes by March 15**, driven by a production glut that pushed farm gate prices below production costs.

● **Amid trust concerns surrounding full-fledged Islamic banks**, Islamic banking wings of conventional banks saw deposits surge, with some exceeding 100 percent growth in 2024.

● **Bangladesh's large-scale manufacturing sector grew 10.37 percent in December 2024**, driven mainly by the ready-made garments (RMG) sector, which holds significant weight in the index.

● Bangladesh Bank has mandated that banks check borrowers' CIB reports before **issuing new loans or rescheduling facilities in the agriculture sector, except for microfinance linkage loans.**

● **Government borrowings from banks may become costlier in Q4 of FY 2024-25** due to rising yields on sovereign securities, with a nearly 8 percent increase in borrowing target for the April-June period.

● Open costing, which now accounts for 60 percent of Bangladesh's garment exports, has led to low profit margins (**1-4 percent**) for factory owners, as buyers control pricing based on production cost transparency.

*IT WOULD BE TOUGHER TO SAY WHETHER THE RELAXATION IN DAILY CRR RULES WILL BRING ANY POSITIVE OUTCOME AS THE COUNTRY'S MONEY MARKET IS NOT FUNCTIONING PROPERLY.*

**Mustafa K Mujeri**, Executive Director, Institute for Inclusive Finance and Development (InM), on edging down of the inter-bank call-money rate following Bangladesh Bank's decision to lower the daily cash reserve ratio (CRR) from 3.5 percent to 3.0 percent. (March 6, 2025. The Financial Express)

Since the coverage of telecom-grade fibre networks in Bangladesh is limited and remote areas still have problems with load shedding, Starlink will accelerate the daily activities and digital economic initiatives of our entrepreneurs, freelancers, NGOs, and SME businesspeople.

**Faiz Ahmad Taiyeb**, Special Assistant to the Chief Adviser, on the partnership of several Bangladeshi firms with Starlink to establish ground stations. (March 9, 2025. The Daily Star)

Our exports have grown due mainly to increasing orders from the US, Unicef and the World Health Organization.

**Muhammad Zahangir Alam**, Chief Financial Officer, Square Pharmaceuticals, on Bangladesh's pharmaceutical exports growth of 7.1 percent year-on-year to USD 145.46mn in July-February FY25. (March 10, 2025. The Daily Star)

**If the trade deficit had remained as high as in the last fiscal year, the current account deficit would have been even larger. However, we must strive to keep the current account balance in a good position to reduce pressure on the country's foreign exchange reserves.**

**Professor Mustafizur Rahman**, Fellow, Centre for Policy Dialogue, on the fact that Bangladesh's current account deficit decreased by 87 percent to USD 552mn in July-January FY25. (March 11, 2025. The Business Standard)

We expect the inflation rate to remain high, at 9.8% in FY25, making it difficult for the central bank to lower its policy rates.

**Moody's, Global Credit Ratings Agency**, on the matter of downgrading Bangladesh's banking outlook to negative, citing slow economic growth, high inflation, and rising nonperforming loans (NPLs). (March 12, 2025. The Business Standard)

Despite that, recovery should be the number one priority along with austerity measures to keep them floating at this moment so that the sector can support the business growth when the momentum is restored.

**Kanti Kumar Saha**, CEO, Alliance Finance PLC, on falling loan recovery of NBFIs in Bangladesh by 3.2 percent year-on-year in Q4 2024, reflecting economic strain and inflation pressures. (March 20, 2025. The Daily Star)

**The card base in Bangladesh remains relatively low. There are regulatory bottlenecks in issuing credit cards, which hinder growth.**

**AKM Fahim Mashroor**, CEO, Bdjobs.com, on the hindered growth of credit cards due to regulatory barriers despite the massive growth of prepaid cards by 166 percent. (March 22, 2025. The Financial Express)

The continuous fall in capital machinery imports is concerning for the economy. This trend suggests that industries are not focusing on expanding production, which could negatively impact employment generation.

**Syed Mahbubur Rahman**, MD and CEO, Mutual Trust Bank, on declining imports of capital machinery by 30 percent amid the rising imports of consumer goods and industrial raw materials. (March 23, 2025. The Business Standard)

**We don't have minerals in Bangladesh. We don't produce palm oil, which is a significant component in toiletries. However, we do have salt.**

**Malik Mohammed Sayeed**, Chief Executive Officer, Square Toiletries Ltd, on suggesting the hidden growing potential of Bangladesh's toiletries market, accelerated by rising income, increasing awareness and lifestyle changes. (March 23, 2025. The Daily Star)

## WORLD ECONOMIC INDICATOR

Country	Nominal GDP: 2023 (In USD Billion)	Real GDP Growth: 2023 (Yearly % Change)	Inflation Point to Point (%)		Current Account Balance: (% of GDP)	Interest Rates (%), Ten Years Treasury Bond	Currency Units (per USD)
Frontier Markets							
Sri Lanka	74.85	-7.82	-2.60	Mar-25	-0.99	11.80	295.40
Vietnam	433.70	5.05	3.13	Mar-25	5.12	3.12	25,805.00
Kenya	108.92	5.51	3.60	Mar-25	-3.94	13.52	129.25
Nigeria	374.95	2.86	23.18	Feb-25	0.32	19.53	1,531.19
Bangladesh	446.35	6.03	9.32	Feb-25	-0.75	12.05	122.00
Emerging Markets							
Brazil	2,173.67	2.91	5.06	Feb-25	-1.32	14.79	5.84
Saudi Arabia	1,067.58	-0.76	2.00	Feb-25	3.94	N/A	3.75
India	3,572.08	7.83	3.61	Feb-25	-1.21	6.46	85.53
Indonesia	1,371.17	5.05	-0.09	Feb-25	-0.11	6.96	16,695.14
Malaysia	415.57	3.68	1.50	Feb-25	1.20	3.65	4.44
Philippines	436.62	5.57	1.80	Mar-25	-2.57	6.12	57.38
Turkey	1,108.45	4.52	38.10	Mar-25	-4.07	30.12	37.99
Thailand	514.95	1.87	0.84	Mar-25	1.28	2.09	34.53
China	17,662.04	5.24	-0.70	Feb-25	1.50	1.79	7.27
Russia	1,997.03	3.59	10.10	Feb-25	2.53	15.12	84.44
Developed Markets							
France	3,031.78	0.87	0.80	Mar-25	-0.75	3.33	0.91
Germany	4,457.37	-0.31	2.20	Mar-25	6.80	2.57	0.91
Italy	2,255.50	0.92	2.00	Mar-25	0.16	3.76	0.91
Spain	1,581.15	2.50	2.30	Mar-25	2.60	3.26	0.91
Hong Kong	376.97	3.22	1.40	Feb-25	9.40	3.23	7.78
Singapore	501.43	1.08	0.90	Feb-25	19.77	2.45	1.34
United States	27,357.83	2.53	2.80	Feb-25	-2.97	4.00	1.00
Denmark	405.20	1.81	2.00	Feb-25	10.90	2.33	6.81
Netherlands	1,117.10	0.09	3.70	Mar-25	10.17	2.81	0.91
Australia	1,741.88	2.06	2.40	Dec-24	1.22	4.18	1.64
Switzerland	885.14	0.76	0.30	Mar-25	7.64	0.44	0.86
United Kingdom	3,344.74	0.15	2.80	Feb-25	-2.20	4.45	0.78

**Bangladesh Data:** Interest Rate of 10 Years Treasury Bond As Per March 2025, Inflation As Per February 2025, and Currency Unit (Per USD) As Per 6th April 2025 are sourced from Bangladesh Bank.

**Nominal GDP, Real GDP Growth, and Current Account Balance:** Data of all countries are sourced from the IMF World Economic Outlook April 2024.

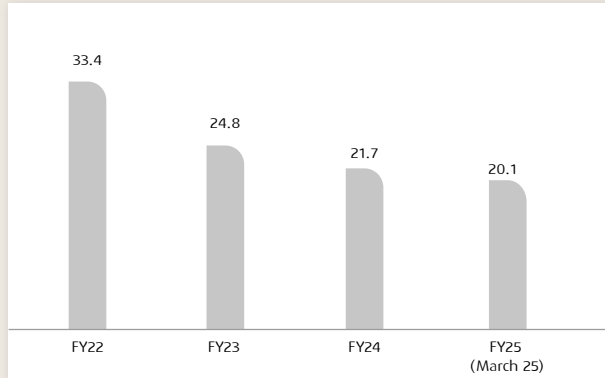
**Inflation:** Data of all countries apart from Bangladesh are sourced from tradingeconomics.com.

**Interest Rate of 10 Years Treasury Bond and Currency Unit:** Data of all countries apart from Bangladesh are sourced from investing.com.

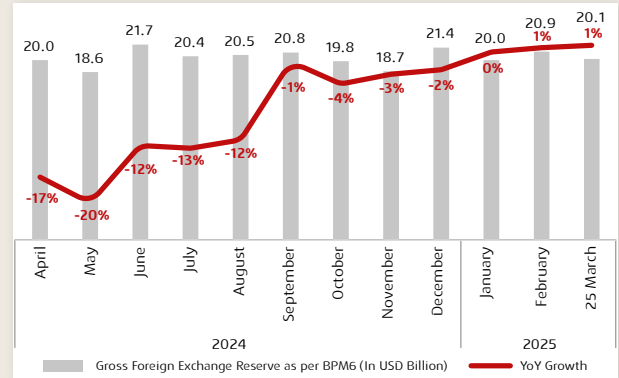


# BANKING DATA CORNER

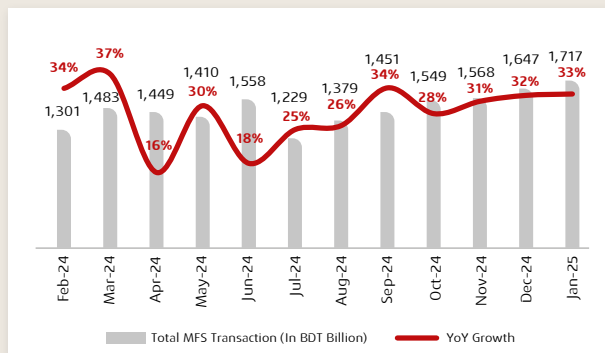
**Gross Foreign Exchange Reserve as per BPM6**  
(In USD Billion and Last 2 Years)



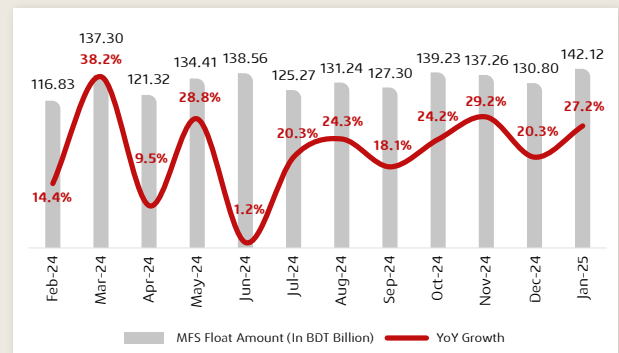
**Gross Foreign Exchange Reserve as per BPM6**  
(In USD Billion and Last 12 Months Trend)



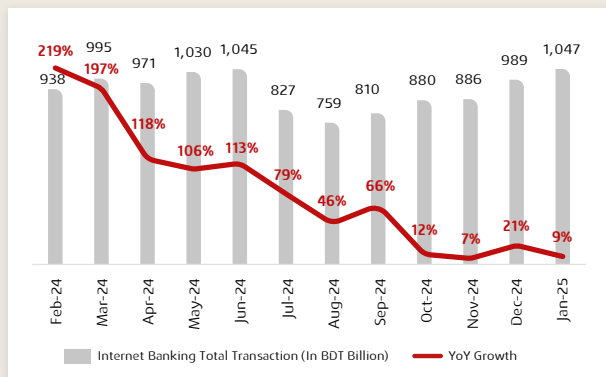
**MFS Total Transaction Value**  
(In BDT Billion and YoY Growth)



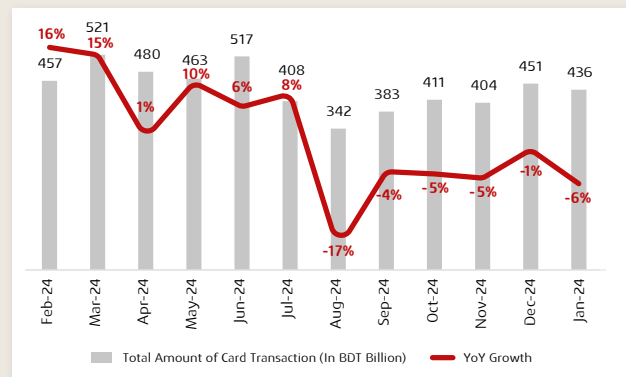
**MFS Float Amount**  
(In BDT Billion and YoY Growth)



**Total Amount of Internet Banking Transaction**  
(In BDT Billion and YoY Growth)



**Total Amount of Card Transaction**  
(In BDT Billion and YoY Growth)



Source: Bangladesh Bank

# Ecospear Pvt. Company Ltd.



## Mohammad Raihan

Founder and CEO, Ecospear Pvt. Company Ltd.

### Interviewed By

Sumaiya Tarannum Sujana, Team MBR

*With the aim to mitigate the environmental and ecological crisis in Bangladesh, Ecospear, a startup established by Mr. Mohammad Raihan, has been successfully manufacturing eco-friendly bags in Bangladesh as an alternative to the polythene bags since 2018. Their bags are mostly made with cassava, corn, and PBAT (kind of futuristic biomaterial). Currently, they are producing approximately 15 tons of eco-friendly plastic bags every month. Ecospear earns around BDT 50 crore annually from its exports. The company is driven by a simple mission: to create a cleaner, greener future for Bangladesh and beyond. Team MBR was in a conversation with the founder and CEO of Ecospear Pvt. Company Ltd., Mr. Raihan, and had the opportunity to find out more about his motivations behind forming the startup and his future aspirations surrounding Ecospear.*

**Sumaiya Tarannum Sujana:** By providing various biodegradable solutions, Ecospear Pvt. Company Ltd. has been creating waves in an effort to alleviate Bangladesh's ecological and environmental crises. May we know what led you to come up with the concept of Ecospear?

**Mohammad Raihan:** Ecospear was born out of a deep concern for the escalating plastic pollution crisis in Bangladesh. Back in 2016, we envisioned a future where sustainability and innovation would converge to shape a greener nation. At the time, biodegradable alternatives were either unknown, untested, or unaffordable. We saw an opportunity to pioneer

a movement that went beyond just business—it was about restoring ecological balance and creating scalable, responsible alternatives. With a clear mission and relentless R&D, Ecospear emerged not just as a product manufacturer but as a catalyst for change in environmental policy, industry standards, and consumer behavior. We are proud to have worked closely with the Department of Environment (DoE) and Bangladesh Standards and Testing Institution (BSTI), helping set benchmarks for biodegradable products nationwide.

**Sumaiya Tarannum Sujana:** The demand for eco-friendly items is rising as environmental worries increase. Would you please share

**with us the range of biodegradable products and solutions that Ecospear offers?**

**Mohammad Raihan:** Ecospear offers a wide portfolio of certified biodegradable and compostable packaging solutions that cater to both retail and industrial use. Our flagship products include grocery bags, T-shirt bags, garbage liners, courier packs, produce bags, and garment packaging, all made from starch-based, compostable materials. Recently, we've expanded into high-performance bio-resins, which are used in the manufacturing of diverse packaging formats. With our exclusive technology and global sourcing of raw materials, we ensure our products decompose within 90 to 180 days under natural composting conditions. We're also working on customized sustainable solutions for key sectors like agriculture, healthcare, and logistics, paving the way for a circular economy in Bangladesh and beyond.

**Sumaiya Tarannum Sujana: Currently, many local startups and manufacturers in Bangladesh are offering different compostable solutions for packaging on industry-scale. May we know how do you differ from other market participants in terms of product offering, pricing or sourcing?**

**Mohammad Raihan:** At Ecospear, our competitive edge lies in a combination of innovation, authenticity, and long-standing expertise. Unlike many market participants who rely on partial solutions or greenwashed alternatives, we offer globally certified, home and industrial compostable products that are genuinely biodegradable. We've invested heavily in proprietary technology and international partnerships to ensure access to premium raw materials, giving us control over both quality and cost.

Our pricing model is designed for scalability. While maintaining high standards, we've built strategic relationships with retailers—most notably, Bangladesh's largest retail chain with over 540 outlets—to ensure large-scale adoption and price

accessibility. Moreover, Ecospear doesn't just sell products; we offer tailored solutions, technical guidance, and policy-level advocacy, creating a value ecosystem that no other local player currently provides.

**Sumaiya Tarannum Sujana: Ecospear claims to offer products that are 100% biodegradable within 90-180 days. Would you kindly share some insights regarding the materials and procedures you employ to guarantee the true biodegradability of your products?**

**Mohammad Raihan:** Ecospear's products are made primarily from renewable sources like corn starch, cassava, and other plant-based materials, blended with proprietary bio-resins that are both ASTM D6400 and EN13432 certified. These materials are engineered to fully degrade within 90 to 180 days under composting conditions—leaving no toxic residue, microplastics, or long-term environmental impact.

We maintain rigorous internal testing and third-party certification to validate every product batch. Our manufacturing process uses low-energy technology and water-based printing to further reduce environmental impact. We also work closely with regulatory bodies like BSTI and the Department of Environment to maintain transparency and authenticity in biodegradability claims, helping build consumer trust and industry credibility.

**Sumaiya Tarannum Sujana: According to a Business Standard report, Ecospear can export about BDT 50 crore a year. May we know about your assessment of the export potential of eco-friendly packaging solutions and products of Bangladesh?**

**Mohammad Raihan:** The global shift towards sustainable packaging is no longer a trend—it's a necessity. Bangladesh, with its strategic location, growing manufacturing base, and government emphasis on green exports, is uniquely positioned to become a major supplier of eco-friendly alternatives. Ecospear is already

exploring partnerships in Europe, the Middle East, and Southeast Asia, where demand for certified compostable products is rapidly rising.

Our internal projections suggest that we can export over BDT 50 crore worth of products annually, particularly as we scale our production with new machinery and expand into specialty bio-resins. With global regulations tightening on single-use plastics, we foresee Bangladesh becoming a competitive hub for sustainable materials—especially if we continue to align innovation with policy support and strong environmental stewardship.

**Sumaiya Tarannum Sujana:** Apart from regular eco-friendly packaging, Ecospear has also launched a unique eco-friendly plastic named FASTIX in Bangladeshi market. Would you please enlighten us regarding FASTIX and how it is ensuring a sustainable impact on our environment?

**Mohammad Raihan:** FASTIX, which is basically an EG-bag, short for Ever Green bag, represents the next generation of sustainable innovation at Ecospear. It's a product designed to meet modern needs—Easy to Carry, Easy to Use, and Easy to Dispose—yet rooted in a deeper mission: to protect and preserve our environment for generations to come. More than just a biodegradable bag, the EG-bag is developed using the most advanced home-compostable technology, placing it a step ahead of conventional biodegradability standards.

While most biodegradable products require industrial composting facilities, the EG-bag naturally disintegrates in home compost environments within 90 to 180 days, leaving behind no microplastics, toxins, or environmental residues. It's designed for absolute convenience without compromising ecological integrity. Whether used for groceries, garments, or daily household needs, the EG-bag aligns utility with sustainability in a seamless way.

What truly sets EG-bag apart is its philosophy—it's not just a product, but a commitment to an

evergreen future. It symbolizes a conscious shift in how we perceive convenience and consumption, and empowers businesses and individuals to make responsible choices without sacrificing practicality. With the EG-bag, Ecospear is proud to lead Bangladesh into a new era of eco-innovation, where sustainability becomes second nature.

**Sumaiya Tarannum Sujana:** As eco-friendly solutions are a bit more expensive than the conventional alternatives, the usage of conventional plastics is definitely higher in Bangladesh considering our current economic scenario. May we know what has been the adoption rate of your products so far and what initiatives have you taken to address such challenges among general people?

**Mohammad Raihan:** Adoption of our products has grown steadily over the years, driven by increasing environmental awareness, regulatory shifts, and our strategic collaborations. Our landmark partnership with the largest retail chain in Bangladesh—spanning over 540 outlets—has played a vital role in mainstreaming compostable packaging. Through this collaboration, we've not only reached a wide customer base but also educated thousands of consumers on the benefits of choosing biodegradable over conventional plastic.

Still, we recognize the economic challenges. Eco-friendly products can carry a slightly higher upfront cost, especially in price-sensitive markets like ours. That's why we've focused on scaling production, optimizing our supply chain, and investing in automation to bring down prices without compromising quality.

Beyond business, we've actively participated in public awareness campaigns, school outreach programs, and government dialogues to build a culture of sustainability. We work closely with policymakers to support legislation that incentivizes green alternatives. At Ecospear, we believe change happens through collaboration—and we're committed to making sustainable living accessible to all, not just a privileged few.

**Sumaiya Tarannum Sujana:** Your work as a mixer of innovation and sustainability has been an inspiration for many in Bangladesh. What suggestions would you want to give to other entrepreneurs who are keen to enter the sustainable product market in Bangladesh or beyond?

**Mohammad Raihan:** Sustainability is not just a business opportunity—it's a responsibility. For aspiring entrepreneurs, the sustainable product market offers immense potential, but it demands patience, purpose, and persistence. My advice: start with a clear mission. Understand the problem you're solving, and build a solution that's authentic, scalable, and backed by real impact.

Secondly, invest in education and trust-building. Whether it's with consumers, investors, or regulators, transparency is key. The market is evolving, and misinformation around "green" products is common. Stand out by offering certified, tested, and traceable solutions.

Finally, collaborate and innovate continuously. Sustainability isn't static. Stay ahead by embracing new technologies, adapting to policy changes, and listening to your community. Ecospear's journey has taught me that change is possible when business becomes a force for good. So, dream big—but build responsibly. The world needs more businesses that are brave enough to care.







# E-COMMERCE LOGISTICS IN BANGLADESH:

## SCALING DELIVERY INFRASTRUCTURE TO POWER DIGITAL RETAIL

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Written By  
**Md. Redwan Hossain**

The digital transformation of Bangladesh's e-commerce market is showing an upward trend. The logistics sector has become crucial for enabling this digital market growth. The e-commerce logistics sector in Bangladesh is projected to grow from BDT 568.7 billion (USD 5.3 billion) in 2024 to BDT 1.5 trillion (USD 14 billion) by 2026, driven by increasing online shopping and logistics demand (source: e-CAB). The delivery of products requires prompt and trustworthy service due to the 2,700+ e-commerce sites and 300,000+ f-commerce pages operating within the country.

The delivery companies, including RedX, Pathao Courier, Steadfast, and Paperfly, are focusing on expanding their business operations while ensuring customer satisfaction for this surging demand. These companies are using automated warehouses, AI for route planning, and last-mile parcel hubs to transform national goods transportation systems.

However, the sector still functions with outdated infrastructure challenges, regulatory barriers and staffing deficits. These challenges can be serious but with the right solutions, they are fixable.

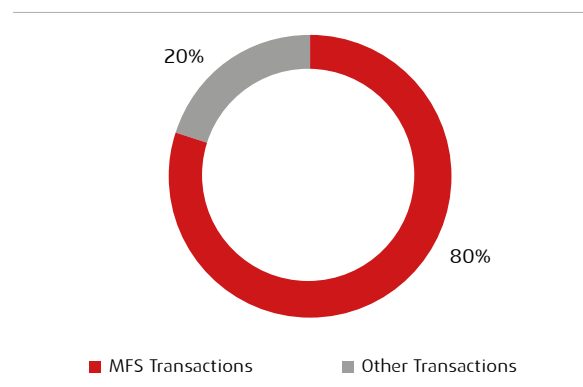
### Overview of E-Commerce Logistics Sector in Bangladesh

Bangladesh's e-commerce logistics sector is expanding considerably, and a detailed study must be conducted to juxtapose its growth with its regional counterparts, examine historical trends, and provide the necessary statistics.

The growth of e-commerce logistics in Bangladesh is being propelled by the synergy of robust digital infrastructure, shifting consumer behavior, and favorable demographics. Internet coverage across the country now extends to 95% of the population (BTRC, 2024), significantly enhancing access to online platforms across urban and rural regions. This connectivity, along with rising smartphone penetration, has enabled easier ease of online shopping by consumers and reach extension by businesses to a broader customer base.

Mobile financial services (MFS) such as bKash, Nagad, and Rocket are also at the core of the initiative, facilitating over 80% of e-commerce transactions and facilitating easy digital payments.

**Figure 01: Contribution of MFS to E-commerce Logistics Transactions**



Source: Payments CMI

Also, the demographic profile of the nation where over half of the population is under the age of 35 and a 10% growth yearly middle class (Bangladesh Bureau of Statistics, UNFPA, Boston Consulting Group) have a dynamic consumer market that pushes the demand for efficient and scalable logistics solutions further.

Observing the evolution of e-commerce logistics during the last few years provides a deeper insight into its evolution:

**Table 1: Evolution of E-commerce Logistics in Bangladesh**

Year	E-commerce Logistics Market Size	Growth Rate (%)
2020	\$1.1 billion	-
2021	\$1.7 billion	55%
2022	\$2.4 billion	41%
2023	\$3.0 billion	25%
2024 (Projected)	\$3.7 billion	23%

Source: Based on data from the E-Commerce Association of Bangladesh (e-CAB) and industry reports.

India holds sway over South Asia's logistics for e-commerce, with strong infrastructure and investment. Bangladesh may be small but is growing fast and has huge potential for technology and infrastructure improvement. Pakistan is growing with more internet usage and online shopping but needs better logistics. Sri Lanka and Nepal have

smaller markets but can grow if they increase internet penetration, infrastructure, and digital payments.

A comparative analysis of the e-commerce logistics markets of South Asian countries puts Bangladesh in focus and with promise:

Table 2: Comparative Analysis of the E-commerce Logistics Markets of South Asian Countries

Country	E-commerce Logistics Market Size (2024)	Projected CAGR (2024-2029)
India	\$17.5 billion	18%
Bangladesh	\$3.7 billion	15%
Pakistan	\$2.5 billion	16%
Sri Lanka	\$0.6 billion	12%
Nepal	\$0.2 billion	10%

Source: Estimates based on Statista, World Bank, and industry reports.

The e-commerce logistics sector of Bangladesh is quickly emerging as a market leader in South Asia, driven by strong digital adoption and market growth. Technology and infrastructure investments strategically will be critical to sustaining this momentum and unlocking its full potential.

Key Logistics Players and Their Models

The growth of Bangladeshi e-commerce has created new logistics operators who operate between vendors who sell online and the broad customer base in the country. The operators employ distinct operational approaches to offer their services.

RedX

Innovative logistics solutions for e-commerce businesses.



Pathao Courier

Reliable courier services enhancing e-commerce delivery

Steadfast

Consistent and dependable logistics partner for e-commerce



Paperfly

Advanced technology-driven logistics for e-commerce growth.

Figure 02: Key Players in E-commerce Logistics

Source: Author's Design



## 1. RedX

RedX functions as the leading logistics corporation in the country through the daily processing of more than 100,000 parcels. The company began operating as a Dhaka-centric service until it extended its service to multiple regional areas. RedX operates warehouse automation trials, which will permit a 15–20% reduction in delivery times while speeding up order fulfillment.

## 2. Pathao Courier

Pathao Courier has chosen third-party logistics (3PL) to extend delivery services across individual districts. The collaboration between Pathao and Cainiao (a logistics division of Alibaba) in 2023 brought streamlined last-mile operations, which reduced the average delivery time in major cities below 48 hours.

## 3. Steadfast Courier

Steadfast Courier maintains a successful position in safe and timely Dhaka delivery services through

its recruitment of more than 5,000 delivery agents. This platform works with increasing numbers of f-commerce and boutique traders who demand fast delivery services to keep customers engaged.

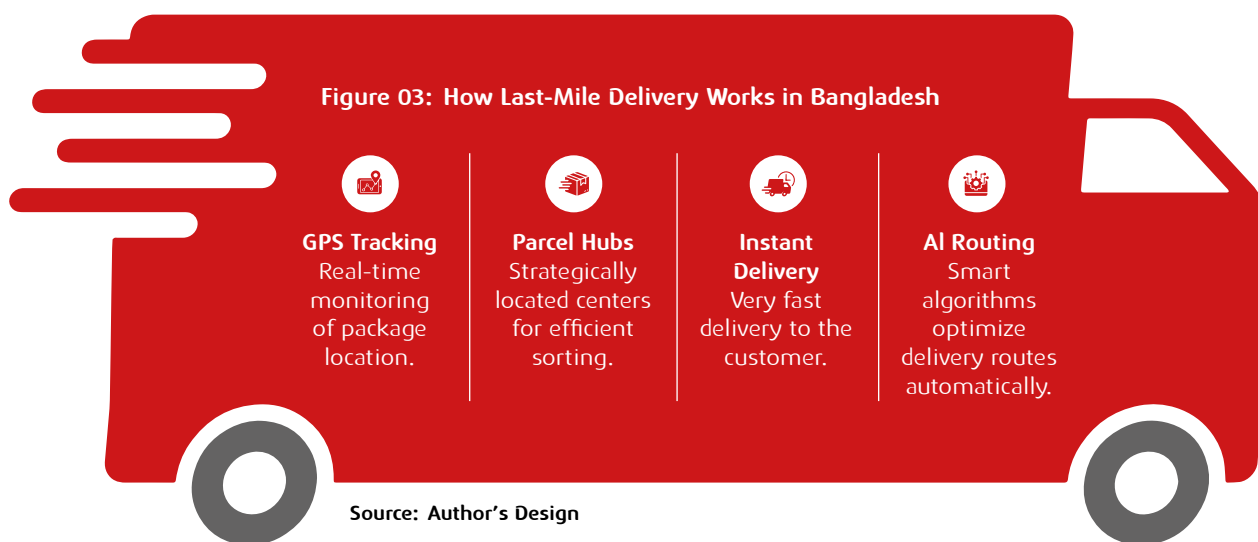
## 4. Paperfly

Paperfly adopted smart logistics early on to implement AI routing functions, which cut down failed deliveries and reduced delivery times by 20%. To determine the regions where delivery errors or product returns are more likely to happen, the company collects data from Daraz, AjkerDeal, and Evaly. It provides this information by means of predictive analysis.

The group of companies fulfills multiple requirements across e-commerce by providing urban express delivery services, along with national-level distribution capabilities.

### Last-Mile Delivery Innovations

Last-mile delivery is critical to customer satisfaction in Bangladesh's competitive e-commerce landscape. Some of the innovations include:



GPS-based vehicle tracking: Tracking vehicles through GPS makes routes more efficient and allows real-time monitoring of delivery events.

Missed delivery drop-off points: Pathao Parcel Hubs provide easy alternatives for customers who are unable to receive deliveries at home.

Instant delivery services: RedX and Steadfast have introduced express delivery for high-turnover products like groceries and electronics.

AI-powered analytics: Paperfly applies machine learning to predict delivery complexity and maximize success rates.

Operating solutions with these capabilities enhance organizational effectiveness and resolve major access problems within metropolitan traffic networks and rural areas.

## **Key Challenges Faced in E-commerce Logistics**

Bangladesh's logistics industry continues to be vital to the country's economic development in spite of significant, ongoing challenges and related problems. Some of the major challenges faced by logistics companies of Bangladesh are explained below:

### **1. Lack of Infrastructure**

Delays occur often in delivery processes while transportation costs increase because of poor roads and insufficient infrastructure and heavy traffic jams that impact primary trade routes between Dhaka and Chittagong. The combination of insufficient berthing space with old operational equipment and slow container processing produces port congestion at Chittagong Port so shipment delays become expensive. Product spoilage and complex logistics systems and higher expenses occur due to a shortage of modern warehouses, which forces businesses to store products in improvised solutions.

### **2. Customs and Regulatory Bottlenecks**

When customs staff use lengthy manual procedures without sufficient coordination and restricted IT applications, delivery time increase, as do logistics costs. Regulatory confusion surrounding VAT and digital taxation, alongside uncalculated enforcement operations, creates difficulties for companies to maintain compliance. Heavy taxation rates affecting cross-border payments, together with backward banking regulations, create unnecessary obstacles throughout the logistics value chain.

### **3. Labor and Skills Shortages**

Although the industry heavily depends on manual work, it fails to find enough trained

workers in transportation. Companies also face issues regarding warehousing and logistics management functions. The inadequate industry-focused training creates worker shortages, which reduces productivity. It eventually results in subpar delivery standards of logistics services.

### **4. High Operating Costs**

Underutilized truck capacity combined with ongoing transportation jams enhances transportation expenses that diminish the market value of Bangladeshi export products. Runaway shipping charges create additional costs and business uncertainties for the logistics providers.

### **5. Technology and Digitization Gaps**

The global digital transformation has not led to changes in Bangladesh's logistics sector, as automation technology and real-time tracking and electronic documentation remain uncommon. Operational delays have formed due to the inadequate tech integration of customs operations with clearing houses and logistics platforms.

### **6. Sustainability and Environmental Concerns**

Despite rising international demands, Bangladesh experiences minimal progress in eco-friendly initiatives for logistics infrastructure, such as electric delivery vans and energy-efficient warehouses or green packaging. The main issue is green logistics remains actively underdeveloped in Bangladesh.

## **The Future of E-commerce Logistics**

The e-commerce logistics sector of Bangladesh will experience substantial transformation because of automation and sustainability integration with digitalization and governmental support measures. This transition will improve delivery speed and efficiency while also creating new prospects for employment, investment, and future economic growth.





Source: Author's Design

### 1. Automation of Operations

The future warehouse operations and distribution systems in Bangladesh will be completely automated. The largest logistics firm in the country, RedX, is operating warehouse robot pilot programs for operational automation. The use

of robotic and automated sorting technologies is expected to boost operational effectiveness by 30% to 40% by eliminating human errors and accelerating order handling while reducing work-related expenses. Automated systems installed at RedX fulfillment centers have resulted in a 15% decrease in delivery time.

## 2. Green Delivery Solutions

The growing global interest in sustainability has led online logistics operations in Bangladesh to adopt environmental preservation practices. Various startup companies are using electric vehicles (EVs) and drones to conduct cost-effective delivery services that help logistics operations reduce their environmental impact. Research conducted by the World Bank shows that transport activities from Bangladesh account for 15% of nationwide greenhouse gas emissions. Business operations have planned to reduce their carbon output through electric delivery vans and drones for the final stage of dispatches, with projections for a 10% to 15% decrease in emissions over the next five years. Experiments at Pathao Courier have showed that electric motorcycles for delivery in Dhaka result in 20% reduced fuel costs than regular fuel-powered vehicles.

## 3. Digital Wallets and Payment Platforms

Digital payments through wallets and mobile money platforms have revolutionized the transaction procedures used in e-commerce logistics operations. It may be possible to expedite transaction verification and simplify payment processes by integrating payment systems with logistical systems. A survey conducted by Bangladesh Bank found that digital payment systems account for 80% of all online transactions, with Bkash, Nagad, and Rocket leading the market. Digital platforms linked to logistics can reduce transaction time by 50%, which simultaneously enhances customer satisfaction with operational excellence. Mobile wallets enable customers to track their transaction activity in real-time, which increases their trust in the logistics network system.

## 4. Government Initiatives and Policy Support

The development of the sector heavily depends on government backing. The Bangladesh Post Office is implementing digital transformation through infrastructural development while collaborating with private delivery partners to optimize final delivery operations. The Bangladesh ICT Division

reports that the postal services will implement digitization while decreasing deliveries by 40%, which will extend service, reach by 25% to under-served locations over the next three years. The government plans to issue an upcoming e-commerce policy roadmap that will provide necessary clarity on taxation rules and describe cross-border logistics requirements and infrastructure development needs. The upcoming policy aims to attract BDT 1,000 crore worth of investment for logistics development while establishing a goal to generate 50,000 job positions in e-commerce logistics operations over the next five years.

The combined implementation of new policies and technologies will establish an eco-friendly and quick logistics system that functions seamlessly.

## Way Forward

The e-commerce logistics business in Bangladesh is going to grow heavily. It is supported by mobile banking services and increased digital connectivity among young people. Large companies like RedX, Pathao Courier, Steadfast, and Paperfly are adopting the current trends such as robotic warehouses, AI route optimisation, and electric drones that cut fuel costs by 20%.

However, the growth is bogged down due to issues such as scarce infrastructure, regulatory red tape, and shortage of expert labor. Improved roads, high-tech ports, faster customs processing, and efficient digital payment with sustainability features would be needed in order to achieve momentum.

This sector demonstrates positive expansion by embracing government reforms, which target postal sector innovation while implementing e-commerce systems. The next five years will bring employment for 50,000 people resulting from a BDT 1,000 crore investment that will develop the Bangladesh logistics sector. Bangladesh has set out to become a regional logistics hub through the development of its infrastructure and creative economic initiatives, in accordance with current national objectives.



# **LUBE OIL MARKET IN BANGLADESH:**

## GREASING THE PATH TOWARDS INDUSTRIAL EFFICIENCY

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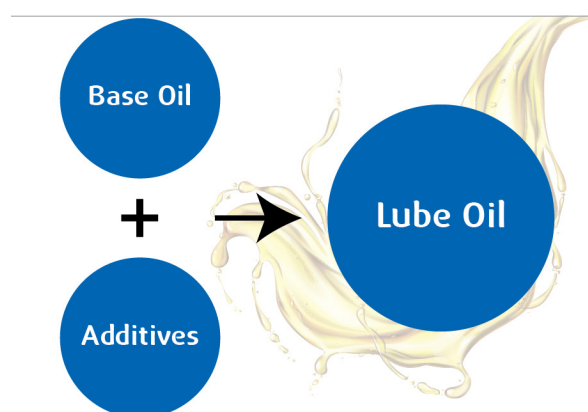
Written By  
**Sumaiya Tarannum Sujana**

The lube oil market in Bangladesh is fast emerging as a silent powerhouse, underpinning the country's accelerating industrial momentum, transport evolution, and infrastructure boom. This industry, which is frequently disregarded, subtly powers the country's engines both literally and symbolically. According to a Daily Star study, rising costs, greater mobility, industrial growth, and general economic activity caused Bangladesh's engine oil sales to more than double from BDT 3,616 crore five years ago to BDT 8,000 crore in 2024. The lube oil market in Bangladesh is not only expanding, but also changing as a result of new competitors vying for market share and a doubling of demand over the last five years.

### Formation of Lube Oil

Lube oil is a substance that can help with corrosion prevention, cleaning, cooling, sealing, and friction reduction, among other things. Lubricants usually comprise fewer than 10 percent additives and 90 percent base oil, usually petroleum fractions known as mineral oils. Base oils can occasionally be synthetic liquids or vegetable oils. Reduced wear and friction, enhanced viscosity, resistance to oxidation and corrosion, aging, and contamination, and more are all provided by additives. Powders (dry graphite, PTFE, molybdenum disulfide, tungsten disulfide, etc.), PTFE tape for plumbing, air cushions, and other materials are examples of non-liquid lubricants.

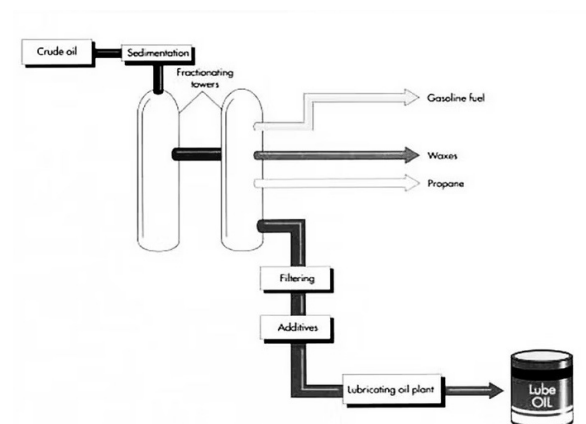
Figure 1: Lube Oil Formation



Source: Hydrocarbon Unit, Energy & Mineral Resources Division

Lubricating oil is generally refined from crude oil. The crude oil is heated in massive fractionating towers following a purification procedure known as sedimentation. The varied vapors—which can be utilized to produce gasoline, waxes, propane, and other materials—boil off and are gathered at various locations throughout the tower. After the collected lubricant oil has been filtered, additives are added.

Figure 2: Lube Oil Manufacturing Process



Source: Made How

### Overview of the Lube Oil Market in Bangladesh

The lube oil market in Bangladesh has expanded to unprecedented levels due to the country's fast industrial boom. The Bangladeshi lubricants market is projected to increase at a cumulative annual growth rate (CAGR) of 7.76% from 2025 to 2030, from an estimated 216.71 million liters in 2025 to 314.89 million liters by 2030, according to Mordor Intelligence. Around 200 businesses in Bangladesh offer lube oil, which is expected to reach 1.77 lakh tonnes in 2024, compared to just 1.6 lakh tons five years prior, according to The Daily Star. Five years ago, engine oil sales in Bangladesh were BDT 3,616 crore, but in 2024, they more than doubled to BDT 8,000 crore. The automobile industry is responsible for 68% of the yearly demand for engine oil, with the industrial sector coming in second at 38%. Market insiders claim that the remaining portion is consumed

by the marine and agricultural sectors. The Daily Star published an article in 2020 that detailed the various sectors in Bangladesh's lubricant oil use.

**Table 1: Breakdown of Lube Oil Consumption (in tonnes) (2020)**

Vehicles	80000
Industries	65000
Agricultural	10000
Water vessels	5000

Source: The Daily Star

The top five brands in Bangladesh's lubricating oil market are Mobil (MJL Bangladesh Ltd.), Caltex/Chevron (Navana Petroleum), Total (Trade Services International), BP (Rahimafrooz) and Royal Dutch Shell PLC (Ranks Petroleum Ltd.).

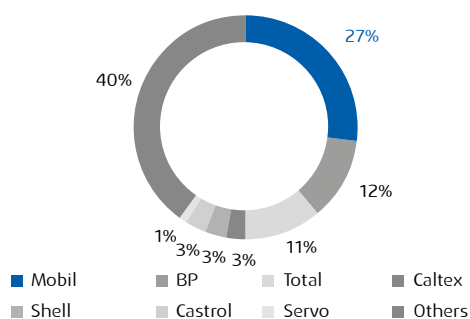
**Figure 3: Top Lube Oil Brands in Bangladesh**



Among these lube oil brands, Mobil (MJL Bangladesh Ltd.) holds the highest percentage of market share.

**Figure 4: Market Share of Lube Oil Brands in Bangladesh**

**Market Share (as Percentage)**



Source: The Daily Star

Apart from the above-mentioned global brands, there are some local brands too who have been operating in our lube oil market. According to an article by The Business Standard, global brands control 46% of our nation's lube oil market, with local and non-brand manufacturers accounting for the remaining 54%. However, because of their low grading, a number of stakeholders and experts are worried about the quality of the locally blended lube oil products.

**Figure 5: Local Lube Oil Brands in Bangladesh**



The market for lubricants in Bangladesh is dominated by engine oil. One of the many materials used to lubricate internal combustion engines in order to guarantee optimal performance is engine oil or engine lubricant. Although engine oil can be mineral, synthetic, or semi-synthetic, it always consists of a special blend of additives and base oil. Because of the large demand from the transportation or automotive end-user industries, engine oil dominates the nation's lube oil market. Engine oil is necessary for all types of combustion engine vehicles to run properly and last a long time. Additionally, the majority of automakers advise that petrol engines have their oil changed once a year or 20,000 kilometers, while diesel and turbocharged petrol engines should have their oil changed every six months or 10,000 kilometers. Engines, brake systems, fuel systems, transmission manufacturing, steering systems, exhaust systems, and many other vehicle components all need lubricants.

### Short Glimpse of Global Lube Oil Market

Mordor Intelligence has estimated that the size of the global lubricants market will be 45.80 billion liters in 2025 and will grow at a compound annual growth rate (CAGR) of 3.12% to reach 53.40 billion liters by 2030. Because motor vehicles require more lubricant replacement cycles than any other industrial application, the automotive industry was the largest end-user across all categories. With a compound annual growth rate (CAGR) of 4.8%, power generation is anticipated to be the



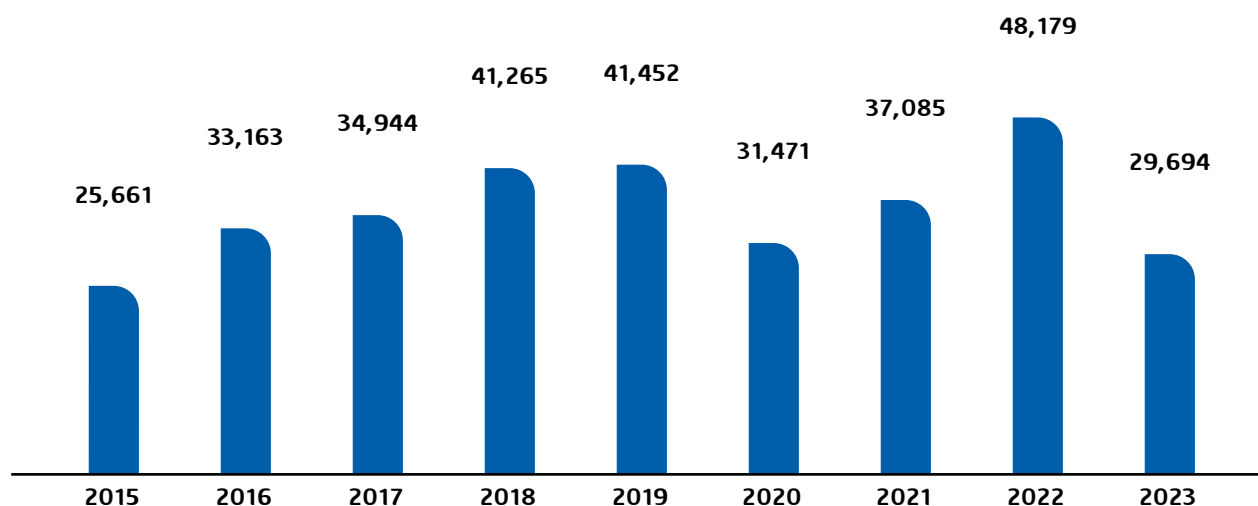
end-user sector with the fastest rate of growth in the worldwide lubricants market from 2021 to 2026, followed by the automotive sector (3.8%). With a compound annual growth rate (CAGR) of about 4.3%, Asia-Pacific is anticipated to be the lubricants market with the quickest rate of growth worldwide from 2021 to 2026

### Growing Potential of Lube Oil Market in Bangladesh

As per the data published by the Bangladesh Road Transport Authority (BRTA) Approximately

3,38,931 motorbikes were registered as of August 2022, making up more than 86% of all registered motor vehicles in Bangladesh. Since most motorcycles in the nation are powered by internal combustion engines that run on petrol, there is a considerable need for engine oil, which will only increase as more people move into cities and have more money to spend. Additionally, as of August 2022, private passenger automobiles made up more than 3.1% of all motor vehicles registered in the nation. This upward trend will undoubtedly contribute to the expansion of the lube oil market in Bangladesh.

Figure 6: Average Monthly Vehicle Registration in Bangladesh



Source: Bangladesh Road Transport Authority (BRTA)

Bangladesh's fast industrialization is another important driver propelling the market's expansion because factories and other production facilities need a variety of lubricants to run smoothly. A favorable environment for the lube oil market has also been produced by government measures supporting industrialization and infrastructural development.

### Challenges within the Market

Despite the promising landscape of lube oil market, the sector grapples with some challenges too:

#### High Import Duties

According to The Daily Star, importers that

bring in refined lubricants must pay a 49% duty, while local businesses that mix base oil with chemical additives must pay a 38% import duty in Bangladesh. These taxes not only raise prices but also stifle innovation and pricing flexibility.

#### Presence of Low-grade Oil

Semi-urban and rural markets in Bangladesh are often overrun with inferior engine oil. This weakens engines, undermines customer confidence, and disadvantages responsible parties. About 97-98% of the oil produced locally is of substandard quality, according to an industry expert. The lack of a strong regulatory framework or quality certification body thus remains a concern.

### **Brand Proliferation**

With more than 200 lube oil businesses in Bangladesh, many of which are of dubious quality, market fragmentation is severe. Consumers often choose on price rather than performance, making it harder for premium brands to justify value.

### **Lack of Public Awareness**

In Bangladesh, a large number of car owners are ignorant of brand compatibility, viscosity classes, and appropriate oil change intervals. It's still difficult to educate our market participants.

### **Way Ahead**

The market for lube oil in Bangladesh is not only keeping the wheels turning, but it also speeding

them up. With an estimated annual growth of about 7.76%, the industry has a lot of potential as long as its obstacles are met with cooperation and vision. Lubricants continue to be the unsung heroes of industrial advancement, whether they are used to keep the buses on the highway, the machinery in the factory, or the ships at the dock operating smoothly. The potential of the lube oil market must be better understood by both government and citizens, who must then take appropriate action. As Bangladesh eyes middle-income status and a greener, more industrial future, the lube oil industry is poised to play a vital role - greasing the path toward truly boundless possibilities.



# Drip Irrigation BD Ltd.



## Tahera Reza

Co-Founder and CEO, Drip Irrigation BD Ltd.

### Interviewed By

Sumaiya Tarannum Sujana, Team MBR

*Founded by Ms. Tahera Reza and a fellow co-founder in 2020, Drip Irrigation BD Ltd. is one of the leading irrigation service providers in Bangladesh. They are offering services like AWD, drip irrigation, sprinkler irrigation, fogging irrigation, and micro weather controlling using 4IR technology. Their goal is to contribute to building a sustainable and cost-efficient cultivation system in Bangladesh. Team MBR was in a conversation with the co-founder and CEO of Drip Irrigation BD Ltd., Ms. Reza, and had the opportunity to find out more about her motivations behind forming the startup and her future aspirations surrounding Drip Irrigation BD.*

**Sumaiya Tarannum Sujana: Drip Irrigation BD Ltd. has been working as one of the leading irrigation service providers in Bangladesh since 2020. Would you kindly share with us how you have come up with the idea of Drip Irrigation?**

**Tahera Reza:** The idea of Drip Irrigation BD Ltd. emerged from a very personal and practical realization. As someone deeply involved in urban farming and community agriculture initiatives, I witnessed firsthand how traditional irrigation methods were often inefficient, wasteful, and

costly—especially for small-scale farmers with limited access to water and capital.

In 2019, while co-founding Krishimela.com, an agri-based online platform, I connected with countless farmers across Bangladesh. Many of them voiced the same concerns: inconsistent water supply, high utility costs, and poor crop yields due to outdated irrigation techniques. That's when the concept of a localized, affordable, and sustainable drip irrigation system began to take shape.

Our solution was to introduce a system that

not only conserved water but also empowered farmers to produce more with fewer resources. We took it a step further by integrating IoT and solar power into our systems, making them more adaptable and environmentally friendly. Additionally, we started exploring the use of recycled plastic to build components—addressing both sustainability and affordability.

In 2020, Drip Irrigation BD Ltd. officially launched with a vision to revolutionize agriculture in Bangladesh by making smart, efficient irrigation accessible to all, especially smallholder farmers who form the backbone of our agriculture sector.

**Sumaiya Tarannum Sujana: With the aim to make a shift in the farming process, Drip Irrigation BD Ltd. has been offering a wide array of services and technological solutions in agriculture. May we know about the range of products and solutions offered by Drip Irrigation?**

**Tahera Reza:** At Drip Irrigation BD Ltd., we focus on delivering smart, sustainable, and affordable solutions that transform the way farming is done in Bangladesh. Our flagship innovation is the IoT-based Micro Irrigation System, designed to optimize water use, boost crop yield, and reduce farming costs—particularly for smallholder farmers.

This system uses solar power and IoT technology to automate water delivery based on real-time data from soil moisture sensors. It not only ensures precision irrigation but also significantly reduces water usage—up to 60% compared to traditional methods.

Our product lineup includes:

- Smart irrigation kits for various land sizes and crop types.
- Filtration units that ensure clean water flow and protect system efficiency.

- Automated fertigation systems that integrate nutrient delivery through the irrigation system.
- Hydroponic setups for urban and soilless farming.
- Custom irrigation layout designs and on-site installation support.

We also provide mobile app integration for farmers to monitor and control irrigation schedules remotely, enhancing convenience and efficiency.

Beyond products, we offer consultation, training, and after-sales service to ensure successful adoption. Our solutions are built using recycled plastic waste, combining innovation with environmental responsibility. By offering a full spectrum of tech-enabled farming tools, our aim is to empower Bangladeshi farmers to move from conventional practices toward a more efficient, climate-resilient, and profitable future.



**Sumaiya Tarannum Sujana: Currently, there are many irrigation systems in Bangladesh; 'groundwater irrigation' and 'water reservoir irrigation' being the most common ones. May we know what differentiates drip irrigation system from others in the market, especially for small-scale farmers in Bangladesh?**

**Tahera Reza:** The IoT-based Micro Irrigation System stands out from traditional irrigation methods such as groundwater and water reservoir irrigation due to its unparalleled efficiency and precision. Traditional systems often waste water due to over-irrigation, and they rely heavily on fluctuating groundwater levels or limited reservoir capacities, making them unsuitable for many small-scale farmers.

Our IoT-based Micro Irrigation System uses sensors to monitor soil moisture levels and automatically adjust water flow, ensuring that only the exact

amount needed for optimal crop growth is applied. This precision reduces water waste by up to 60%, a significant advantage in a water-scarce country like Bangladesh. Additionally, our system operates on solar power, offering a sustainable, off-grid solution, which is especially beneficial for remote areas without reliable access to electricity. The integration of IoT technology allows farmers to remotely control and monitor irrigation schedules via a mobile app, making it easier to manage water usage effectively.

For small-scale farmers, this means lower operational costs, higher crop yields, and more resilient farming practices that are less dependent on unpredictable weather patterns or water resources. Furthermore, the IoT-based Micro Irrigation System can be scaled to suit various land sizes and crop types, making it a versatile option that traditional systems cannot match.

In essence, our system provides small-scale farmers with a smarter, more sustainable, and cost-effective alternative to conventional irrigation techniques, empowering them to achieve greater productivity with fewer resources.

**Sumaiya Tarannum Sujana:** Women entrepreneurs may encounter numerous obstacles in agriculture sector that has historically been dominated by males. As a female entrepreneur, may we know what particular challenges you have faced in the agri-tech industry, and how have you resolved them?

**Tahera Reza:** As a female entrepreneur in the agri-tech industry, I've encountered both societal and industry-specific challenges. Agriculture, particularly the tech-driven aspect, has long been a male-dominated field. Breaking through stereotypes and gaining the confidence of stakeholders—such as investors, partners, and customers—was an early challenge.

The technical nature of our work also required me to assert my expertise in a space where women are often underrepresented. Initially,

it was difficult to find role models or mentors within the agri-tech sector. However, I actively sought out networks and communities that empowered women in business and agriculture. Through collaborations and learning from like-minded professionals, I grew in my confidence and knowledge, which helped me build credibility and trust within the industry. Another hurdle was navigating access to funding. Securing investments in a field dominated by men often meant overcoming biases and convincing stakeholders of the viability and potential of our technology, especially when dealing with traditional agricultural financing institutions. To address this, I leveraged data-driven results from our early projects to demonstrate the tangible impact of our solutions.

Today, I continue to advocate for women in agri-tech by fostering a supportive work environment, providing training, and encouraging young women to explore agricultural technology. The resilience, adaptability, and determination required to overcome these barriers have ultimately shaped the vision of Drip Irrigation BD Ltd. and our mission to make farming more sustainable and inclusive.

**Sumaiya Tarannum Sujana:** Drip Irrigation BD Ltd. has already started implementing their technologies in many projects within Bangladesh. Would you please share with us what has been the biggest achievement for Drip Irrigation BD so far in terms of market impact or customer satisfaction?

**Tahera Reza:** One of our proudest achievements at Drip Irrigation BD Ltd. is the successful implementation of the IoT-based Micro Irrigation System in numerous smallholder farming communities across Bangladesh. Our system has not only revolutionized the way these farmers manage water usage but has also significantly improved their crop yields and reduced irrigation costs.

Through our technology, farmers are experiencing water savings of up to 60%, which has proven



to be especially valuable in regions facing water scarcity. This has led to a noticeable increase in productivity and, in turn, better financial stability for many small-scale farmers. The positive feedback and gratitude from our customers have been incredibly rewarding, affirming the tangible impact our solutions have on their livelihoods. In addition to improving water efficiency, our system has been instrumental in reducing dependency on manual labor, which has been a major challenge in rural farming areas. The automated nature of our technology allows farmers to spend less time managing irrigation and more time on other critical aspects of farming.

Our biggest achievement, however, lies in the partnerships we've built with local communities, government initiatives, and NGOs, who have supported us in implementing our systems. These collaborations have not only broadened our reach but also helped us to scale quickly and sustainably, creating a lasting impact on the agricultural landscape of Bangladesh.

**Sumaiya Tarannum Sujana:** Drip Irrigation BD Ltd. offers many products for irrigation, filtration, hydroponics etc. purposes. May we know if you depend on the import of machineries and equipment or do you completely depend on your own manufacturing facilities?

**Tahera Reza:** At Drip Irrigation BD Ltd., we strive to offer high-quality, cost-effective solutions while ensuring sustainability in our operations. We have a balanced approach when it comes to sourcing machinery and equipment. For some specialized components, such as high-performance filters, sensors, and certain advanced automation technologies, we do rely on imports from trusted international suppliers. This ensures that our systems incorporate the best available technology for optimal performance and durability.

However, we are deeply committed to local manufacturing, especially for the core

components of our IoT-based Micro Irrigation System, including irrigation pipes, fittings, and frames. These are often produced using recycled plastic waste, which aligns with our vision of promoting environmental sustainability. By producing key parts locally, we can reduce costs, ensure quicker turnarounds, and make our systems more affordable for small-scale farmers. Additionally, we are constantly exploring opportunities to expand our local manufacturing capabilities and reduce reliance on imports. We believe in empowering the local economy and contributing to the development of the agri-tech ecosystem within Bangladesh. Overall, we aim to strike a balance between global expertise and local innovation, ensuring that we provide our customers with top-notch products at competitive prices while fostering sustainable practices.

**Sumaiya Tarannum Sujana:** With the rising temperature and dryness in the environment, irrigation is gradually becoming an important aspect of farming. Would you please share with us your opinion regarding the adequacy of infrastructure and policy support for irrigation system in Bangladesh?

**Tahera Reza:** Irrigation has become increasingly critical in Bangladesh, given the rising temperatures, unpredictable rainfall, and water scarcity challenges. Despite the urgency of the issue, the infrastructure and policy support for irrigation systems, especially advanced technologies like drip irrigation, remain underdeveloped in many areas.

Currently, traditional irrigation methods dominate, but they often lead to inefficient water use, contributing to long-term environmental degradation. While there are efforts to improve water management practices, such as the development of reservoirs and water conservation initiatives, these solutions often fall short when it comes to scalability and sustainability. The infrastructure needed for smart irrigation systems, like the IoT-based Micro Irrigation System, is still

in its infancy. There is a lack of widespread support for integrating solar-powered and IoT-based technologies into existing agricultural practices. Additionally, local irrigation systems often rely on groundwater, which is depleting rapidly in many regions.

On the policy side, there is growing awareness of the need to address water scarcity and climate change impacts. However, comprehensive policies that incentivize sustainable irrigation technologies and support their adoption by farmers are limited. While some government programs do provide financial support for agricultural technology, there is still a lack of clear regulations or incentives specifically for drip irrigation or water-efficient solutions. We believe that more investment in irrigation infrastructure and stronger policy frameworks to encourage sustainable practices are critical for ensuring long-term agricultural productivity and food security in Bangladesh. Collaboration between the government, private sector, and NGOs will be key to driving the widespread adoption of advanced irrigation technologies.

**Sumaiya Tarannum Sujana:** Collaboration with larger organizations can facilitate the integration of modern technologies more into mainstream agriculture. May we know about any such partnership of yours with any larger agricultural body or organization contributing to the improvement of irrigation systems in Bangladesh?

**Tahera Reza:** At Drip Irrigation BD Ltd., we understand that partnerships with larger organizations play a crucial role in bringing modern irrigation technologies into the mainstream. Over the years, we've built collaborations with various government bodies, NGOs, and corporate

organizations to scale the impact of our IoT-based Micro Irrigation System across Bangladesh. We have partnered with several government organizations such as the Bangladesh Agricultural Development Corporation (BADC), Department of Agricultural Extension (DAE), and Chittagong Hill Tracts Development Board (CHTDB) to pilot and implement our technologies in rural and underserved areas. These collaborations have been essential in gaining trust from farmers and demonstrating the effectiveness of our irrigation systems on a larger scale. Additionally, partnerships with universities have allowed us to stay at the cutting edge of agricultural research, helping to further refine our solutions and ensure they meet the needs of local farmers.

On the NGO side, we've worked closely with organizations like CARE, BRAC, IDF, Heifer International and PKSF to introduce sustainable irrigation technologies in rural farming communities. These NGOs have helped us expand our reach, particularly in areas where access to modern farming tools and knowledge is limited. Their grassroots networks have enabled us to engage directly with farmers and support them in adopting smart irrigation systems that not only save water but also increase crop yields. We've also collaborated with many corporate organizations to provide integrated solutions, fostering innovation in the agricultural sector. These partnerships have enabled us to scale our operations and contribute significantly to the modernization of Bangladesh's agricultural landscape.

Through these diverse collaborations, we continue to drive the adoption of modern irrigation systems and contribute to the sustainable growth of Bangladesh's agriculture sector.






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