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INVESTMENT DIVERSIFICATION OF PRIORITY SECTORS AFTER LDC GRADUATION

Investment Diversification of Priority Sectors after LDC Graduation

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Acronyms and Abbreviations

ADB	Asian Development Bank
AI	Artificial Intelligence
ANU	Active Network Unit
APEDA	Agricultural and Processed Food Products Export Development Authority
API	Active Pharmaceutical Ingredient
APTA	Asia-Pacific Trade Agreement
ASYCUDA	Automated System for Customs Data
BADC	Bangladesh Agricultural Development Corporation
BAPA	Bangladesh Agro-Processors' Association
BARI	Bangladesh Agricultural Research Institute
BASIS	Bangladesh Association of Software and Information Services
BCSIR	Bangladesh Council of Scientific and Industrial Research
BEPZA	Bangladesh Export Processing Zones Authority
BEZA	Bangladesh Economic Zones Authority
BFTI	Bangladesh Foreign Trade Institute
BHTPA	Bangladesh Hi-Tech Park Authority
BIDA	Bangladesh Investment Development Authority
BJMC	Bangladesh Jute Mills Corporation
BPO	Business Process Outsourcing
BRC	British Retail Consortium
BSTI	Bangladesh Standards and Testing Institution
BTEB	Bangladesh Technical Education Board
BUFT	BGMEA University of Fashion & Technology
BUTEX	Bangladesh University of Textiles
CA	Controlled Atmosphere
CEO	Chief Executive Officer
CIT	Corporate Income Tax
COO	Chief Operating Officer
DCCI	Dhaka Chamber of Commerce & Industry
DDT	Dividend Distribution Tax
DFQF	Duty-Free Quota-Free
DTTA	Double Taxation Avoidance Agreement

EBA	Everything But Arms
EMC	Electronics Manufacturing Clusters
EPZ	Export Processing Zone
ES	Enterprise Survey
ESDM	Electronics System Design and Manufacturing
ETP	Effluent Treatment Plant
EU	European Union
EVI	Economic Vulnerability Index
FAO	Food and Agriculture Organization
FBCCI	Federation of Bangladesh Chambers of Commerce and Industry
FDI	Foreign Direct Investment
FGD	Focus Group Discussion
FICCI	Federation of Indian Chambers of Commerce & Industry
FIDF	Fisheries and Aquaculture Infrastructure Development Fund
FIQC	Fish Inspection and Quality Control
FTA	Free Trade Agreement
FYP	Five-Year Plan
GAP	Good Agricultural Practice
GCCA	Global Cold Chain Alliance
GDP	Gross Domestic Product
GED	General Economics Division
GNI	Gross National Income
GoI	Government of India
GST	Goods and Services Tax
GVCs	Global Value Chains
HACCP	Hazard Analysis Critical Control Point
HAI	Human Assets Index
HSBC	Hongkong and Shanghai Banking Corporation
HTZs	High-Tech Zones
ICOR	Incremental Capital Output Ratio
IEC	International Electrotechnical Commission
IoT	Internet of Things
IP	Internet Protocol
IPO	Initial Public Offering

IPRs	Intellectual Property Rights
IQF	Individual Quick Freezing
ISO	International Organization for Standardization
IT	Information Technology
ITES	IT-enabled Service
ITPs	Information Technology Parks
JICA	Japan International Cooperation Agency
KCC	Kisan Credit Card
KII	Key Informant Interview
LDC	Least Developed Country
LEED	Leadership in Energy and Environmental Design
MT	Metric Tons
MAC	Middle and Affluent Class
MEITY	Ministry of Electronics and Information Technology
MFN	Most Favored Nation
MoC	Ministry of Commerce
MRA	Mutual Recognition Agreement
MSMEs	Micro, Small, and Medium Enterprises
NABARD	National Bank for Agriculture and Rural Development
NBFI	Non-bank Financial Institutions
NBR	National Board of Revenue
NCDC	National Cooperative Development Corporation
NGO	Non-Governmental Organization
NIFT	National Institute of Fashion Technology
NRT	Natural Resources Tax
NTVQF	National Technical and Vocational Qualification Framework
OIC	Organization of Islamic Cooperation
OSS	One Stop Service
PIT	Personal Income Tax
PLI	Production Linked Incentive
PMMSY	Pradhan Mantri Matsya Sampada Yojana
PPP	Public-Private Partnership
Q&A	Question and Answer
R&D	Research and Development

RAS	Recirculating Aquaculture Systems
RBI	Reserve Bank of India
RCA	Revealed Comparative Advantage
RMG	Readymade Garments
S&DT	Special & Differential Treatment
SAFTA	South Asian Free Trade Area
SAM	Social Accounting Matrix
SANEM	South Asian Network on Economic Modeling
SCT	Special Consumption Tax
SDGs	Sustainable Development Goals
SEIP	Skills for Employment Investment Program
SEZs	Special Economic Zones
SMEs	Small and Medium-sized Enterprises
SMI	Survey of Manufacturing Industries
SPECS	Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors
SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
TDS	Tax Deducted at Source
TSPs	Training Service Providers
TVET	Technical and Vocational Education and Training
UMICs	Upper-Middle-Income Countries
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VAT	Value Added Tax
WTO	World Trade Organization

Executive Summary

Bangladesh is set to graduate from its Least Developed Country (LDC) status in 2026, marking a significant milestone in its economic journey. This transition presents both challenges and opportunities, with the investment landscape being a primary concern. The loss of International Support Measures (ISMs) currently available to LDCs necessitates a focus on diversifying investments to sustain growth. To navigate this period successfully, it is imperative to implement well-designed, sector-specific policies that enhance the investment climate, bolster economic resilience, and seize emerging opportunities.

The Bangladeshi economy is heavily reliant on the ready-made garments (RMG) sector, which benefits from preferential trade agreements. However, diversification has been hindered by factors such as weak regulations, supply chain inefficiencies, and limited innovation. Government policies have disproportionately favored the RMG industry, leaving other sectors under-supported and curtailing investment diversification.

Despite an increase in the total investment-to-GDP ratio over the years, Bangladesh's decadal total investment growth has stagnated at approximately 8 per cent since the 1980s. This stagnation is exacerbated by declining foreign exchange reserves, macroeconomic instability, and rising inflation. Additionally, challenges such as land scarcity, inadequate power distribution, and natural resource constraints create barriers for potential investors. Those seeking investment opportunities face hurdles in taxation, customs, land acquisition, and securing utility connections after registering investment proposals.

Sustainable economic development requires robust domestic and foreign investments. Diversifying investments can mitigate risks associated with economic volatility, foster innovation, and enhance productivity across various sectors. Foreign Direct Investment (FDI), in particular, can act as a catalyst for integration into the global value chain, amplifying its positive impacts. Strategic planning and targeted efforts are essential to strengthen Bangladesh's position in global negotiations and expedite the transition from LDC status.

In this context, the study identifies three priority sectors for investment diversification from a list of 29 key sectors. These sectors were selected based on five market-based criteria: domestic market size, international market potential, sector readiness, SME linkage possibilities, and job creation and quality. The three identified sectors are Agro-processing, Jute and Jute Products, and IT and IT-enabled Services (ITES).

To evaluate the challenges and opportunities within these sectors, the study adopts a comprehensive methodology. A key component of this approach is an enterprise survey involving 972 firms across the three sectors: 228 from Agro-processing, 332 from Jute and Jute Products, and 412 from IT and ITES. These firms were selected from sector-based clusters located in the Dhaka, Khulna, and Chittagong divisions of Bangladesh. To supplement the survey findings and gain deeper insights into sector-specific challenges and opportunities, the study also incorporates 25 Key Informant Interviews (KIIs) and two Focus Group Discussions (FGDs).

The study reveals that awareness among firms about LDC graduation is generally high, with many enterprises in the agro-processing, jute, and IT sectors recognizing its potential impacts. However, gaps remain in understanding specific consequences, such as stricter 'Rules of Origin' (RoO) and labor compliance requirements[1]. Expectations for the post-graduation period include increased foreign direct investment (FDI) and heightened foreign competition. While firms in the agro-processing and jute sectors foresee varied effects on export earnings, the IT sector appears less optimistic. Additionally, there is an anticipated need for higher raw material imports and compliance with stricter regulations.

Agro-processing Sector

Agriculture remains a vital source of livelihood in Bangladesh, with the agro-processing sector contributing 1.7 per cent to the GDP. This sector benefits from substantial domestic investment, amounting to approximately $1.2 billion, and has also received an average FDI inflow of $337.7 million over the past five years. Despite a low

[1] RoO are the criteria required to determine the national source of a product and duties and restrictions are imposed upon the source of imports in many cases

revealed comparative advantage (RCA) of 0.2, which indicates limited international competitiveness, the sector demonstrates strong forward and backward linkages. Small and Medium Enterprises (SMEs) account for 41.63 per cent of the sector's shares and 54.57 per cent of its output, highlighting its significance as a critical area for future investment, particularly in technology and productivity enhancements.

Survey data reveals that, domestically, the agro-processing sector is primarily driven by fish and meat products, which capture 35.75 per cent of the market potential, followed by packaged and snack foods at 20.29 per cent, and vegetables at 19.81 per cent. Internationally, vegetables, fruits, and grains dominate export potential, representing 20.48 per cent of the market, with packaged foods and bakery items also contributing significantly. The growing demand in both domestic and international markets, combined with strong investment interest—especially in fish and meat products—indicates substantial potential for expansion.

Despite its promising prospects, the agro-processing sector faces numerous challenges, which vary by firm size. Micro enterprises grapple with significant issues such as unreliable electricity and gas supplies, complex licensing procedures, and high tax rates. Small enterprises also contend with utility problems, limited investment, and elevated tax burdens. Medium-sized firms struggle with unreliable power supply, labor rights regulations, and regulatory compliance. Meanwhile, large firms encounter shortages of skilled labor, stringent customs and trade regulations, and difficulties in acquiring land due to lengthy documentation processes.

Financing remains a critical hurdle for the sector, with over 80 per cent of firms relying on domestic loans. The loan acquisition process is often cumbersome, taking over a month due to extensive documentation requirements and bureaucratic delays. High interest rates and complex collateral requirements further restrict access to credit, particularly for smaller firms. Attracting foreign investment is even more challenging, as nearly 75 per cent of firms face obstacles related to infrastructure and legal frameworks. Medium-sized firms experience the highest loan rejection rates at 40 per cent, underscoring the urgent need for tailored financial solutions to foster the sector’s growth.

Moreover, compliance with certification requirements poses significant challenges. The Bangladesh Food Safety Authority (BFSA) is responsible for issuing certifications for export products but operates with outdated laboratory infrastructure and a shortage of skilled personnel, limiting its ability to provide internationally recognized certificates. Sectors such as spices and beverages face greater certification challenges compared to fish and meat. Inefficient customs clearance processes, with export clearance taking an average of seven days and import clearance up to eleven days, further complicate the situation by increasing costs and reducing competitiveness. Bangladesh’s customs efficiency lags behind regional peers like Vietnam, Thailand, and Malaysia, adversely affecting overall trade performance.

Enforcing Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) standards is equally challenging due to outdated testing facilities and methodologies used by local laboratories. This is particularly problematic for exporters in sectors such as shrimp processing, where compliance with SPS standards is essential for accessing international markets. Furthermore, outdated risk management practices within the customs system severely impact the export of perishable goods. Manual inspections and a lack of automation result in delays and higher costs. The absence of modern port facilities and inadequate container handling equipment exacerbates these issues, emphasizing the urgent need for improved risk management and streamlined customs procedures.

The agro-processing sector employs over 250,000 people and makes a significant contribution to the economy; however, it faces a 45 per cent skill gap due to inadequate specialized training. Although there are employment opportunities, particularly for younger workers, the lack of effective technical and vocational training continues to hinder productivity and innovation. Bridging these skill gaps through enhanced training programs and modernized recruitment practices is essential for improving the sector's efficiency.

To unlock the potential of Bangladesh’s agro-processing sector, several key interventions are necessary.

- Establishing accredited testing laboratories within Bangladesh would streamline the certification process, reduce reliance on foreign facilities, and enhance export performance.
- Lowering direct import taxes on raw materials is crucial as Bangladesh transitions out of LDC status, enabling firms to offset the loss of incentives and fostering growth and innovation.

- Contract farming can improve supply chain efficiency by aligning farming practices with market demands, while targeted training and inputs for farmers can boost crop yields and quality, ensuring a reliable supply of raw materials for processors.
- Developing frozen trailer facilities is essential for reducing transportation costs and increasing supply chain efficiency, particularly for SMEs handling perishable goods.
- Utilizing existing railways and river ports for transporting agricultural products can enhance export volumes and reduce costs.
- Investing in specialized training through agricultural universities and Technical and Vocational Education and Training (TVET) institutes will address skill gaps and improve productivity.
- Effective enforcement of export laws and reductions in shipping times will strengthen international competitiveness. Decentralizing the supply chain and minimizing middlemen's influence can improve farmer profitability and sector productivity.
- Establishing a domestic preservative production industry will decrease reliance on imports while improving product quality and shelf life.

Through these strategic investments and policy reforms, Bangladesh's agro-processing sector can realize its full potential and strengthen its position in both domestic and international markets.

Jute and Jute Products

The jute and jute products sector is a cornerstone of Bangladesh's economy, contributing 1 per cent to GDP and playing a pivotal role in the SME landscape. Despite its significant contribution and an impressive RCA of 1361.2 - indicating a strong global competitive edge—the sector faces substantial challenges that hinder its growth and limit its potential.

A recent survey of the jute sector highlights several promising sub-sectors with potential in both domestic and international markets. Domestically, jute bags and sacks lead the market, commanding a 45.36 per cent share, followed by jute handicrafts at 20.86 per cent and jute rope and string at 11.59 per cent. Other sub-sectors, such as jute garments, carpets, fabrics, and raw jute, also show notable growth potential. Internationally, jute bags and sacks dominate with a 36.17 per cent market share, driven by rising global demand for sustainable packaging solutions. Jute handicrafts and jute rope and string also present considerable opportunities. In terms of investment appeal, jute handicrafts rank highest, attracting 27.27 per cent of investment interest, followed by jute bags and sacks at 20.91 per cent and jute garments at 20 per cent. Foreign investors show a strong preference for jute bags and sacks (38.95%), jute handicrafts (19.85%), and jute carpets and mats (14.98%). Key markets for jute products include North America, Northern and Western Europe, Japan, Southeast Asia, the Middle East, and Oceania, reflecting a global shift towards sustainability and eco-friendly products.

Despite these promising prospects, the jute and jute products sector faces significant challenges. Chief among them is the sector's heavy reliance on raw jute exports. As the world's largest exporter of raw jute, Bangladesh's focus on unprocessed materials limits its ability to penetrate higher-value markets with diversified jute products. This lack of product diversification constrains market expansion and reduces opportunities to engage with a growing consumer base that increasingly values innovative and value-added products.

In addition to the challenge of product diversification, the jute sector faces significant structural inefficiencies. Outdated machinery and high maintenance costs place a substantial burden on jute mills, while the inefficient leasing system overseen by the Bangladesh Jute Mills Corporation (BJMC) exacerbates operational challenges. Furthermore, non-tariff barriers, such as anti-dumping duties imposed by India—Bangladesh's largest importer of jute—underscore the urgent need for diplomatic and trade policy interventions. These barriers not only limit access to crucial markets but also weaken the sector's competitive position on the global stage.

Financing remains a critical issue for the jute sector. Many firms struggle to secure domestic loans due to high interest rates, cumbersome paperwork, and lengthy approval processes. These financial hurdles are compounded by operational inefficiencies, inadequate infrastructure, and systemic issues, including gender discrimination that disproportionately affects female entrepreneurs. Additionally, the high compliance costs associated with meeting stringent international standards further strain financial resources, adding another layer of pressure on exporters.

To address these challenges and unlock the sector's full potential, a comprehensive set of reforms is necessary.

- Policy measures should include regulating plastic usage to increase demand for jute products, stabilizing prices by curbing the influence of middlemen, and providing subsidies or incentives for the production of diversified, value-added jute products.
- Government intervention is crucial to ensure stable pricing, reduce tax burdens, and address anti-dumping issues with India.
- Adopting technological advancements, particularly energy-efficient solutions like solar power, can improve productivity and lower costs.
- Investments in research and development, with a focus on innovations such as jute-cotton blended fabrics, can help decrease reliance on cotton imports.
- Collaboration between the jute industry and textile institutes is vital for driving product diversification and accessing new markets.
- Raising investor interest through awareness campaigns about jute's sustainability and offering low-interest loans specifically designed for the sector can further facilitate growth.

By implementing these strategic interventions and policy reforms, Bangladesh's jute and jute products sector can overcome its current challenges, realize its full potential, and strengthen its position in domestic and international markets.

IT and ITES Sector

The IT and ITES sector in Bangladesh is experiencing rapid expansion and holds a significant position in the country's economy, contributing 1.26 per cent to GDP. With a solid foundation of $1.8 billion in domestic investment, the sector is poised for further growth. Its modern structure, characterized by a high proportion of private limited companies, supports this trajectory. Although less labor-intensive, the sector is highly productive and demonstrates strong international engagement through both direct and indirect exports. According to survey data, several key subsectors are driving growth within the IT and ITES sectors. Software and web development leads with the highest potential at 45.99 per cent, followed by digital marketing and design at 13.68 per cent, and customer service and cybersecurity at 13.44 per cent. Other notable contributors include training and research, e-commerce and freelancing, data services and analytics, AI and emerging technologies, cloud hosting, and hardware and networking.

In the realm of international exports, customer service and cybersecurity (11.22%), digital marketing and design (8.83%), and AI and emerging technologies (7.4%) are recognized as the leading sub-sectors. Foreign investment shows strong interest in software and web development, accounting for 45.04 per cent, followed by customer service and cybersecurity (14.22%) and digital marketing and design (10.78%). The sector's global engagement is concentrated in key regions such as North America, Europe, Asia, the Middle East, and Oceania, with substantial opportunities identified in markets like the USA, Canada, the Middle East, and Australia.

Despite these promising prospects, the IT and ITES sector faces several challenges. High internet costs and environmental concerns, including significant carbon emissions, pose risks to the sector's growth. Infrastructure challenges, such as unstable electricity and unreliable internet, particularly impact sectors like AI and Data Services. Bangladesh's low ranking in global digital connectivity highlights the urgent need for substantial infrastructure investments.

Access to finance is another critical issue. Approximately 53 per cent of IT and ITES firms face difficulties securing domestic finance, while 59.71 per cent struggle with attracting foreign investment. SMEs are particularly affected, with limited financial access hindering their economic potential. The SANEM-BIDA-UNDP Enterprise Survey 2024 reveals that 60.24 per cent of IT and ITES firms have secured loans, primarily from private banks, which offer quicker processing times compared to state-owned banks and non-bank financial institutions (NBFIs). However, many firms avoid loans due to reasons such as self-funding, high interest rates, and complex paperwork. The sector also faces high import tariffs on essential IT machinery and software, which hinder efficiency and increase production costs. Although some tax reductions have been implemented to support local manufacturing, high tariffs on items like computers and software continue to affect the sector's competitiveness and encourage the use of pirated software.

To address these challenges and support the continued growth of the IT and ITES sector, several key recommendations are proposed.

- The government should establish and enforce standardized valuation guidelines for IT and ITES firms to ensure consistent and reliable assessments, thereby enhancing investor confidence and supporting sector growth.
- Enacting dedicated venture capital legislation would create a favorable investment environment by addressing critical issues such as investor rights and tax incentives, both of which are essential for fostering innovation and entrepreneurship.
- Strengthening intellectual property rights through improved legal frameworks and enforcement, as well as supporting IP registration, will protect innovations and attract foreign investment.
- Upgrading IT parks to include comprehensive facilities such as transportation, educational institutions, healthcare, and recreational amenities will enhance their attractiveness to investors and improve employee satisfaction.
- Implementing a long-term strategy with consistent policies, including fixed import tax rates for IT materials, will provide a stable investment climate and align with global trends. Investing in digital infrastructure to increase internet speeds and expand broadband coverage is crucial for operational efficiency and inclusive growth.
- Promoting Bangladesh as a global hub for affordable, high-skilled labor through effective country branding can attract international investments and boost competitiveness.
- Establishing a universally accepted payment system will streamline transactions, support sector growth, and reduce reliance on informal financial channels.

By addressing these challenges and implementing these recommendations, Bangladesh can unlock the full potential of its IT and ITES sector, enhance its global competitiveness, and drive sustainable economic growth.

1. Introduction

1.1 Investment Diversification in Post-LDC Bangladesh: Context and Significance

Bangladesh is on track to graduate from LDC status in November 2026. In 2021, when the UN General Assembly made its decision, Bangladesh's Gross National Income (GNI) per capita was $1,827, significantly above the graduation threshold of $1,222. Similarly, the country's scores in the other two indicators — Economic Vulnerability Index (EVI) and Human Assets Index (HAI) —also exceeded the graduation benchmarks. Bangladesh's EVI score was 27, well below the threshold of 32 or higher, while its HAI score stood at 75, surpassing the required minimum of 66. These indicators collectively confirmed that Bangladesh was ready to transition from an LDC to a developing country.

An intriguing aspect of this graduation is that Bangladesh, compared to previously graduated LDCs, boasts a substantially larger economy and population base. This transition represents a pivotal moment for a nation characterized by steady growth and a long-term vision for prosperity. However, it necessitates a comprehensive and strategic approach to navigate the opportunities and challenges ahead. Graduation from LDC status not only acknowledges Bangladesh's progress but also calls for sustained, inclusive growth. This journey has been marked by significant advancements in key sectors, including textiles, manufacturing, and agriculture. Nonetheless, the shift to developing country status will fundamentally alter Bangladesh's position in global trade and economic dynamics.

One of the primary concerns associated with LDC graduation is the potential loss of preferential market access to over 40 countries. This could result in a significant reduction in annual exports, estimated at approximately $7 billion (Mirdha, 2024). The decline, attributed to an increase in average tariffs, is projected to range from 5.5 per cent to as much as 14 per cent, with the EU market being particularly affected (Razzaque, Dey, & Rabi, 2024). Such preferential market access has been instrumental in driving Bangladesh's export revenue and economic growth. Consequently, there is an urgent need for a proactive strategy to sustain and enhance economic resilience in the post-graduation era.

Moreover, Bangladesh has benefited extensively from Special and Differential Treatment (S&DT) measures available to LDCs. In recent years, the country's export-led growth has been largely driven by these measures. The RMG sector, which accounts for over 80 per cent of the country's goods exports, has thrived under Duty-Free Quota-Free (DFQF) access and other preferential trade arrangements in global markets. Similarly, flexibilities in implementing intellectual property rights (IPRs) have significantly supported the growth of Bangladesh's pharmaceutical and software industries, fostering both domestic market expansion and export potential. However, these preferential treatments will cease after the LDC graduation in 2026, posing new challenges to sustaining economic growth.

Bangladesh will be able to apply for preferential market access under the EU's Generalized Scheme of Preferences (GSP+) program after graduating from the LDC group in 2026.[2] While the textile and apparel industry

[2] However, there are some challenges that Bangladesh may face: **Transition period:** The EU will provide a three-year grace period for Bangladesh to continue to enjoy duty-free access to the EU market, meaning that Bangladesh will be able to maintain this status until 2029. However, during this transition period, Bangladesh will need to negotiate with trading partners. **Apparel exports:** Bangladesh's apparel exports may face Most Favored Nation (MFN) tariff rates in the EU. This is because Bangladesh's share of S-11b products under GSP is currently estimated to be almost 50 per cent, which is above the 37 per cent threshold for obtaining GSP preferences. **GSP+ qualification:** To qualify for GSP+ preference, Bangladesh will need to meet two criteria: First, the vulnerability criterion stipulates that the eligible country must have a non-diversified economy defined as the country's seven largest sections of GSP-covered imports representing more than 75 per cent (in value) of its total GSP-covered imports to the European Union during the past three consecutive years. Second, the sustainable development criterion requires a beneficiary country to ratify and effectively implement 32 international agreements and conventions on human rights, labour rights, environmental protection and climate change, and good governance (Razzaque, 2024).

remains central to Bangladesh's economic growth, its dominance underscores the urgent need for balanced development. Reliance on a single industry fosters rapid expansion but also exposes the economy to external shocks and volatility. Studies indicate that diversified economies are more resilient to external shocks and better equipped to adapt to changing market conditions (UNCTAD, 2024). In this context, diversifying investments across priority industries and sub-sectors becomes crucial. Moreover, diversification aligns with the global agenda of achieving the United Nations' Sustainable Development Goals (SDGs), particularly Goals 1, 9, and 10, by reducing income inequality and generating new employment opportunities across various sectors.

As Bangladesh prepares for its LDC graduation, investment diversification becomes a cornerstone of its economic strategy. To achieve its vision of attaining upper-middle-income status by 2031 and ensuring sustained economic stability, the country must enhance investments and diversify its exports. This diversification into new, higher-value-added industries and services is essential for increasing export earnings, maintaining trade balance, and ensuring long-term economic resilience. Such diversification would also help stabilize exports and minimize the risks of disruptions caused by external factors.

To offset the challenges posed by LDC graduation and to diversify the economy, scaling up investment is imperative. Increased investments from both domestic and foreign sources can facilitate a smooth transition and contribute to higher economic growth (Fruman & Forneris, 2016). Domestic investment fosters local entrepreneurship, strengthens industries, and builds critical infrastructure for sustained growth. Foreign Direct Investment (FDI) amplifies these benefits by introducing advanced technologies and fostering technology transfer to local businesses. This transfer enables local firms to upgrade their technological capabilities, boosting productivity and production capacity (Guo et al., 2024). Additionally, FDI can integrate Bangladesh into global value chains by shifting the economy from low-productivity activities to higher-value-added industries, further enhancing its positive impact. FDI not only directly contributes to economic growth by increasing capital formation but also indirectly supports growth by promoting trade openness (Makki & Somwaru, 2004).

Despite an overall rise in the investment-to-GDP ratio over time, Bangladesh’s total investment growth has remained stagnant at approximately 8 per cent per decade since the 1980s (Raihan et al., 2023). Compared to other East Asian nations, Bangladesh has not experienced a significant surge in investments. A quarter of total investment has consistently been allocated to public investment, with its share of GDP reaching 7.5 per cent in 2022, driven by increased spending on development projects under the annual development program. Meanwhile, private investment has gradually risen, from 12.5 per cent of GDP in 1981 to 17.3 per cent in 2000, peaking at 25.3 per cent in 2019. However, its share of GDP has stagnated between 22–24 per cent from 2011 to 2022. To replicate the sustained private investment growth seen in East Asia, Bangladesh requires a prolonged period of robust private investment expansion. Currently, the country appears to be mired in a low-growth phase for private investment.

Bangladesh has similarly struggled to attract substantial foreign investment, with FDI averaging around 1 per cent of GDP. This low level of FDI has slowed private investment growth and, consequently, economic expansion. Compared to its regional peers, Bangladesh ranks low in FDI attraction. From 2016 to 2020, Vietnam’s FDI inflow averaged 4.88 per cent of GDP, Malaysia’s was 2.69 per cent, and the Philippines’ was 2.56 per cent, while the averages for Low- and Middle-Income Countries (LMICs) and Middle-Income Countries (MICs) were 1.5 per cent and 1.6 per cent, respectively, according to World Bank data.

In Bangladesh, only a few sectors have attracted meaningful foreign investment. The textiles and garment industry, a significant player in the global market, consistently accounts for around 20 per cent of total FDI, supported by its robust supply chains and affordable labor. The energy sector—spanning power, gas, and petroleum, particularly renewable energy—has also been a key area for FDI, contributing approximately 19.3 per cent of total FDI stock as of December 2023, reflecting efforts to diversify energy sources. The banking and financial services sector drew roughly 14 per cent of FDI in FY 2023-24. Additionally, the telecommunications and technology sectors have seen growing investment, driven by the increasing digitalization of the economy.

Boosting investment in Bangladesh is crucial for export growth and broader economic development. Investments in key sectors, especially those with strong export potential, enhance the capacity and competitiveness of local industries. This leads to higher production levels, improved product quality, and expanded access to international markets, thereby increasing exports. To maintain its position as a key player in the global economy—particularly in the post-LDC graduation period—Bangladesh must ensure steady

investment growth and diversify investments across various sectors. Sustained and consistent efforts to improve the business-enabling environment, infrastructure, and policy framework will be vital for fostering and sustaining positive investment trends in the post-LDC graduation era.

1.2 Objectives of Study

Overall objectives of the study: The broad objectives of the assignment are:

1. Identifying priority sectors for investment diversification in the post-LDC scenario and evaluating the growth and investment potential of those priority sectors.
2. Strategizing policy measures for a business environment conducive to investments in the priority sectors.

Specific objectives of the study: The specific objectives of the assignment are:

- Identifying the three priority sectors for investment diversification in the post-LDC scenario.
- Assessing the current status and challenges of the priority sectors.
- Evaluating the growth potential and investment needs of the priority sectors.
- Identifying the potential sub-sectors for investment within each priority sector.
- Identifying the policies of developing and developed countries that have facilitated the growth of the identified sectors in those countries.
- Preparing an action plan with suggestions for special incentives to attract domestic and foreign investments in the identified sectors.
- Assessing the position of Bangladesh in attracting FDI in the identified sectors in comparison to the comparable countries.
- Strategizing policy measures and recommending ways forward for a business environment conducive to investments in the priority sectors.

1.3 Overview of the Report

The report is structured as follows: Section 2 provides an overview of the study's methodology, highlighting the approaches adopted, including sampling techniques, data collection procedures, and data analysis methods used to examine the challenges faced by the priority sectors. This section also details the tools employed to identify the three priority sectors and offers an in-depth description of these sectors based on secondary sources. Section 3 presents the key features of the current status of the priority sectors, based on primary survey data. It further explores the challenges these sectors face. Section 4 outlines the rationale for and identification of potential sub-sectors for investment within each priority sector. Section 5 conducts a comparative analysis of FDI attraction. Section 6 provides policy recommendations for improving the business environment and fostering a conducive investment climate. Additionally, it proposes an action plan to attract both domestic investment and FDI in the priority sectors.

2. Methodology

The methodology comprises desk review, enterprise survey, KIIs, and FGDs. KIIs and FGDs will help bridge the information gap from the enterprise survey.

2.1 Desk Review

The desk review phase involves analyzing reports, publications, and frameworks on SDG localization, both locally and internationally, alongside relevant national plans and policies. The research team reviewed various public documents, including government planning documents such as the 8th Five-Year Plan, Perspective Plan 2021–2041, and Bangladesh Delta Plan, as well as policy documents such as the Export Policy 2021–24 and the National Industrial Policy 2022, to prepare a preliminary list of sectors. Additionally, the team examined a range of national and international documents, including Impact Assessment and Coping Strategies for Graduation from LDC (GED 2020), Handbook on the Least Developed Countries 2021, Identification of Trade-Related Graduation Challenges and Preparation of Sector-Specific Trade Roadmaps for Overcoming the Challenges, and the Global Competitiveness Report by the World Economic Forum 2019.

2.2 Identification of the Priority Sectors

The steps mentioned in the following section were used to identify key sectors with the potential to drive growth and investment after LDC Graduation. For 3 selected sectors, KII's and FGD's were carried out to better understand the key barriers to growth and investment. The team followed four steps for sector identification. Those are:

Step 1: Preparing the Long List based on the 'Feasibility of Reform' Criteria
Step 2: Sector Scoring Matrix for Identifying Priority Sectors
Step 3: Data Collection Methodology
Step 4: Index Calculation

Step 1: Preparing the Long List based on the 'Feasibility of Reform' Criteria

An extensive literature review was conducted to prepare the initial long list (Table 1) for sector identification. This process involved analyzing the National Industrial Policy 2022, Export Policy 2021–2024, 8th Five-Year Plan, and Perspective Plan (2021–2041). The long list includes BIDA's investment priority sectors, export diversification targets, and priority industries outlined in the National Industrial Policy 2022, as well as the highest priority sectors identified in the Export Policy 2021–2024. The feasibility of reforms was assessed by evaluating the presence and priority levels of sectors in the Export Policy 2021–2024 and the National Industrial Policy 2022. Out of 29 sectors, 14 were classified as highest priority, and 2 sectors were designated for special development in the export policy.

Table 1: Long list for sector identification

Broad Sector	Sectors
Agriculture	Seed
	Rice Bran Oil
	Tea
Agro & Manufacturing	Agro-processing
	Jute & Jute Products
Manufacturing	Agriculture Machineries
	API
	Automobile

Broad Sector	Sectors
	Home Textile
	Cement
	Ceramic
	Construction Materials
	Cosmetics & Toiletries
	Leather & Leather Products
	Light engineering and electronic goods
	Motorcycle and Parts
	Furniture
	Garments Accessories
	Luggage
	Man Made Fibre based Garments
	Medical Equipment
	Pharmaceuticals
	Plastics & Plastic Products
	Shipbuilding
Service	IT
	Healthcare Services
	Logistics
	Tourism
	Windmill

Source: Authors' Compilation

Step 2: Sector Scoring Matrix for Identifying Priority Sectors

The sectors in the long list were scored based on the following five market-based criteria (Table 2) to identify the three priority sectors that provide the highest potential for diversification and growth. The five factors were:

1. Domestic Market Size
2. International Market
3. Sector Readiness
4. SME Linkage Possibility
5. Job Creation and Quality

Table 2: Scoring matrix with the sub-factors/indicators

Factors	Sub-factors/Indicators
Domestic Market Size	Share of GDP (%)
	Domestic Investment Size
	FDI Size
International Market	Export Share of Total Export
	Export Share of World Export
	Sectoral Revealed Comparative Advantage

Factors	Sub-factors/Indicators
Sector Readiness	Strength of Forward Linkage
	Strength of Backward Linkage
	Presence of Effluent Treatment Plant (%)
SME Linkage	Sectoral Share of SMEs
	Output Share of SMEs
Job Creation	Share of Employment in Total Employment

Source: Authors' Compilation

Step 3: Data Collection Methodology

Sectoral disaggregated data was sourced from diverse channels, yet in certain instances, data was unavailable across sectors for various indicators. To facilitate the smooth computation of the index, proxy values were utilized in these circumstances.

1. Domestic Market Size

1.1 Share of GDP (%)

The sectoral share of GDP was computed based on the average level of sectoral output spanning the years 2016-17, 2017-18, 2018-19, and 2019-20. Data for this analysis was sourced from the Statistical Yearbook 2020, which contained the most recent available data at the sectoral disaggregated level.

1.2 Domestic Investment Size

The sectoral domestic investment size was calculated with the following equation:

Sectoral Domestic Investment = Sectoral Output x Sectoral Growth Rate x ICOR

The sectoral output data was obtained from the Statistical Yearbook 2020. The output value was calculated as the average output over the last four years (2016-17, 2017-18, 2018-19, and 2019-20). Similarly, the sectoral growth rate was determined as the average growth rate over the same four-year period. The ICOR was extracted from the "Study on Employment, Productivity, and Sectoral Investment in Bangladesh: 2019," conducted by the General Economic Division (GED).

1.3 FDI Size

Under the sub-indicator of FDI, the average FDI over the past five years was considered. The data for this analysis was gathered from the Statistics Department of the Bangladesh Bank. The average of the FDI was taken to avoid the anomalies due to COVID-19 and the Ukraine-Russia war.

2. International Market

2.1 Export Share of Total Export

This sub-indicator includes the sectoral export share of the total exports of Bangladesh. The average sectoral export share of FY 2021-22 and FY 2022-23 was taken. The data was collected from the annual reports of Export Promotion Bureau FY 2021-22 and FY 2022-23.

2.2 Export Share of World Export

This sub-indicator includes the worldwide sectoral export share of the total world export. The export data of 2021 was taken for calculation from the Atlas of Economic Complexity, Harvard Kennedy School Growth Lab.

2.3 Sectoral Revealed Comparative Advantage

The sectoral revealed comparative advantage was calculated from the following equation by using the sectoral export data of Bangladesh and worldwide sectoral export data, obtained during the previous two steps (2.1 and 2.2).

$$\text{RCA} = \frac{\text{Bangladesh's exports of the sector}}{\text{Bangladesh's total export}} \times \frac{\text{World's total exports}}{\text{World's exports of the sector}}$$

It's an economic concept used to assess the relative advantage or disadvantage of a country in producing a certain good or service compared to other countries.

3. Sector Readiness

3.1 Strength of Forward and Backward Linkage

In our analysis of forward and backward linkages, we utilized the Social Accounting Matrix (SAM) 2017. From this matrix, we derived the SAM multiplier model to quantify the interdependencies within the economy. The calculation process involves dividing the matrices by the total demand or supply value against each row and column. By doing so, we isolate the effects of each sector's output on the overall economy. Specifically, this division yields the forward linkage and backward linkage matrices.

The forward linkage matrix reflects how changes in the output of one sector influence the demand for inputs from other sectors. Conversely, the backward linkage matrix illustrates how changes in the demand for inputs from one sector affect the output of other sectors.

3.2 Presence of Effluent Treatment Plant (ETP)

The availability of ETP data was collected from the Survey of Manufacturing Industries (SMI) 2019. A higher ratio of ETP represents lower sectoral pollution levels.

4. SME Linkage Possibility

4.1 Sectoral Share of SMEs

The sub-indicator includes the share of SMEs in the selected sectors. For constructing this index, the data was collected from SMI 2019.

4.2 Output Share of SMEs

The output share of SMEs was calculated from SMI 2019. This index represents the share of SME output in the total sectoral output.

5. Job Creation

5.1 Share of Employment in Total Employment

The sub-indicator represents the share of sectoral employment in total employment. The data was collected from SMI 2019.

Step 4: Index Calculation

Due to data availability constraints, we selected 11 sectors for conducting the index calculation. However, most of the data for the remaining 18 sectors was not available. To rank sectors based on selected indicators, we first calculated an individual index for each indicator. The max-min normalization method was used to calculate indices for each indicator. Utilizing the max-min normalization or feature scaling technique is common in data preprocessing to standardize the range of independent variables. This technique allows us to scale and normalize the indicators between 0 and 1, rendering the indices comparable across all sectors.

The max-min formula is:

$$\text{Normalized Value} = \frac{\text{X - Min Value}}{\text{Max Value - Min Value}}$$

Here, X is the actual value.

For instance, the domestic investment size serves as an indicator to evaluate the domestic investment potential of sectors. Employing max-min normalization for this indicator yields values ranging from 0 to 1. Notably, the pharmaceutical sector scores 1, while jute and jute products receive a score of 0. The remaining sectors fall

within the range of 0 to 1. This range enables us to compare sectors effectively. Thus, the pharmaceutical sector demonstrates the greatest potential in the domestic investment landscape, while jute and jute products exhibit the lowest. After calculating the individual indices for all indicators, we aggregated them to evaluate sectors out of 12. Subsequently, we can rank the sectors accordingly.

Results and Identified Sectors

From the sector identification matrix calculation, we have got the following results (Table 3) which indicate that the agro-processing sector has the highest index value 7.42 out of 12. The agro-processing sector is best suited for investment diversification followed by Information Technology (IT) sector at the second place. Light engineering and electronic goods, home textiles placed at third and fourth position in the index.

Table 3: Result of index calculation

	Domestic Market Size			International Market		
Sectors/Index	**Index (Share of GDP)**	**Index of Domestic Investment**	**Index of FDI Size**	**Index of Export Share of Total Export**	**Index of Export Share of World Export**	**Index of Sectoral RCA**
Agro-processing	0.502	0.610	1.000	1.000	0.729	0.000
IT	0.525	1.000	0.111	0.435	0.974	0.000
Light engineering and electronic goods	1.000	0.695	0.025	0.428	1.000	0.000
Home Textile	0.854	0.624	0.328	0.913	0.026	0.004
Pharmaceuticals	0.785	0.894	0.209	0.059	0.232	0.000
Leather & Leather Products	0.000	0.064	0.166	0.820	0.005	0.019
Jute & Jute Products	0.041	0.000	0.000	0.666	0.000	1.000
Furniture	0.100	0.329	0.039	0.000	0.090	0.000
API	0.000	0.000	0.000	0.169	0.143	0.000
Plastics & Plastic Products	0.009	0.049	0.006	0.063	0.228	0.000
Man Made Fibre-based Garments	0.000	0.000	0.000	0.144	0.011	0.002

	Sector Readiness			SME Linkage		Job Creation	
Sectors/Index	**Index of Forward Linkage**	**Index of Backward Linkage**	**Index of Presence of ETP**	**Index of Sectoral Share of SMEs**	**Index of Output Share of SMEs**	**Index of Share of Employment**	**Sector Selection (Out of 12)**
Agro-processing	1.000	0.669	0.373	0.000	0.539	1.000	**7.423**
IT	0.266	0.600	1.000	0.410	0.457	0.975	**6.752**
Light engineering and electronic goods	0.000	0.816	0.561	0.601	0.539	0.090	5.754
Home Textile	0.449	0.669	0.000	0.299	0.539	0.497	5.201
Pharmaceuticals	0.314	0.577	1.000	1.000	0.000	0.058	5.128
Leather & Leather Products	0.208	1.000	0.548	0.593	0.539	0.300	4.262
Jute & Jute Products	0.113	0.676	0.000	0.290	0.539	0.243	3.568
Furniture	0.622	0.808	0.345	0.334	0.387	0.240	3.294
API	0.160	0.607	0.696	0.398	0.027	0.000	2.200
Plastics & Plastic Products	0.118	0.238	0.151	0.175	1.000	0.061	2.100
Man Made Fibre based Garments	0.125	0.000	0.441	0.410	0.457	0.000	1.590

Source: Authors' calculation

As the agro-processing sector and IT sector have placed at the top of the calculated index, these two sectors were selected as the priority sectors for investment diversification study.

As the third sector, the Jute and Jute products sector was selected. The sector is extremely crucial from the perspective of feasibility of reform. Furthermore, in a post-LDC scenario, the importance of a biodegradable fiber, which is a sustainable alternative to synthetic materials, will be absolutely paramount. Overall, investigating the jute sector presents an opportunity to leverage Bangladesh's historical strengths, promote economic diversification, create jobs, and contribute to a more sustainable and equitable future, especially in a post-LDC graduation scenario.

The agro-processing sector includes frozen fish, shrimp, frozen food products, tea, spices, fruits, drinks, juice, tobacco, dry fruits, biscuits, rose water, vegetables, processed meat, dairy products, and edible oil. IT and IT services include software development and ITES including business process outsourcing (BPO) service, e-commerce, IT help desk, and web development. The jute and jute product sector includes raw jute, hessian, jute basket, jute rope roll, jute webbing, and jute matting as the major items. There are also some diversified jute products, such as home textiles and household furniture, decoration, jute geo-textile, lifestyle products, packaging products, etc.

2.3 Data Collection Process

A. Enterprise Survey

To achieve the objectives of this study, conducting an enterprise survey is essential. Based on alignment with the nation's socio-economic goals—such as sustained GDP growth, inclusive employment generation, strengthening SMEs, and promoting global and local value chains—three priority sectors for the survey were identified. Utilizing data and insights gathered from the survey, the study team formulated evidence-based strategies and provided recommendations to foster a business environment conducive to investments in the priority sectors, thereby ensuring an improved investment climate in Bangladesh.

Sampling Framework

The sample size was determined based on the population of firms within the priority sectors. Additionally, the sampling process accounted for firm size. The enterprise survey was systematically designed to collect data from the priority sectors: agro-processing, IT, and jute and jute products. Population data for these sectors were obtained from government documents, including the BIDA Annual Report.

To ensure methodological rigor and data comparability, the survey was conducted using standardized instruments and uniform sampling methodologies. These measures were implemented to minimize measurement errors and produce data suitable for meaningful inter-sectoral comparisons. Ensuring statistical robustness was a fundamental objective of this survey. The resulting sample sizes were substantial enough to enable statistically valid analyses for the designated industries.

To determine the sample size for the survey, the following formula was utilized:

$$\boldsymbol{n} = \left[\frac{\boldsymbol{1}}{\boldsymbol{N}} + \frac{\boldsymbol{N-1}}{\boldsymbol{N}} . \frac{\boldsymbol{1}}{\boldsymbol{PQ}} \left(\frac{\boldsymbol{K}}{\boldsymbol{Z}_{\boldsymbol{1-\frac{\alpha}{2}}}} \right)^{2} \right]^{-1}$$

Here,
N = population size
P = population proportion
Q = 1-P
K = the desired level of precision
$Z_{1-\alpha/2}$ = the value of the normal standard coordinate for a desired level of confidence, 1 – α

This formula has been used for the sampling methodology of the World Enterprise Survey[3]. To estimate the sample size, we assumed a population proportion of P = 0.5. This value is often used when the actual proportion is unknown. Furthermore, our goal is a 5 per cent precision level at a 95 per cent confidence level (represented by a Z value of 1.96). This precision ensures reliable inferences from the sample to the population. By combining the conservative P assumption, the desired 5 per cent precision, and the 95 per cent confidence level with a Z value of 1.96, we establish the rationale for our chosen sample size.

The estimated sample size is in Table 4:

Table 4: Sample size calculation[4]

Sectors	Sample Size
Agro-processing	228
IT and IT Services	412
Jute and Jute Products	332
Total	**972**

Source: SANEM Team's Estimation

Construction of Questionnaire and Survey Manual

The questionnaire for the enterprise survey (Annex 2), the key informant interviews (KII) (Annex 3), and the focus group discussions (FGD) (Annex 4) have been developed based on the understanding of the study objectives and the relevant literature.

[3] A World Bank Enterprise Survey is a firm-level survey of a representative sample of an economy's private sector. The surveys cover a broad range of business environment topics including access to finance, corruption, infrastructure, competition, and performance measures.
[4] The proportion of micro, small, medium, and large has been taken from the SMI 2019. The proportion represents the national averages.

A survey manual was developed for the enumerators and the supervisors for conducting the survey efficiently. The survey manual included the overview of the survey, background and objectives, sampling design, specified responsibilities of the enumerators and the supervisors, general guidance to fill up the questionnaire, necessary definitions and question-by-question explanation for the demanding parts, unit conversion etc.

Training and Field Test

Enumerators got training for enterprise surveys. The training was a mix of question-by-question explanations, Q&A sessions, mock interviews, and quizzes. Furthermore, the enumerators got training on Kobo Toolbox. Additionally, one day of field testing was conducted by the enumerators. Field testing results were included in the modification process of the questionnaire.

B. Key Informant Interviews (KIIs)

The research team conducted 12 KIIs across three sectors. Of these, five KIIs were conducted in the agro and food processing sector, four in the jute and jute products sector, and three in the IT sector. The agro and food processing sector interviews included representatives from ACI Agro, Expeditors (Bangladesh) Ltd, Nestlé Bangladesh Ltd, Paragon Group, and Pran Group. The jute sector interviews involved representatives from Teamex Jute Mills Ltd, Sonali Aansh Industries Ltd, Janata-Sadat Jute Mill, Akij Bashir Group, and the Foreign Investors' Chamber of Commerce & Industry (FICCI). In the IT sector, interviews were conducted with representatives from the Bangladesh Association of Contact Center and Outsourcing (BACCO), the ICT Ministry, and Polygon Tech. All KII respondents held managerial positions within their respective organizations, allowing the research team to gather qualitative insights from these sectors.

C. Focus Group Discussion (FGD)

The research team conducted two FGDs involving representatives from all three selected sectors. Participants included representatives from the BACCO, Bondstein Technologies, Bangladesh Association of Software and Information Services (BASIS), SMAC IT, Daraz, DataSoft, Penta Global, and others. The FGDs were designed to facilitate interactive discussions among multiple stakeholders, aiming to identify barriers, challenges, and opportunities within the priority sectors to attract sufficient investment from local and foreign investors.

2.4 Data Management Process

The survey data was collected through a mobile-based data collection tool, Kobo Toolbox. This particular toolbox facilitates real-time monitoring of data collection. This also allowed for minimizing data entry errors as the questionnaire became responsive to the conditions, constraints, and logic put in place by the research team. The research team accessed the data from the Kobo Toolbox server and exported it to STATA. The team rechecked the data before cleaning and later verified the data.

Data Collection: Enumerators under the supervision of supervisors conducted the survey. After the collection of data, enumerators provided the data through the Kobo Toolbox servers. Supervisors checked and approved them.

Data Entry: Since the data was collected through the Kobo Toolbox app, the data was automatically stored in the Kobo Toolbox servers. However, enumerators also cross-checked the data and re-submitted all the survey data at the end of the day. Supervisors and research assistants could see the data from the server and cross-check it, if necessary.

Data Cleaning: Research assistants exported the data from the Kobo Toolbox data entry system to an Excel data file. The data was checked and cleaned by research assistants. The cleaned data was given to the research associates for analysis.

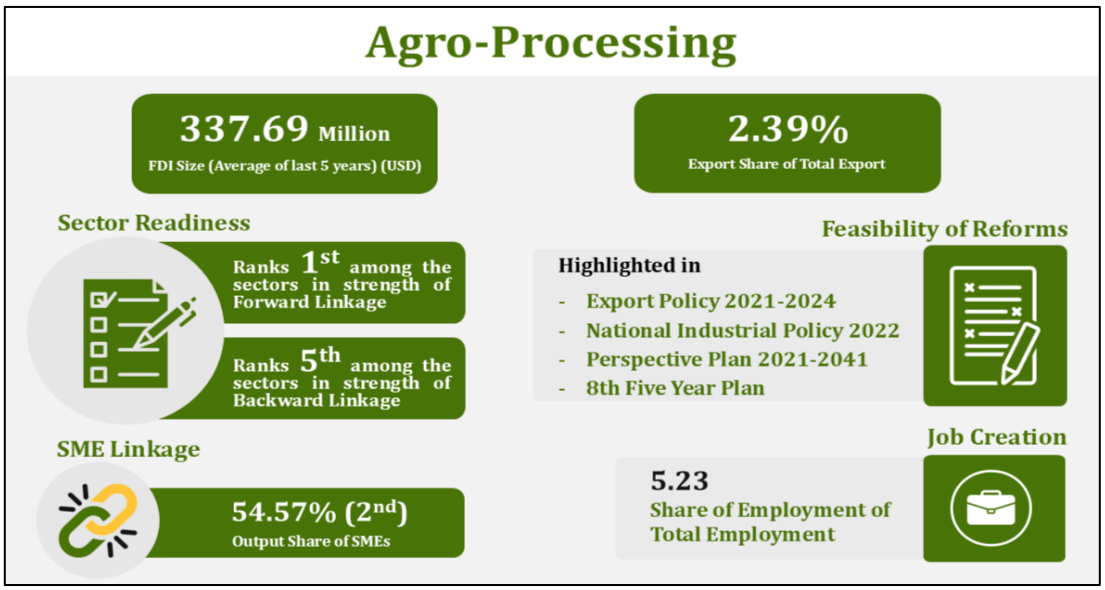
3. Current Status and Challenges

3.1 Background of the Sectors

Agro-processing

Agriculture is the primary occupation for 45.36 per cent of people in Bangladesh (BBS, 2022). Bangladesh exports more than 700 basic and processed food products to 140 countries and the agro-processing sector makes a substantial contribution to the GDP at 1.7 per cent (Bangladesh Investment Development Authority, n.d.-a). This sector has also attracted substantial FDI, averaging approximately $337.7 million over the past five years (Bangladesh Bank, 2023). This strong international interest indicates potential for further growth, particularly in enhancing production efficiency and adopting advanced technologies.

Chart 1: Overview of agro-processing sector



Source: Authors' compilation from various documents

The agro-processing sector has an export earnings of $1 million in the fiscal year 2023-24 (Export Promotion Bureau, 2024a). The sector accounts for 2.4 per cent of total exports, with a 10.2 per cent share in the world export market (Export Promotion Bureau, 2024). However, the sector's RCA is relatively low at 0.2 (Annex 1.5), suggesting that despite its domestic investment size and contribution to GDP, it does not hold a significant competitive edge internationally. Regardless, investment in this sector presents opportunities for growth and improvement, such as enhancing production efficiency, adopting better technologies, and improving product standards to meet international requirements.

The sector also demonstrates strong forward and backward linkages (having scores of 15.6 and 10.3, respectively) reflecting its deep integration within the broader economy. Additionally, with a sectoral share of 41.63 per cent and an output share of 54.57 per cent in the SME landscape, the agro-processing sector plays a crucial role (Annex 1.5). Consequently, this sector has been identified as one of the highest priority sectors in the 2021-2024 export policy and provided a significant number of jobs, making up 5.2 per cent of total employment (BBS, 2022). Investment in this sector can promote further growth and opportunities for workers in the agricultural sector.

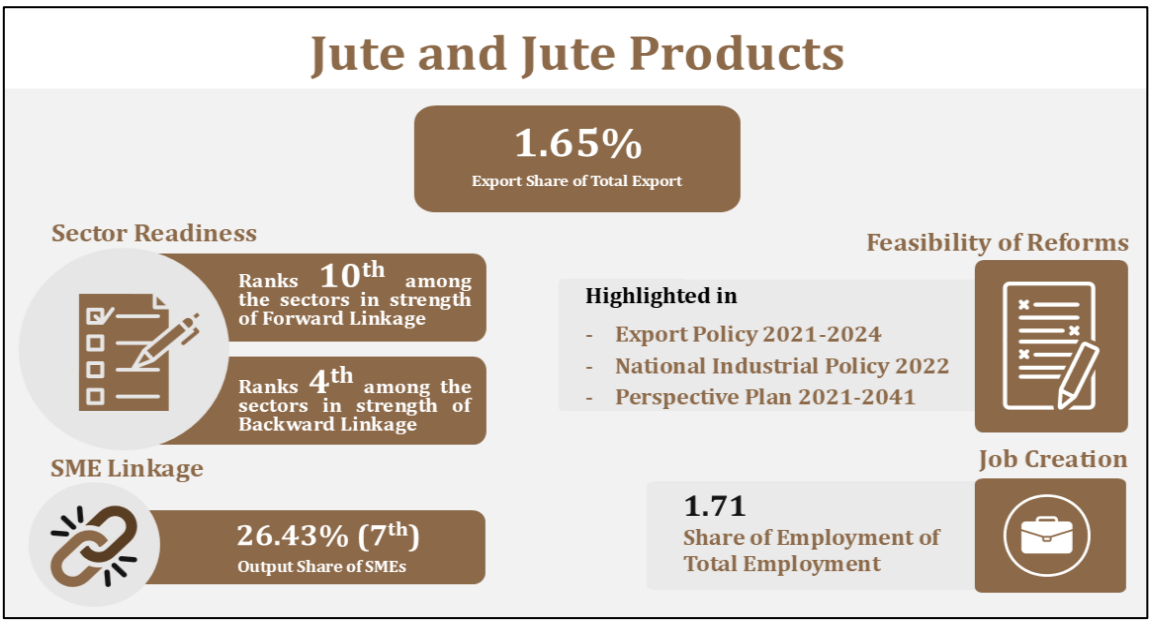
On the other hand, this sector produces a high amount of carbon at 598 million tons, emphasizing the need for investment in ways to reduce carbon emissions. Given this sector's significant contributions to GDP, FDI inflows, and strong sectoral linkages, the agro-processing sector is well-positioned for investment. Opportunities exist to

enhance production efficiency, adopt sustainable practices, improve employment conditions, and improve product standards to heighten competitiveness in the global market.

Jute and Jute Products

Jute is popularly termed the golden fibre as it is one of the most prominent cash crops in the country. The jute and jute products sector contributes 1 per cent to GDP and 3 per cent in export earnings (Bangladesh Investment Development Authority, n.d.-b). The sector has attracted minimal FDI, compared to other sectors. This creates a chance for investors to tap into a market that has not been fully explored yet but holds great potential, especially in the growing demand for sustainable and eco-friendly products.

Chart 2: Overview of jute and jute products sector



Source: Authors' compilation from various documents

The Jute sector has export earnings of $5 million for raw jute, $10 million for Jute products (jute yarn and twine, jute carpet) and $2 million for diversified jute products (fashionable shoes and bags, jute geo-tex etc) (Export Promotion Bureau, 2024a). Jute accounts for 1.6 per cent of total exports, with a negligible share in the world export market (0.001%). However, the sector's RCA is exceptionally high at 1361.2 (Annex 1.5), underscoring Bangladesh's significant comparative advantage in this industry.

Although the jute sector shows lower forward linkages (2.82), its backward linkages (10.33) are competitive, indicating its importance in the supply chain. The sector also has strong SME integration, with 51.35 per cent sectoral share and 54.57 per cent output share, making it a good ground for investment, particularly in modernizing SMEs and expanding their export capabilities (Annex 1.5).

The sector's carbon emissions are the lowest among the three sectors, at 50 million tons. This positions jute as an attractive option for investors focused on sustainability and eco-friendly initiatives, aligning with global trends towards greener products.

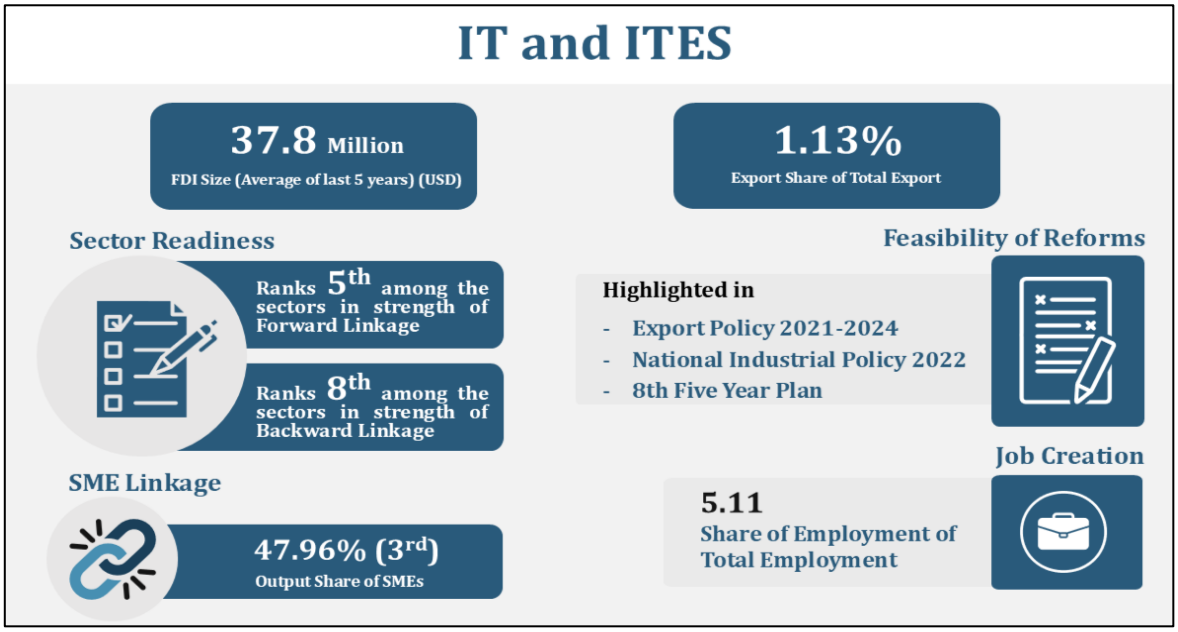
The jute sector employs fewer people, at 1.7 per cent of total employment (SMI, 2019). Jute has been a key export product for Bangladesh for many years and continues to provide income for many rural communities. Increased focus on this sector can help improve it by encouraging new and sustainable uses for jute, which can open up more job opportunities and markets.

Despite its lower investment and FDI, the jute sector presents unique opportunities, particularly in sustainable practices. Investors can use Bangladesh's comparative advantage in jute to develop high-value products for export, contributing to both economic growth and environmental sustainability.

IT and ITES

The IT sector in Bangladesh, with its growing contribution to GDP at 1.26 per cent in 2022-23 presents a compelling opportunity for growth (Bangladesh Economic Review, 2023). With a considerable FDI inflow of approximately $37.8 million (Bangladesh Bank, various years), there is still room to attract global investors, particularly by enhancing IT education and training.

Chart 3: Overview of IT and ITES sector



Source: Authors' compilation from various documents

The IT-enabled services sector has export earnings of $1 million in the fiscal year 2023-24 (Export Promotion Bureau, 2024a). The IT sector accounts for 1.1 per cent of the total exports of Bangladesh. Globally, the IT sector contributes 13.7 per cent to the overall export share (Annex 1.5). However, the sector's RCA is low at 0.08, indicating that it currently does not have a comparative advantage globally. This suggests significant potential for growth, particularly through investment in innovation, skill development, and global marketing strategies. Moreover, the IT sector's strong ties with SMEs further enhance its attractiveness as a priority sector. SMEs make up more than half of the IT sector, playing a crucial role in driving innovation and job creation. On that note, this sector is also a major job creator, responsible for 5.1 per cent of all jobs in Bangladesh (SMI, 2019).

Environmental concerns, such as the IT sector's high carbon emissions at 730 million tons, emphasize the importance of investment in sustainable and green technologies. By focusing on reducing the sector's carbon footprint, there is potential to not only improve environmental outcomes but also attract investors who prioritize sustainability.

3.2 Current Status of the Surveyed Firms

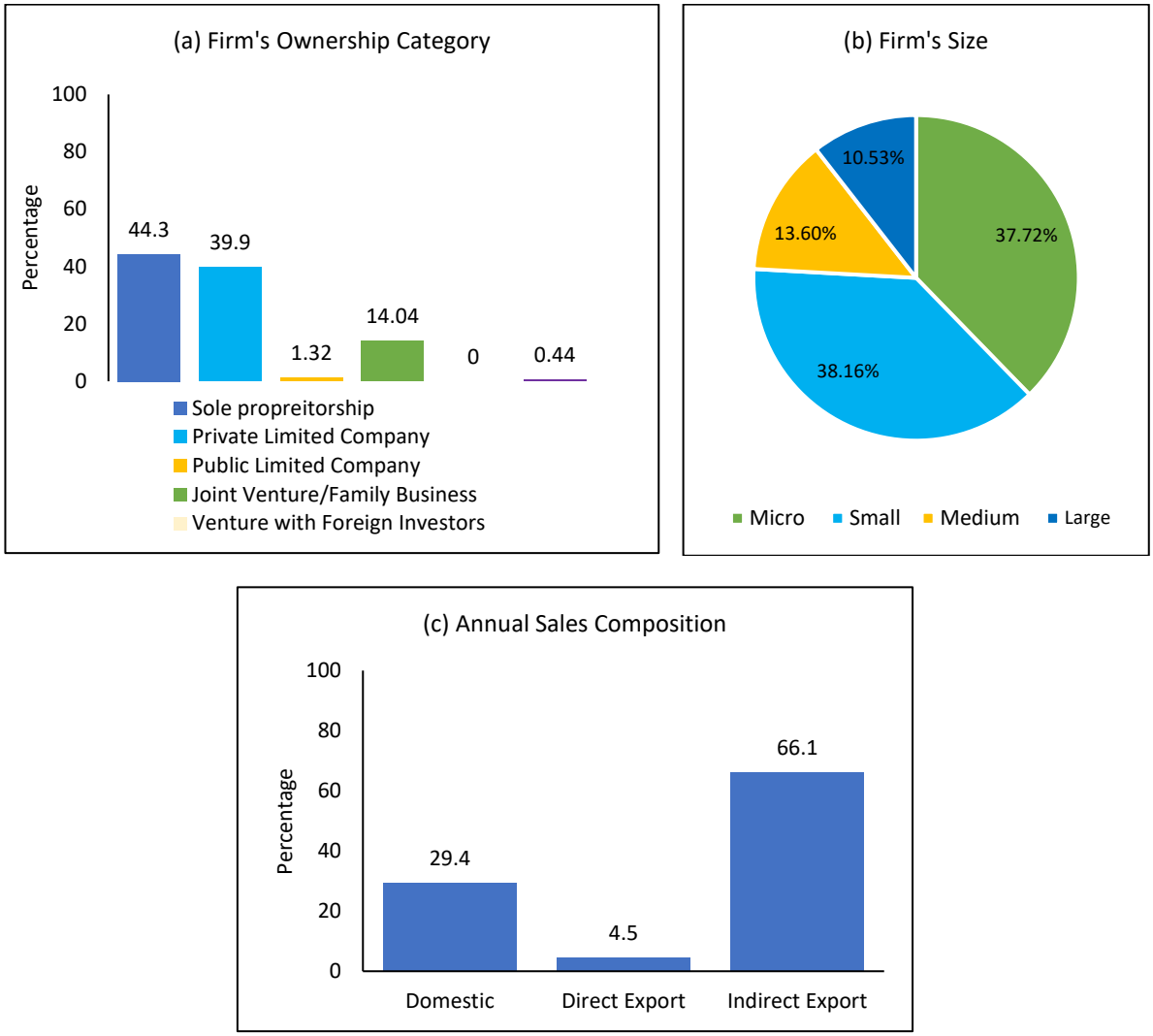
Agro-processing Sector

In the agro-processing sector, 228 firms were surveyed. This sector is characterized by a substantial presence of sole proprietorships[5], which make up 44.3 per cent of the companies. This form of ownership is more common in agro-processing due to the ease of establishment, particularly in rural areas. These businesses are usually small-scale and family-run. However, this reliance on sole proprietorships can also limit access to capital and resources necessary for improving operations. The remaining firms in this sector consist of a significant

[5] A sole proprietorship means that the business is owned and managed by a single individual.

proportion of private limited companies[6] (39.9%) and a negligible amount of public limited companies (1.32%)[7]. There are also small numbers of joint ventures or family businesses and other companies (14.04 per cent, and 0.44 per cent respectively)[8] (Figure 1).

Figure 1: Overview of the surveyed agro-processing firms



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The workforce within the agro-processing sector is notably large. The surveyed firms have an average of 168.9 full-time employees per company.

One of the key strengths of the agro-processing sector is its orientation towards export markets. Approximately 47.81 per cent of the surveyed firms in the agro-processing sector hold international certifications, which reflects the difficulty of obtaining certificates. Only 37.35 per cent of companies found the process easy, while 14 per cent reported difficulties, highlighting the need for better support mechanisms to help businesses navigate the certification process. Moreover, around 40 per cent of the firms were not satisfied with the testing labs. These

[6] A private limited company restricts the right to transfer its shares and prohibits any invitation to the public to subscribe for its shares or debenture. It limits the number of its members to a maximum of 50 and a minimum of 2, excluding employees.
[7] A public limited company is a form of business organization characterized by its ability to offer its shares to the general public through a stock exchange. Minimum 7 shareholders are required to form a public limited company.
[8] A joint venture company in Bangladesh involves both foreign and local entrepreneurs jointly operating a business, with each party contributing equity investment and the company registration or incorporation certificate being issued solely by the Registrar of Joint Stock Companies and Firms (RJSC).

challenges underscore the need for improved certification processes and better testing facilities, particularly to support companies in meeting international standards more efficiently.

In terms of production capacity, the agro-processing sector utilizes 62.1 per cent of its capacity. Not being able to operate at their full capacity suggests some room for improvement for the overall sector. Increasing capacity utilization could lead to higher output without a proportional increase in costs, thereby improving profitability. However, this will require investments in technology and process optimization to ensure that the additional capacity can be utilized efficiently.

Sales distribution data from the survey provides further insight into the sector's operations. The agro-processing sector relies heavily on indirect exports[9], which account for 78.6 per cent of its sales. This heavy reliance on intermediaries may reduce profit margins and limit direct control over market access. Direct exports only account for 4.5 per cent of sales, while domestic sales represent 29.4 per cent. This distribution indicates that while the sector is well-integrated into international supply chains, there is a significant opportunity to increase direct exports leading towards higher revenue.

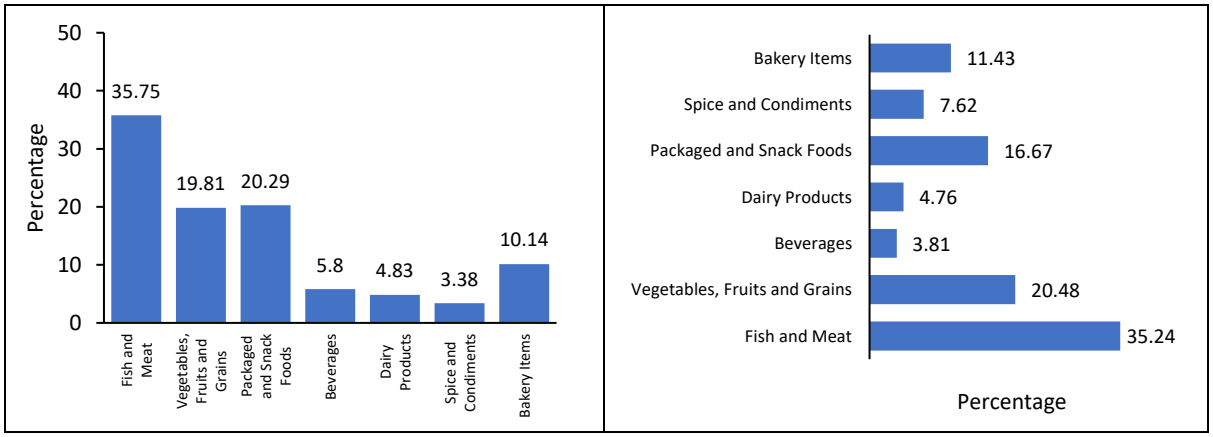
Another important aspect of the agro-processing sector is its reliance on imported raw materials, which accounts for 31.2 per cent of total inputs. This dependency on imports presents a risk, as fluctuations in global supply chains or changes in import tariffs could significantly impact production costs and overall profitability. Reducing this reliance by investing in local sourcing and supply chain development could improve cost stability and enhance the sector's resilience to external shocks.

The future looks promising for the agro-processing sector, with 47.4 per cent of companies expecting their sales to grow by more than 50 per cent in the next five years. Additionally, only 14.9 per cent of companies expect their growth to be minimal (up to 10%). However, there are concerns over high electricity and gas costs, with many companies spending over 10 lakhs annually on electricity. Investing in energy-efficient technologies and renewable energy sources can help lower these expenses and support the sector's growth.

Potential Sub-sectors of the Agro-processing Sector

The agro-processing sector in Bangladesh has emerged as a key driver of economic growth, playing a crucial role in both the domestic market and international trade. As one of the most vibrant sectors of the economy, it supports the livelihoods of millions and meets the increasing demand for value-added agricultural products. With a diverse range of subsectors, including fish, meat, packaged foods, and vegetables, agro-processing is not only catering to the domestic market but also gaining significant traction in international exports. This growth is underpinned by Bangladesh's strong agricultural foundation, strategic positioning, and rising interest from both domestic and foreign investors.

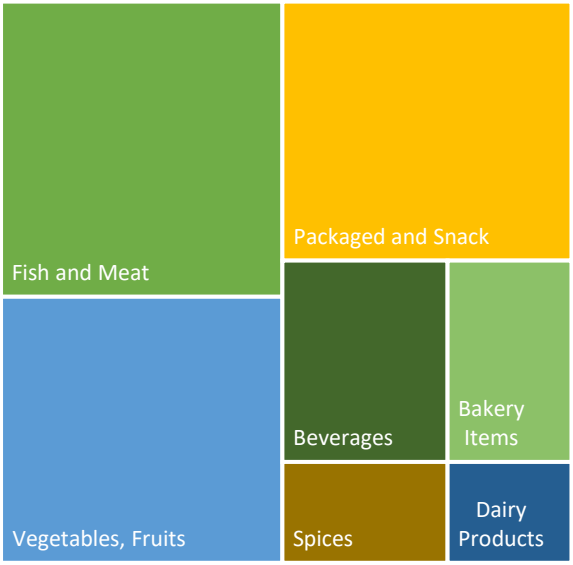
Figure 2: Most potential sub-sectors of the agro-processing sector



A: Potential sub-sectors in the domestic market **B: Potential sub-sectors in the international market**

[9] Indirect export describes a situation in which a company sells its products to customers in another country using an intermediary.

C: Potential Sub-Sectors Firms Willing to Invest in



D: Potential Sub-Sector to Attract Foreign Investment

Source: SANEM-UNDP-BIDA Enterprise Survey 2024

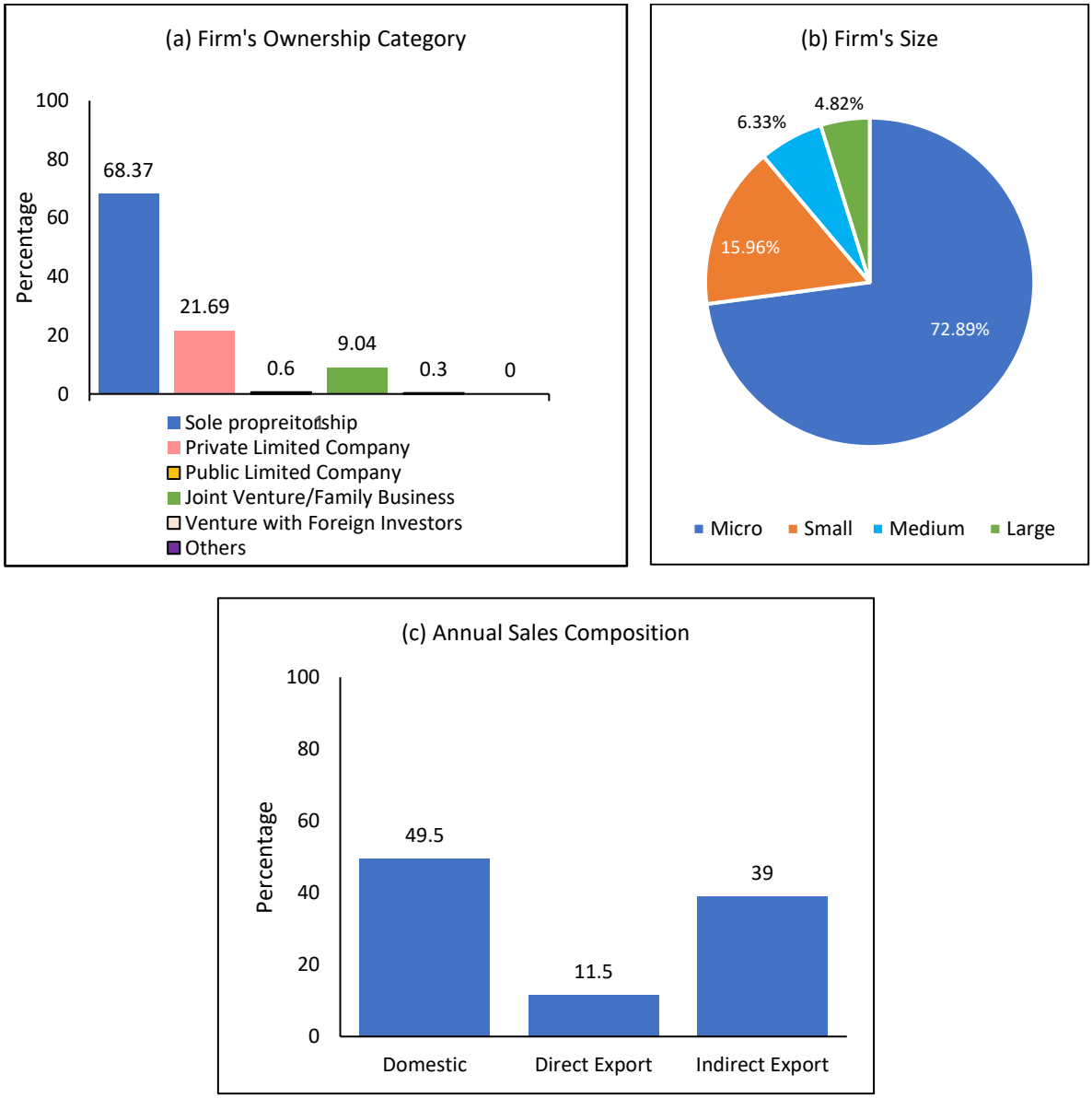
Figure 2 shows that the strong domestic market potential of subsectors like fish and meat (35.75%), packaged and snack foods (20.29%), and vegetables (19.81%) reflects the increasing consumption patterns among the local population. On the international front, Bangladesh's reputation as the world's largest producer of hilsha fish, coupled with its ranking as the third-largest producer of freshwater fish and vegetables, has paved the way for export growth in fish and meat (35.24%) and vegetables, fruits, and grains (20.48%). Similarly, domestic investment interest is led by fish and meat (25.97%), vegetables, fruits, and grains (23.38%), and packaged and snack foods (23.38%), while foreign investment potential is driven by fish and meat (25.51%) and other high-demand subsectors. These key factors highlight the significant potential of these subsectors in driving the growth of Bangladesh's agro-processing sector.

Jute and Jute Products

Jute and jute products are another critical component of Bangladesh’s economy. The survey covered 332 companies in this sector and found that the majority (68.4%) of the firms are owned as sole proprietorships. Private limited companies and joint ventures or family businesses make up around 21.69 per cent and 9.04 per cent of firms (Figure 3).

The jute sector is labour-intensive, employing an average of 90.3 workers per company. Despite its significant role in providing employment, the sector faces challenges in achieving international competitiveness. Only 20.18 per cent of companies hold international certifications, which is a key requirement for accessing global markets. The survey also highlights the difficulties companies face in this area, with just 17.8 per cent finding the certification process easy. This suggests that many businesses in the jute sector are potentially missing out on export opportunities due to these certification barriers. Satisfaction with testing labs, critical for meeting international standards, is notably low in the jute sector. Only 33.3 per cent of companies reported being satisfied with the services provided by testing labs, compared to 60.6 per cent in the agro-processing sector. This indicates a pressing need for better testing facilities and streamlined certification processes, which would enable jute companies to meet international standards more easily and expand their market presence.

Figure 3: Overview of the surveyed jute and jute products firms



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

This sector also has low production capacity utilization at 51.01 per cent. This is the lowest among the sectors surveyed, showcasing inefficiencies that could be managed through investments in modern production processes and technologies. The jute sector relies heavily on indirect exports, which account for 72.9 per cent of sales. Domestic sales make up 49.5 per cent, and direct exports only 11.5 per cent. The reliance on intermediaries for exports likely reduces the sector's profitability and control over market access.

The sector's dependency on imported raw materials, which is 41.7 per cent of inputs, makes the sector vulnerable to global supply chain disruptions and price volatility. Despite these challenges, the future for the jute and jute products sector remains promising. The survey indicates that 45.8 per cent of companies expect more than 50 per cent growth in sales over the next five years. In addition, 23.8 per cent of companies anticipate growth between 31-50 per cent, and 17.2 per cent expect growth between 11-30 per cent. With only 13.3 per cent of companies predicting minimal growth, the sector shows promising expectations for growth, provided that the existing barriers are addressed. Moreover, the cost structure analysis reveals that the jute sector benefits from relatively lower utility costs, which can help maintain profitability.

Potential Sub-sectors of the Jute and Jute Products Sector

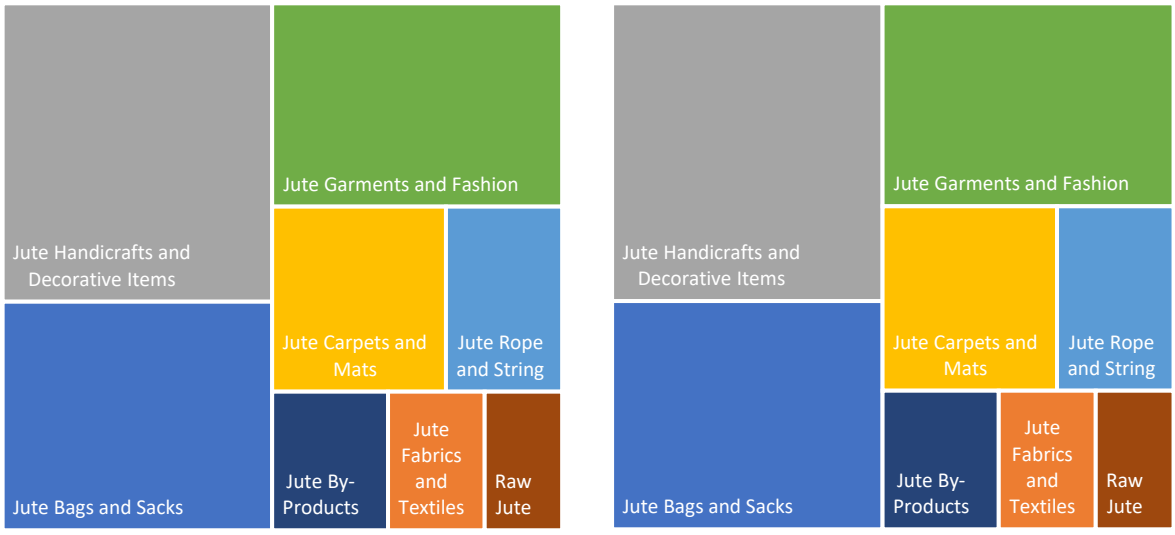
The jute and jute products sector in Bangladesh holds immense significance as a vital contributor to both the domestic economy and international trade. Bangladesh's natural advantage as one of the largest producers of jute globally, combined with the growing global demand for eco-friendly alternatives, positions this sector as a key player in sustainable production. Figure 4 shows that the domestic market potential is strong, with jute bags and sacks (45.36%) dominating, followed by jute handicrafts (20.86%) and jute rope and string (11.59%). These products are increasingly favoured due to rising environmental awareness and the shift towards biodegradable materials.

On the international stage, Bangladesh is capitalizing on the global movement towards sustainable packaging solutions, with jute bags and sacks (36.17%) leading the way in exports. Jute handicrafts and decorative items (22.8%) and jute rope and string (13.37%) also present significant export potential. Domestic investors are drawn to jute handicrafts (27.27%) and jute bags and sacks (20.91%), while foreign investment interest is particularly high in jute bags and sacks (38.95%) and jute handicrafts (19.85%). These factors underline the sector's potential, driven by the global demand for environmentally sustainable products and Bangladesh's leadership in jute production.

Figure 4: Most potential sub-sectors of the jute and jute products sector

A: Potential sub-sectors in the domestic market

B: Potential sub-sectors in the international market



C: Potential Sub-Sectors Firms Willing to Invest in

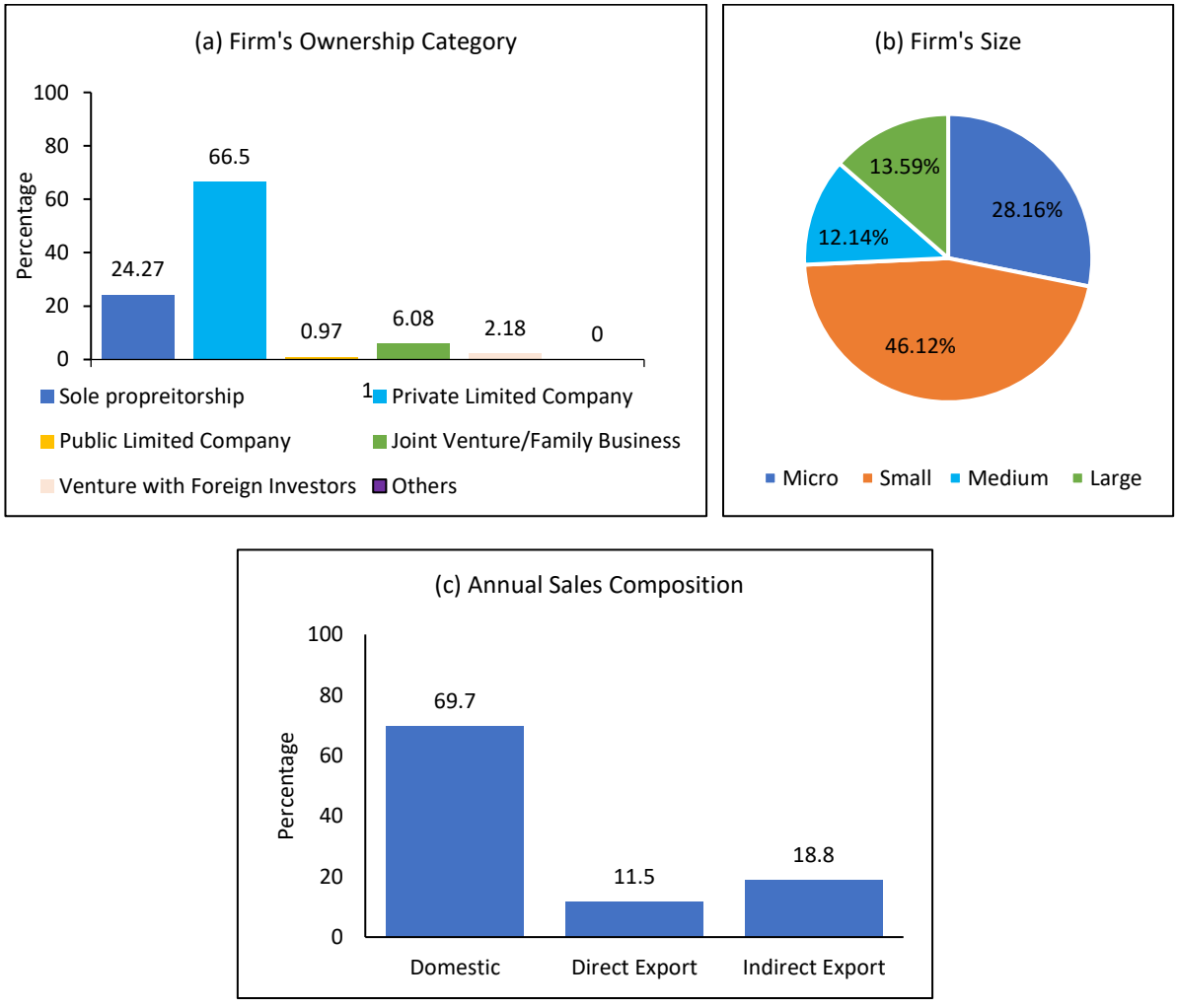
D: Potential Sub-Sector to Attract Foreign Investment

Source: SANEM-UNDP-BIDA Enterprise Survey 2024

IT and ITES

The survey encompassed 412 companies in the IT and ITES sector. There is a significant portion (66.5%) of private limited companies in this sector (Figure 5). The structured business model in this type of companies allows for easier access to capital, and scalability- which are essential in a fast-paced and rapidly evolving industry like IT. In terms of employment, the IT and ITES sector is less labour-intensive compared to the agro-processing and jute sectors, with an average of 64.19 employees per company. This lower number of employees reflects the sector's reliance on technology and skilled labour rather than manual, labour-intensive processes. The focus on technology-driven operations also means that efficiency and productivity are key drivers of success in this sector.

Figure 5: Overview of the surveyed IT and ITES firms



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The survey shows that only 23.3 per cent of companies in the IT and ITES sector hold international certifications. As international certifications are important for ensuring that companies can compete on a global level, the low percentage is concerning for the sector. The IT and ITES sector also lead over the other sectors in production capacity utilization, with an average utilization rate of 67.4 per cent.

Figure 5 also shows that the sales distribution in the IT and ITES sector reveals a strong focus on the domestic market, with 69.7 per cent of sales coming from within the country. This indicates a robust demand for IT services in Bangladesh, driven by the ongoing digital transformation. However, there is also promising international engagement, with 11.5 per cent of sales coming from direct exports and 18.8 per cent from indirect exports.

The IT and ITES sector also show a relatively lower dependency on imported raw materials, with 38.3 per cent of inputs being imported. This lower dependency reduces the sector's vulnerability to global supply chain disruptions and price fluctuations, providing a more stable operating environment compared to the other sectors.

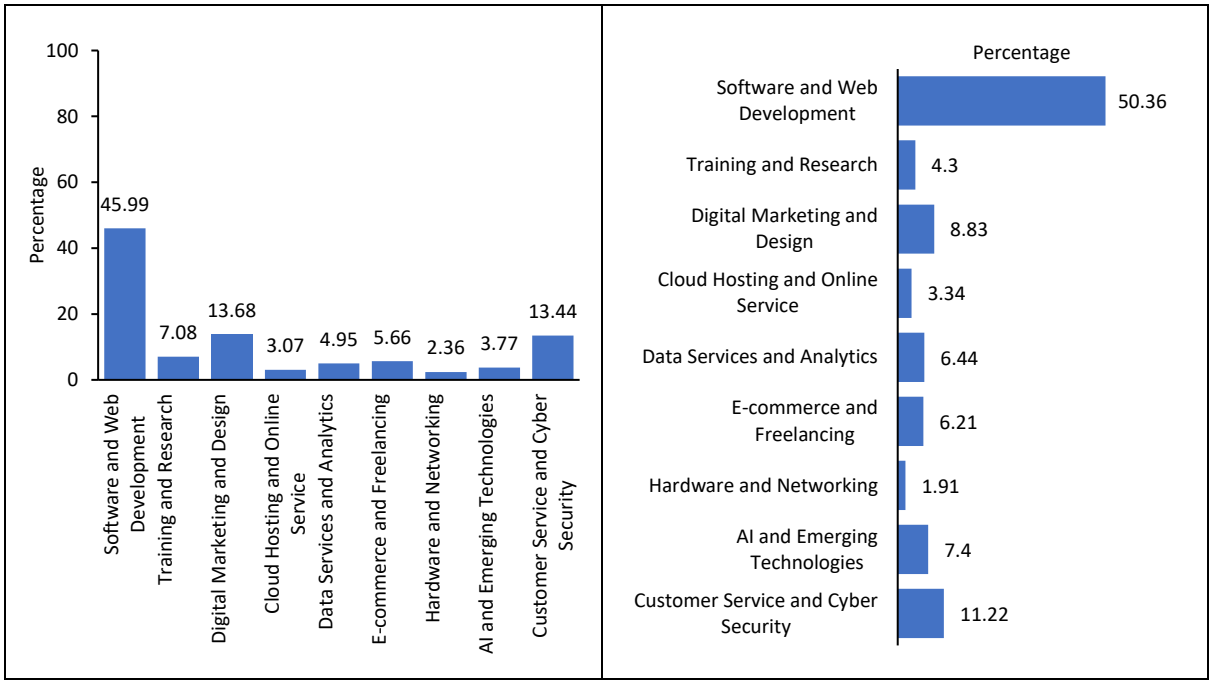
The future outlook for the IT and ITES sector is encouraging. The survey reveals that 50.5 per cent of companies expect more than 50 per cent growth in sales over the next five years, the highest growth expectation among the sectors surveyed. Additionally, 23.1 per cent of companies anticipate growth between 31-50 per cent, while 16.3 per cent expect growth between 11-30 per cent. Only 10.19 per cent of companies predict minimal growth, indicating high optimism about the sector's potential.

Despite its strong growth prospects, this sector faces challenges, particularly in its cost structure. While the sector benefits from lower utility costs, it shows significant expenditure on internet services. This high expenditure reflects the digital nature of the industry, where reliable and high-speed internet is essential for operations. Investing in better internet infrastructure and reducing associated costs can help companies in this sector enhance their profitability and maintain their competitiveness.

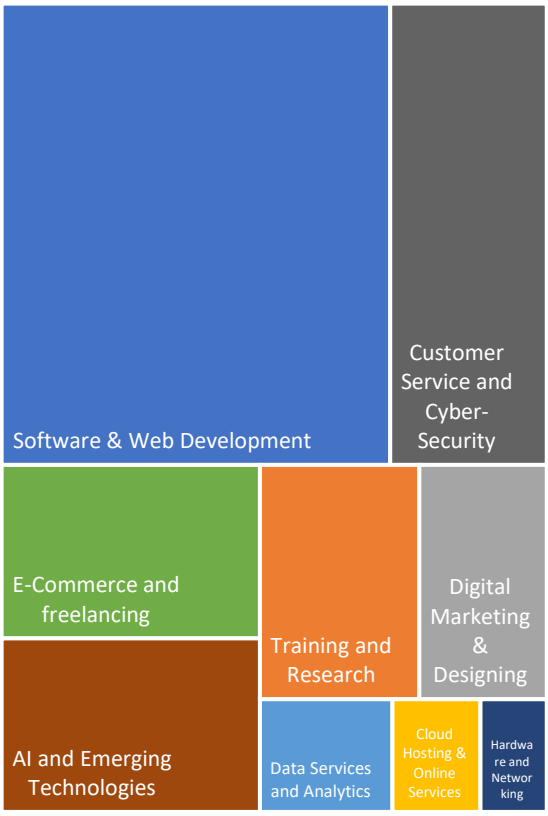
Potential Sub-sectors of the IT and ITES Sector

Bangladesh's IT and ITES sector is rapidly emerging as a cornerstone of the country's digital economy, fueled by technological advancements and a growing pool of skilled professionals. The domestic market potential is led by software and web development (45.99%), reflecting the increasing demand for digital solutions across industries. Other key subsectors, such as digital marketing and design (13.68%) and customer service and cybersecurity (13.44%), are also playing critical roles in driving the sector's growth. The IT and ITES sector is further supported by a wide array of services, including e-commerce, freelancing, AI and emerging technologies, and cloud hosting, which are integral to the digital transformation of Bangladesh (Figure 6).

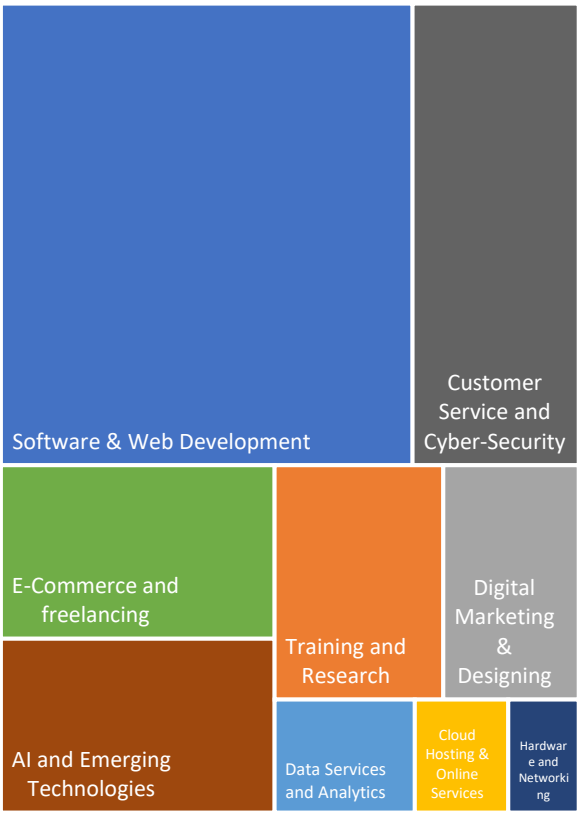
Figure 6: Most potential sub-sectors of IT and ITES sector



A: Potential sub-sectors in the domestic market **B: Potential sub-sectors in the international market**



C: Potential Sub-Sectors Firms Willing to Invest in



D: Potential Sub-Sector to Attract Foreign Investment

Source: SANEM-UNDP-BIDA Enterprise Survey 2024

In the international market, subsectors like customer service and cybersecurity (11.22%), digital marketing and design (8.83%), and AI and emerging technologies (7.4%) are leading the export potential, positioning Bangladesh as a provider of innovative and secure digital solutions. Domestic investors are particularly focused on software and web development (40.68%) and customer service and cybersecurity (16.38%), while foreign investors are attracted to software and web development (45.04%) and digital marketing and design (10.78%). These key factors—growing demand for digital services, technological innovation, and global integration—underscore the sector's potential for continued expansion and investment.

Gender perspective

The survey investigated the gender composition of ownership and management level employees, with agro-processing firms having 34.6 per cent female ownership and 9.5 per cent firms having female top managers. The jute and jute products sector have a higher female ownership rate at 65.3 per cent and 25.5 per cent female top managers. To compare, the IT and ITES sector is more male-dominated, with 31.2 per cent female ownership and 9.9 per cent female top managers. This indicates a need for more gender diversity, particularly in the IT and ITES sector (Figure 7).

Figure 7: Average percentage of firms having female as (a) Top Manager (b) Owner (c) Full-time employees

Source: SANEM-UNDP-BIDA Enterprise Survey 2024

A majority of the surveyed jute products firms are micro or small firms which are mainly run by women entrepreneurs. In contrast, the IT sector has a considerably low share of female full-time employees.

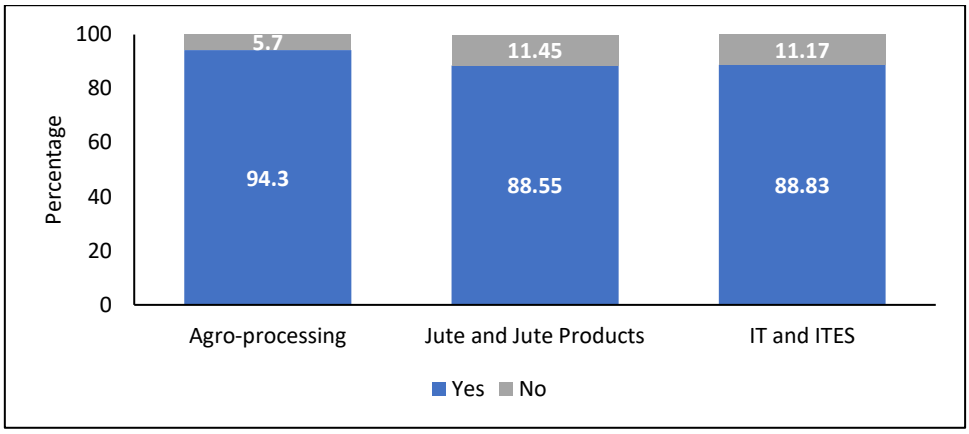
Awareness about the Impact of LDC Graduation

As an LDC, Bangladesh has also benefitted greatly due to various support measures. For instance, the agricultural products of Bangladesh are currently exported to more than 160 countries with high concentrations in a few markets. More than 60 per cent of the export market of agro products is in India, Malaysia, Saudi Arabia, the EU, and the UK. Bangladesh enjoys duty-free access to India, the EU, and the UK, among other major destination countries (Razzaque, 2023).

Awareness about LDC graduation is essential for all sectors in Bangladesh to adapt strategically, maintain competitiveness, and leverage new opportunities while mitigating risks associated with this significant economic transition. Having correct information and perception will help them make informed strategies to mitigate impacts and attract investments.

Hence, it is encouraging that the majority of the enterprises across the three selected sectors are aware of Bangladesh's upcoming LDC graduation in 2026. In the agro-processing sector, 94.3 per cent of the firms are aware of the transition. Similarly, around 88 per cent of firms in the Jute and Jute Goods and IT and ITES sectors are also aware (Figure 8).

Figure 8: Percentage of firms knowing about LDC graduation



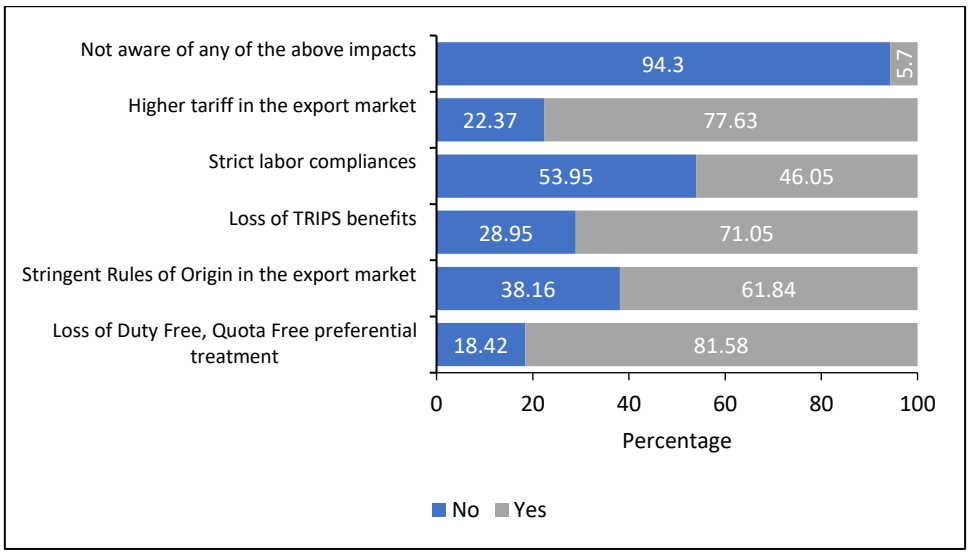
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

To dig down into the level of awareness, the respondents were asked if they were aware of losing the specific benefits after the LDC graduation. The post-LDC effects include loss of DFQF preferential treatment, stringent RoO in the export market, loss of TRIPS benefit, strict labour compliances, higher tariffs in the export market etc.

Figure 9 illustrates the awareness level of firms about the loss of benefits and stringent rules in the agro-processing sector of Bangladesh. More than 80 per cent of the firms are aware of the loss of DFQF preferential treatment and more than 70 per cent of the firms know about the loss of TRIPS benefit and higher tariffs in the export market[10]. However, the awareness of stringent labour compliances (46%) and stringent RoO in the export market (61.84%) is comparatively low.

Lenient RoO has played a big role in the recent export success story of Bangladesh. However, after LDC graduation, Bangladesh will be subjected to more stringent RoO requirements. Only 5.7 per cent of the firms in the agro-processing sector are unaware of the possible effects due to LDC graduation.

Figure 9: Awareness of the effects due to LDC graduation in agro-processing sector

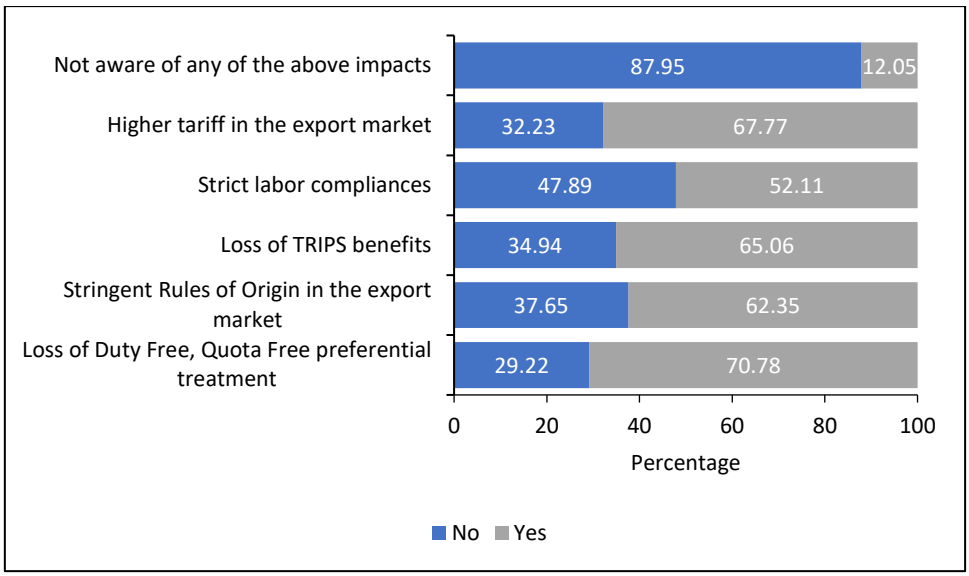


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

[10] Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is a comprehensive multilateral agreement on intellectual property (IP) which plays a big role in facilitating trade in knowledge and creativity, in resolving trade disputes over IP.

The impact of LDC graduation will be lesser for jute and jute goods as the existing export follows the non-LDC tariff line (UNDESA, 2020; Raihan et al., 2022). However, all the sectors will have to face some common impacts, so awareness is necessary. Around 12 per cent of the firms do not know about any of the impacts after the transition phase as shown in Figure 10.

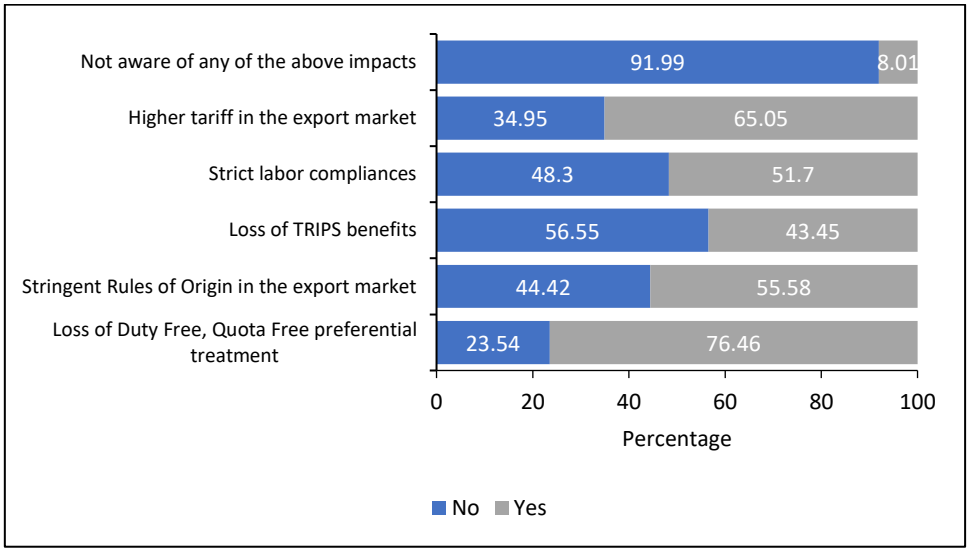
Figure 10: Awareness of the effects due to LDC graduation in jute and jute products sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The post-LDC era will demand stronger IP protections to foster innovation and secure technological advancements as well and it will recalibrate Bangladesh's trade relationships in the IT sector (The Business Standard, 2024b). So, a deep knowledge of the possible effects of LDC graduation is necessary for this sector as well. Only 8.01 per cent of firms in this sector are totally unaware of the effects (Figure 11).

Figure 11: Awareness of the effects due to LDC graduation in IT and ITES sector



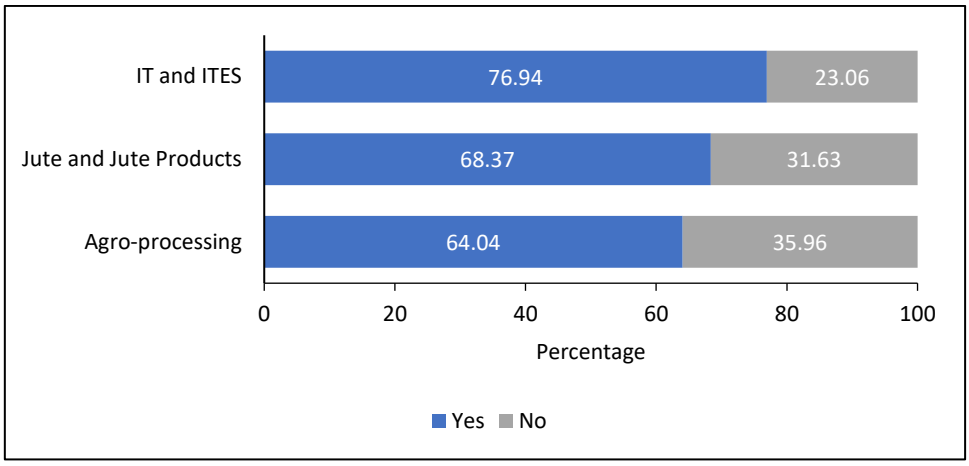
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Anticipation regarding the Impact of LDC Graduation

This section describes the anticipation of the firms on various aspects of the economy like an increase in investment, raw materials, export, and compliance-related issues in the post-LDC graduation era. This level of anticipation reflects the firms' mindset of growth and willingness towards innovation and diversification. Although the investment climate is still weak, Bangladesh may witness a higher inflow of FDIs once it graduates LDC status (The Daily Star, 2024b).

Figure 12 shows the anticipation of the firms about the increase in investment due to LDC graduation. In the three chosen sectors, more than 60 per cent of the firms expect such an increase. Around 76 per cent of firms in IT and ITES, 64.04 per cent of firms in agro-processing and 68.37 per cent of firms in the jute and jute products sector anticipate investment growth.

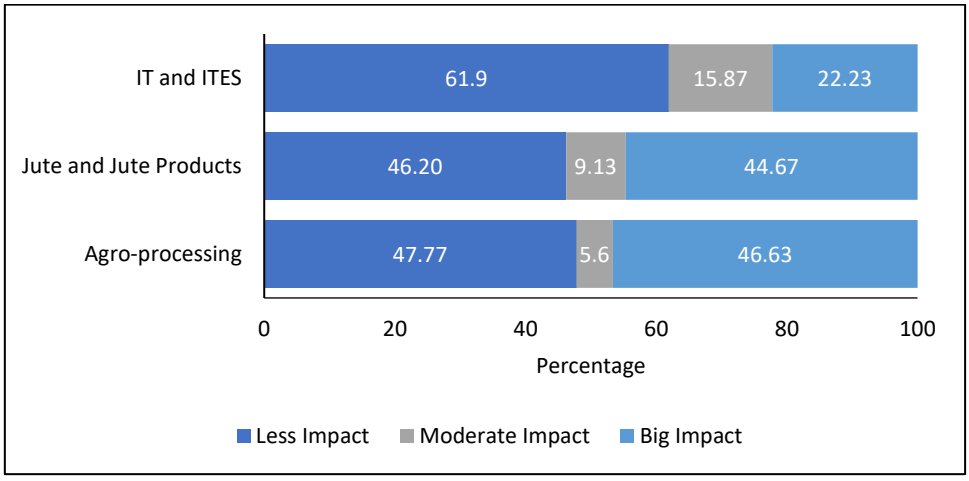
Figure 12: Anticipation regarding increase in investment due to LDC graduation



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

As the country is going to lose many of its benefits, export diversification is a very crucial factor in this phase. However, limited FDI inflow is a constraining factor for export diversification in Bangladesh (ADB, 2016; Raihan et al., 2017; Razzaque et al., 2024). With anticipation regarding investment increase, there is anticipation regarding export earnings growth as well. In the agro-processing sector, 47.77 per cent of firms expect less impact while the rest of the firms expect a big impact due to LDC graduation. The jute and jute goods sector also has the same scenario. Again, less than half of the firms (46.20%) expect less impact. On the other hand, the IT and ITES sector is comparatively more optimistic about an increase in export earnings with more than 61 per cent expecting less impact (Figure 13).

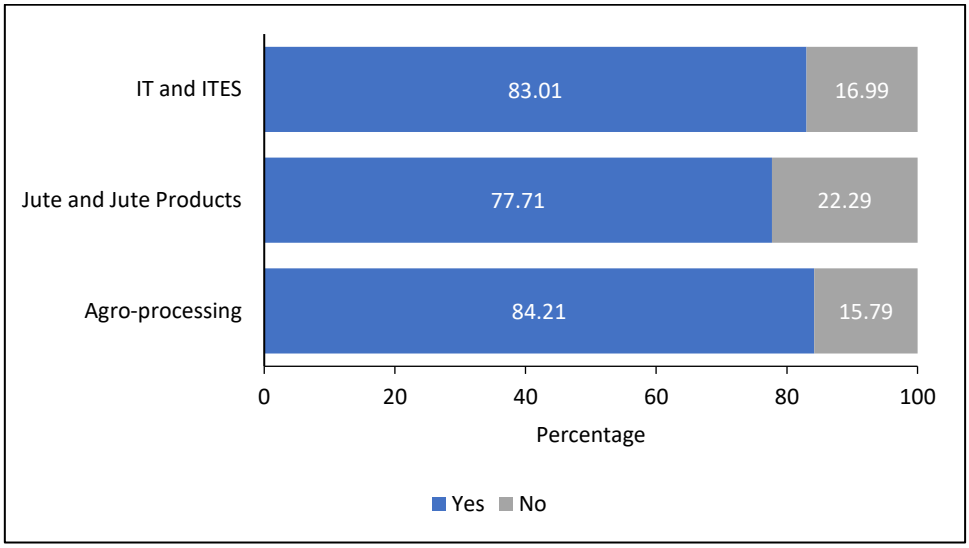
Figure 13: Anticipation regarding the impact on export earnings due to LDC graduation



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Despite the positive expectations, almost all the firms anticipate an increase in the level of foreign competition due to LDC graduation. Figure 14 shows that 84.21 per cent of firms in the agro-processing sector, 77.71 per cent of firms in the jute and jute products sector and 83.01 per cent in the IT and ITES sector anticipate such an increase. The jute sector is anticipating less competition owing to the declining prospects due to synthetic substitutes (Mohiuddin, 2015).

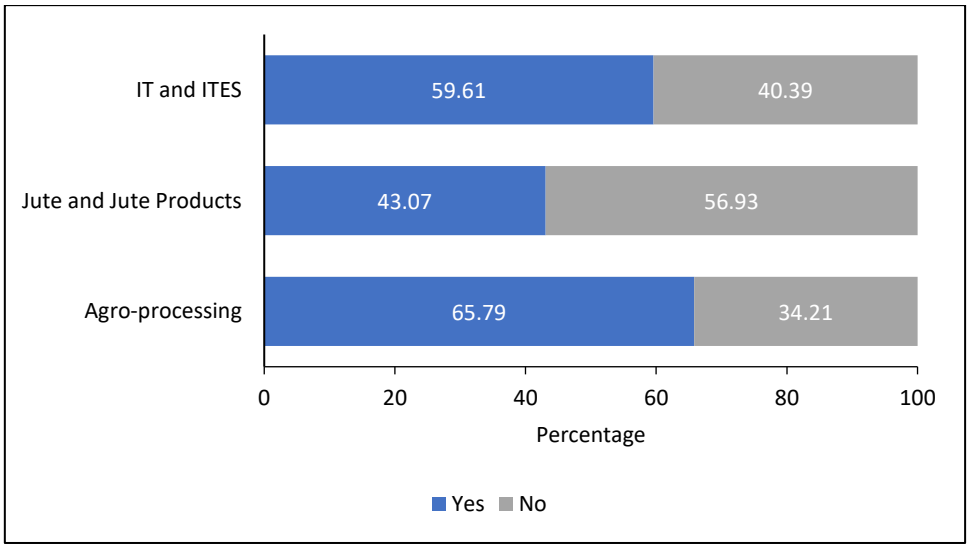
Figure 14: Anticipation regarding the increase in the level of foreign competition due to LDC graduation



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The anticipation regarding the increase in raw materials imports varies across the sectors. Figure 15 shows that 65.79 per cent of the firms in agro-processing and 59.61 per cent of the firms in the IT and ITES sector anticipate an increase in the import of raw materials. The percentage is slightly lower in Jute and Jute products (43.07%) as the sector is not very import-dependent in the case of raw materials.

Figure 15: Anticipation regarding the increase in the import of raw materials due to LDC graduation

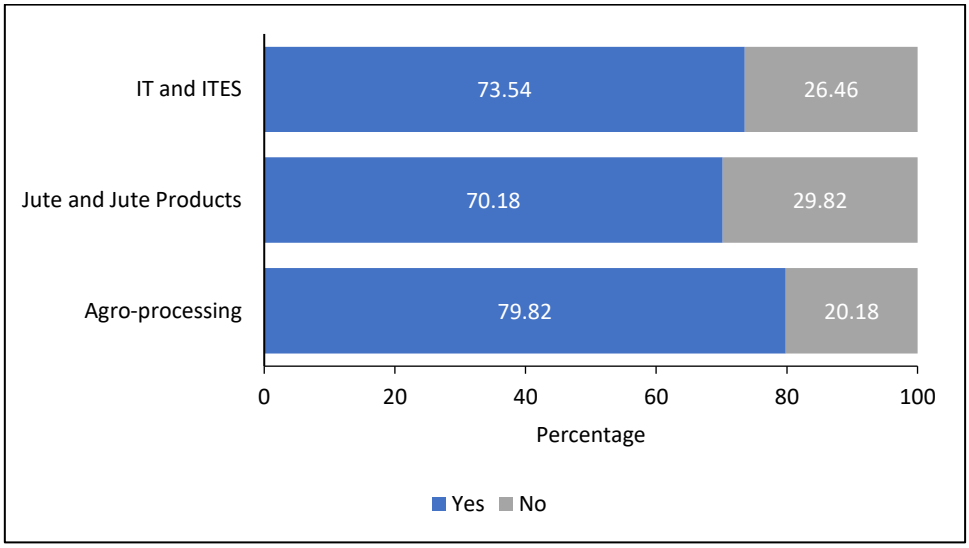


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Moreover, there is an increasing need to strengthen institutional capacities to deal with the stringent compliance requirements following graduation, in labor, gender, environment, intellectual property rights, human rights, governance, and other relevant areas (The Financial Express Bangladesh, 2023). Figure 16

illustrates the firms' anticipation regarding compliance-related issues posing challenges for the sector due to LDC graduation. As the majority of the firms across the three sectors anticipate these challenges, there is an acute need for immediate actions to mitigate them.

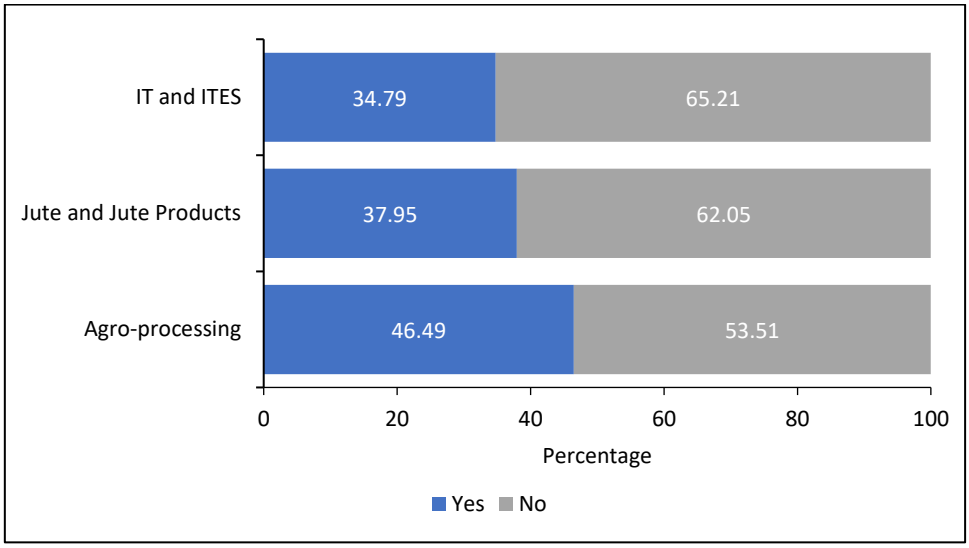
Figure 16: Anticipation regarding compliance-related issues posing significant challenge due to LDC graduation



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The effectiveness of policies is significantly influenced by the awareness and engagement of relevant stakeholders throughout the policy-making process. While there are several initiatives by the GoB regarding graduation, stock-taking of awareness level regarding those is missing. Most of the firms in the three sectors do not know if any policies have been implemented regarding LDC graduation (Figure 17).

Figure 17: Awareness about whether policies have been implemented regarding LDC graduation



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The above scenario highlights the need for revamping new policies to face the challenges as well as having adequate orientation about the policies within the sector stakeholders.

3.3 Agro-processing Sector

3.3.1 Biggest Obstacles Faced by the Sector

The agro-processing sector faces several significant challenges. To better understand these challenges by firm size, this study categorizes the surveyed agro-processing firms into four groups: micro, small, medium, and large. Chart 4 represents the most significant obstacles (as identified in the survey responses) encountered by these categories in ascending order.

Micro Agro-Processing Firms: The primary obstacle faced by micro-enterprises in the agro-processing sector is inconsistent electricity and gas supply, which disrupts production processes. In addition to utility issues, micro-level firms struggle with high tax rates, reducing profitability and discouraging new entrants to the sector. Lengthy procedures for obtaining business licenses and permits also emerge as a major challenge for micro agro-processing firms.

Small Agro-Processing Firms: Small agro-processing firms face challenges due to insufficient investment from both domestic and foreign sources, hindering their growth potential. A lack of interest among entrepreneurs to invest in Bangladesh's agro-processing industries further exacerbates the problem, leading to industry concentration among larger firms (Tongsiri and Alam, 2004). Additionally, unreliable electricity supply, low gas pressure, and higher tax rates compared to other industries make it difficult for small firms to compete with larger players in the market.

Medium Agro-Processing Firms: Medium-sized enterprises encounter persistent difficulties in obtaining new power supply connections and ensuring reliable, high-quality electricity (Raihan, 2022). Besides facing common challenges such as insufficient investment, high tax rates, and limited access to utilities—shared by micro and small firms—medium-sized firms also struggle with compliance with labor rights regulations.

Large Agro-Processing Firms: Large agro-processing firms face challenges that differ in scale and scope from those of smaller firms. While issues like electricity access, taxation, and investment are common across the sector, larger firms are particularly affected by a shortage of skilled labor (Raihan, 2022). Moreover, strict customs and trade regulations complicate export operations. Acquiring new land for production expansion is a significant challenge due to lengthy documentation processes, regulatory hurdles, and limited land availability.

Chart 4: Biggest obstacles faced by agro-processing sector

Micro	Small	Medium	Large
• Access to Electricity/ Uninterrupted Electricity • Higher Tax Rates • Insufficient Foreign Investment • Inadequate pressure of gas/Access to Gas • Lengthy Business license and permits procedure	• Insufficient Foreign Investment • Lack of domestic investment • Inadequate Gas pressure • Access to Electricity/ Uninterrupted Electricity • Higher Tax Rates	• Lack of domestic investment • Insufficient Foreign Investment • Labor Right Regulations • Higher Tax Rates • Access to Electricity/ Uninterrupted Electricity	• High Skill Labor Shortage • Higher Tax Rates • Stringent Custom and Trade Regulations • Access to Electricity/ Uninterrupted Electricity • Access to Domestic Investment • Access to Land

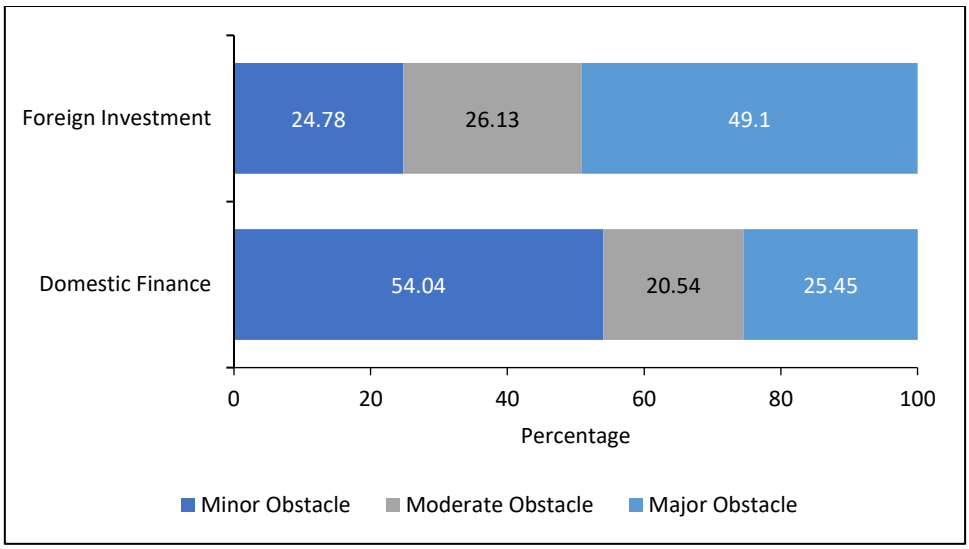
Source: Authors' compilation from the enterprise survey

3.3.2 Financing Challenges

The agro-processing sector in Bangladesh faces significant challenges in attracting investment due to limited access to finance, exacerbated by land fragmentation, inadequate marketing infrastructure, and weak support services. Coupled with a poorly designed export subsidy policy and a challenging investment climate, the financing issue hinders the sector's ability to link with markets and adopt Good Agricultural Practices (GAPs), ultimately limiting private investment along the value chain (Ahmed et al., 2021).

Financing can be categorized into two parts- Domestic Finance and FDI. Almost all firms of all sizes have to face moderate to major financing challenges. Existing literature also states the same as Afandi & Kermani (2014) said that access to finance appears to be among the most severe obstacles to firms' growth particularly in developing countries. Moreover, the financing obstacles of Bangladeshi firms increased after the global financial crisis, particularly for small firms with low-capacity utilization. In the case of facing difficulties in accessing domestic finance, approximately 54.04 per cent of firms in agro-processing face some minor obstacles while around 45 per cent face moderate to major challenges as shown in Figure 18.

Figure 18: Level of difficulty in accessing finance in agro-processing sector



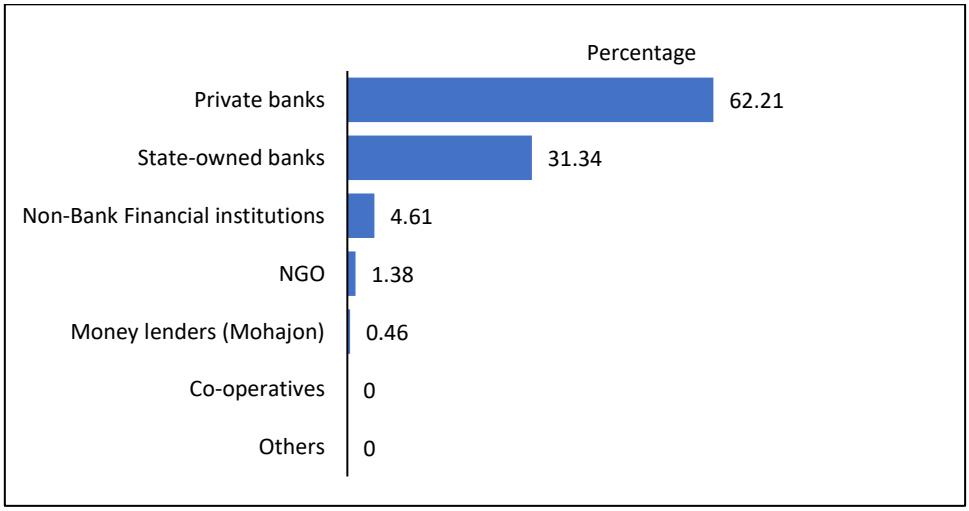
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The level of difficulty in accessing foreign investment is even higher. Around 75 per cent of agro-processing firms face moderate to major obstacles. Access to foreign investment is more difficult than access to domestic finance in Bangladesh due to infrastructure constraints and implementation problems with investment policies (Muchie et al., 2010). Moreover, foreign investment needs more legal frameworks which make the process relatively more difficult as well.

Domestic Financing Challenges

Around 80 per cent of firms in the agro-processing sector have obtained a domestic loan at least once, according to SANEM-UNDP-BIDA Enterprise Survey 2024. Most of the availed loans have been taken from private banks as shown in Figure 19. The dominance of private banks in providing loans to the agro-processing sector in Bangladesh, as evidenced by their 62.21 per cent market share compared to 31.34 per cent for state-owned banks, can be attributed to several factors. Private bank has a significant contribution to agricultural credit in Bangladesh (Alauddin, 2014). Private banks often offer more competitive interest rates, flexible loan terms, and innovative financial products tailored to the specific needs of agro-processing businesses, such as those structured around seasonal production cycles. Their proactive relationship management, faster loan processing, and extensive branch networks, particularly in semi-urban and rural areas, make them more accessible and attractive to firms in this sector. Additionally, private banks have built strong reputations for reliability and efficiency, often avoiding the bureaucracy and politicization that can affect state-owned banks. With advanced risk management practices and access to international funding, private banks are better positioned to meet the diverse financing needs of agro-processing firms, contributing to their dominance in the sector.

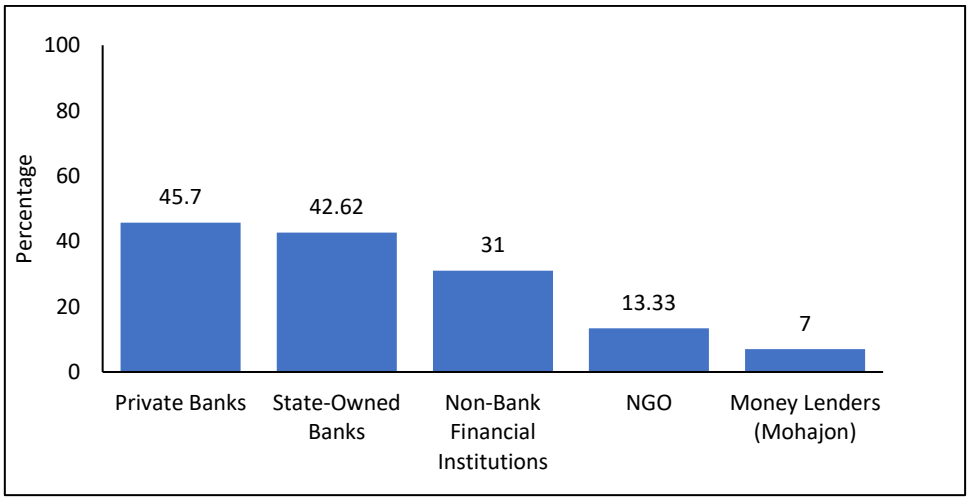
Figure 19: Source of loan in agro-processing sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

However, among the sources, private banks and state-owned banks take the highest number of days on average to avail of a loan. More than one month is needed to secure a loan with private banks taking 45.7 days and state-owned banks taking 42.62 days on average. The reason for this is the stringent process with more documentation requirements, extensive assessments and a long bureaucratic process. In contrast, informal sources like money lenders and NGOs offer quicker access to loans, typically within 7 to 13 days. Even though informal sources offer faster loans due to simplified procedures and personal relationships, these loans often come with higher interest rates, reflecting a trade-off between speed and cost of credit. On the other hand, since NBFIs are less recognized than banks (The Daily Star, 2024c) at the mass level, a very low percentage of loans are taken from that source even though it takes less time (31 days) than banks (Figure 20).

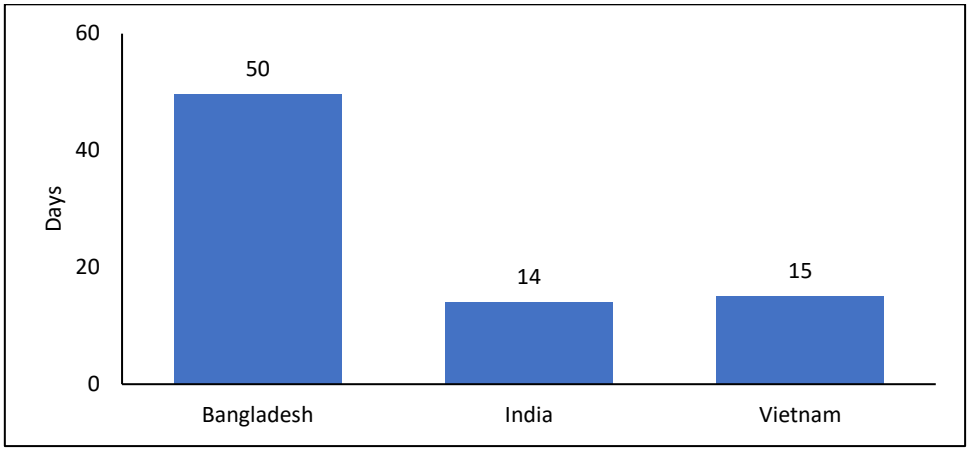
Figure 20: Average time to secure a domestic loan in agro-processing sector (in days)



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The process of obtaining loans and financing in Bangladesh is particularly slow, with an average duration of approximately 50 days to secure a loan, as illustrated in Figure 21. This lengthy timeline stands in stark contrast to the efficiency observed in neighboring countries. For instance, in India and Vietnam, the process is significantly faster, requiring only about 14 and 15 days, respectively. This disparity highlights potential inefficiencies and bottlenecks within the financial system of Bangladesh that could be impeding business operations and economic growth when compared to its regional peers.

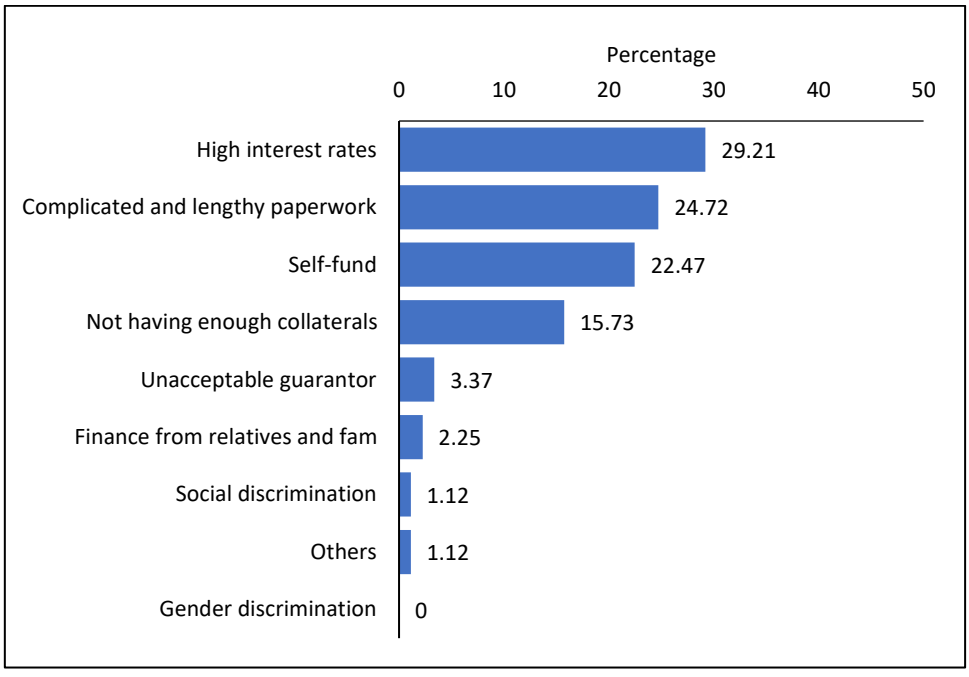
Figure 21: Comparison of countries in terms of average time for loan approval



Source: SANEM-UNDP-BIDA Enterprise Survey 2024 (Bangladesh); Timeline for Credit Decisions, State Bank of India (India); Vietnam cross-border lending guide, 2023 (Vietnam)

While analysing the reasons for not taking a loan, Figure 22 exhibits a similar scenario as discussed above. In the agro-processing sector, the primary deterrents to taking loans are high interest rates and complicated paperwork, with about 25 per cent of potential borrowers mentioning paperwork as a major obstacle. This complexity occurs due to rigorous documentation and lengthy approval processes that contribute to the extended time required to secure loans. Additionally, 15.73 per cent of individuals are unable to meet collateral requirements. Literature states that people in the agro-processing sector in Bangladesh are generally keen to borrow from specialized banks like Bangladesh Krishi Bank (BKB) and Rajshahi Krishi Unnayan Bank (RAKUB) due to their lower interest rates. However, many struggle to secure these loans due to collateral requirements, complex application procedures, allegations of bribery, and insufficient or delayed credit disbursements. Various initiatives aimed at easing credit access for small and marginal farmers through guarantees from landowners or responsible villagers have also had limited success. This results in the farmers still facing significant challenges in meeting the collateral requirements. Consequently, around 22.47 per cent rely on self-funding.

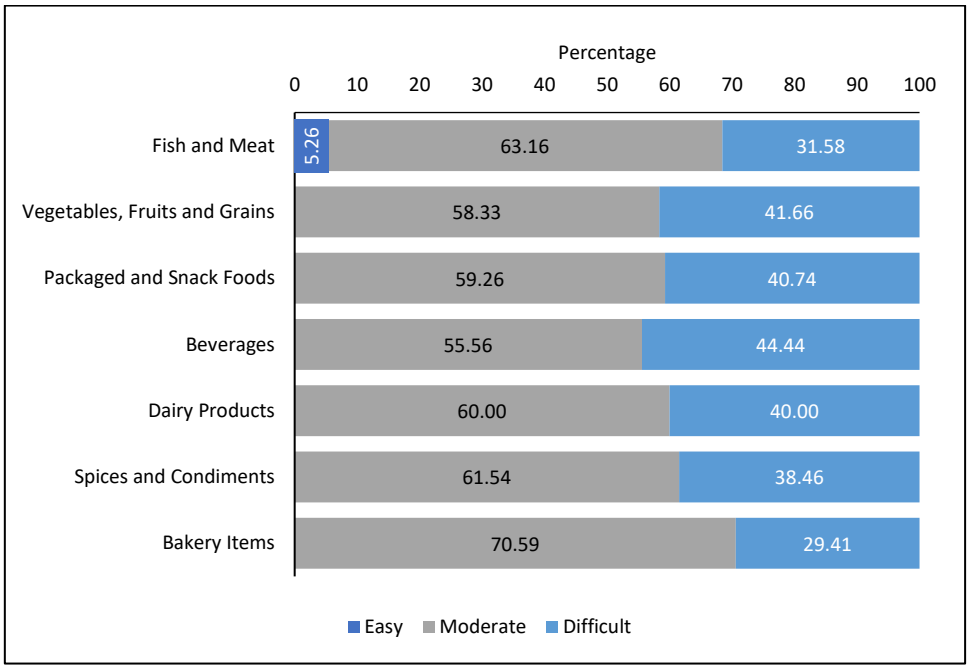
Figure 22: Reason for not taking a loan in agro-processing sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The difficulty in taking loans varies across the sub-sectors of all three sectors.[11] However, all the sub-sectors of the agro-processing sector face moderate to difficult challenges. Figure 23 shows that Beverages (44.44 per cent difficult and 55.56 per cent moderate challenges); Vegetables, Fruits, and Grains (41.66 per cent difficult and 58.33 per cent moderate challenges), and Dairy Products (40.74 per cent difficult and 59.26 per cent moderate challenges) face the difficult challenges. Only 5.26 per cent firms of Fish and Meat subsector find it easier to take domestic loans. In the agro-processing sector, more than 95 per cent of firms in different sub-sectors face moderate to difficult challenges while availing loans mostly from private or state-owned banks and NBFI. The beverage or dairy industry has high capital requirements due to their need for advanced technology compared to the other industries. While seeking more loans, they have to go through stringent procedures and more scrutiny making the process more difficult. Moreover, other sub-sectors of the agro-processing sector have some dependency on climate as there is always a chance for losses in post-harvest season. Lack of collateral, complicated paperwork, lengthy procedures, and natural calamity-induced risk- create barriers to accessing loans, especially for SMEs.

Figure 23: Difficulties faced in taking loans in agro-processing sub-sectors

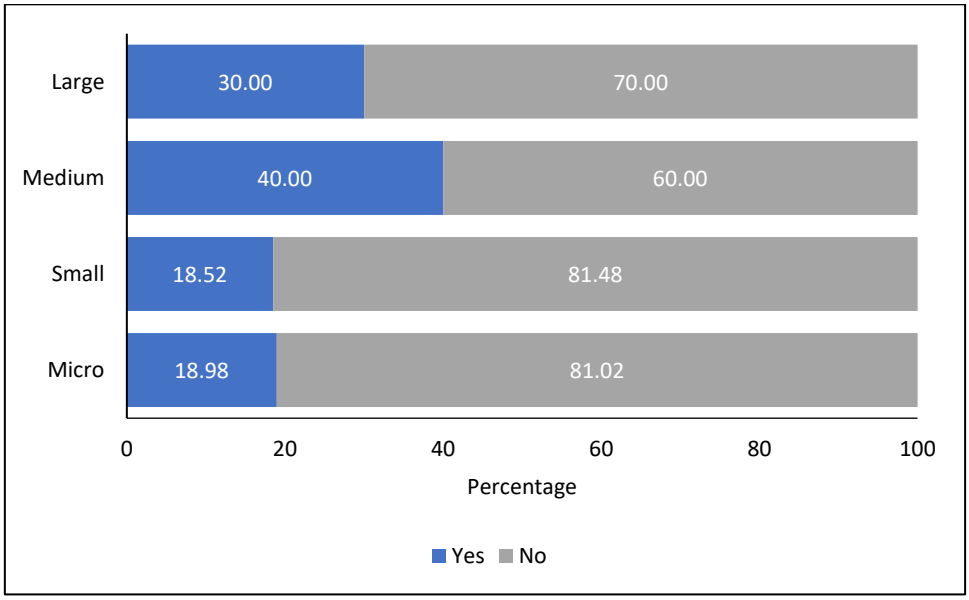


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

While the accepted loans take 30-60 days to be sanctioned, the firms have to face a considerable rate of loan rejection as well. The hassle of loan rejection varies mostly due to firm size as shown in Figure 24. Small (18.52%) and micro (18.98%) enterprises particularly struggle due to limited financial history and lower asset base, making it harder for them to meet bank requirements. Medium size businesses have to face the highest rejection rate (40%) which suggests possible issues with regulatory compliance, documentation, or industry-specific risks. The literature says that medium-sized firms often face unique challenges because they are too large to benefit from the flexibility of small firms but not large enough to achieve the economies of scale that large firms enjoy (Fernández et al., 2019). Large firms also face 30 per cent rejection, a slightly lower rejection rate than medium firms. Since large and medium firms try to access loans from formal channels more, they get rejected more.

[11] The potential sub-sectors have been identified from 'SANEM-UNDP-BIDA Enterprise Survey 2024'. The agro processing sub-sectors include Bakery Items, Spices and Condiments, Dairy Products, Beverages, Packaged and Snack Foods, Vegetables, Fruits and Grains and Fish and meat. The sub-sectors in Jute and jute products- Raw Jute, Jute by-products, Jute Garments and Fashion, Jute Rope and String, Jute Carpets and Mats, Jute Handicrafts and Decorative Items, Jute Fabrics and Textiles, Jute Bags and Sacks. Sub-sectors of IT and ITES include- Software and Web Development, Training and Research, Digital Marketing and Design, Cloud Hosting and Online Service; Data Service and Analytics, E-commerce and Freelancing, Hardware and Networking, AI and Emerging Technologies and Customer Service and Cyber Security.

Figure 24: Rate of loan rejection in agro-processing sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

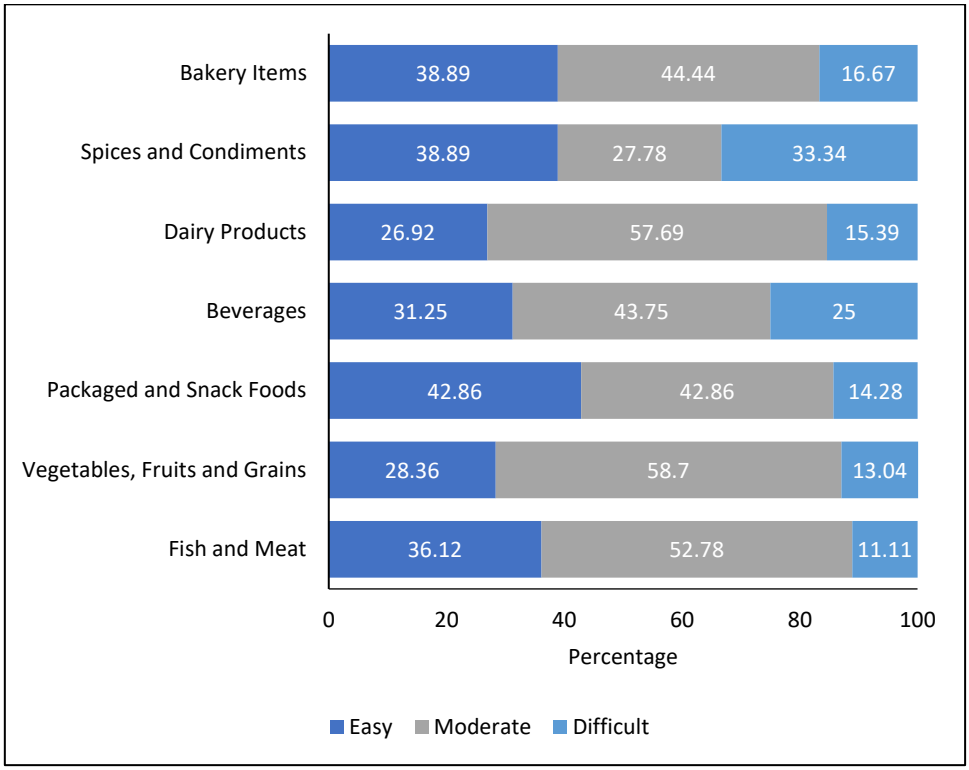
According to the representatives of the agro-processing sector, the domestic loan amount in cases of medium-scale enterprises varies from BDT 400 to 1800 lakhs. The payable amount of these enterprises varies from BDT 200 to 300 lakhs and the outstanding credit varies from BDT 200 to 1500 lakhs. The credit period varies from two months to four years. Insiders of the agro-processing sector claim that the interest rate for the agro-processing sector is as high as 14-20 per cent (KII and FGD respondents).

3.3.3 Compliance Challenges

Certification: The BFSA is now the sole entity responsible for issuing certificates for testing export product samples, a task previously handled by the Export Promotion Bureau (EPB) (Ali, 2022). Both BFSA and Bangladesh Standards and Testing Institution (BSTI) also share responsibilities for testing food samples within the domestic market. Although the process has been centralized under BFSA, significant challenges persist. Exporters still face barriers in different markets, often related to standards, product certification, frequent changes in rules and regulations, etc. Additionally, the Department of Agricultural Extension (DAE) and the Bangladesh Council of Scientific and Industrial Research (BCSIR) need to be better equipped with skilled personnel, modern machinery, and accredited laboratories, with an increased capacity for their workforce (BFTI, 2019). Although BCSIR can test some parameters, these tests are not recognized by buyers due to the lack of accreditation by the Bangladesh Accreditation Board (BAB).

While BFSA issues provisional health certificates for agricultural and some processed foods, its nine designated labs lack international accreditation, posing challenges for the agro-processing industry (BFTI, 2019; Raihan, 2022). BFSA also suffers from a manpower shortage, preventing it from becoming fully operational. The spices, condiments, and beverages sectors face the most difficulties, with 33.34 per cent and 25 per cent respectively finding the certification process challenging or moderately challenging. In contrast, the fish and meat sectors encounter fewer issues, with only 11.11 per cent reporting major difficulties (Figure 25).

Figure 25: Challenges in obtaining certificate in agro-processing sub-sectors



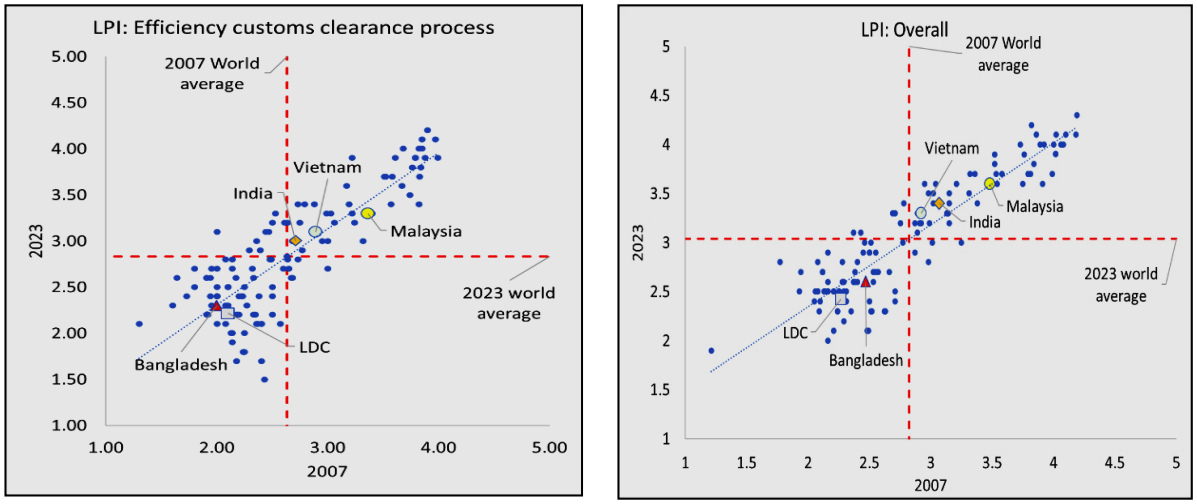
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Customs Clearance Process: The efficiency of customs clearance is crucial for effective trade, reducing costs and ensuring timely delivery (NBR, 2014)**.** However, in Bangladesh, the customs clearance process remains a significant bottleneck for trade. The average clearance time is 7 and 11 days respectively for exports and imports (WBES, 2022), highlighting an inefficient system. Stakeholder feedback from KIIs underscores the outdated nature of customs rules, laws, and procedures, which are primarily focused on revenue generation rather than facilitating trade. This leads to additional costs, production disruptions, and potential goods damage. In Bangladesh, it takes 7 days on average to clear exports through customs (World Bank, 2023). According to the TRS 2022, the average time from arrival to release is approximately 11 days, 6 hours, and 23 minutes; 7 days, 11 hours, and 19 minutes; and 8 hours, and 11 minutes respectively for sea cargo, air cargo and land cargo (NBR, 2022).

Figure 26 represents the comparison between Bangladesh and other peer countries in the Logistics Performance Index (LPI)[12]. Bangladesh consistently scores below the global average on the LPI. In contrast, peer countries like Vietnam, India, and Indonesia have consistently surpassed the global average since 2007, demonstrating substantial improvements in their trade and logistics performance, while Bangladesh lags, reflecting slower progress.

[12] LPI is an indicator of trade logistics and comprises of six sub-indices: efficiency of the clearance process, quality of trade and transport-related infrastructure, ease of arranging competitively priced shipments, competence and quality of logistics services, ability to track and trace consignments, and the timeliness of shipments reaching their destination within the scheduled or expected delivery time (World Bank, 2023).

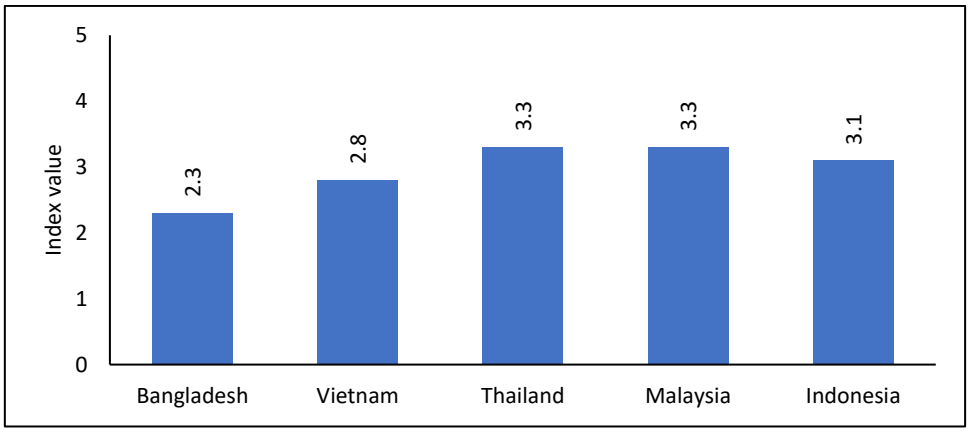
Figure 26: LPI: Efficiency of customs clearance process



Source: World Development Indicators, 2023

Figure 27 shows, the 'Efficiency of Customs Clearance Process', an LPI sub-indicator ranging from 1 to 5 which measures the speed and ease of customs procedures to minimize delays and transaction costs for businesses. Here, a higher score indicates better performance. Bangladesh scores 2.3, indicating relatively low efficiency compared to other countries. Bangladesh's lower score suggests significant obstacles and inefficiencies in its customs processes that could negatively impact trade performance. In contrast, Vietnam, Thailand, Malaysia, and Indonesia score between 2.8 and 3.3, highlighting their more streamlined customs procedures.

Figure 27: Logistics performance index: Efficiency of customs clearance process



Source: World Development Indicators, 2023

SPS And TBT Challenges in Agro-processing: To address the complexities of food safety and product standards in international trade, the World Trade Organization (WTO) has established two key agreements: the SPS Agreement and the TBT Agreement[13]. In Bangladesh, the DAE and the Ministry of Agriculture are responsible for issuing import and export permits, as well as phytosanitary certificates for plants and plant products. However, there are challenges in implementing GAP and enforcing quarantine rules, as monitoring and application do not always meet the required standards (Innovision Consulting Private Limited, 2016).

[13] The Sanitary and Phytosanitary (SPS) Agreement and the Technical Barriers to Trade (TBT) Agreement have been established by World Trade Organization. The SPS Agreement is designed to safeguard food safety and protect animal and plant health, while the TBT Agreement ensures that product standards facilitate fair trade without creating unnecessary barriers.

Bangladesh's inability to fully implement SPS measures is hindering its export capabilities, particularly to the demanding markets of the EU and Northern Hemisphere. The testing procedure is very lengthy and costly (BFTI, 2023). For instance, 78 processing plants in Bangladesh have met the EU standards and are approved by the EU authority but the cost of obtaining this certification has risen by nearly 75 per cent, imposing a substantial financial burden on shrimp exporters (BFTI, 2019).

Additionally, outdated testing methods in local labs, such as culturing and microscopy, are inadequate for detecting certain pathogens, leading to bans on products like Bangladeshi nuts, mustard oil, and betel leaves in various countries. In 2015, the EU banned Bangladeshi nuts in Chanachur due to aflatoxin contamination. Similarly, mustard oil, pickles, and chutney imports are restricted in Australia and Singapore for containing benzoic acid. Also, Australia has banned aromatic rice unless fumigated with methyl bromide. In 2014, the EU temporarily banned Bangladeshi betel leaves over salmonella bacteria concerns. The ban prevented exports to 29 countries and resulted in a substantial decline in Bangladesh's overall agricultural export earnings (BFTI, 2023). Additionally, the EU's strict labeling requirements and refusal to accept certificates from Bangladesh's BSTI and BCSIR further complicate trade.

Inefficiencies in Customs Operations and the Risk Management System: Customs in Bangladesh face challenges due to outdated risk management, limited automation, and reliance on physical inspections, inadequate knowledge of HS classification, causing delays and inefficiencies in goods clearance. The lack of a robust, Revised Kyoto Convention (RKC) compliant risk-based selectivity approach, results in false risk assessments and delays in goods clearance. Instead of utilizing advanced and automated risk management processes, outdated and inefficient methods, such as an over-reliance on manual procedures and physical inspections for all shipments, dominate customs operations, causing delays, increased costs, and potential security risks. Furthermore, Bangladeshi ports lag significantly due to inefficient management, inadequate infrastructure, and outdated equipment leading to challenges in container handling, insufficient port yard capacity, the absence of modern port sheds, and outdated equipment. To streamline customs operations and enhance revenue collection within a modern and automated framework, green, yellow, red, and blue line-based assessment systems of ASYCUDA[14] were introduced in 2013, which have not been fully implemented yet (SANEM, 2022). Manual processes in revenue collection, risk management, and 100 per cent physical inspections, especially for agricultural goods, increase costs and time (SANEM, 2022). Additionally, with only one heavy pallet scanner[15] in the import cargo village[16], only 1-2 per cent of consignments are scanned, posing a national security risk. Moreover, the absence of technical expertise in customs procedures within the ICT team of National Board of Revenue (NBR) also impedes the development of an evidence-based risk management system (NBR, 2014).

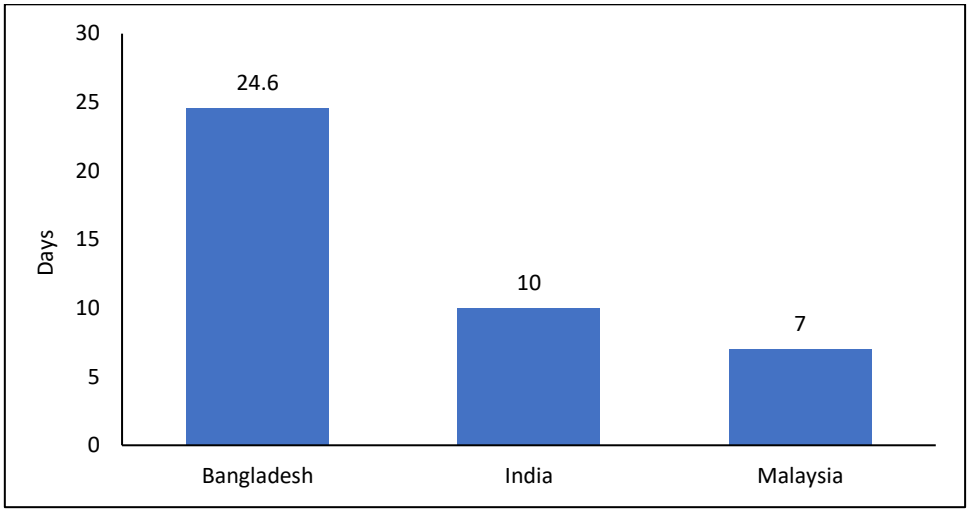
Challenges in Regulatory Compliance: The time and effort required for documentation play a crucial role in the growth and sustainability of businesses, particularly for SMEs. However, the documentation process in Bangladesh is notably complicated and time-consuming, which often demotivates newcomers to the industry. Figure 28 highlights the comparison between Bangladesh, India, and Malaysia in terms of the time required to comply with government regulations. In Bangladesh, it takes approximately 24.56 days to meet these regulatory requirements, whereas in India and Malaysia, the process is much faster, taking only 10 and 7 days respectively. This significant difference places Bangladeshi businesses at a disadvantage, as the longer compliance time can delay operations and reduce overall efficiency.

[14] The Automated System for Customs Data (ASYCUDA) is a computerized Customs Management System developed by the United Nations Conference on Trade and Development (UNCTAD). It provides an integrated solution for streamlining customs procedures. It includes a comprehensive range of modules and features such as electronic customs declarations, automated document processing, risk management, inventory control, transit management, tariff classification, valuation, and statistical reporting. This system is designed to enhance efficiency, facilitate trade, and improve revenue collection within customs operations.

[15] A heavy pallet scanner is a specialized piece of equipment used in customs and logistics to inspect large, heavy, and often densely packed shipments on pallets. It employs advanced scanning technologies such as X-ray imaging to examine the contents of pallets without requiring them to be manually unpacked or opened.

[16] An import cargo village is a designated area or facility within or near an airport, seaport, or land port where imported goods are temporarily stored, processed, and inspected before being cleared by customs.

Figure 28: Country comparison in terms of time for government regulations



Source: SANEM-UNDP-BIDA Enterprise Survey 2024 (Bangladesh); India Filings (India) and Malaysia Company Registration, Bestar (Malaysia)

The processing times for import licenses or permits vary significantly across Vietnam, Thailand, Malaysia, and Bangladesh (Table 5). In Vietnam, the processing time ranges from 5 to 10 business days for an Automatic Import License but can extend to 20 to 30 business days for a Non-Automatic Import License. Thailand offers more efficiency, with immediate processing for non-regulated products and up to 15 days for regulated ones. Malaysia's ePermit system is particularly streamlined, taking just 3 to 5 working days. In contrast, Bangladesh's Import Registration Certificate takes around 10 days to process, placing it in the middle of the spectrum. These variations in processing times directly impact the investment in each country. Countries like Malaysia and Thailand, with faster and more efficient import procedures, are more appealing to foreign and domestic investors, as quick access to necessary goods and materials is crucial for business operations. In comparison, the longer processing times in Bangladesh deter potential investors, as delays in obtaining import licenses can hinder business efficiency and increase operational costs.

Table 5: Import permit issue and processing time in comparator countries

Country	Import License/Permit	Processing Time
Vietnam	Automatic Import License	5 to 10 business days
	Non-Automatic Import license	20 to 30 business days
Thailand	Import License for Regulated Product	Up to 15 days
	Import License for Non-Regulated Product	Immediate
Malaysia	Import permits (ePermit)	5 to 3 working days

Source: MyGovernment (Malaysia); Guide to Import to Vietnam, Emerhub (Vietnam); Thailand Company Secretary (Thailand)

3.3.4 Infrastructural Challenges

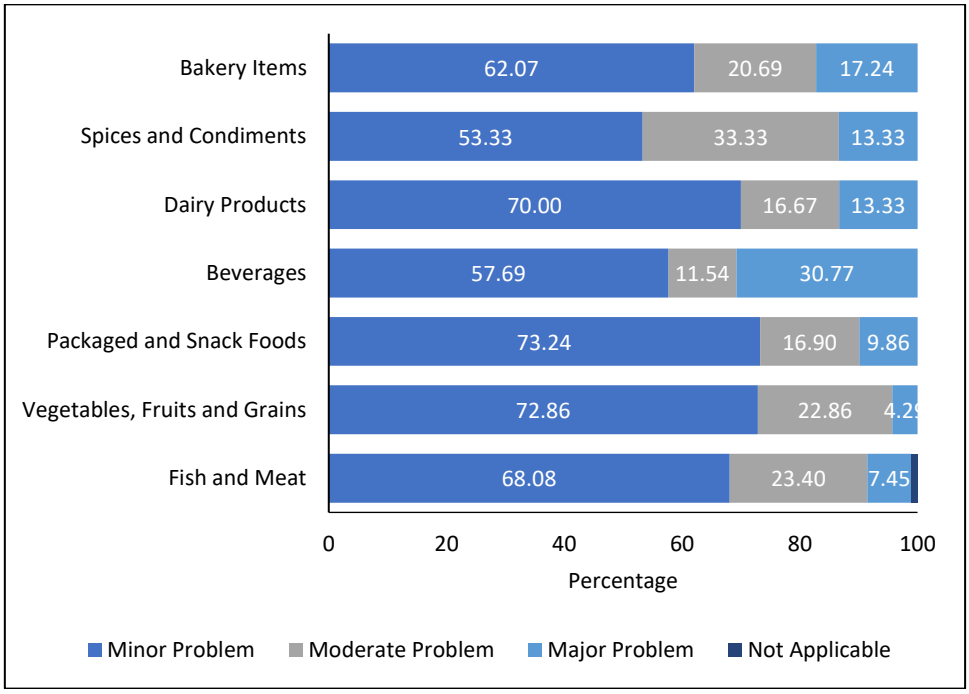
Testing Labs: The agro-processing sector in Bangladesh faces numerous infrastructural challenges. Lack of adequate lab testing facilities is one of the key challenges. Inadequate lab testing facilities hinder the agro-processing industry's growth by making it difficult to maintain compliance with export norms (Ahmed, 2023). In Bangladesh, there exist only 14 accredited laboratories to carry out tests and quality assurance. The number of accredited laboratories and testing parameters of the BSTI is not at an expected level, weakening us while signing the Mutual Recognition Agreement (MRA) with potential trade partners. The BFSA has designated around 10 food testing labs, but they face challenges due to limited resources, insufficient technical capabilities, and a

shortage of workers, reflecting the early challenges faced by BFSA[17] as a relatively young organization (BFTI, 2023) . Also, there is no crop sector plant quarantine accredited laboratory[18] in Bangladesh but only the Pesticides Analytical Laboratory, BARI, Gazipur for pesticides. Furthermore, establishing an accreditation laboratory system for public and private laboratories is challenging due to the need for harmonized sampling procedures that comply with ISO/IEC 17025 standards and meet international requirements.

Basic Utilities: Physical infrastructure is crucial for the growth of any sector. In the agro-processing industry, robust infrastructure includes reliable electricity, gas, and water supply to ensure uninterrupted production. Additionally, strong internet facilities are essential for active participation in international markets and maintaining connectivity with clients. In terms of basic utilities- electricity, water, gas, and internet, the challenges vary among agricultural subsectors[19].

Electricity: A reliable power connection and consistent electricity supply are crucial for sustainable agro-industrial development, as they support essential equipment like cold storage, mills, warehouses, scales, and packing machines needed to maintain product quality. However, in Bangladesh, many agro-processing firms face severe challenges in accessing adequate electricity, particularly SMEs, which often struggle to obtain new electricity connections (Raihan, 2022). According to the SANEM-UNDP-BIDA Enterprise Survey 2024, The beverage sector faces the most severe problem with electricity for current operations, with 30.77 per cent reporting major issues. Also, the bakery, spice and condiment, and dairy industries have been notably affected by electricity challenges, with 17.24 per cent, 13.33 per cent, and 13.33 per cent of businesses respectively reporting major disruptions to their current operations (Figure 29). Moreover, the high cost of electricity further exacerbates the challenges faced by the agro-processing industry, adding to the operational difficulties for firms (MoC, 2021).

Figure 29: Level of challenges for basic utilities (electricity) in agro-processing sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

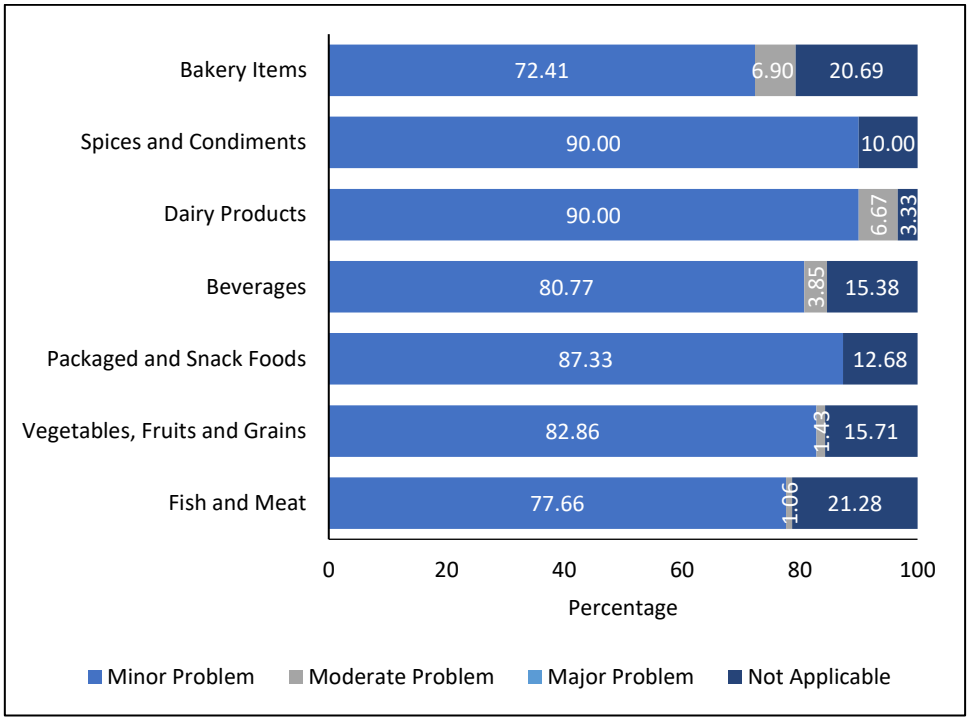
[17] The Bangladesh Food Safety Authority (BFSA) was established on February 2, 2015, under the provisions of the Food Safety Act, 2013.

[18] A Crop Sector Plant Quarantine Accredited Laboratory is a specialized facility certified to carry out testing, inspection, and analysis of plant materials and agricultural products in compliance with plant quarantine regulations. These laboratories are vital for preventing the introduction and spread of harmful pests, diseases, and invasive species through plants, seeds, and other agricultural commodities

[19] The potential sub-sectors have been identified from SANEM-UNDP-BIDA Enterprise Survey 2024. The agro processing sub-sectors include Bakery Items, Spices and Condiments, Dairy Products, Beverages, Packaged and Snack Foods, Vegetables, Fruits and Grains and Fish and Meat.

Water: Water is a critical utility for the agro-processing industry, and insufficient or polluted water supply can lead to compromised food quality and safety (MoC, 2021). Various countries' SPS and TBT regulations have requirements for water to be used for processing, for example, India (BFTI, 2023). Also, limited access to water interrupts the production process. In Bangladesh, water scarcity presents a minimal obstacle for the majority of agro-processing enterprises across all sub-sectors (SANEM-UNDP-BIDA Enterprise Survey, 2024). Bakery items have a moderate level of challenges (6.9%). Also, 6.67 per cent of the dairy product sector reports moderate issues in water (Figure 30).

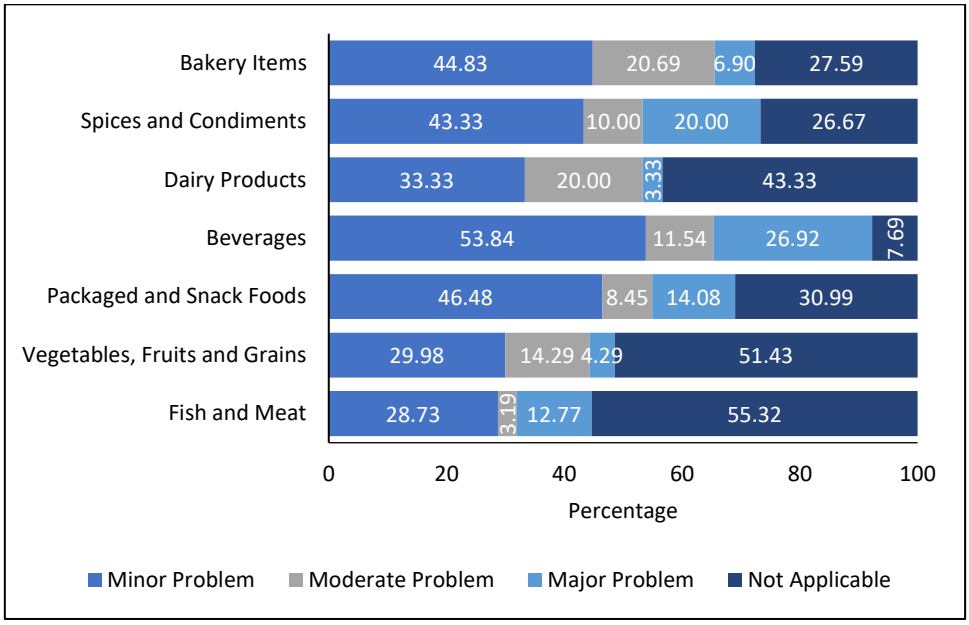
Figure 30: Level of challenges for basic utilities (water) in agro-processing sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Gas: In various agro-processing sub-sectors, consistent gas supply is essential in various steps of the processing. Also, an adequate gas supply makes the production process efficient and cost-effective. Furthermore, Inadequate gas supply and restrictions on commercial gas lines are hindering new investments in the agro-processing industry. As Bangladesh's natural gas supply is decreasing and the government no longer approves new industrial gas connections, constructing new processing plants is becoming more difficult and costlier for new investors and limits sectoral expansion (Innovision Consulting Private Limited, 2016). The beverages and spices and condiments sectors are disproportionately impacted by gas supply constraints, with a substantial 26.92 per cent and 20 per cent of firms respectively reporting severe difficulties in accessing gas. This severe shortage can greatly disrupt production processes, including carbonation, heating, and sterilization, which may reduce output and potentially result in product shortages or compromised quality. In contrast, the dairy product sector appears more resilient to gas supply fluctuations, with only 3.33 per cent of firms experiencing major challenges (Figure 31).

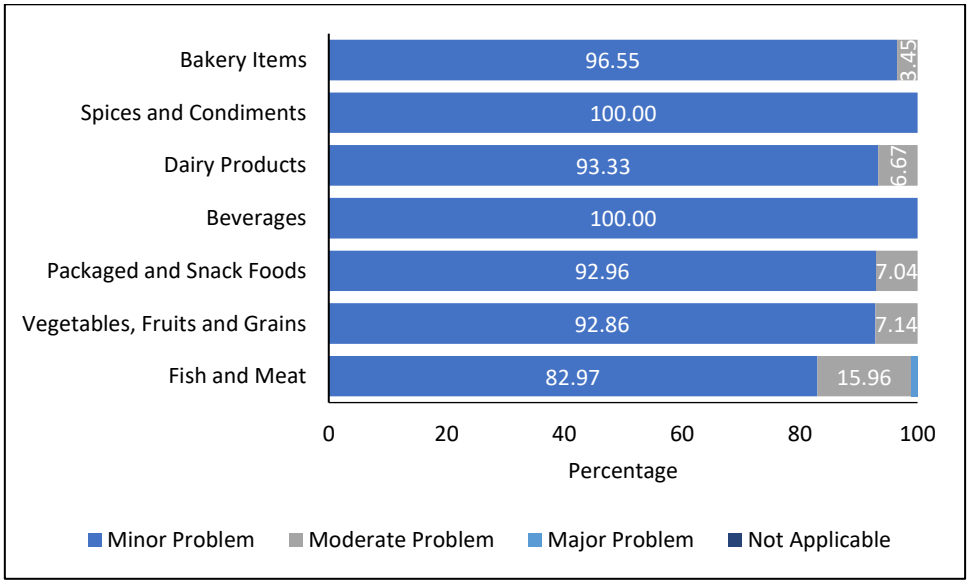
Figure 31: Level of challenges for basic utilities (gas) in agro-processing sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Internet: Internet access and usage within a firm significantly enhance its operations, creating a better environment for trade and improving overall economic activity (Zhong et al., 2020). There is a positive and significant global impact of Internet users, fixed broadband subscriptions, and secure internet servers on the performance of the agricultural sector (Suroso et al., 2022). Also, a stable internet facility is crucial for maintaining the agro-processing supply chain with modern technology and enhancing production by ensuring quality and safety. Internet access, while generally not a major hurdle for most of the agro-processing sub-sectors in Bangladesh, presents moderate challenges for certain firms. The fish and meat industry is most affected, with 15.96 per cent of firms reporting moderate challenges (SANEM-UNDP-BIDA Enterprise Survey, 2024). In comparison, the vegetables, fruits, and grains sector, packaged and snack food sector and dairy product sector experienced relatively lower levels of challenges at 7.14 per cent, 7.04 per cent, and 6.67 per cent respectively (Figure 32). These disparities highlight the varying degrees to which digital infrastructure impacts different segments of the agro-processing industry in their operation.

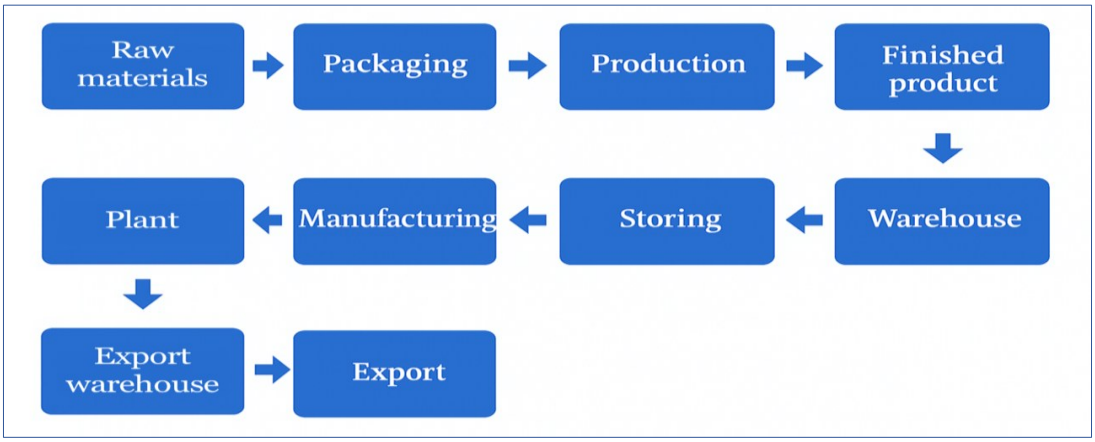
Figure 32: Level of challenges for basic utilities (internet) in agro-processing sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Agro-Processing Supply Chain and Associated Challenges: The agro-processing supply chain is essential for Bangladesh's economy, bridging the gap between agricultural production and value-added goods for domestic consumption and export. Despite its immense potential, the sector faces significant challenges that affect its efficiency and growth. Issues such as inadequate knowledge of pesticide use among farmers, outdated technology, high postharvest losses, insufficient cold storage facilities, and unreliable energy supplies affect every stage of the supply chain (Chart 5).

Chart 5: Agro-processing supply chain



Source: SANEM's Compilation from KII and FGD

Raw Materials: Farmers in Bangladesh lack sufficient knowledge regarding the appropriate timing and correct application of essential pesticides during production. Consequently, Australia has imposed a ban on shipments of aromatic rice from Bangladesh, citing non-compliance with their fumigation requirements (KII and FGD respondents). While Bangladesh uses aluminium phosphate for fumigation, Australia mandates the use of methyl bromide for treating rice imports.

Harvesting and post-harvesting: Postharvest losses of agricultural produce, particularly fruits and vegetables, range from 25 per cent to 45 per cent, and often exceed these levels during the glut season, resulting in economic losses of more than BDT 10 thousand crores (FGD and KII respondents). This is primarily due to inadequate preservation methods and infrastructure. Additionally, the technology used in agro-processing remains outdated, with the majority of paddy processed using low-capacity Engelberg hullers**,** which result in a high percentage of broken rice and inefficient bran recovery**,** further reducing profitability and quality (Sarkar, et al., 2018).

Warehouse and Cold Storage: Around 5 lakh tonnes of potatoes were stored in 2003 according to Bangladesh Cold Storage Association (BCSA). Around 400 cold storages across Bangladesh are struggling to preserve and maintain the quality of vast quantities of potatoes for power cuts. Also, most of the warehouses in Bangladesh are prepared for storing potatoes. It does not have the facilities for storing perishable fruits and vegetables (FGD and KII respondents).

Manufacturing: The agro-processing industry in Bangladesh faces significant challenges due to inadequate and unreliable gas and electricity supplies, which disrupt production processes. Additionally, there is a notable shortage of skilled manpower trained in modern processing techniques. Only government-owned sugar mills have the capacity to crush the sugar cane, extract sugar cane juice, and then transform it into sugar. The privately owned sugar processing factories are not engaged in the full process of transforming the raw sugar cane into sugar. They buy the crushed juice and then transform it into sugar. According to a study conducted by Bangladesh Agro-Processors' Association (BAPA), 46 per cent of processors lack knowledge of productivity tools[20]. 47 per cent are aware of productivity. Only 2 per cent of the total agro-processors are using 5S, KAIZEN and LEAN methods of productivity tools (BAPA, n.d.).

[20] **Productivity tools** refer to methodologies, techniques, and frameworks designed to enhance efficiency, reduce waste, and improve the quality of processes within organizations. Among the productivity tools used by agro-processors, TQM (Total Quality Management) emphasizes continuous quality improvement, while JIT (Just-In-Time) focuses on minimizing inventory

Packaging: The absence of harmonized sampling procedures that comply with ISO/IEC 17025 standards leads to inconsistencies in packaging practices, making it difficult to meet international requirements and maintain compliance during inspections and audits. Bangladesh has to import packaging materials from abroad since domestic packaging is not internationally accepted.

Transportation and shipping: Bangladesh doesn't have adequate cooling van and trailer facilities for shipping processed food. Transporting frozen items privately is expensive, costing BDT 60,000 per truck from Dhaka to Narshingdi (FGD respondents). Also, due to traffic congestion, sometimes it takes longer to transfer products to the warehouse.

Export: The health certificate for exporting shrimp to the EU provided by the Fish Inspection and Quality Control Wing (FIQC) is recognized by the EU, but the cost of obtaining the certification has increased by almost 75 per cent (BFTI, 2023). This study by the Bangladesh Foreign Trade Institute (BFTI) also identified some SPS and TBT measures Bangladeshi products face in export destinations. For example, due to the Aflatoxin[21] problem with Bangladeshi nuts, nuts in Chanachur was prohibited in EU countries in 2015. Also, the import of mustard oil, pickles and chutney is restricted in Australia and Singapore for containing Benzoic acid. EU countries always ask for products' definite percentages of ingredients in the labels. Besides, they do not accept the certificates and test reports issued by BSTI and BCSIR (BFTI, 2023).

Box 1: Halal meat certification in Bangladesh

Halal Meat Certification

The global halal meat market, valued at $870.4 billion in 2023, is projected to reach $1,654.8 billion by 2032, growing at a CAGR of 7.4 per cent (Straits Research, 2024). This rising demand for halal meat is driven by both Muslims and non-Muslims due to its health benefits and safety. It presents a significant opportunity for Bangladesh. However, despite being a Muslim-majority country with substantial potential, Bangladesh has not fully capitalized on this market.

One of the main challenges is the lack of dedicated HS codes for halal meat-which limits exporters' access to industry-specific benefits. Additionally, meat certification in Bangladesh is managed by two organizations: the BSTI and the Islamic Foundation. However, the country lacks adequate certification facilities to support large-scale meat exports. Currently, only Bengal Meat is capable of making limited exports while meeting all the certification requirements.

To tap into the global halal meat market, Bangladesh needs to introduce a clear policy guideline and establish a dedicated halal certification system. Industry experts say that BSTI uses the JAKIM (Malaysia) certification, recognized by the OIC countries, other countries like Saudi Arabia have their own criteria. A unique certification body in Bangladesh could help streamline the process and boost exports, unlocking the country's full potential in the global halal meat industry.

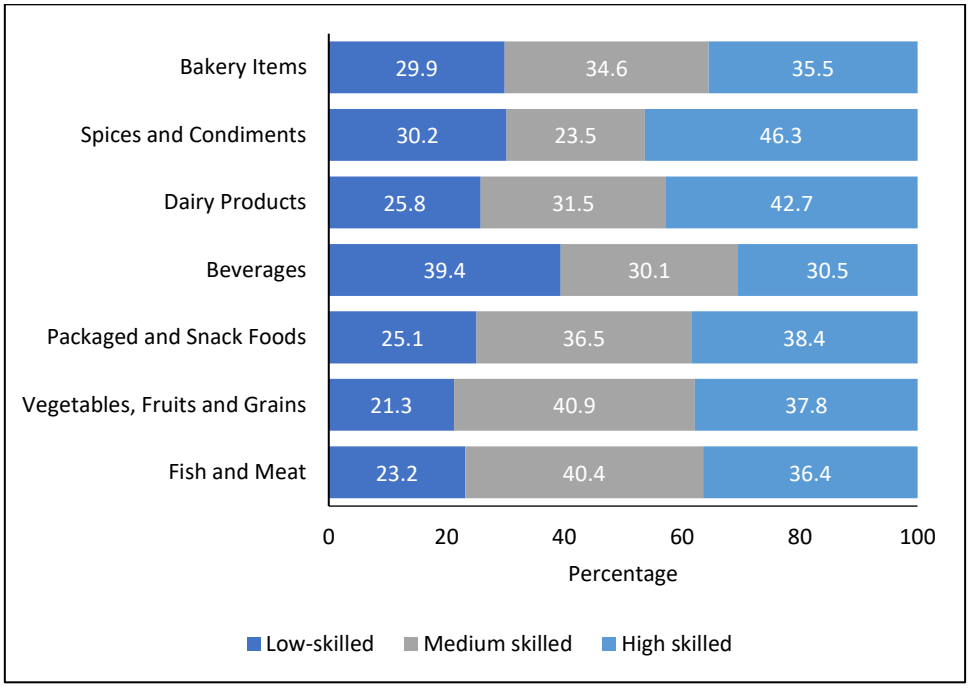
3.3.5 Labour Force Challenges

Agro-processing sector struggles with significant labour force challenges. Studies have shown that the sector suffers from a 45 per cent skill gap, which is mostly due to a lack of specialized training and knowledge in food safety, sanitation, and food testing protocols (BIDS, 2016). From Figure 33, it is evident that certain sectors within the agro-processing industry, such as spices and condiments (46.3%) and dairy products (42.7%), have less than half of high-skilled workers, which is still a significant proportion compared to the remaining sub-sectors. This reflects the technical expertise required in these sectors, where precision and knowledge are critical for maintaining product quality and driving innovation. Conversely, the beverage sector shows a relatively high proportion of low-skilled workers (39.4%), suggesting a lack of modernization and technical expertise. This reliance on low-skilled labour can be a barrier to innovation and efficiency, ultimately hindering productivity and economic growth within the sector. The shortage of skilled workers indicates that the sector might struggle to implement advanced technologies and modern production techniques, which are essential for improving output quality and scaling operations.

and waste. The 3S (Sort, Set in order, Shine) method enhances workplace organization, and its extended version, 5S, includes standardization and sustained discipline. KAIZEN promotes continuous incremental improvements, and LEAN aims to streamline processes by reducing waste and maximizing value.

[21] Aflatoxins are toxic substances produced by certain fungi, primarily Aspergillus flavus and Aspergillus parasiticus, which grow on crops like nuts, grains, and seeds under warm and humid conditions.

Figure 33: Skill level distribution of workers in agro-processing sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Figure 34 further examines the labour force challenges faced by the agro-processing sector. The data reveals that the lack of specialized technical and vocational knowledge (59.64%) is a predominant issue, limiting the ability of workers to perform complex tasks and innovate. Despite a Bangladesh Technical Education Board (BTEB) training module for Poultry and Meat Processing at various National Technical and Vocational Qualification Framework (NTVQF) levels, no formal training programs have been launched specifically for meat processing. Since there are no Training Service Providers (TSPs) in this sector, the demand for training among overseas applicants remains unfulfilled. Institutionalized training opportunities in agro-processing are limited, with TSPs offering programs in only a few trades like Food Preparation and Food Safety & Hygiene. Employers themselves provide essential training in areas such as HACCP, Lean Six Sigma, Quality Control, Packaging, and Machine Operation through on-the-job training. Consequently, workers possess limited expertise in compliance, quality control, and productivity. There is a significant need for training and awareness about food preservation particularly regarding temperature maintenance, throughout the supply chain—from farmers to suppliers using freezing vans to consumers.

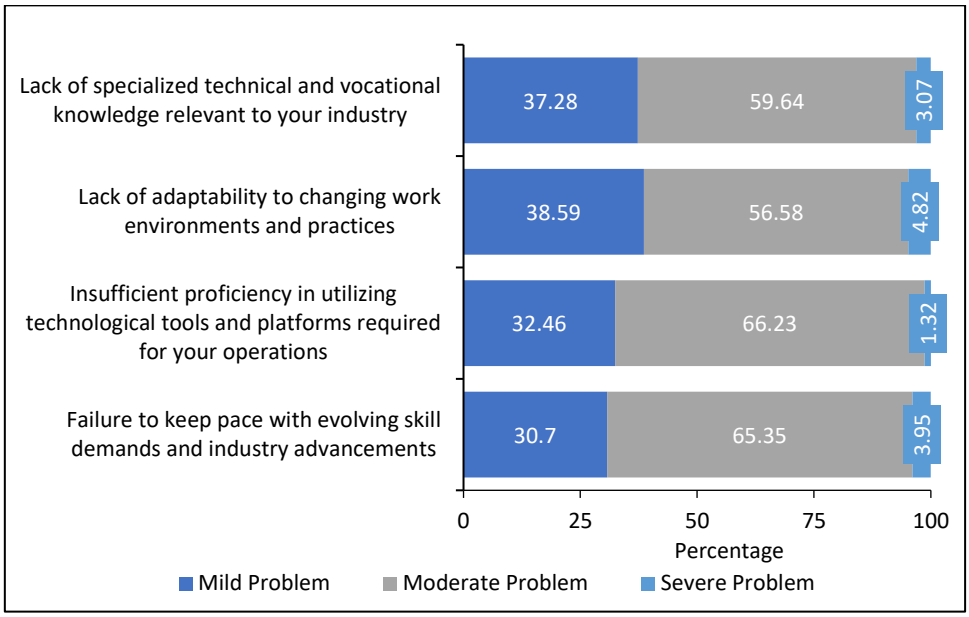
For instance, after slaughtering an animal, it must be kept at a specific temperature for 12 hours before processing. However, farmers and labourers often lack this knowledge, resulting in unsafe food that cannot be preserved for long periods. Working in low-temperature environments (8 to 10 degrees) for meat preservation requires physical fitness. Additionally, biosecurity is a priority in white meat processing, resulting in restricted living conditions for workers to prevent germ spread, which leads to a high turnover rate.

The absence of job placement services at training centers raises doubts about the value of certifications, further discouraging potential trainees. Reputable training centers are scarce in peri-urban areas, and financial constraints prevent many students from investing in training. In food preparation (cooking, baking, and food preservation), trainees often lack sufficient facilities for hands-on experience. Training mostly occurs in group settings where techniques are demonstrated by trainers and trainees mainly observe.

In agro-processing, most employees secure jobs through word of mouth, often via references. Informal recruitment methods like miking and leaflets are prevalent as factories are located away from towns and due to the limited technological proficiency among local recruits. Moreover, if workers switch between different plants, such as from dairy production to automated bakery production, their expertise in one product does not accumulate or become applicable. The industry also faces a shortage of skilled machine operators, food

technologists, mixture men, chemists, quality control officers, packaging supervisors, and graduates with degrees or diplomas in food processing and engineering.

Figure 34: Labour related challenges in agro-processing sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Additionally, the sector struggles with a lack of adaptability to changing work environments and practices (56.58%), which is essential in a rapidly evolving industry. Moreover, the insufficient proficiency in utilizing technological tools and platforms required for operations (66.23%) highlights the digital divide within the sector. The failure to keep pace with evolving skill demands and industry advancements (65.35%) further aggravates these challenges, indicating a broader issue of outdated skill sets that do not align with current industry needs (Figure 34).

3.3.6 Tax and Regulation Challenges

Import Tariff: The availability of industry-specific machinery is a crucial factor in attracting investment. While domestic production often falls short, imports can help fill this gap. To promote technological advancements within the sector, it is essential to implement minimal import tariffs on essential machinery. The government provides various incentives to expand the agro-processing sector, such as exemptions from tariffs on generators, information technology equipment, certain irrigation and agricultural machinery, animal feed for the poultry industry, and raw materials used in agriculture. However, certain types of machinery vital to the agro-processing sector, such as cold storage, mobile cooling units, and temperature-controlled rooms, face higher import tariff rates, discouraging the sector's expansion.

This study has identified key machinery for the agro-processing sub-sectors and their associated import tariffs as set by the NBR (Table 6). The prevailing high import duties on agro-processing machinery and preservatives significantly increase production costs. Reducing these tariffs is crucial to enhancing the sector's competitiveness and facilitating technological upgrades. Additionally, cash incentives of up to 15 per cent for exporting products from agro-processing sub-sectors such as vegetables, fruits, potatoes, halal meat, and processed meat have been discontinued, further impacting the sector's growth potential (Khatun, 2024).

Table 6: Import tariff on agro-processing machinery

Product Name	HS Code	Schedule	Statutory Rate of Import Duty
Rice huller and wheat crusher	8437.80.10	2024-2025	10%
Parts of Rice huller and wheat crusher	8437.90.10	2024-2025	10%
Chiller imported by Industrial IRC holder VAT-compliant cold storage	8418.69.96	2024-2025	10%
Other Chillers	8418.69.99	2024-2025	25%
Air conditioning machine comprising a motor-driven fan and elements for changing the temperature and humidity (Requiring exceeding 90,000 BTU but not exceeding 3,00,000 BTU)	8415.10.20	2024-2025	25%

Source: Authors' compilation from NBR

3.3.7 Good Agricultural Practice (GAP)

GAP[22] ensures safe and high-quality food production while supporting environmental sustainability and social development. Adapting good agriculture practices in Bangladesh can foster the export of agricultural products by ensuring product quality. GAP promotes moderate use of pesticides, organic and chemical fertilizers, water, and environmentally friendly management techniques and maintains the nutritional quality of food. To implement the GAP, Contract farming works as a medium. Contract farming links farmers with processors and ensures the implementation of GAP. Nowadays the idea of contract farming is growing in developing countries as it helps local producers by providing market access and support in the form of technology transfer and credit facilities (FAO, 2024). In Bangladesh, due to a lack of sufficient modern marketing, wholesale, and retail systems, and public awareness, farmers are unable to cope with the changing market demand. In order to close the gap, the private sector has begun working directly with farmer groups through technical support and contract farming, which guarantees the necessary output levels for processing (ADB, 2023). Companies like PRAN-RFL, ACI Limited, Square etc. are engaged in contract farming in Bangladesh (Table 7).

Table 7: Example of contract farming in Bangladesh

ACI Tomato Project	Pran Cassava Project
• Duration 2014-2019 at Sirajganj • Engaged up to 5,000 landless farmers • Assisted farmers in leasing land and overseeing the cultivation process • Provided all agricultural inputs, training on optimal fertilizer use and cropping practices • Product: Tomato	• Launched in 2014 and processed at the plant at Habiganj • Provided necessary training, inputs and financial assistance • Products: Cassava starch, liquid glucose, flour, chips, and animal feed

Source: ACI Sustainable Contract Farming Project and Pran Cassava Project

Country Comparison

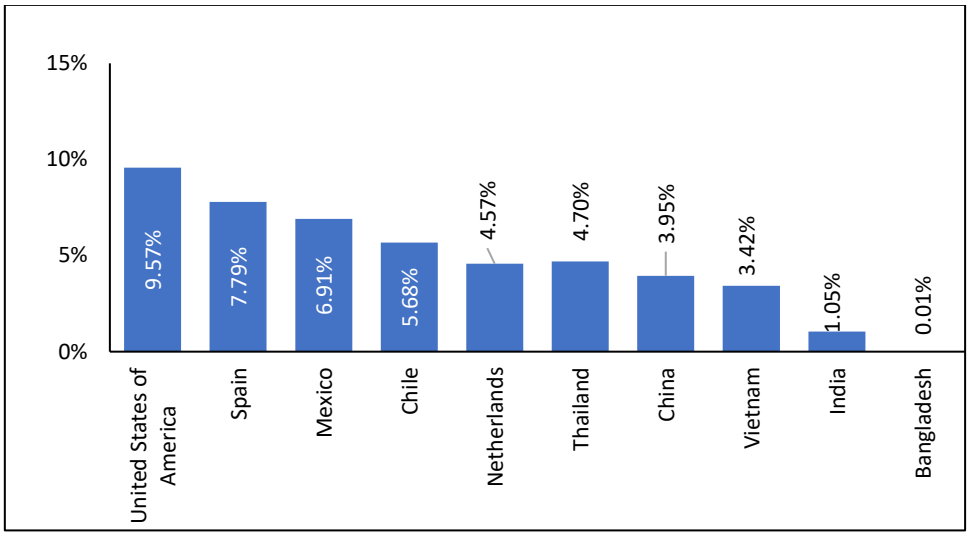
Bangladesh holds immense potential in the agro-processing sector, with sub-sectors like fruits, fish, meat, and dairy offering significant export opportunities. However, when compared to its international and regional peers such as India, Thailand, Vietnam, and Brazil, Bangladesh lags behind.

[22] GAP stands for Good Agricultural Practices, which are a set of principles, standards, and technical recommendations aimed at ensuring sustainable agricultural production, food safety, environmental protection, and worker health and safety.

A Roadmap for Bangladesh's Fruit Export Industry: Lessons from Thailand

Thailand's success in the global fruits and nuts export market offers valuable lessons for Bangladesh's agro-processing sector. Global Trade Atlas (2022) showed that among Asian Countries, Thailand (4.70%) is leading the global market in exporting Fruits and Nuts, followed by China (3.95%) and Vietnam (3.42%) (Figure 35).

Figure 35: Major global exporters of fruits and nuts



Source: Trade Atlas, 2024

A key element of Thailand's strategy has been its diversification of products, exporting not only fresh fruits but also a wide array of processed items, such as canned fruits, frozen fruits, ice creams, dried fruits, and juices made from pineapple, mango, guava, orange, and coconut. This diversification has been supported by proactive government measures, including setting production targets and implementing incentive programs across various agencies. A particularly effective practice for Thailand has been "Contract Farming," where processing facilities purchase fruits directly from trees before harvest, ensuring both quality control and efficient logistics (Kubo Koji, 2019). Furthermore, Thailand's investment in cold storage infrastructure has allowed the country to stockpile semi-processed dried fruits, which can be further processed as needed to meet market demands.

In addition to these strategies, Thailand has bolstered its fruit industry through financial incentives, such as providing approximately $105 million in low-interest loans to fruit purchasers (Echemi, 2024). The government has also streamlined logistics by extending border checkpoint hours and expediting customs clearance procedures, reducing transportation times. Moreover, the issuance of "Good Agricultural Practices" certificates to 120,000 farms has improved production quality and market access. Direct government procurement and subsidies have offered additional support to producers and distributors. The Thai Trade Promotion Agency's active participation in international trade fairs has further elevated the country's fruit exports on the global stage.

By learning from Thailand's comprehensive approach and adapting these strategies to its specific context, Bangladesh can significantly enhance the competitiveness and export potential of its agro-processing sector.

Box 2: Key takeaways for Bangladesh in Thailand's fruit and nuts sector

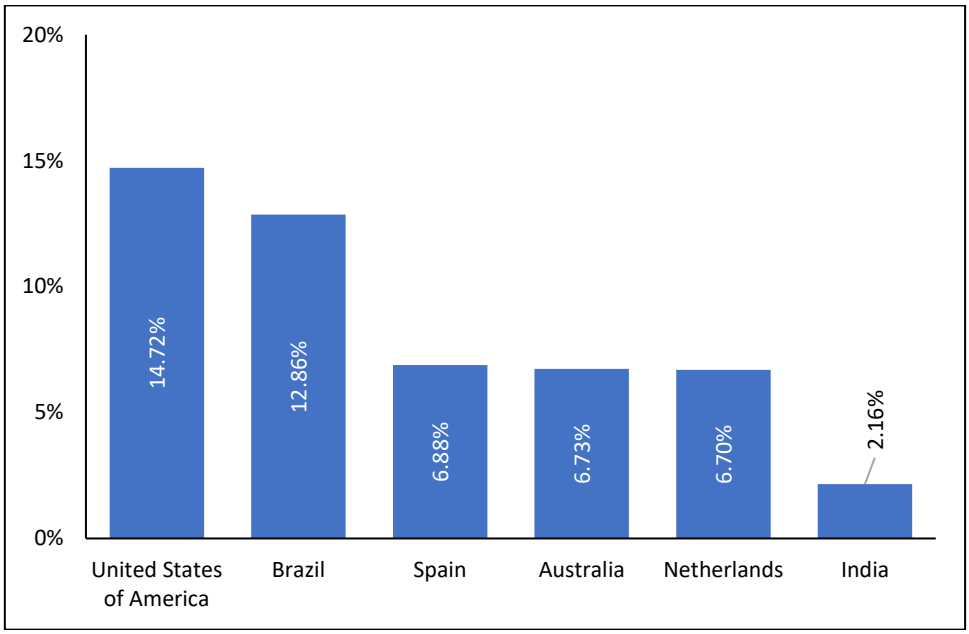
Key Takeaways for Bangladesh

- Investing in infrastructure and quality standards
- Fostering collaboration between government agencies, producers, and processors
- Diversifying fruit products
- Incentivizing contract farming for ensuring product quality and global standards

Brazil's Meat Industry: A Model for Global Leadership

Brazil stands as the second-largest meat exporter globally, accounting for approximately 12.86 per cent of the world's meat exports (Figure 36), offering valuable insights into Bangladesh's meat industry. One of the key drivers of Brazil's success is its robust halal meat and poultry sector, making it one of the largest halal meat exporters worldwide. The strict standards requiring manual slaughter by Muslims have increased the demand for Muslim labour in Brazil, highlighting the importance of adhering to religious and cultural practices to tap into global markets. China, as the major importer of Brazilian meat, has fostered the Brazil-China 'Beef Alliance', a model that Bangladesh could replicate to strengthen its own meat export market.

Figure 36: Major global exporters of meat



Source: Trade Atlas, 2024

Brazil's meat processing sector predominantly uses national technology but also incorporates advanced machinery from leading tech countries, and increasingly automated processes to enhance efficiency. The high standards of Brazilian meat are evident, with nearly 88 per cent of all beef being grass-fed. Additionally, Brazil has adopted anti-stress procedures during the transportation of animals, ensuring humane treatment and minimizing pain during slaughter. Quality assurance is paramount, with rigorous procedures to avoid contamination and comprehensive monitoring of critical control points. Sanitary inspections are routinely conducted, with only healthy carcasses approved for further processing.

Brazil has also made significant advancements in meat packaging, with the transition to vacuum-packed cuts that go directly from the slaughterhouse to consumers, maintaining freshness and quality. To certify national meat quality for export, Brazil has an official government certification program that meets EU standards. The AgriTrace[23] platform further enhances this by ensuring traceability, providing transparency to foreign traders, and delivering high-quality information. The Brazilian government's allocation of $10 billion to infrastructure improvements as a part of the climate fund in 2024 has bolstered the efficiency of the logistics supply chain, including cold storage facilities, where Brazil ranks as one of the top countries globally, with a storage capacity of about 6 million cubic meters, according to the Global Cold Chain Alliance (GCCA).

By emulating Brazil's comprehensive approach—emphasizing technology, quality assurance, certification, and strategic alliances—Bangladesh can enhance its meat processing sector's competitiveness and position itself more effectively in the global market.

[23] Agritrace is a system created by Brazilian Agriculture and Livestock Confederation (CNA), with the support of Brazilian Beef Exporters Association (ABIEC), which unifies all information about the traceability protocols.

Box 3: Key takeaways for Bangladesh from Brazil's meat processing sector

Key Takeaways for Bangladesh

- Adapting modern technology for slaughtering and processing
- Ensuring meat quality and maintaining standards
- Implementing strong and rigorous sanitary inspection procedures
- Promoting transparency for foreign investors
- Establishing globally accepted certification mechanisms
- Building strategic alliances to expand export markets

India's Meat Industry: A Model for Quality and Growth

India is a significant player in the global meat export market, contributing 2.16 per cent to the world's total meat exports (Figure 36). To ensure the highest standards of meat quality and safety, India has established a network of modern slaughterhouses, advanced cold storage systems, high-tech veterinary services, and state-of-the-art food testing laboratories. The Indian government also provides free vaccinations to control and eradicate various livestock diseases, reinforcing the quality of the meat. Compliance with OIE guidelines[24] is strictly observed to mitigate risks in meat preparation and export. Only Agricultural and Processed Food Products Export Development Authority (APEDA)-registered abattoirs[25] and meat processing plants are permitted to export meat, with compulsory microbiological testing and regular health certifications mandated by state veterinary offices.

India's food processing industry benefits from several government incentives aimed at fostering growth and modernization. The sector allows 100 per cent FDI through the automated route, encouraging foreign investments. Additionally, the government offers a 150 per cent income tax deduction on capital expenditures related to the establishment and management of cold chains and warehouses for agricultural products. New food processing, preservation, and packaging units are eligible for a 100 per cent income tax exemption for the first five years, followed by a reduced rate of 25 per cent-30 per cent thereafter. A ₹20 billion fund was established by the National Bank for Agriculture and Rural Development (NABARD) in 2014-15 to provide affordable credit to designated Food Parks and their units, and customs duty concessions are granted on imported machinery.

The Indian government, through the Ministry of Food Processing Industries, initiated the 'Mega Food Park Scheme' in 2008, under which 42 mega food parks are being established, with 35 already approved. These parks feature around 1,200 one-acre plots with essential infrastructure available for entrepreneurs to lease for setting up food processing and ancillary units. This initiative is designed to create a conducive environment for food processing businesses to thrive.

Additionally, the Ministry launched a scheme for the modernization and establishment of abattoirs during 2008-09, particularly government-operated facilities, with the objective of introducing scientific and modern slaughtering methods, alongside advanced technology for waste management and pollution control (Government of India, 2013).

Furthermore, the 'Integrated Cold Chain and Value Addition Infrastructure' scheme has been introduced to develop a comprehensive supply chain infrastructure. This scheme supports the establishment of facilities such as pre-cooling, weighing, sorting, grading, and multi-product/multi-temperature cold storage, along with Controlled Atmosphere (CA) storage, packing facilities, Individual Quick Freezing (IQF), blast freezing at distribution hubs, and the deployment of reefer vans and mobile cooling units. These facilities are crucial for the effective distribution of perishable goods like fish, dairy, meat, and poultry, ensuring that they reach consumers in optimal condition while minimizing losses.

[24] The **OIE** stands for the **World Organisation for Animal Health** (originally known as the Office International des Epizooties). OIE's international standards on food safety focus on eliminating potential hazards for consumers arising prior to the slaughter of animals or the primary

[25] An abattoir is another term for a slaughterhouse, which is a facility where animals are killed, processed, and prepared for consumption as meat or other byproducts.

Through these extensive initiatives, India is significantly enhancing its meat export industry's capacity, quality, and global competitiveness, setting a robust example for other countries.

Box 4: Key takeaways for Bangladesh from India's meat industry

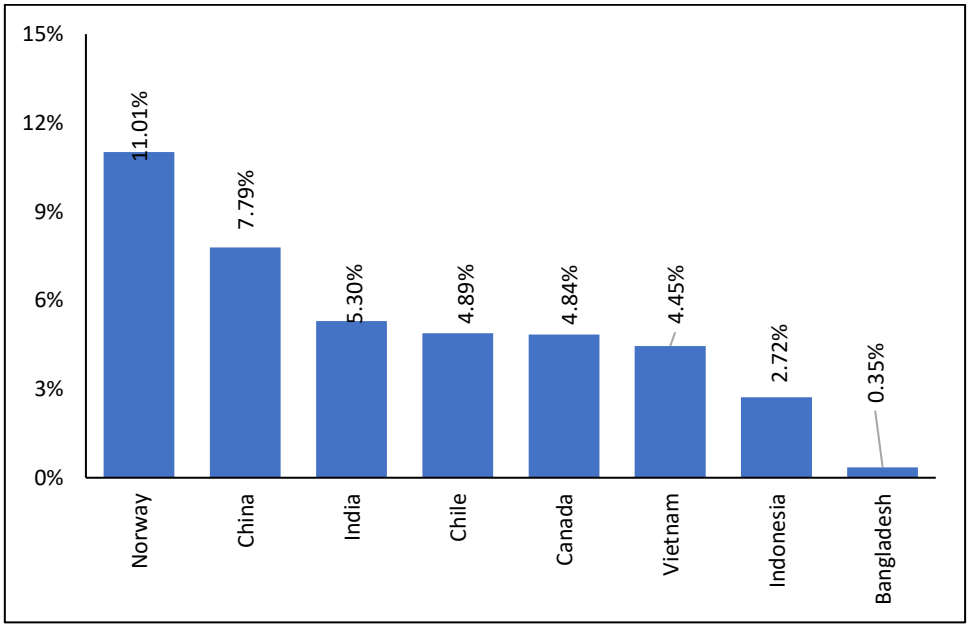
Key Takeaways for Bangladesh

- Establishing modern slaughterhouses and food testing laboratories, advanced cold storage systems, high-tech veterinary services
- Providing free vaccinations to control and eradicate various livestock diseases
- Fiscal incentive to establish and management of cold chains and warehouses
- Modernization and establishment of existing abattoirs
- Developing a comprehensive supply chain infrastructure by supporting infrastructures crucial for the effective distribution of perishable good

Vietnam's Seafood Industry: A Model of Transformation

Vietnam has significantly advanced its seafood export industry by transitioning from exporting raw materials to producing high-value products such as frozen fillets, ready-to-cook items, and pre-packaged seafood meals. With approximately 4.45 per cent of the world's fish exports, as per the Global Trade Atlas 2024, the country has emerged as a key player in this sector (Figure 37). To meet global market demands and ensure adherence to international standards, Vietnamese processors have obtained key certifications, including HACCP, BRC, and ISO, positioning the country as a competitive player on the world stage.

Figure 37: Major global exporters of fish



Source: Trade Atlas, 2024

Vietnamese processors have also mastered diverse techniques like freezing, canning, smoking, and drying, allowing them to cater to a wide range of market preferences. The adoption of advanced technologies in aquaculture has been pivotal in this transformation. Automated feeding systems, stringent biosecurity measures, and blockchain technology for supply chain traceability have been implemented to enhance production efficiency and transparency. Furthermore, the integration of big data and AI helps optimize production processes and predict market trends, ensuring that Vietnam remains at the forefront of the seafood industry.

Innovations in aquaculture, such as improved pond designs, sustainable feed alternatives, and recirculating aquaculture systems (RAS), have also been embraced to promote eco-friendly farming practices.

Box 5: Key takeaways for Bangladesh from Vietnamese seafood industry

Key Takeaways for Bangladesh

- Obtaining international certification for fish processing
- Diversifying fish product according to the market demand
- Adapting advanced technologies in aquaculture to increase the efficiency

India's Fisheries Sector: A Model for Boosting Fish Exports and Fisheries Infrastructure

India, one of the largest fish-exporting nations in the world, exporting 5.30 per cent of the global fish market, is making significant strides in enhancing its fisheries sector through a range of government initiatives (Figure 37). The Government of India (GoI) is actively supporting the development of infrastructure for fishing harbors and fish landing centers, recognizing the critical role these facilities play in sustaining and expanding the country's fish exports.

A key initiative, the 'Pradhan Mantri Matsya Sampada Yojana (PMMSY)', aims to enhance sustainable fish production and double fish exports by 2024-25. PMMSY also targets a significant reduction in post-harvest losses, aiming to bring them down to 10 per cent by modernizing the fisheries sector through technological advancements.

To support these efforts, the 'Fisheries and Aquaculture Infrastructure Development Fund (FIDF)' provides financial assistance for the development of fisheries infrastructure. This fund is accessible to state governments, union territories, and state entities through nodal agencies like the NABARD, the National Cooperative Development Corporation (NCDC), and scheduled banks (PwC, 2022).

Additionally, the 'Kisan Credit Card (KCC)', offered by the Ministry of Agriculture and Farmers Welfare, helps meet the working capital requirements of fishermen and fish farmers, enabling them to invest in production and productivity-related activities.

The 'SagarMala project', spearheaded by the Ministry of Shipping, focuses on developing fishing harbors and fish landing centers, further enhancing the infrastructure needed for efficient and effective fisheries operations. By improving these critical facilities, the SagarMala project contributes to reducing post-harvest losses.

Box 6: Key takeaways for Bangladesh from India's fisheries sector

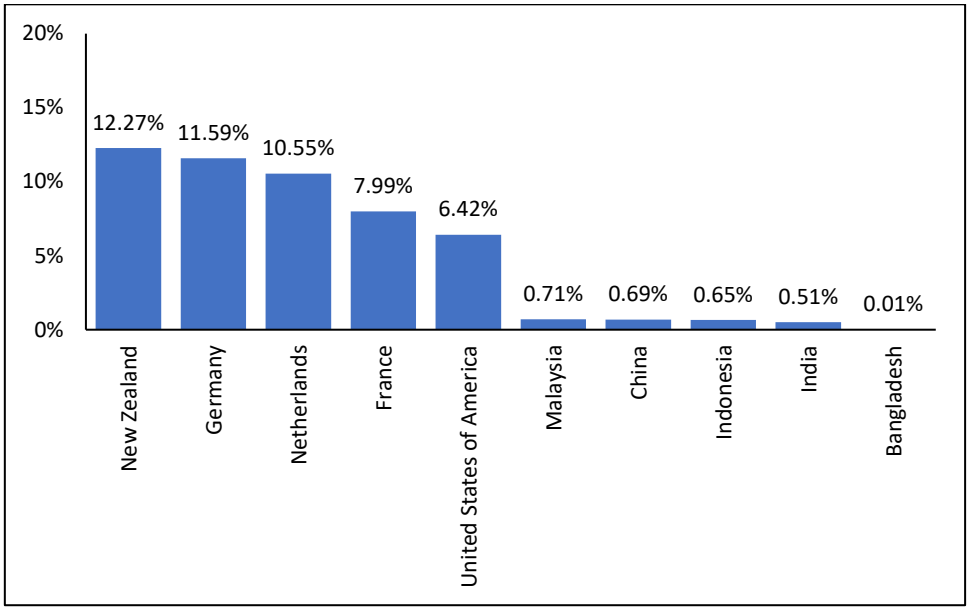
Key Takeaways for Bangladesh

- Developing sustainable fishing harbors and fish landing centers
- Reducing post-harvest losses by providing cold storage near harbors
- Improving logistics to ensure the global standards
- Providing financial support to the fisherman and fish farmers in the off season

A Comparative Analysis of Dairy Industries: New Zealand, Germany, and India

Figure 38 highlights the distribution of global dairy product exports among various countries. New Zealand leads the global dairy product exports with 12.27 per cent, followed by Germany at 11.59 per cent. Among neighboring countries of Bangladesh, India's contribution accounts for only 0.51 per cent of the global market, which is still higher than Bangladesh's.

Figure 38: Major global exporters of dairy products



Source: Trade Atlas, 2024

New Zealand: New Zealand's dairy industry has strategically shifted towards producing higher-value dairy products, such as speciality cheeses, infant formula, and nutritional dairy powders, which command premium prices in the global market. This transformation from raw milk to high-value products not only boosts profit margins but also allows the industry to access niche markets, catering to specific consumer segments. This diversification reduces the industry's vulnerability to fluctuations in commodity prices, ensuring more stable and sustainable growth.

Additionally, New Zealand's Free Trade Agreement (FTA) with China has played a crucial role in the industry's expansion. The removal of tariffs on New Zealand dairy products has significantly lowered the cost of exporting to China, enhancing the competitiveness of New Zealand's products in this key market. The combination of higher export volumes and increased prices, due to reduced competition, has led to substantial revenue growth for the New Zealand dairy industry, further solidifying its position in the global market.

Germany: Germany's dairy industry has significantly benefited from the close collaboration between scientific research institutions and the dairy sector. Universities have been at the forefront of dairy research, developing new technologies, products, and processes. This has led to innovations such as improved feed formulations, advanced breeding techniques, and more efficient milking systems, as well as the development of new dairy products, such as functional foods, organic products, and specialized dairy ingredients. This led to optimizing the process, by reducing costs and minimizing environmental impact. Overall, strong partnerships between universities and dairy companies facilitate knowledge sharing and technology transfer. Universities often provide extension services to dairy farmers, helping them implement research findings and improve their practices. Furthermore, universities conduct research on sustainable dairy farming, including studies on climate change mitigation, resource efficiency, and animal welfare. By promoting sustainable and ethical practices, universities help build consumer trust in the German dairy industry. This academic-industry synergy not only drives innovation but also ensures that the German dairy sector remains competitive, sustainable, and responsive to global market demands.

India: India's dairy sector has achieved significant growth and stability, largely due to the government's active financial involvement and strategic initiatives. Key government expenditures on agricultural research, pest control, inspection, grading, and marketing services have created a stable environment that fosters sectoral growth. The 'National Programme for Dairy Development' has been instrumental in building and enhancing dairy infrastructure for milk procurement, processing, and marketing through State Cooperative Dairy Federations and District Cooperative Milk Producers' Unions. Moreover, government support through income insurance and safety-net programs encourages investment by providing financial security to entrepreneurs. The government

has also initiated packages to develop modern infrastructure with efficient supply chain management, including integrated cold chains and value-addition facilities. These efforts, combined with flexible credit support from the banking system, incentivize small farmers to upgrade their production capabilities.

In addition to financial support, India has implemented structural adjustment assistance to facilitate the financial and physical restructuring of the dairy sector. Programs such as producer retirement initiatives and resource retirement programs have helped optimize land and resource use. The 'Production Linked Incentive (PLI) Scheme for the Food Processing Industry' further strengthens the value chain by incentivizing the production of high-value products like mozzarella cheese. Meanwhile, the 'Operation Flood' program has created a vast network of dairy cooperatives, expanding milk-processing capacity to approximately 15.6 million liters per day and involving 8.4 million milk-producer households. This cooperative network ensures that the benefits of the dairy sector's growth are widely shared, making it a cornerstone of India's agricultural economy.

Box 7: Key takeaways for Bangladesh in dairy sector

Key Takeaways for Bangladesh

- Collaboration between scientific research institutions, universities and the dairy sector on dairy research, developing new technologies, products, and processes
- Improving feed formulations, advanced breeding techniques, and more efficient milking systems
- Advanced pest control, inspection, grading system, and sanitary procedures
- Modernization of dairy infrastructure for milk procurement, processing, and marketing

3.4 Jute and Jute Products Sector

3.4.1 Biggest Obstacles Faced by the Sector

The jute and jute products sector in Bangladesh is traditionally a big part of the country's economy. The golden fiber faces a variety of challenges that are particularly pronounced across different scales of operation. Islam et al. (2015) highlighted the lack of capital, inputs, and market information as one of the main obstacles to the jute industry. The sector faces challenges due to its limited product diversification which is essential for increasing exports. Bangladesh misses out on value-added product opportunities in the case of jute export. Despite being the world's biggest exporter of raw jute (78.54%), it performs poorly in the case of jute products. There is a gap in producing fashionable and diversified jute products. As a result, the industry fails to cater to the younger generation. Besides, India has extended 'Anti-dumping duty' on certain jute products from Bangladesh (The Business Standard, 2022). It significantly affects Bangladeshi jute exports as India is the largest importer of Bangladeshi jute.

Moreover, BJMC has taken the initiative to lease out the jute mills. For this, there is a requirement for successful bidders to deposit rent for 36 months as security. This process is burdensome, especially for small investors, coupled with high maintenance costs and outdated machinery of the said mills (The Daily Star, 2023a). Additionally, there has been a demand for access to low-interest bank loans, adjusting tax rates on jute exports, increasing cash assistance to 20 per cent for various jute products, waiving the tax at source on export incentives, ensuring the availability of high-yielding jute seeds, and improving the accuracy of raw jute production, consumption, and export statistics (The Financial Express Bangladesh, 2024).

The study has divided the jute and jute products industry into four sizes- micro, small, medium and large to look at the challenges at different operational levels (Chart 6).

Micro jute firms: The micro firms in the jute and jute products sector struggle with fundamental issues such as access to land and the absence of investment. This is compounded by a shortage of skilled labour and lengthy procedures for obtaining business licenses and permits. Moreover, lack of collateral is also an issue for the micro firms. Human resource constraints, financial resource constraints, physical resource constraints and policy input constraints are the main obstacles to eco-friendly jute micro enterprises (Islam & Jian, 2019).

Small jute firms: The small firms in the jute sector face the most challenges in financing. The issue of access to finance is more in the overall sector. Moazzem et al. (2009) state that both public and private jute mills in Bangladesh have to face a lot of debt burden. Labour shortage, higher tax rates, and access to land are also some of the challenges for small jute firms.

Medium-sized jute firms: Medium-sized jute firms face access to financing issues. The medium-sized jute firms face the dual burden of insufficient investment and the complexities of stringent customs and trade regulations, alongside the same labour shortages and regulatory hurdles that trouble smaller firms.

Large jute firms: In large jute and jute products firms, the challenges include restrictive trade regulations, a lack of domestic investment, and inadequate access to land. These issues are further exacerbated by lengthy bureaucratic processes and an insufficient influx of foreign investment.

Chart 6: Biggest obstacles faced by jute and jute products sector

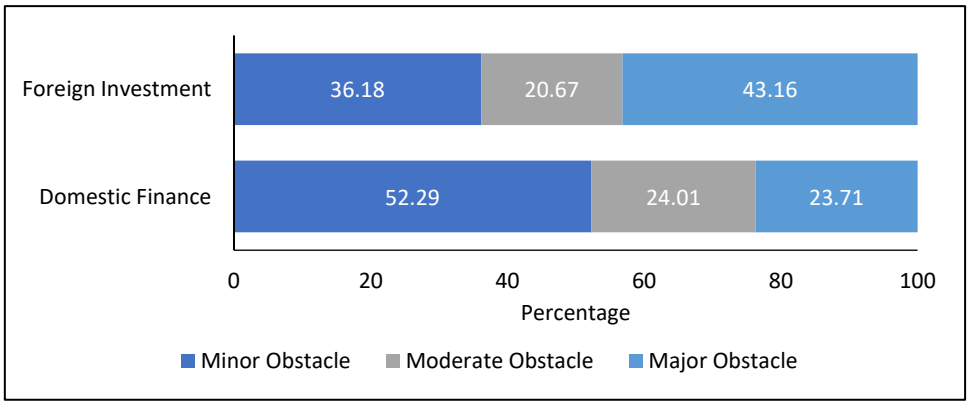
Micro	Small	Medium	Large
• Access to Land • Insufficient Foreign Investment • Lack of domestic investment • High Skill Labor Shortage • Lengthy Business license and permits procedure	• Insufficient Foreign Investment • Lack of domestic investment • High Skill Labor Shortage • Higher Tax Rates • Access to Land	• Insufficient Foreign Investment • Lack of domestic investment • High Skill Labor Shortage • Lengthy Business license and permits procedure • Stringent Custom and Trade Regulations	• Stringent Custom and Trade Regulations • Lack of domestic investment • Access to Land • Lengthy Business license and permits procedure • High Skill Labor Shortage • Insufficient Foreign Investment

Source: Authors' compilation from the Enterprise Survey

3.4.2 Financing Challenges

The Jute sector faces significant obstacles to accessing both domestic and foreign financing. Around 48 per cent of the firms in the Jute and Jute Products sector face moderate to major obstacles in accessing domestic finance. On the other hand, more than 60 per cent of the firms face moderate to major obstacles in accessing foreign investment (Figure 39). In this context, Raihan et al. (2023) stated that challenges such as taxation complexity, a higher tax burden and import duty, intricate repatriation processes, shortage of skilled professionals, complicated foreign exchange regulations, and the absence of modern trade financing demotivate new foreign investors.

Figure 39: Level of difficulty in accessing finance in jute and jute products sector

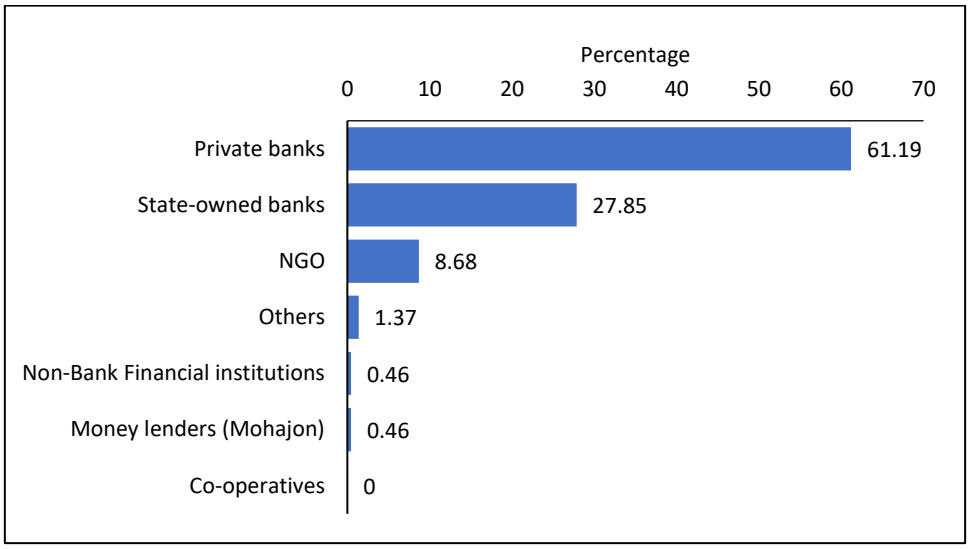


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Domestic Financing

Around 33.5 per cent of the firms in the jute and jute products sector have taken domestic loans at least once, according to SANEM-UNDP-BIDA Enterprise Survey 2024. Private banks and state-owned banks account for around 89 per cent of domestic loans in the jute and jute products sector (Figure 40)

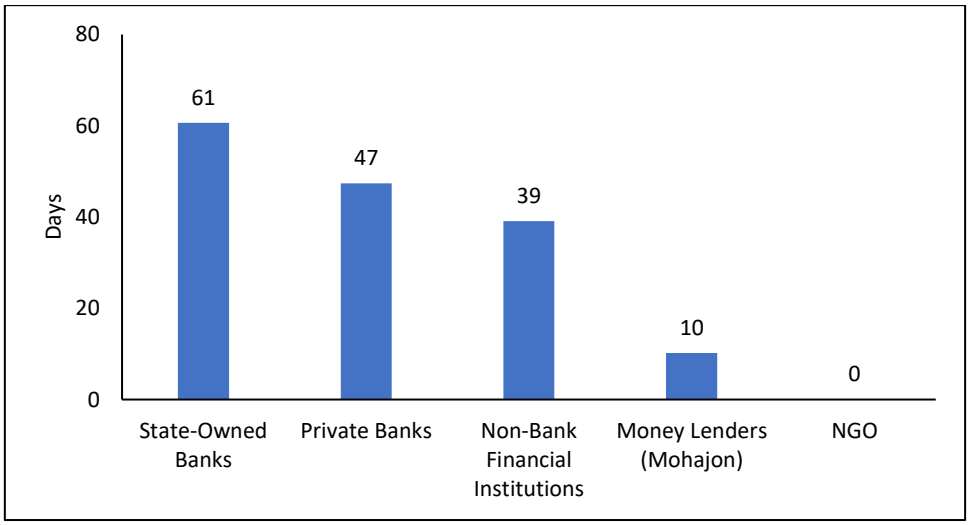
Figure 40: Sources of loan in jute and jute products sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The average time to secure a loan in jute and jute products is more than agro-processing sector. State-owned banks take around 2 months (61 days) on average and private banks take 47 days on average as shown in Figure 41. NBFIs also take around 39 days. Informal sources like Mohajon take around 10 days on average to provide a loan. Even though an informal source takes less time to get the loan, it has a higher opportunity cost (Karaivanov & Kessler, 2013). McKernan et al. (2005) stated that informal loan sources are usually considered in emergency situations due to their flexibility and quick approval of loans.

Figure 41: Average time to secure a domestic loan in jute and jute products sector (in days)

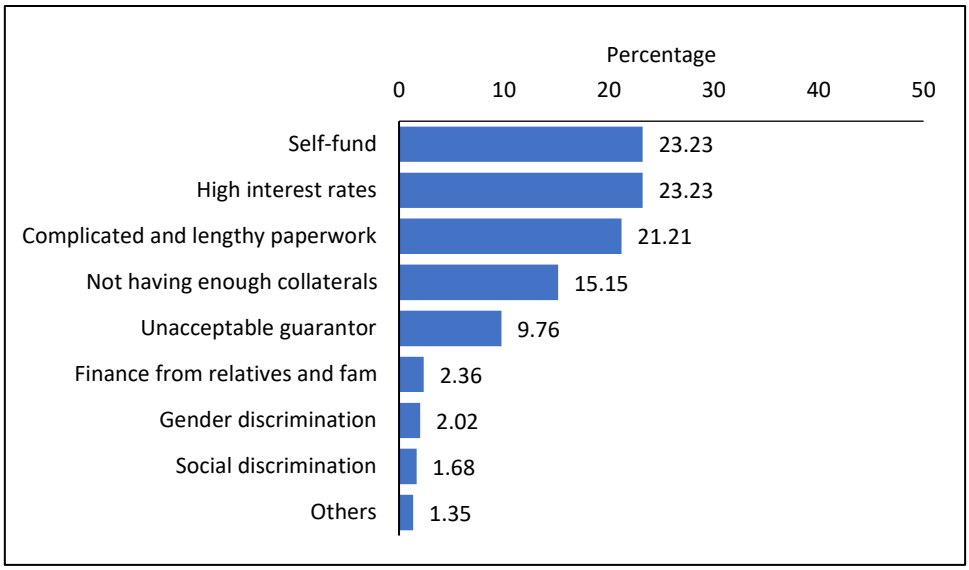


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

In the jute and jute products sector, the top three reasons for not taking loans are self-funding (23.23%), high interest rates, (23.23%) and complicated and lengthy paperwork (21.21%). Figure 42 also shows that not having enough collaterals (15.15%) and an unacceptable guarantor (9.76%) are significant reasons for the firms not taking loans. Various types of discrimination are also noticed as barriers to access to finance. Hossain (2019) also

showed that high interest rates, complicated loan processes, and biased bank officers are major barriers for rural female entrepreneurs in accessing loans from financial institutions in Bangladesh (Figure 42).

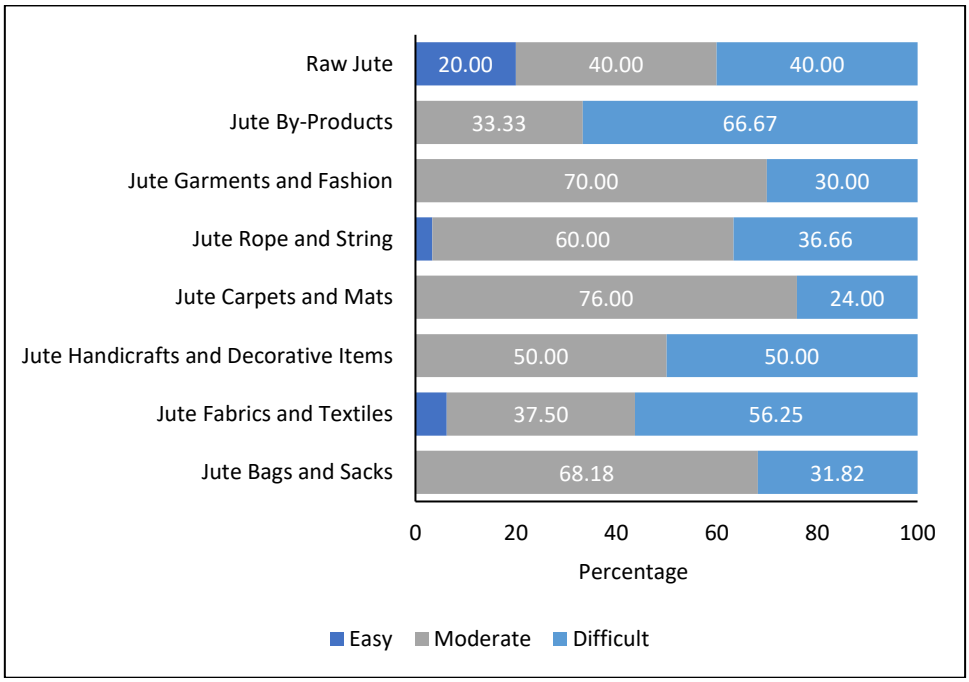
Figure 42: Reasons for not taking loan in jute and jute products sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Bangladesh leads in the export of raw jute while it performs poorly in the case of jute products. In the case of availing domestic loans, raw jute firms face comparatively less challenge than other jute products. Around 20 per cent of raw jute firms find it easier to avail loans. On the other hand, jute by-products (66.67%), jute fabrics and textiles (56.25%) and jute handicrafts and decorative items (50%) face the most challenges (Figure 43).

Figure 43: Difficulties faced in taking loans in jute and jute products sub-sectors

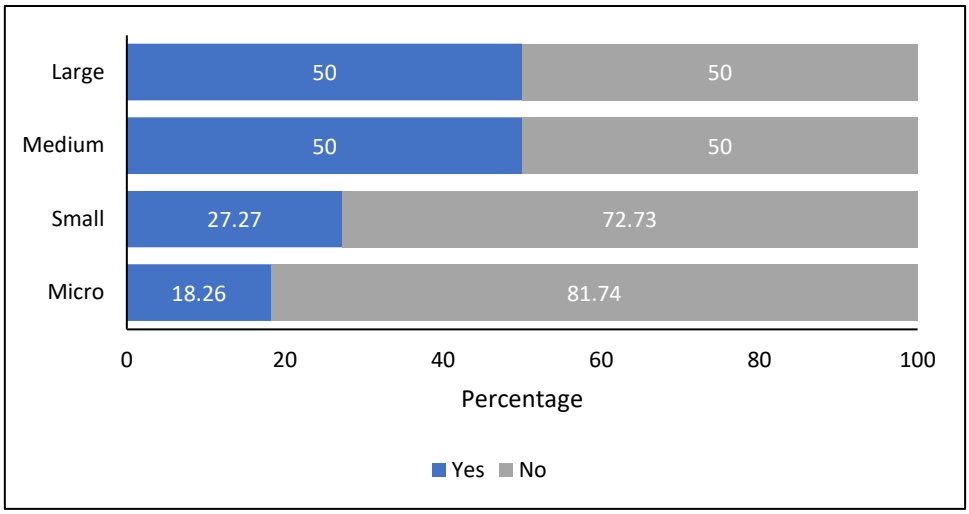


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Compared to the agro-processing sector, the loan rejection rate is higher in the jute sector. Half of the loan requests of the large and medium firms in this sector get rejected (Figure 44). Akter et al. (2020) have highlighted the current financing challenges of the jute sector which resulted in only seven to ten of these mills running

effectively, five to seven running with difficulties, and the rest being shut down. As the firms are heavily burdened with bad loans, the banks cannot fund them further.

Figure 44: Rate of loan rejection in jute and jute products sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

In the past, the jute mills were mostly state-owned or public, which suffered from government funding not being disbursed in time. By the time the fund was disbursed, the market price of jute increased by 40 per cent to 50 per cent (The Financial Express Bangladesh, 2015). The government has taken initiatives in the past couple of years to reopen state-owned jute mills under the BJMC through private management via rental agreements. However, the required 36-month rent deposit and the high costs of maintenance and refurnishing old machinery have become burdensome for small investors, acting as entry barriers.

3.4.3 Compliance Challenges

SPS and TBT Challenges of Jute and Jute Products: The numerous standards imposed by importing countries have significantly increased compliance costs. For example, in Australia, sacks and woven fabrics require certification confirming that industrially processed jute products come from pest-free crops. Also, fiber products packed in wooden crates or placed on wooden pallets must be fumigated. Previously, methyl bromide was used for fumigation, but it is now banned in many countries. The alternative treatments are expensive as they require multiple chemicals to cover a wide range of pests. Exporters also face inspection and fumigation fees to India ranging from approximately Rs. 900 to Rs. 9000 per shipment[26]. Furthermore, the legislation governing non-tariff measures specifies twelve land ports[27] of entry through which jute and other plants can be exported to India.

3.4.4 Infrastructural Challenges

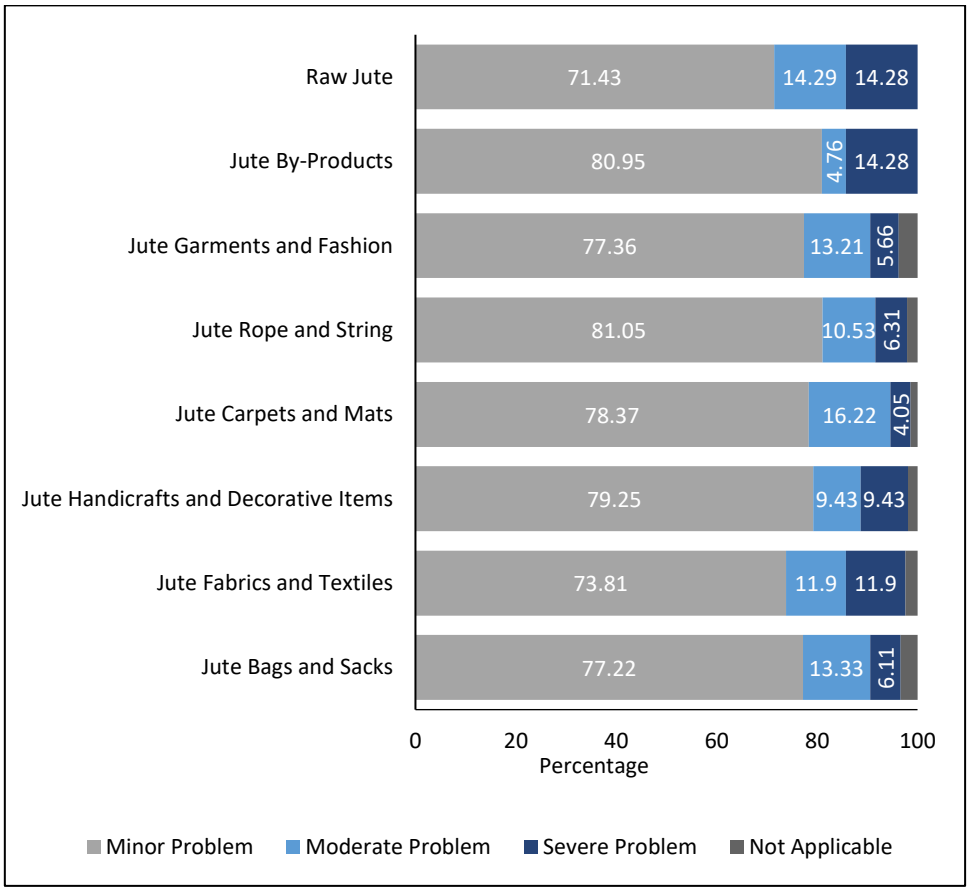
In 2020, 25 public jute mills have been closed due to incurring huge losses. However, the main reason behind this was they relied on outdated and inefficient technology and overall mismanagement (The Financial Express Bangladesh, 2024). For instance, raw jute was manually cut using heavy knives. Recently five of the 25 closed down mills have returned to production (The Business Standard, 2024a). However, infrastructural challenges persist. The lack of maintenance leads to significant infrastructural degradation (The Daily Star, 2024a).

[26] Bangladeshi jute exporters face stringent measures and conditions, particularly from India, the largest importer of Bangladeshi jute and jute products. India places more restrictions on jute imports than other countries. These include regulations under the Plant Quarantine Order (2003), Jute Grading and Marking Rules (1978), and Jute Bags Marking Order (2002), along with inspection and fumigation fees ranging from Rs. 900 to Rs. 9000 per shipment.

[27] 12 land ports are: Agartala (Tripura); Bongaon (West Bengal); Gede Road Rly. Stn. (West Bengal); Jogbani (Bihar); Moreh (Manipur); Panitanki (West Bengal); Raxual (Bihar); Zokhwathar (Mizoram); Changrabandha (West Bengal); Ghozadanga (West Bengal); Mehadipur (West Bengal); Vittamod (Bihar)

Electricity: The jute industry faces moderate to severe problems with electricity supply (Figure 45). Jute Carpets and Mats, Raw Jute and Jute Bags and Sacks - sub-sectors report moderate problems with 16.22 per cent, 14.29 per cent and 13.33 per cent of respondents respectively highlighting this problem. Severe electricity problems are most prominent in Raw Jute (14.28%), Jute by-products (14.28%), Jute Fabrics and Textiles (11.9%), Jute Handicrafts and Decorative Items (9.43%). Here, the raw jute and jute by-products face severe electricity issues in the production process making the overall production slower. This has an indirect effect on other sub-sectors as they are reliant on these inputs. These findings emphasize the need for targeted improvements to address electricity supply issues and enhance the efficiency of the jute industry.

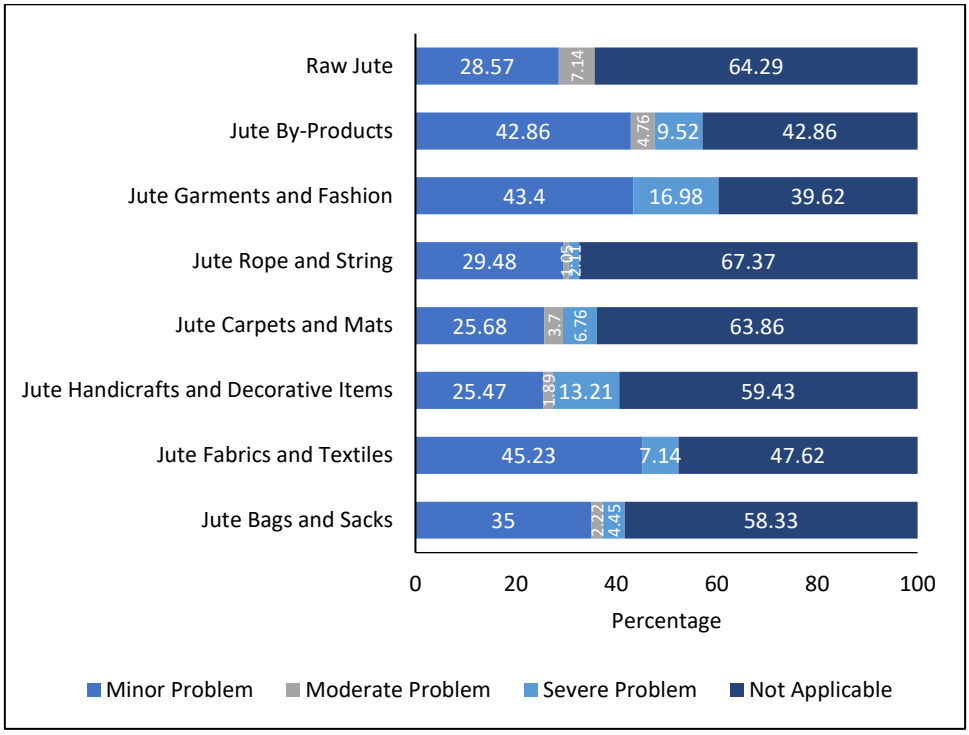
Figure 45: Level of challenges for basic utilities (electricity) in jute and jute products sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Gas: Another significant issue is the insufficient gas pressure for jute and jute products. The current level of gas supply and low pressure makes production disruption. According to Figure 46, Jute Garments and Fashion (16.98%) and Jute Handicrafts and Decorative Items (13.21%) report notable moderate to severe gas-related issues, indicating critical infrastructure deficiencies. Additionally, sub-sectors such as Jute Fabrics and Textiles (7.14%) and Jute By-Products (9.52%) also face severe gas-related challenges. These findings highlight the urgent need for improved gas infrastructure to ensure consistent and efficient production across the jute industry.

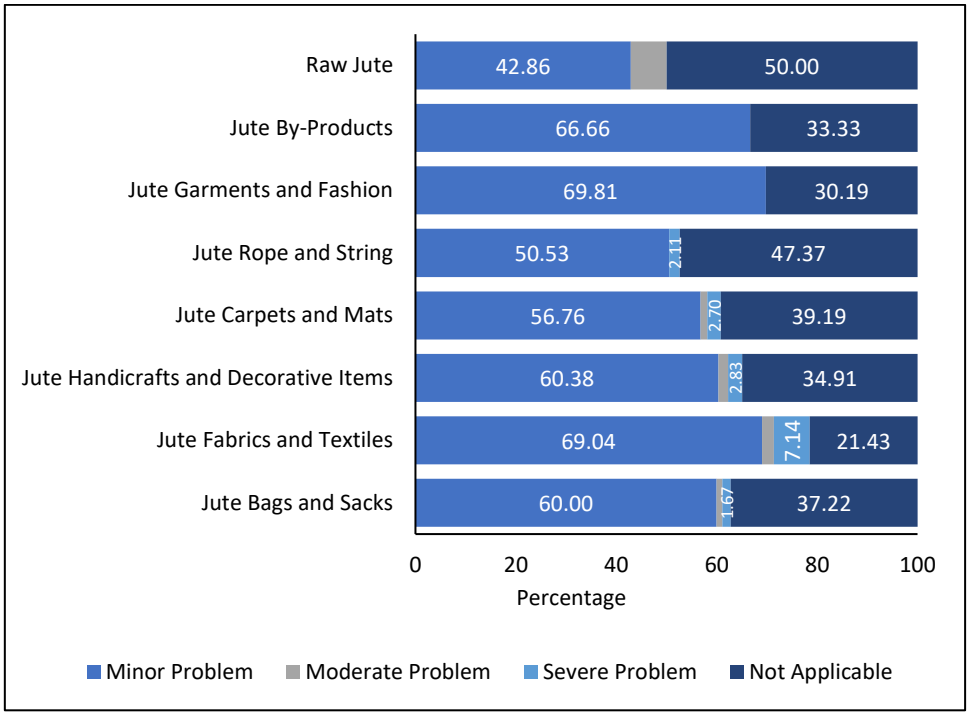
Figure 46: Level of challenges for basic utilities (gas) in jute and jute products sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Water: The firms have reported water supply to pose fewer problems for the jute sub-sectors compared to other utilities (Figure 47). Around 50 per cent of firms in each sub-sector face minor problems. Very few sub-sectors, such as Jute Fabrics and Textiles (7.44%), Jute Handicrafts and Decorative items (2.83%) have reported water supply as a severe challenge.

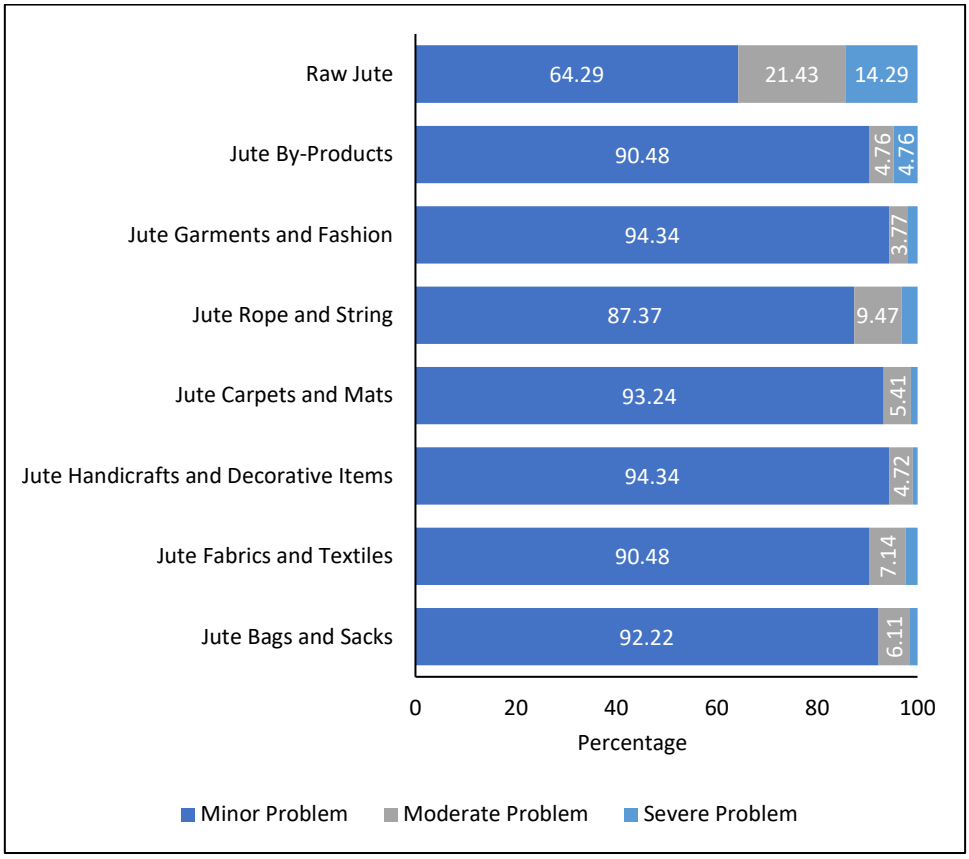
Figure 47: Level of challenges for basic utilities (water) in jute and jute products sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Internet: Internet access is a minor problem for most of the sub-sectors in the jute industry. Almost 65-94 per cent of the firms in each sub-sector reported minor problems. This could be due to less internet dependence of these sub-sectors (Figure 48).

Figure 48: Level of challenges for basic utilities (internet) in jute and jute products sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Furthermore, KIIs with industry experts reveal that there is a lack of initiative and advanced technology from textile and fashion design institutes such as BUTEX, BUFT, and NIFT to diversify and create more fashionable products. This limits the industry's ability to compete with neighboring countries like India, which have better sustainability in the market.

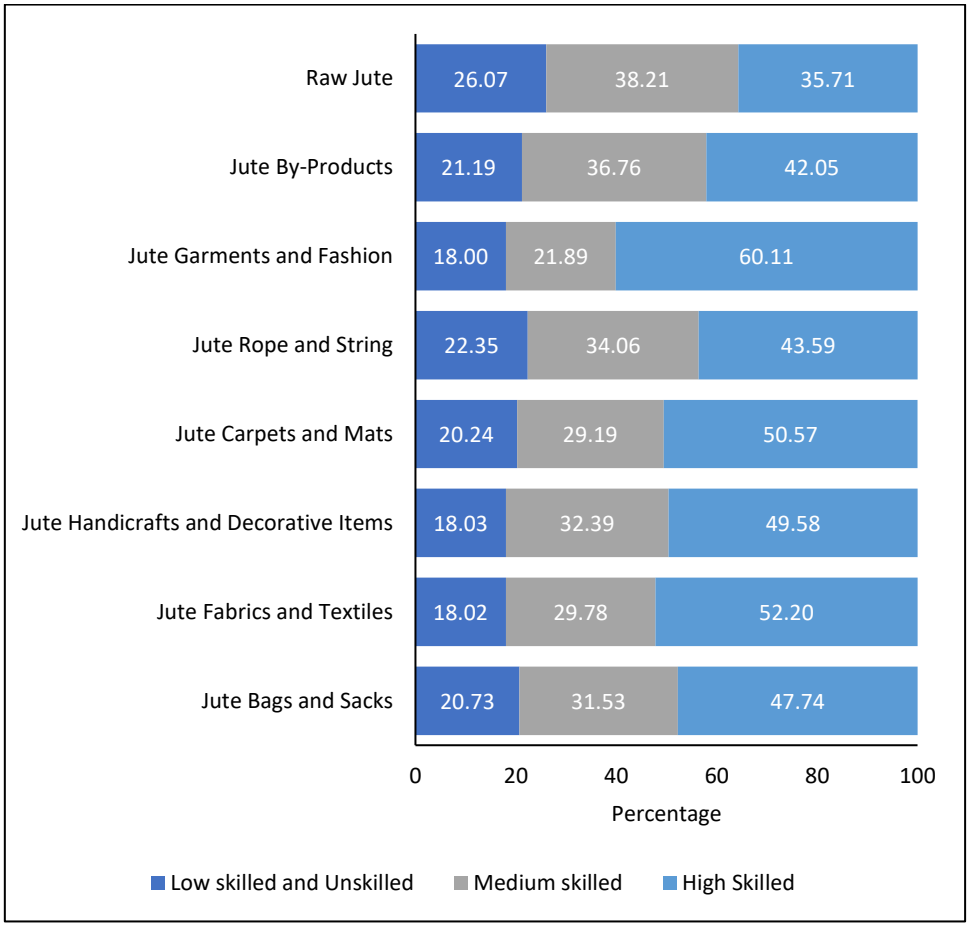
3.4.5 Labour Force Challenges

Historically, jute has been a significant contributor to the country's economy, providing livelihoods for millions of workers. The jute industry in Bangladesh employs an estimated 2.43 lac people in the mills in fiscal year 2021-22 (The Daily Star, 2023b). However, challenges such as inadequate training, poor working conditions, and a lack of investment in skill development can limit the sector's competitiveness in the global market. Addressing these labour issues is essential to improving product quality, increasing efficiency, and ensuring that the jute industry can continue to thrive in a competitive international environment.

The jute industry workforce in Bangladesh predominantly consists of medium to high-skilled workers, particularly in the jute garments and fashion sub-sector, which demands a higher level of expertise due to its complexity. The design, patternmaking, and production processes require specialized skills, contributing to a higher proportion of high-skilled workers, which stands at 60.11 per cent. This sector is also closely linked to global fashion trends, which necessitates constant innovation and adaptability, further reinforcing the need for a highly skilled workforce. Jute fabric and textile production involve complex processes such as spinning, weaving, dyeing, and finishing. These processes require technical proficiency and experience, hence 52.2 per cent of the workforce is highly skilled. The production processes in raw jute and jute rope and string are less

complex and more labour-intensive, which explains the lower proportion of high-skilled workers (26.07 per cent in raw jute and 22.35 per cent in jute rope and string). These sectors involve more basic operations such as harvesting, stripping, and simple twisting or binding, which do not require advanced skills (Figure 49).

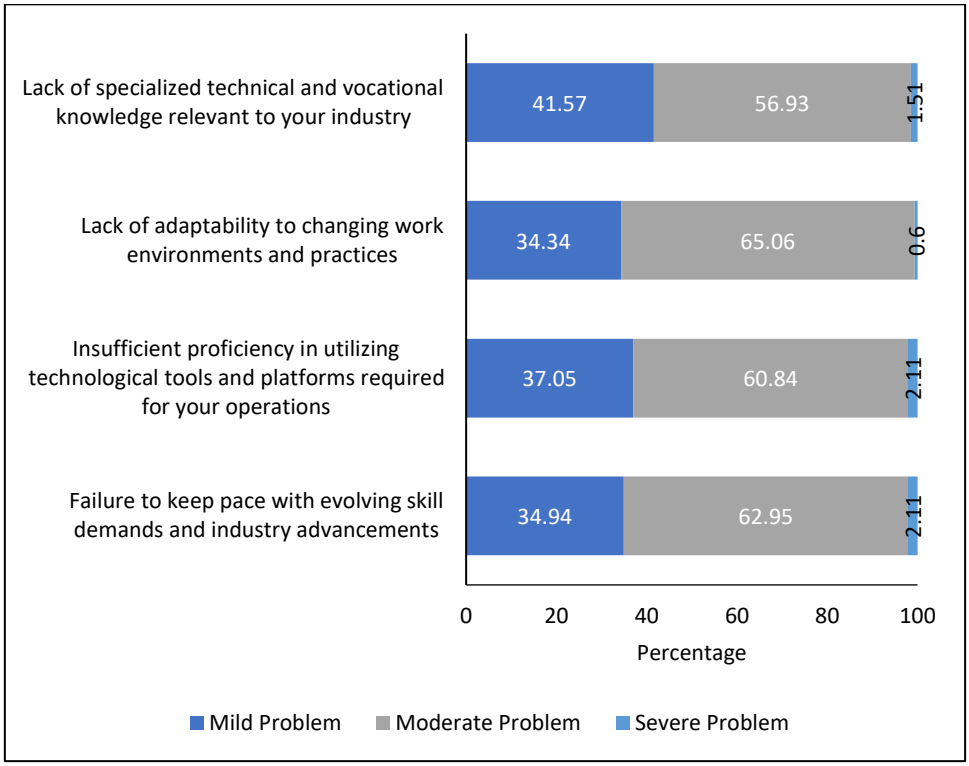
Figure 49: Skill level of the workers in jute and jute products sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

As the jute industry has evolved, particularly in areas like jute garments, textiles, and high-value products, the need for specialized technical and vocational knowledge has become more noticeable. The moderate problem level in lack of Specialized Technical and Vocational Knowledge (59.63%) suggests that while some progress has been made, there is still a significant gap in providing workers with the necessary technical skills. The jute sector may lack sufficient infrastructure for specialized training programs, particularly in rural areas where much of the workforce is located. This gap limits workers' ability to acquire the advanced skills needed to produce high-quality products that can compete globally. As the industry modernizes, adaptability becomes crucial. Lack of Adaptability to Changing Work Environments and Practices is a moderate problem (65.06%) which indicates that while there might be an awareness of the need for change, many workers struggle to adapt due to a lack of flexibility in their skills or reluctance to abandon familiar practices. Insufficient Proficiency in Utilizing Technological Tools and Platforms (60.84%) is also a moderate problem. Failure to Keep Pace with Evolving Skill Demands and Industry Advancements (62.95%) is a moderate issue that suggests that the workforce is struggling to keep up with the rapid changes in the industry, which could limit the industry's growth potential. As new technologies and practices emerge, existing skills can quickly become outdated (Figure 50).

Figure 50: Labour force related challenges in jute and jute products sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

One significant issue in the Jute sector is the low number of candidates with bachelor's degrees in science or engineering, which forces enterprise management to hire production management executives with academic backgrounds in social sciences or commerce, often unsuitable for the technical demands of the industry. There is a high demand for technical workers involved in critical production processes such as assortment, batching, cutting, and drawing. However, technicians and workers engaged in the procurement of jute, and in batching and selection activities, particularly regarding fiber quality, often lack adequate training (Raihan et al., 2022). Furthermore, there is a moderate demand for machine operators in various sections, including softening, carding, spinning, winding, lapping, dampening, and weaving, but the supply is insufficient.

Box 8: Takeaways from national jute policy of Bangladesh

National Jute Policy 2018

The National Jute Policy 2018 was introduced by the government of Bangladesh with the goal of revitalizing the jute sector, improving the livelihoods of farmers, and enhancing the competitiveness of the jute industry on the global stage. The policy aims to position jute as a sustainable and eco-friendly alternative to synthetic products, while ensuring the growth of value-added jute products and modernizing the sector's infrastructure.

The policy has 5 strategic priorities- production of good quality jute; fair price for jute; diversification of jute products; modernization of jute mills and expansion of market for jute products. Key takeaways from the policy include a focus on increasing raw jute production, improving the quality of jute products, modernizing jute mills, performance monitoring of the jute mills, creating Work Plan for the national level strategic plan to revitalize the sector. It emphasizes the development of diversified, high-value jute products like textiles, packaging materials, and biodegradable alternatives. The policy also aims to increase exports, particularly in non-traditional markets, and promote research and innovation in the jute industry. Additionally, it outlines measures to support farmers, enhance the supply chain, and improve the overall competitiveness of the sector.

However, the policy has notable gaps.

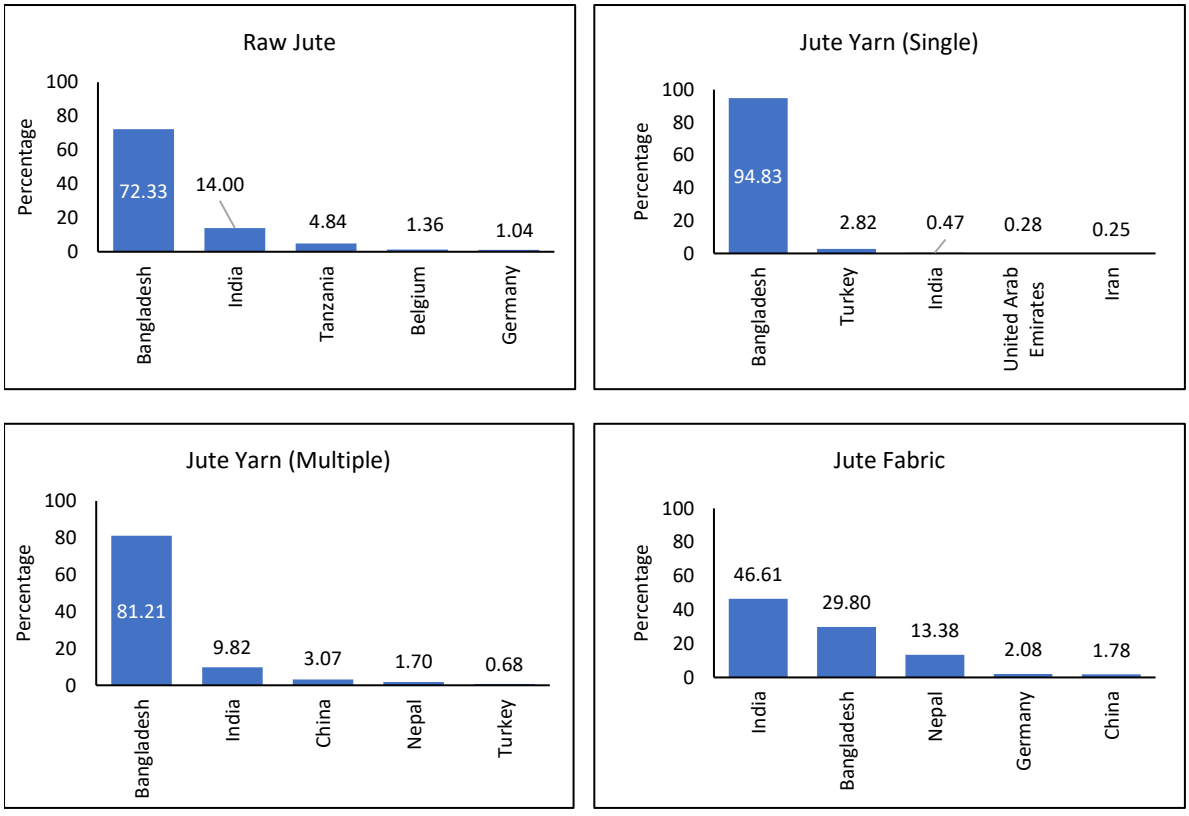
- It lacks a clear framework for research and development.
- The emphasis on raw jute production leaves little room for innovation in high-value products.
- There are no clear mechanisms for funding the development of new technologies, the establishment of jute innovation centers, or the promotion of diversification. Without adequate public-private partnerships or financial incentives, the policy's ambitious goals risk remaining unfulfilled.
- While the policy mentions providing support to jute farmers, it does not include detailed measures for empowering small-scale farmers or producing jute products.

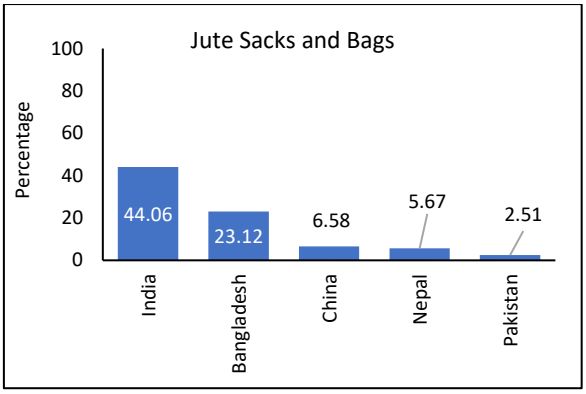
Country Comparison

Bangladesh is the largest exporter of raw jute and jute yarn. Bangladesh produces 11-12 lac tonnes of jute per year of which, two lac tonnes of raw jute are exported directly, and another two lac tonnes are utilised locally (Ministry of Foreign Affairs, 2023). Bangladesh contributes 72.33 per cent of the world's raw jute exports, 94.83 per cent of single jute yarn exports, and 81.21 per cent of multiple jute yarn exports. The jute yarns are available in both single-ply and multiple-ply. They are widely used for tying, knotting, and binding, especially for agricultural commodities. India is in the second position in the case of raw and multiple jute yarn (Figure 51).

On the other hand, Bangladesh performs poorly in the case of readymade jute products. The scenario is quite different for processed jute goods like jute fabric (29.80%) or sacks and bags (23.12%). In the case of finished products, India is leading by a large margin compared to raw jute or jute yarn.

Figure 51: World export of jute products





Source: Trade Atlas 2024

Even after being the largest producer of raw jute, Bangladesh is failing to do the transformation part due to the lack of proper implementation of the national policy. On the other hand, the Indian Jute Policy underscores the importance of a comprehensive approach with clear guidelines for production, marketing, institutional restructuring, technological adoption, labour management, etc. For Bangladesh, the challenge lies in implementing a similarly structured framework provided by the National Jute Policy 2018.

Moreover, in its effort to produce more readymade and bio-friendly jute products, Bangladesh launched 'Sonali Bag' made of jute. However, the country is struggling to meet even one-third of the local demand for these bags. The BJMC has yet to scale up production due to insufficient investment and outdated machinery. A report from 2021 states that, the state-owned Latif Bawani Jute Mills in Demra produces 15,000 Sonali bags daily, while local demand is nearly three times higher (The Business Standard, 2021).
In comparison with neighboring countries, Bangladesh faces significant challenges in advancing its jute industry, primarily due to a lack of implementation of policies. The lack of modern technology further hampers the industry's efforts, limiting its capacity for diversification and innovation in jute products. This combination of policy gaps and technological constraints restricts the sector's growth potential, making it difficult for Bangladesh to compete effectively on a regional scale.

3.5 IT and ITES Sector

3.5.1 Biggest Obstacles Faced by the Sector

Despite the substantial potential for economic growth, the IT and ITES sector in Bangladesh encounters several significant challenges that differ based on the size of the enterprises (Chart 7).

Micro Enterprises: Micro-enterprises in the IT and ITES sector face significant hurdles, starting with a severe lack of domestic investment. They struggle to secure the capital needed for growth, and their operations are further hampered by the lengthy and complex procedures required to obtain business licenses and permits. In addition, they are burdened by stringent customs and trade regulations, which complicate the import and export of necessary technologies and services. High tax rates add another layer of financial stress, and the sector's shortage of high-skilled labour limits their ability to innovate and scale.

Small Enterprises: Small enterprises experience many of the same difficulties as micro-enterprises but on a slightly larger scale. In addition to a lack of domestic investment, they also suffer from insufficient foreign investment, which restricts their ability to expand and compete internationally. The complexities of stringent trade regulations, and high tax rates, create a challenging environment for growth. Like their smaller counterparts, small enterprises are also critically affected by the shortage of high-skilled labour, which hinders their capacity to develop and implement cutting-edge technologies.

Medium Enterprises: Medium-sized enterprises are caught in a difficult position, facing both foreign and domestic investment shortages, which limit their ability to scale operations and compete on a global level. The persistent shortage of high-skilled labour remains a significant barrier, preventing these enterprises from fully

capitalizing on opportunities in the rapidly evolving tech landscape. Additionally, high tax rates impose a heavy financial burden, while access to land—critical for establishing new facilities and expanding operations—remains a major obstacle.

Large Enterprises: Large enterprises face significant difficulties in securing access to land, which is essential for scaling operations and building infrastructure. The bureaucratic hurdles involved in obtaining business licenses and permits are particularly inconvenient for large enterprises, slowing down their ability to respond to market opportunities and expand. Additionally, the shortage of high-skilled labour continues to be a prevalent issue across all enterprises, and even large enterprises struggle to attract and retain the labour needed to maintain their competitive edge. Insufficient foreign investment also poses a significant challenge, limiting the ability of large enterprises to innovate and expand their market reach.

Chart 7: Biggest obstacles faced by IT and ITES sector

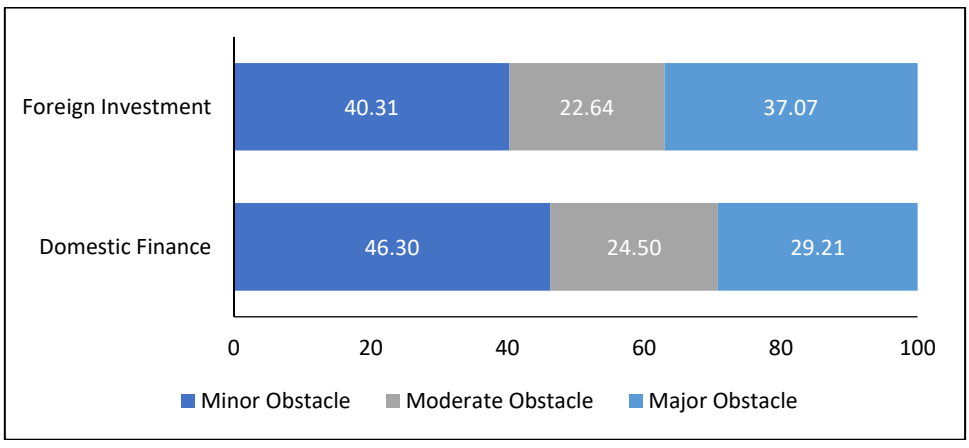
Micro	Small	Medium	Large
• Lack of domestic investment • Lengthy Business license and permits procedure • Stringent Custom and Trade Regulations • Higher Tax Rates • High Skill Labor Shortage	• Lack of domestic investment • Insufficient Foreign Investment • Stringent Custom and Trade Regulations • Tax Rates • High Skill Labor Shortage	• Insufficient Foreign Investment • Lack of domestic investment • High Skill Labor Shortage • Higher Tax Rates • Access to Land	• Access to Land • Insufficient Foreign Investment • Lengthy Business license and permits procedure • Higher Tax Rates • High Skill Labor Shortage

Source: Authors' compilation from the Enterprise Survey

3.5.2 Financing Challenges

Accessing finance is one of the major challenges in Bangladesh. Like the other two chosen sectors, IT and ITES also face higher level of difficulty in accessing foreign investment compared to domestic finance. Around 53 per cent of the firms face moderate to major obstacles in accessing domestic finance while 59.71 per cent of firms face challenges in fetching foreign investment in IT sector (Figure 52). For SMEs, the challenge is even more prevalent. While the sector has shown resilience and productivity growth, even during global financial crises (Shinkai & Hossain, 2011), SMEs struggled with limited access to finance (Hasan & Jamil, 2014).

Figure 52: Level of difficulty in accessing finance in IT and ITES sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Domestic Finance

According to SANEM-UNDP-BIDA Enterprise Survey 2024, around 60.24 per cent of firms have taken a loan at least once. Among the sources, private banks are the most dominant source of domestic loans by solely providing 76.32 per cent of the loan (Figure 53). Private banks also launched a special financial package to extend support to IT and ITES entrepreneurs in collaboration with the BASIS (The Business Standard, 2020). Around 60.62 days are needed on average to secure a loan from state-owned banks and 44.8 days are needed to secure a loan from private banks (Figure 54). NBFIs take around 32 days. In this sector, informal channels also take a long time for a loan. Around 30 days are needed to get loans from Mohajons.

Figure 53: Source of domestic loan for IT and ITES sector

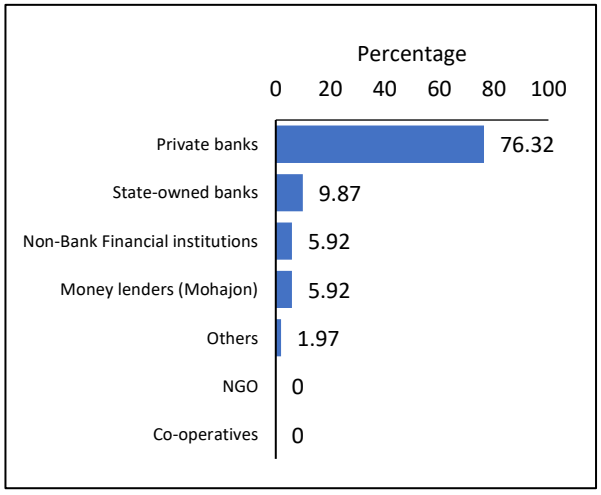
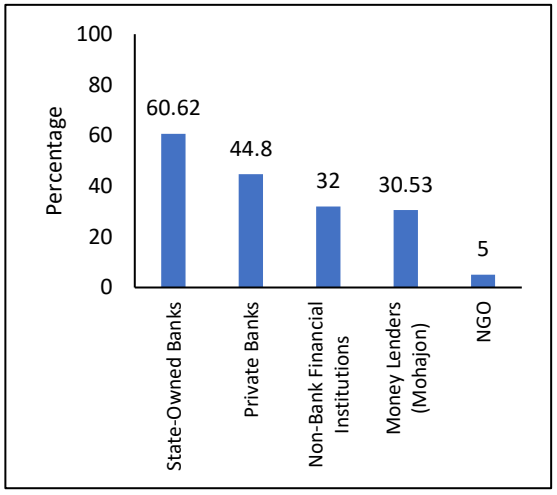


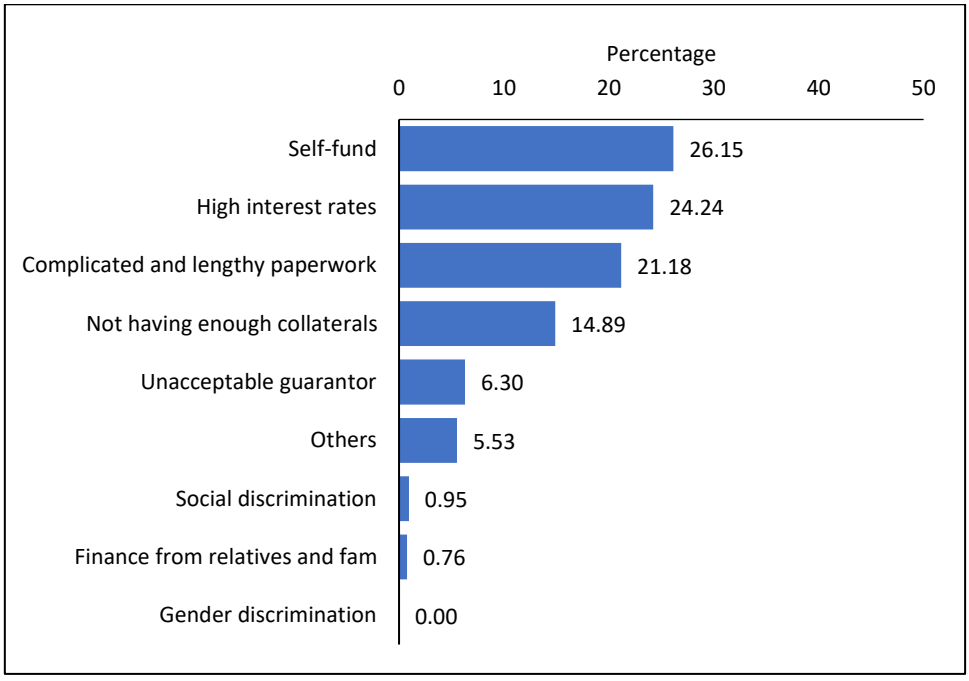
Figure 54: Number of days required to secure loan for IT and ITES sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Firms in this sector do not take loans due to self-fund (26.15%), high interest rates (24.24%), complicated and lengthy paperwork (21.18%) etc. (Figure 55).

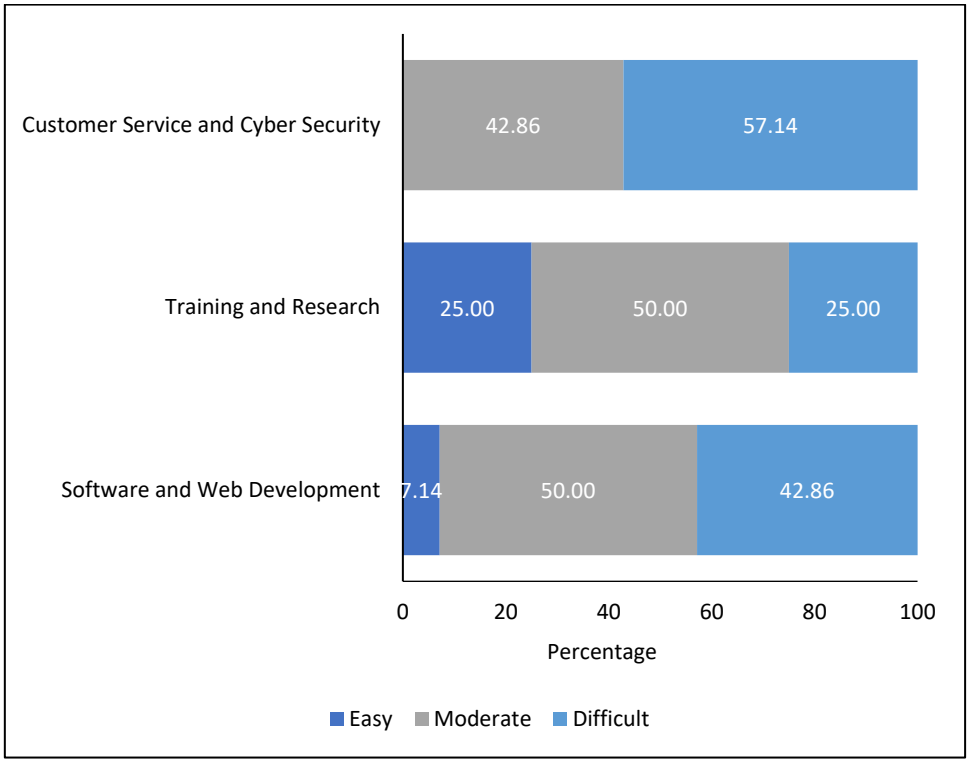
Figure 55: Reasons for not taking loan in IT and ITES sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Availing loans is difficult for the different sub-sectors of IT and IT-enabled sectors (Figure 56). Since IT and ITES is a service sector, the access to finance is more difficult. Besides, firms lack proper financial reporting which discourages the banks from providing loans (Rahman et al., 2015).

Figure 56: Level of difficulty for taking loans in IT and ITES sub-sectors



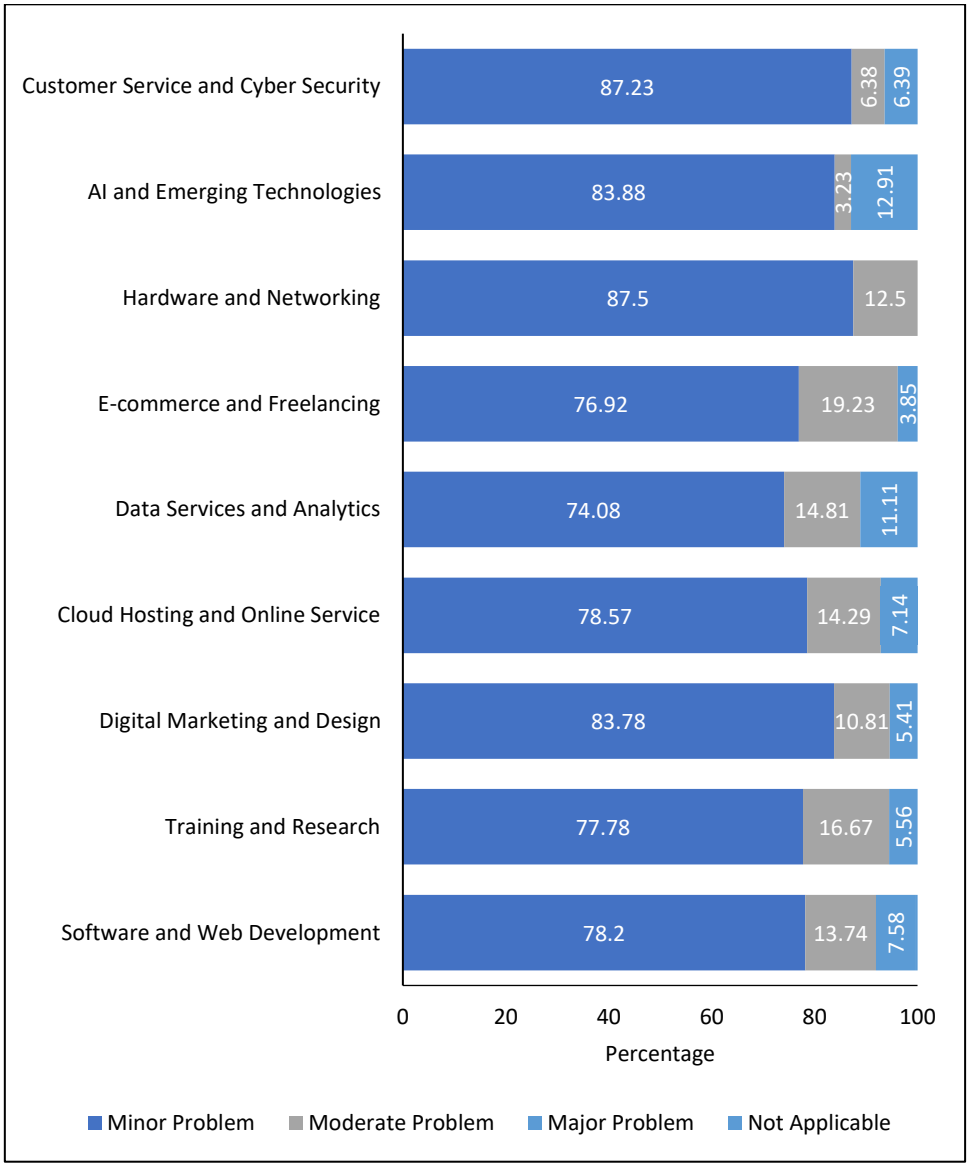
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

3.5.3 Infrastructural Challenges

In Bangladesh, unstable electricity and unreliable internet connectivity are major obstacles to the growing IT and ITES sector (Hossain, 2024). On that note, inadequate internet or broadband facilities are one of the key bottlenecks faced by the IT and ITES sector in attracting FDI (Jahangir, Safir, & Islam, 2021).

Electricity: Electricity is one of the basic needs for functioning in the IT and ITES sectors. But in IT and ITES sector, sub-sectors such as AI and emerging technologies and Data services and analytics face notable challenges with electricity supply, with around 12.91 per cent and 11.11 per cent respectively experiencing severe problems (Figure 57).

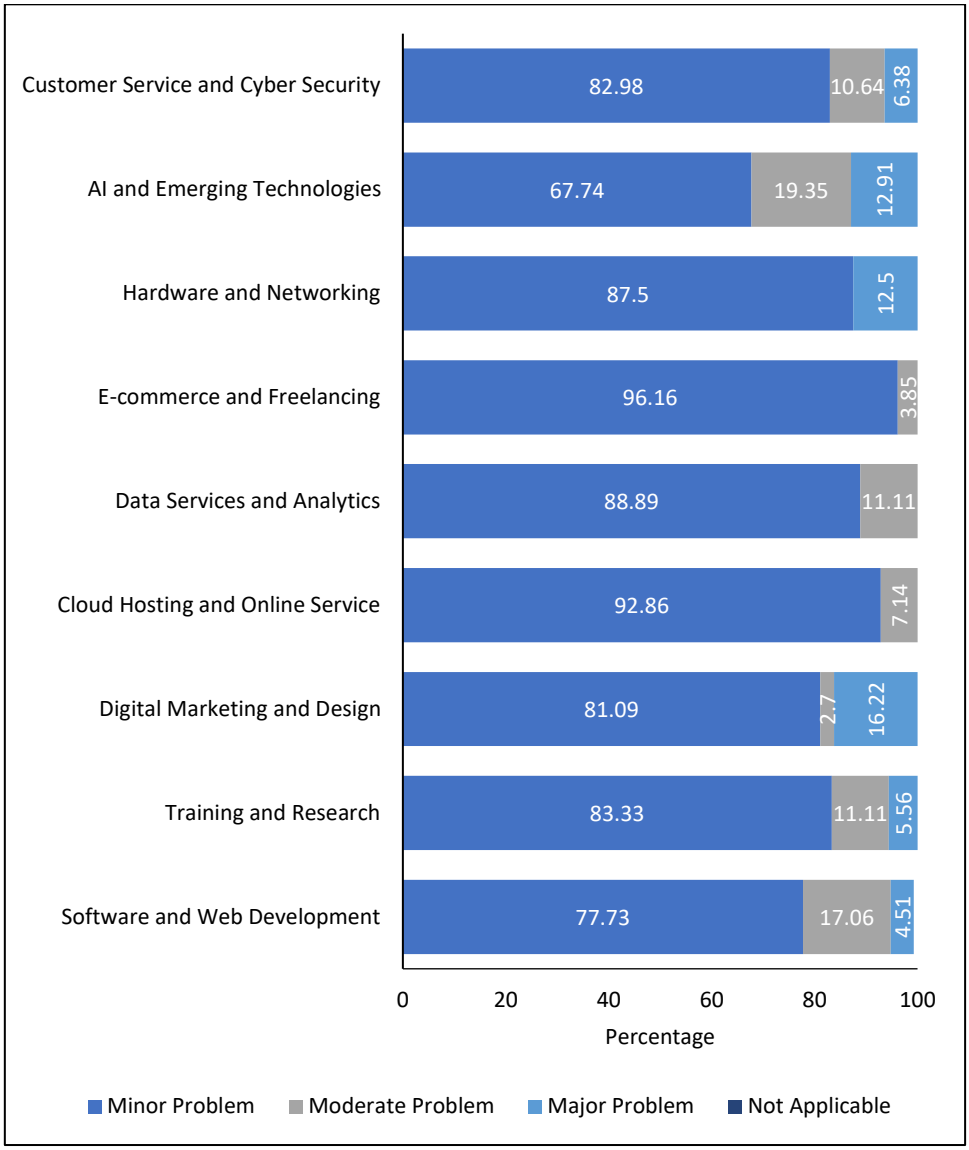
Figure 57: Level of challenges for basic utility (electricity) in IT and ITES sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Internet: Robust digital infrastructure is paramount for the IT and ITES sector's growth in Bangladesh. Enhancing mobile internet speeds and expanding fixed broadband coverage will significantly boost operational efficiency for IT and ITES firms, making the country a more attractive investment destination. In the IT and ITES sector internet connectivity poses significant challenges for the firms, especially for Digital Marketing and Design and AI and Emerging Technologies sub-sectors, where 16.22 per cent and 12.91 per cent of firms respectively report severe issues (Figure 58). Reliable internet access is crucial for these sectors to operate efficiently and maintain competitive advantage.

Figure 58: Level of challenges for basic utility (internet) in IT and ITES sub-sectors



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Currently, Bangladesh lags behind its regional peers in digital connectivity. It ranks 90th out of 108 countries in global mobile internet speeds and 100th out of 159 in fixed broadband. India, Vietnam, and Thailand, for instance, outperform Bangladesh in both categories (Table 8).

Table 8: Mobile internet and fixed broadband country ranking

Mobile internet			Fixed Broadband		
Rank	**Country**	**Mbps**	**Rank**	**Country**	**Mbps**
12	India	107.03	85	India	63.99
48	Vietnam	53.38	37	Vietnam	136.06
51	Thailand	52.05	8	Thailand	230.98
90	Bangladesh	24.49	100	Bangladesh	47.43

Source: The Speedtest Global Index, June 2024

To bridge this gap and unlock the full potential of the IT and ITES sector, substantial investments in digital infrastructure are essential. On that note, Bangladesh has taken the initiative to set up 29 Hi-Tech parks for IT and ITES Industries. Hi-Tech parks are being established in various locations across the country, situated away from the capital city to promote decentralized development and utilize regional advantages. To attract investors and companies, these parks must offer comprehensive facilities, including transportation, education, and healthcare, ensuring a well-rounded infrastructure. Moreover, adequate amenities for employees and their families are crucial for making these parks appealing and supporting a sustainable working and living environment for professionals. However, only four parks were operational, and others were in the construction stage as of 2019 (BHTPA, 2019-2020).

Credible Online Payment System: Though freelancing is a source of remittance flow in Bangladesh, there is no globally accepted credible online payment system (Drishty & Siddique, 2023). The lack of universal payment systems such as PayPal, Apple Pay, Google Pay, Square, and Stripe makes it difficult for IT professionals, freelancers, and tech companies to receive money from clients (Sohel, 2024). Therefore, they have to use less convenient and less secure payment methods.

Research and Development (R&D): R&D financing fosters competition with global experts by fostering the development of creative ideas and innovative solutions (Rokonuzzaman, 2024). AI and Emerging Technologies lead with 53.13 per cent of respondents allocating funds, reflecting the sector's recognition of innovation importance. Conversely, sectors such as Hardware and Networking and Cloud Hosting and Online Service show a substantial lack of R&D investment, potentially hindering technological advancements and competitive edge in these areas (Figure 59).

Box 9: Startup Bangladesh

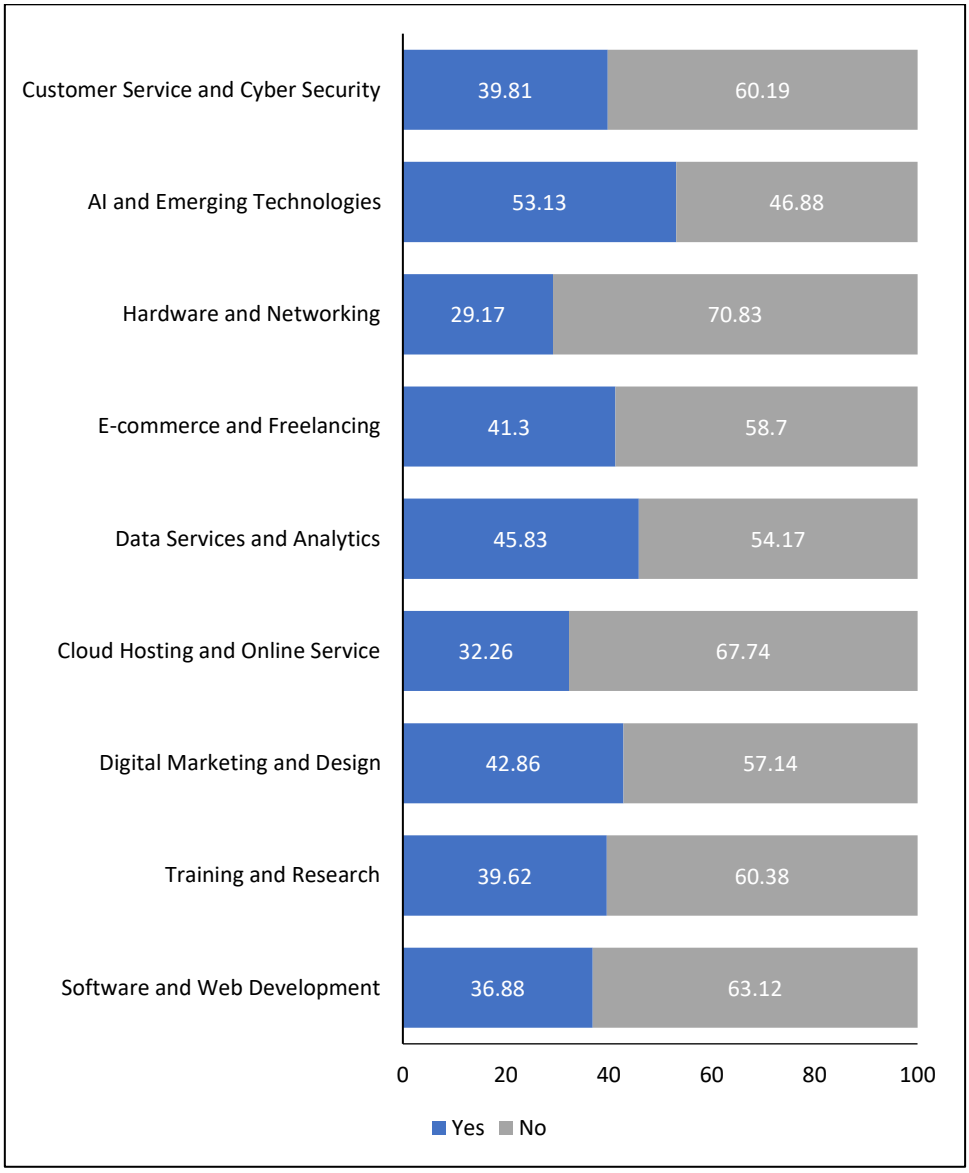
Startup Bangladesh

Startup Bangladesh Limited is the first and only flagship venture capital fund of ICT Division sponsored by the Bangladesh Government. It was established in March 2020 to be a transformative venture capital fund supporting early-stage tech startups and fostering innovation. With an initial allocation of BDT 500 crores, the fund's mission was to drive economic growth, create jobs and promote entrepreneurship in the country.

However, recent developments have raised serious concerns about its effectiveness and integrity. Reports indicate that political considerations, rather than merit or business potential, have influenced the funding decisions. Several startups have allegedly been denied funding for failing to align with the then ruling party. This has cast doubt on the fund's objectivity undermining its core purpose. When venture capital funding is subject to political influence, it skews the entrepreneurial ecosystem, creating an environment where only those with political connections can thrive (The Daily Star, 2024).

For Startup Bangladesh to truly fulfill its mission, it must return to its original vision of merit-based support, free from political interference, to ensure that the country's most promising startups have the opportunity to succeed.

Figure 59: R&D funding allocation in IT and ITES sub-sectors

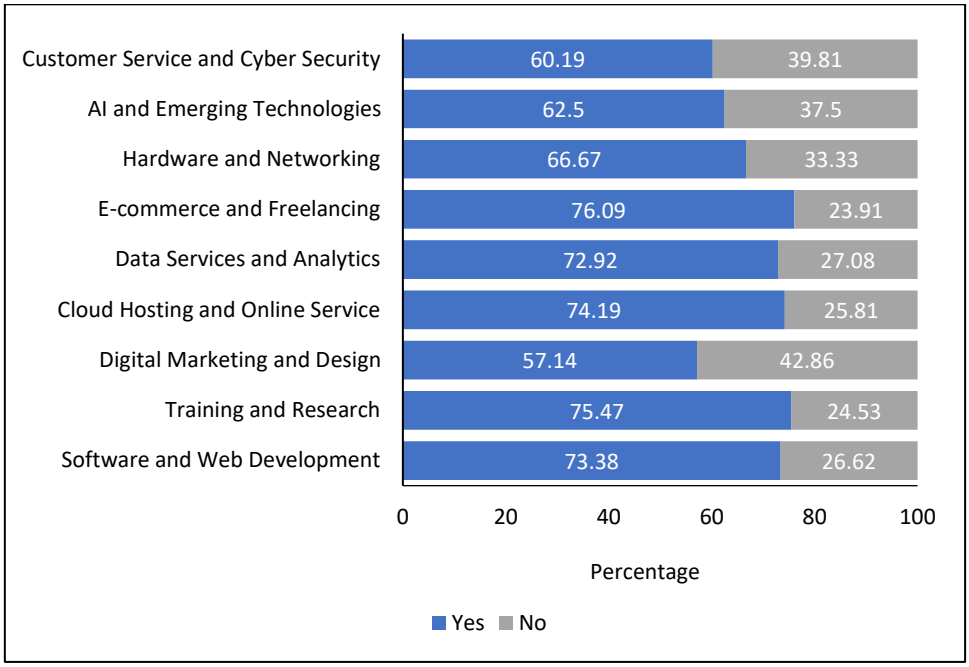


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Raw Materials: In the context of the IT and ITES sectors, the term 'raw materials' refers to the essential resources and inputs required to provide services and create digital products. These 'raw materials' include critical infrastructure such as servers and data centers, cloud computing platforms (e.g., AWS, Azure, Google Cloud), networking equipment like routers and switches, and specialized software and tools. According to survey data, nearly all firms report a significant lack of these essential resources in the IT and ITES sectors (Figure 60). This widespread shortage represents a major constraint on the sector's ability to operate efficiently and innovate. The absence of adequate servers and data centers, for example, can severely limit a firm's capacity to manage data, run complex applications, or expand its digital services.

Moreover, the shortage of networking equipment and specialized software and tools further hampers the ability of firms to scale their operations, ensure security, and maintain competitiveness in a rapidly advancing industry. Without these foundational resources, IT and ITES firms struggle to develop and deliver high-quality services, meet customer demands, and keep pace with global advancements. This lack of critical resources also suggests deeper systemic issues within the sector, such as inadequate investment in digital infrastructure, regulatory challenges, or supply chain disruptions.

Figure 60: Availability of raw materials in IT and ITES sub-sectors

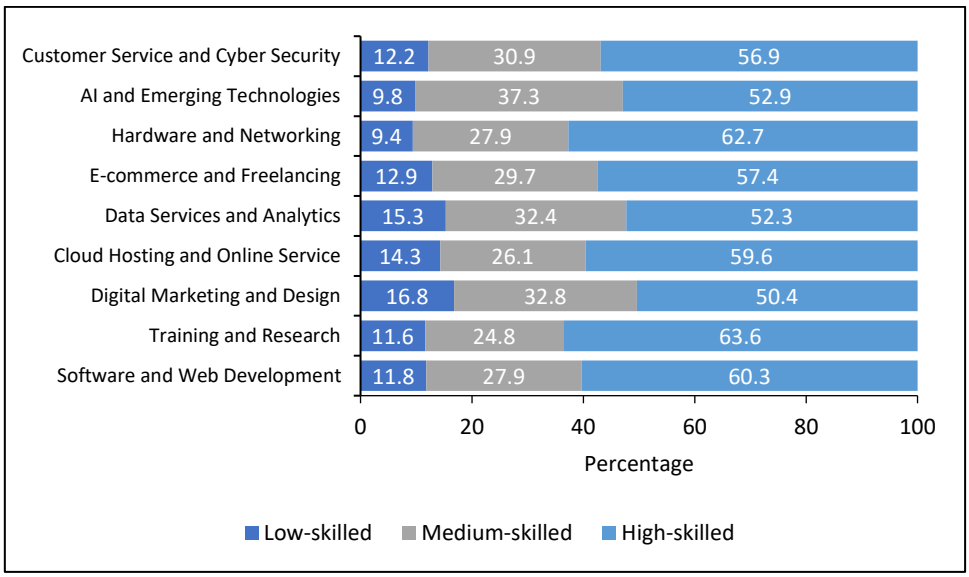


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

3.5.4 Labour Force Challenges

Figure 61 illustrates the labor skill distribution in the IT and ITES sector categorized into low-skilled, mid-skilled, and high-skilled workers across various sub-sectors of the IT and ITES sector. High-skilled workers dominate the distribution, comprising more than 50 per cent of the workforce in every sub-sector with their highest share at 63.6 per cent. Sub-sectors like training and research, hardware and networking, and software and web development have the largest share of high-skilled labourers. The low-skilled workforce occupies the smallest proportion across all sectors, ranging from 9.4 per cent to 16.8 per cent. Mid-skilled workers make up a more significant portion with their representation varying between 24.8 per cent and 37.3 per cent. The range of high-skilled workers highlights the sector's emphasis on expertise, particularly in highly technical or managerial roles (Figure 61).

Figure 61: Labour skill distribution of workers in IT and ITES sub-sectors



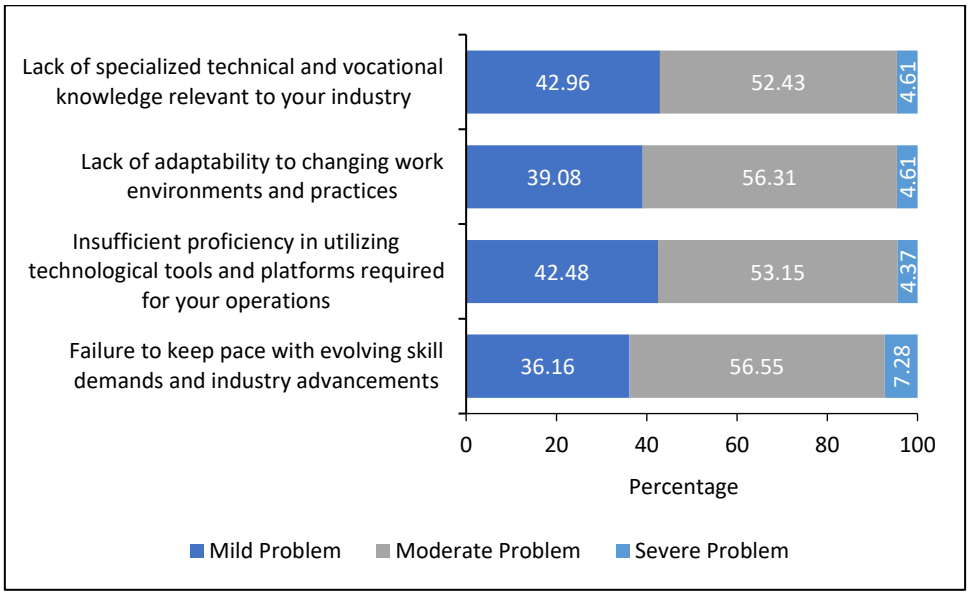
Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The IT sector has a significant demand for programmers, system analysts, software engineers, Q&A professionals, mid-level project/product managers, and graphic designers. The industry also faces a shortage of skilled workers in areas such as Robotics, AI, and IoT. There is a high skills gap at all levels for game developers at entry levels. More firms are linked with institutes outside the TVET system, with a higher prevalence of industry-academia linkages in fields like software development, application development, programming, web development, and graphic and multimedia design. However, these linkages are not strong and do not contribute to modernizing curricula or improving academic collaboration. The activities primarily involve training, academic guidance, and internships. IT firms often recruit fresh graduates and provide them with the necessary training to acquire practical skills, but many employees leave for better-paying jobs after gaining experience, causing significant losses for firms that invest in training semi-skilled workers.

In hardware and networking, there is no shortage of skills at the basic level. However, there is a 70 per cent shortage at the intermediate level and an 80 per cent shortage at the advanced level (M. Hossain et al., 2023). Companies often outsource graphic design and Android programming due to the lack of advanced skills in the local workforce. SEIP[28] training programs fall short of addressing these gaps, as they primarily focus on basic skills and cater to fresh graduates.

In the IT and ITES sector, 7.28 per cent of firms report 'Failure to keep pace with evolving skill demands and industry advancement' as a severe problem (Figure 62). Following this, a lack of adaptability to changing work environments and a lack of specialized technical and vocational knowledge relevant to work were marked as severe challenges for the IT and ITES sector. Almost 50 per cent of the firms think each of these factors is a moderate labour challenge for the sector.

Figure 62: Labour force related challenges in IT and ITES sector



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The lack of R&D facilities is a major reason for the skills gap in the IT sector. There is a high demand for Active Network Unit (ANU) expertise in networking and ANU manufacturing, but Bangladesh lacks a workforce with the necessary skills to meet this demand. There is a lack of decentralized training facilities across the country. While BASIS has established a training center in Chattogram and plans to open another in a different region, it is not enough to meet the widespread demand for training. Additionally, SEIP training regulations do not allow trainees to enroll in two courses of the same subject. As a result, even though participants may want to pursue advanced training, they are restricted from doing so, leading to the underutilization of their potential and skills.

[28] SEIP stands for Skills for Employment Investment Program (SEIP). It is a program to engage jobless and backward youths in sustainable employment by providing market-driven technical training. The SEIP started its journey in 2014 with the aim of making about 8 lakh unemployed youth, women, minority and disadvantaged people skilled by providing training.

3.5.5 Tax and Regulation Challenges

Import Tariff: The government has undertaken various initiatives to facilitate the export of IT and ITES. Additionally, to protect and expand the domestic IT manufacturing industry, the NBR has removed the Advance Tax (AT) on the import of parts and accessories for locally manufactured computers and internet products (Daily Star, 2024). However, there is a lack of consideration that locally manufactured computers may not meet global standards. Additionally, essential hardware and IT machineries, such as laptops, computer monitors, automatic data processing machines, printers, toner cartridges, and smartphones face high import tariffs, which hinder the efficiency of the IT and ITES sector.

These tariffs also restrict small investors from entering the industry. This study has identified some of the key machinery crucial for the IT industry (Table 9), the high import tariffs which significantly raise production costs. Furthermore, the high import tariffs on databases and simulation software may encourage the use of unethical and insecure pirated software (Kabir, 2023).

Table 9: Import tariff schedule on IT and ITES machineries

Product Name	HS Code	Schedule	Statutory Rate of Import Duty
Base stations	8517.61.00	2024-2025	10%
Modem; Ethernet interface card; network switch; hub; route	8517.62.30	2024-2025	10%
Portable automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard and a display	8471.30.00	2024-2025	10%
Wi-Fi/Wimax LAN card and access point; Firewall (security hardware)	8517.62.50	2024-2025	10%
Database; operating systems; development tools; security software used for only data or information protection; word processing, spreadsheet, internet collaboration and presentation tools (Incorporating software)	8523.49.21	2024-2025	25%
Database; operating systems; development tools; security software used for only data or information protection; word processing, spreadsheet, internet collaboration and presentation tools (Solid-state non-volatile storage devices)	8523.51.21	2024-2025	25%
Other software for automatic data processing machines (Incorporating software)	8523.49.21	2024-2025	25%
Other software for automatic data processing machines (Solid-state non-volatile storage devices)	8523.51.10	2024-2025	25%
Computer monitor size not exceeding 22 inch	8528.52.10	2024-2025	25%
Other monitor	8528.52.90	2024-2025	25%
Smartphones	8517.13.00	2024-2025	25%
Other telephones for cellular networks or for other wireless networks	8517.14.00	2024-2025	25%

Source: Authors' compilation from NBR

3.6 Other Challenges

Although the current legal framework in Bangladesh allows for the repatriation of profits and external payments, international investors often encounter challenges in executing outbound transfers. Delays can arise, especially in cases involving tax disputes, where authorities may hold payments to gather additional information. Government officials defend these delays by expressing concerns that even limited outward transfers could lead to significant capital outflow from the country. This cautious stance has drawn criticism from international companies, who have voiced concerns about the NBR's practice of reopening old tax cases, particularly those involving multinational corporations, sometimes dating back decades.

Consultations with stakeholders reveal several issues concerning the repatriation process. One key problem is the communication gap between investors and the Bangladesh Bank, which often results in failure to report FDI within the required 14-day period after entry, causing complications during repatriation. Allegations have emerged that some investors, aiming to maximize the allowed percentage of repatriation, artificially inflate the value of their net assets. Additionally, Chartered Accountant (CA) firms, which play a crucial role in the valuation process, are often falling short in their responsibilities. Reports of misinformation and discrepancies in balance sheets, particularly between the FDI and loan sections for the same company in the same year, have added to the complexity. One participant in a stakeholder consultation shared their experience of a significant disconnect between the guidance provided by Bangladesh Bank on repatriation and the actual process, which is often fraught with delays and challenges.

In 2024, difficulties related to repatriation have been further exacerbated by the ongoing dollar crisis. Key stakeholders have noted a significant increase in reinvestment by multinational companies, driven primarily by the obstacles in remitting profits.

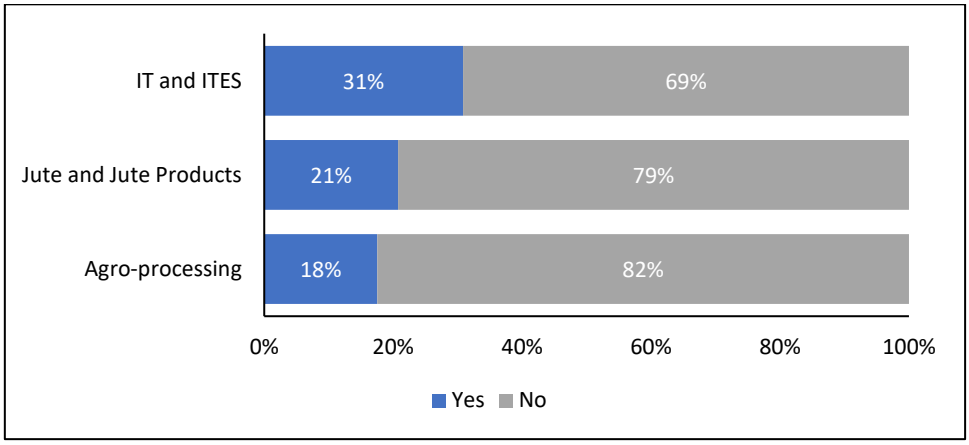
Bangladesh Bank regulations stipulate that a foreign company's branch can repatriate up to $10 million in profits without prior approval. However, if the amount exceeds this threshold, the branch must obtain a no-objection certificate (NoC) from the central bank. Even when NoCs are issued to foreign commercial banks (FCBs) for profit repatriation, stakeholders report that these banks struggle to complete the process due to the lack of available dollars in the market.

Balancing investor-friendly policies with concerns over capital outflows presents Bangladesh with complex challenges in profit repatriation. The ongoing dollar crisis has intensified the need for strategic efforts to create a more efficient and predictable environment for multinational companies seeking to repatriate their earnings from the country (Raihan et al. 2023).

3.7 Foreign Direct Investment (FDI)

FDI is a crucial source of financing helping productivity and efficiency. FDI helps enhance the competitive edge by facilitating the import of advanced technology and business knowledge. However, the pursuit of foreign investment in Bangladesh is relatively low compared to the reliance on domestic loans. Only 18 per cent of firms in the agro-processing sector and 21 per cent of firms in the jute and jute products sector look for foreign investment (Figure 63). Since IT firms need more investment for continuous upgradation, the rate of searching for foreign investment is slightly higher in this sector (31%).

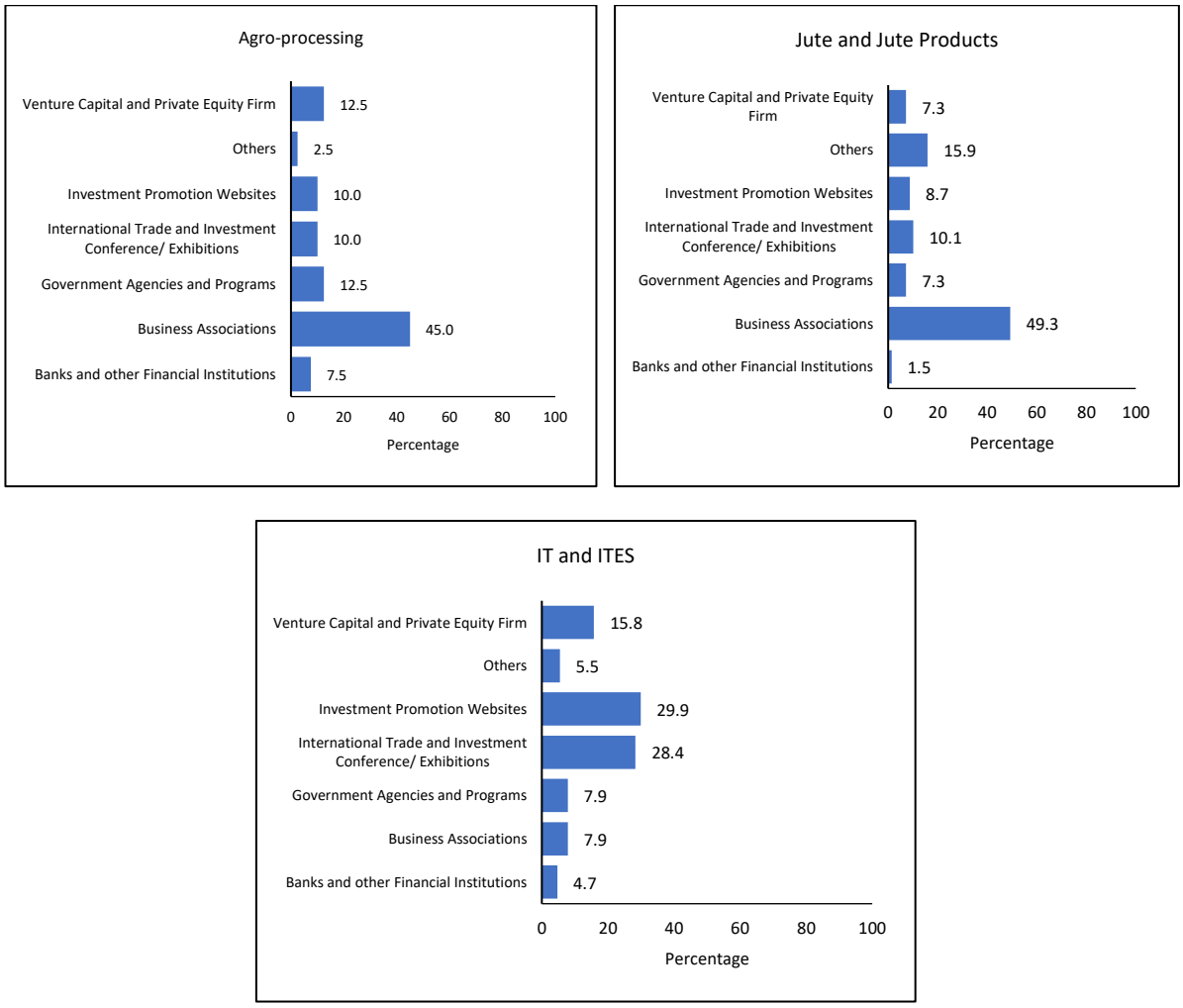
Figure 63: Percentage of firms searching for foreign investment



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Most of the firms in agro-processing and jute and jute products believe that business associations could be the best way to receive information regarding the FDI (Figure 64). For the agro-processing sector, government agencies and programs (12.5%) and venture capital (12.5%) also play a significant role in getting information regarding foreign investment. The top sources of knowledge related to FDI of IT and ITES are different from those of the agro-processing and jute sectors.

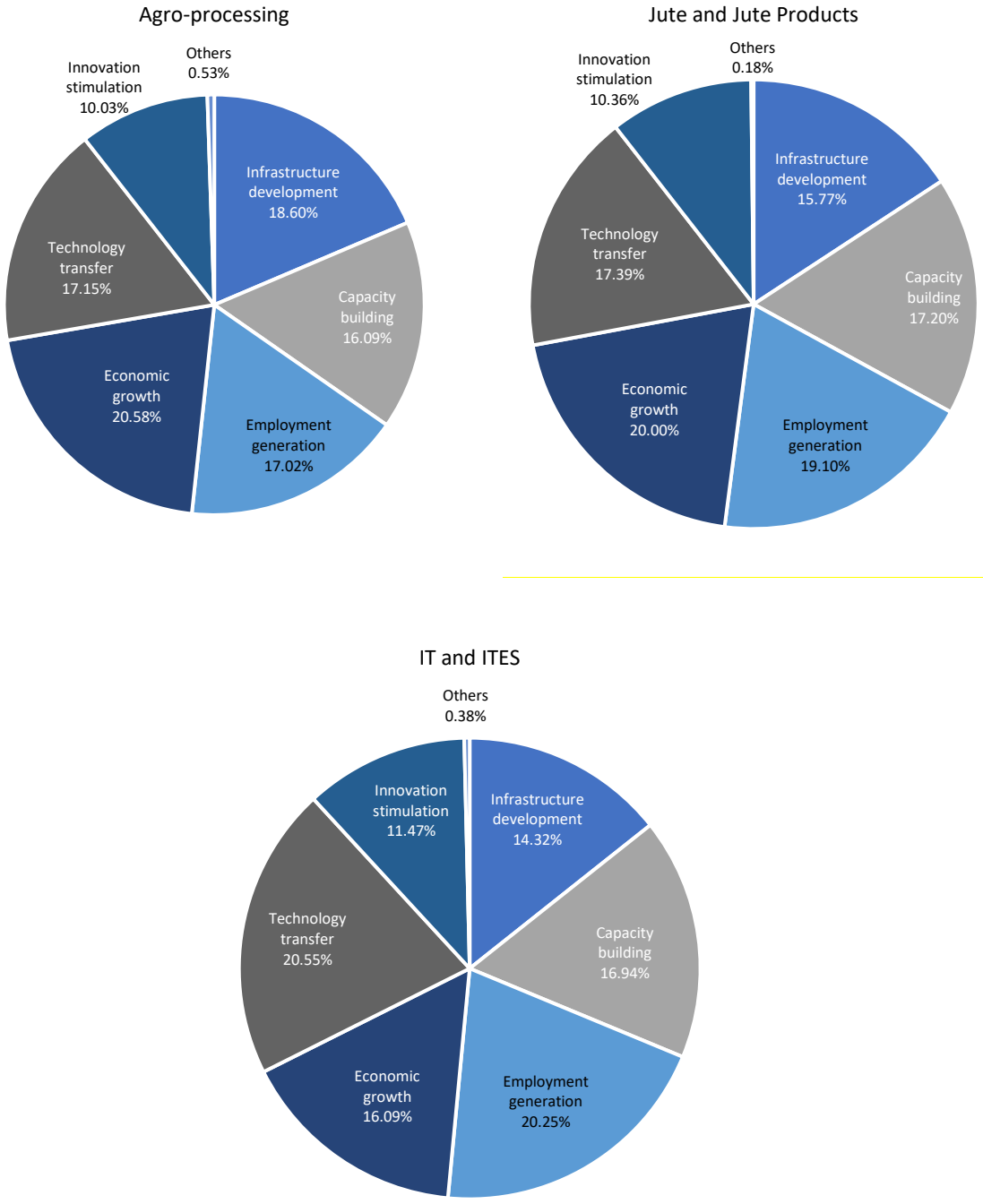
Figure 64: Best source to get information regarding FDI



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Figure 65 shows how FDI can foster economic growth through infrastructure development, employment generation, innovation stimulation etc. Respondents from the agro-processing sector think FDI can create the most impact on economic growth, technology transfer, employment generation and other factors. In the jute and jute products sector, respondents think FDI can create an impact on economic growth, employment generation and technology transfer. IT and ITES sector think FDI's most impact will be in technology transfer, employment generation and capacity building. Therefore, it can be seen that all three sectors expect better technology, capacity building, and employment generation if they get more FDI, ultimately leading to economic growth.

Figure 65: FDI's potential to create the most impact (%) by sectors

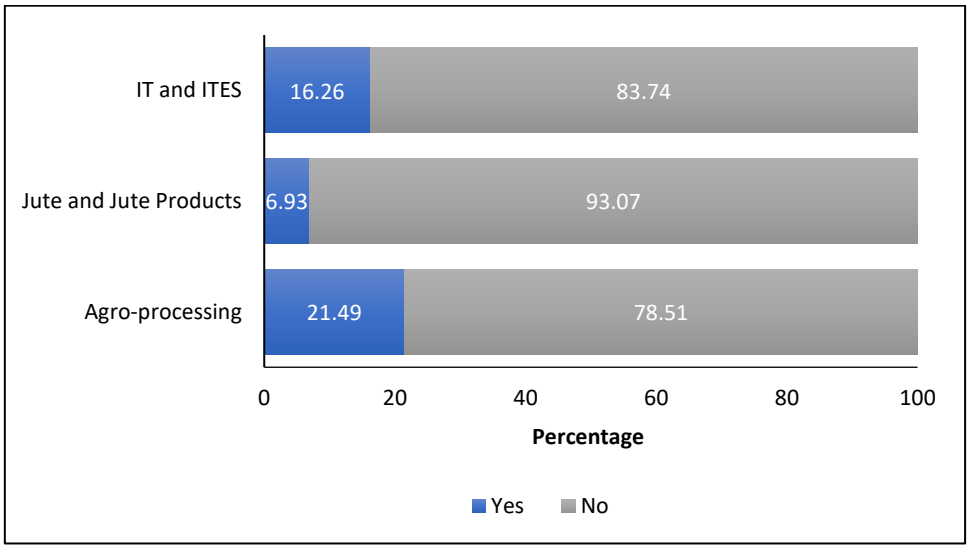


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

BIDA/BEZA/BHTPA OSS remains ineffective

In navigating the challenges and seeking information related to investment, the one-stop services (OSS) provided by the investment authorities such as BIDA, BEZA, and BHTPA play a crucial role. These services are designed to streamline the investment process by offering a centralized platform for investors to access necessary information and support. However, awareness and utilization of these one-stop services remain limited among businesses in Bangladesh. As shown in Figure 66, only a small percentage of firms are taking advantage of these services. Specifically, just 6.93 per cent of firms in the jute and jute products sector have used the one-stop service, while a slightly higher portion of firms in the IT and ITES sector (16.26%) and the agro-processing sector (21.49%) have utilized these resources. This low level of engagement suggests that many businesses may be missing out on opportunities to simplify their investment processes which could potentially enhance their efficiency and growth. Raising awareness and encouraging the use of these services could be vital in supporting the development of various sectors within the country.

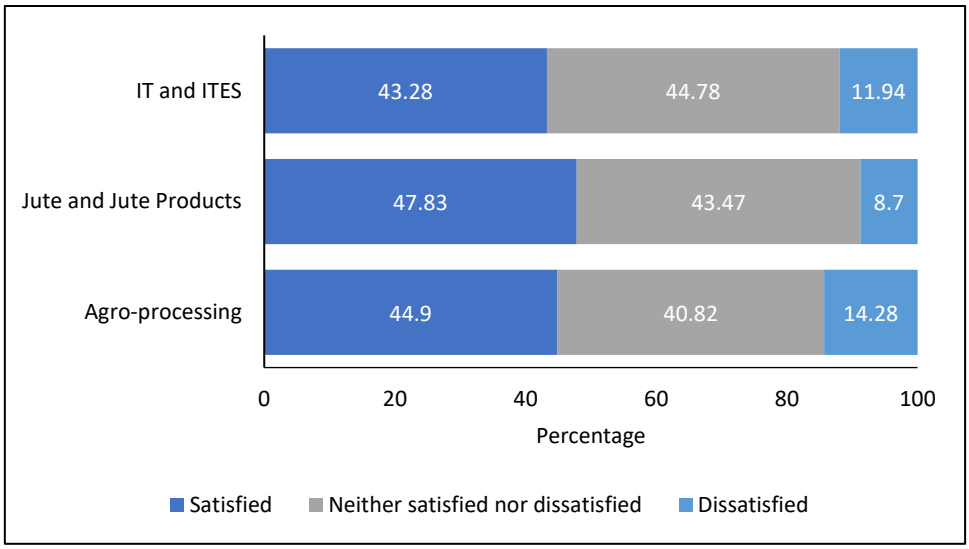
Figure 66: Rate of using BIDA/BEZA/BHTPA One Stop Service (OSS)



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

The rate of dissatisfaction for BIDA/BEZA/BHTPA OSS is highest at 14.28 per cent in the agro-processing sector (Figure 67). It is also to be noted that the rate of using OSS is low among the jute and jute products sector.

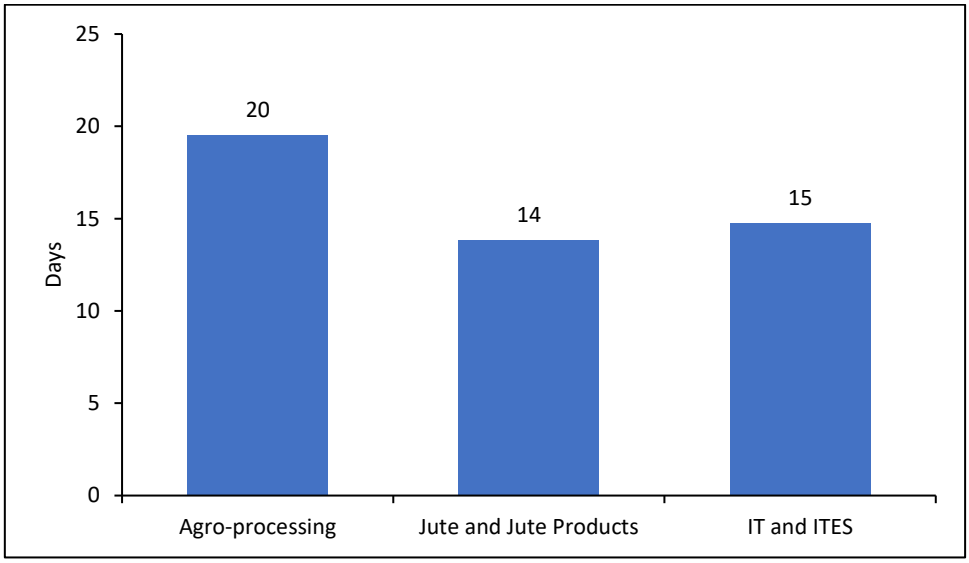
Figure 67: Satisfaction with BIDA/BEZA/BHTPA OSS



Source: SANEM-UNDP-BIDA Enterprise Survey 2024

Figure 68 shows that the average time required to receive responses from the one-stop service ranges between 13 to 20 days. Among the three sectors, the agro-processing sector tends to experience longer response times. This extended duration can lead to frustration and disinterest among users, deterring them from utilizing the one-stop service in the future. The lengthy process undermines the intended purpose of these services, which is to simplify and expedite the investment process.

Figure 68: Average time needed to get a response from One Stop Service (in days)

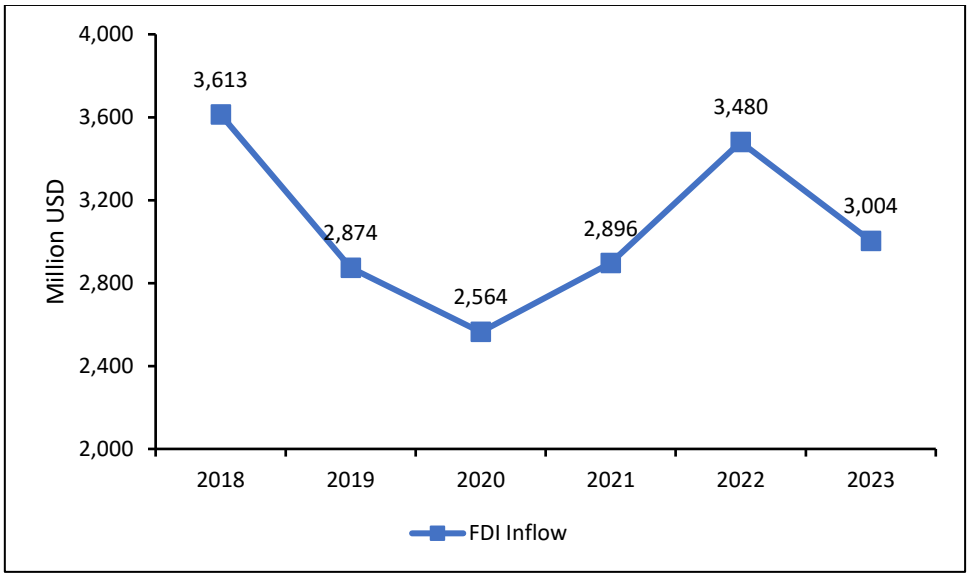


Source: SANEM-UNDP-BIDA Enterprise Survey 2024

3.7.1 Comparative Position of Bangladesh in Attracting FDI

With significant efforts to establish an investor-friendly environment, Bangladesh can emerge as a potential hub for foreign investments. Its strategic geographical advantages and a vibrant, young population further enhance its appeal. The FDI inflows, reaching a record high of $3.4 billion in 2022 (Bangladesh Bank, 2024), reflect growing global confidence in the country's potential. This investment has strengthened the economy, created jobs, and enhanced infrastructure, providing a solid foundation for the nation's development goals.

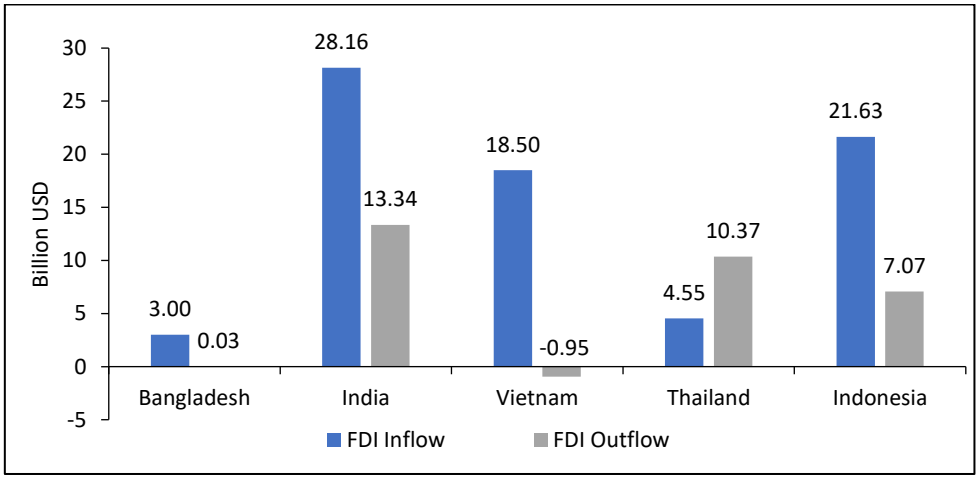
Figure 69: Bangladesh FDI flows (in million USD)



Source: Bangladesh Bank 2024

However, Bangladesh's FDI trends have experienced fluctuations in recent years. FDI inflows declined to $2.9 billion in 2019 and $2.6 billion in 2020, likely due to global economic uncertainties and the COVID-19 pandemic. Inflows recovered to $2.9 billion in 2021, surged to $3.48 billion in 2022, but then declined again to $3.0 billion in 2023 (Figure 69).

Figure 70: FDI flows with comparator countries in 2023 (in billion USD)

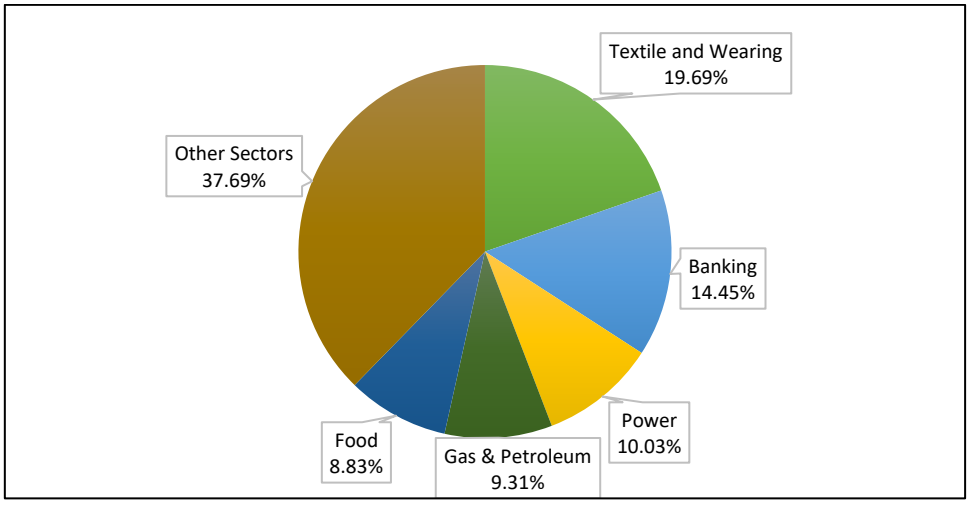


Source: World Investment Report 2024

FDI inflows to Bangladesh represent a significant contribution to its economy, though they remain modest compared to regional peers like India, which secured $28.163 billion, and Vietnam with $18.5 billion. While Bangladesh is a net recipient of foreign investment, with minimal outflows of $0.03 billion, it still lags behind countries such as Thailand and Indonesia, which attracted $4.548 billion and $21.628 billion in FDI, respectively (UNCTAD, 2024). These figures highlight the need for further improvements to compete more effectively with its regional counterparts (Figure 70).

Sector-wise, the manufacturing industry dominated FDI inflows in Bangladesh, receiving $1.256 billion, which constituted 41.8 per cent of the total, with textiles and wearing apparel leading the way at $591.47 million and 20 per cent of net FDI inflow. The power, gas, and petroleum sectors also attracted substantial investment, collectively receiving $581.27 million (9%), demonstrating strong investor interest in Bangladesh's energy infrastructure. Trade, commerce, and banking sectors followed, with banking alone receiving $434.13 million (Bangladesh Bank, 2024). These investments have strengthened industrial capacity and driven infrastructure development, both of which are crucial for sustained economic growth (Figure 71).

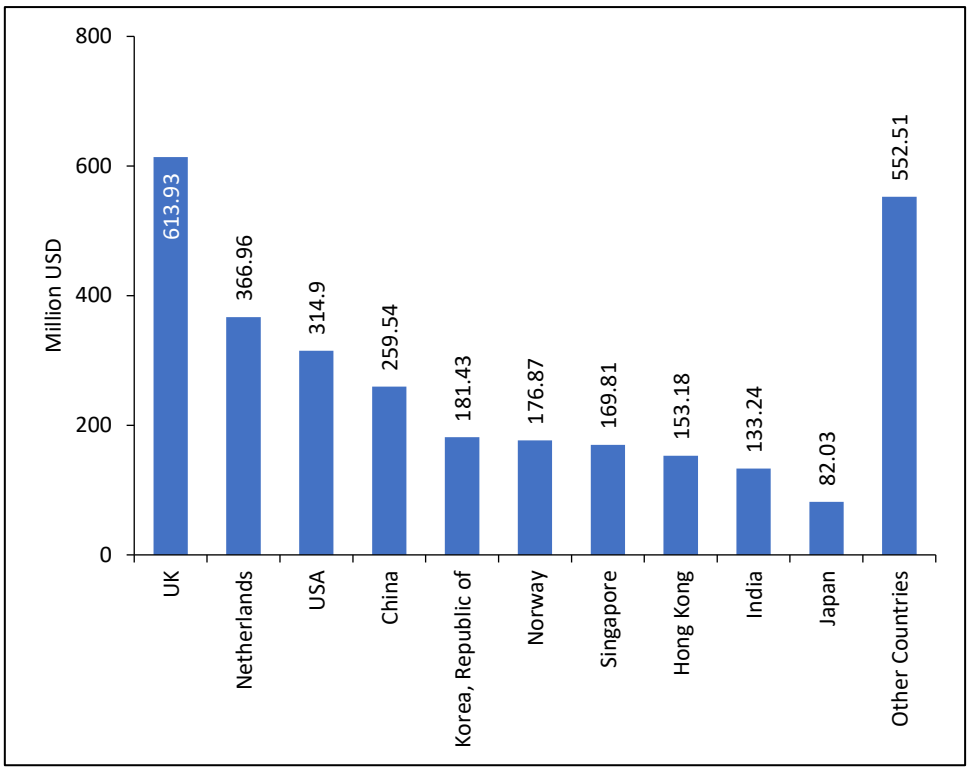
Figure 71: Net FDI inflows by Major Sectors 2023 (In million USD)



Source: Bangladesh Bank 2024

Bangladesh attracted significant FDI inflows, with the United Kingdom leading the way, contributing $613.93 million or 20.4 per cent of the total. Other major contributors included the Netherlands ($366.96 million), the United States ($314.9 million) and China ($259.54 million), collectively accounting for 63.6 per cent of the total net FDI inflows (World Investment Report, 2024). These figures highlight Bangladesh's growing appeal to investors from diverse global markets, reflecting their confidence in the country's economic potential (Figure 72).

Figure 72: Net FDI inflows by major countries in 2023 (In million USD)

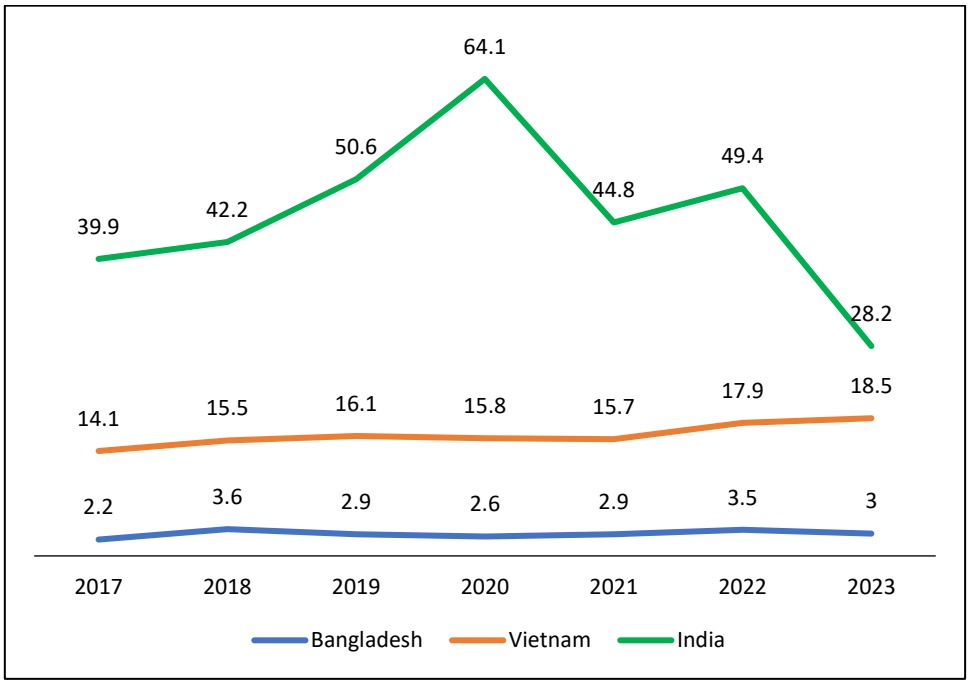


Source: World Investment Report 2024

3.7.2 The Case of Vietnam and India: Effective Mix of Investment and Tax Policies to Attract FDI

Vietnam and India's strategic approaches to attracting FDI stand as a testament to the effectiveness of well-crafted policies (Figure 73). Vietnam has finely crafted its tax incentives strategy, offering reduced CIT rates and strategically timed tax holidays for businesses operating in targeted sectors. This thoughtful approach resonates with potential investors, highlighting Vietnam's commitment to creating an investment-friendly environment. Meanwhile, India has skillfully crafted its own strategy, introducing tailored tax breaks to attract foreign investors. This customized approach strengthens India's position as a magnet for FDI and demonstrates its commitment to fostering sustainable economic growth. By combining tax incentives, sector-specific policies, and efforts to simplify business operations, India has enhanced its appeal to foreign investors. Vietnam's well-calibrated tax incentives and investment-friendly policies, combined with India's comprehensive and tailored strategies, have positioned both countries as leading players in the region, attracting significant foreign investment.

Figure 73: FDI inflows in Bangladesh and comparator countries (in million USD)



Source: World Investment Report 2024

Comparing sector-wise FDI inflows across countries is challenging due to the unavailability of data for comparable years. However, the latest figures from the ITC Investment Map provide some insights. In 2019, Vietnam recorded an FDI inflow of $530.41 million in the information and communication sector and $104.08 million in the agriculture, forestry, and fishing sector. Comparatively, India's 2016 data indicates an FDI inflow of $1,937 million in the information and communication sector (Table 10).

For Bangladesh, the 2019 FDI inflow in the information and communication sector was less than half of Vietnam's inflow and around one-eighth of India's inflow. Bangladesh's FDI inflow figures show $250.10 million in the Information and Communication sector. Additionally, in the agriculture, forestry, and fishing sector, Bangladesh attracted around 26 per cent of Vietnam's FDI inflow. The country received $27.78 million in the agriculture, forestry, and fishing sector and $248.51 million in the manufacture of food products sector.

Table 10: FDI inflow in IT and agriculture sector in Bangladesh, India and Vietnam

Country	Year	FDI Inflow in IT sector (in million USD)	FDI Inflow in Agriculture sector (in million USD)	FDI Inflow in Food Products sector (in million USD)
Bangladesh	2019	250.10	27.78	248.51
Vietnam	2019	530.41	104.08	-
India	2016	1937.00	-	-

Source: International Trade Centre

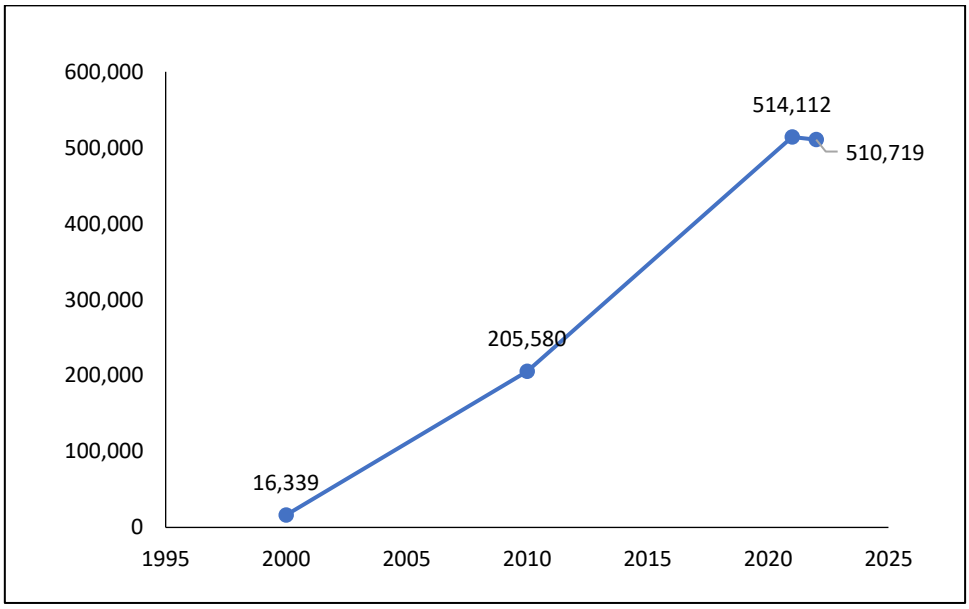
In 2022-23, India's FDI inflow in the food processing industry was 895.54 million, in computer software and hardware was $9394.22 million and in information and broadcasting was $465.61 million (OGD Platform India, 2024). From April 2000 to December 2023, FDI inflow in India's food processing industry was $12466.75 million and in IT sector was $98328.76 million (DPIIT, 2023). In 2016-17 (April – March), the FDI inflow in jute sector was $323 million which reduced from $577 million in 2015-16 (Press Information Bureau, 2017).

The FDI inflow in 2022 in Vietnam's information and communication sector was $655.23 million, in the agriculture, forestry and fishery sector was $67.96 million and accommodation and food service sector was $11.44 million (Foreign Investment Agency, 2023).

A. Incentives Offered by India to Attract Foreign Investments

The Indian government has implemented a comprehensive set of strategies to stimulate foreign investment, with the goal of boosting the nation's economic growth and global competitiveness. These strategies include a range of measures designed to enhance business continuity, revitalize key sectors, and improve the overall ease of doing business (Indian Law Offices, n.d.). These efforts highlight India's commitment to becoming an attractive destination for global investors. Figure 74 shows a rising trend in FDI stock in India. A key element of this initiative is the 2020-21 Budget, which introduced several measures specifically aimed at improving the ease of doing business in India.

Figure 74: Rise in FDI stock in India (in million USD)



Source: World Investment Report 2024

India's recent budget introduces a range of strategic measures aimed at attracting foreign investment and fostering economic growth. Special tax breaks targeted at long-term foreign investors, particularly sovereign wealth funds, are intended to attract patient capital, thereby contributing to economic stability. To further enhance its appeal, India is focusing on the growth of the digital industry and making significant infrastructure investments, positioning itself as a strong contender for global investments despite the economic slowdown. Simplifying the Goods and Services Tax (GST) system is another key initiative, aimed at creating a more business-friendly environment by reducing bureaucratic hurdles for both domestic and foreign businesses. Additionally, support for Micro, Small, and Medium Enterprises (MSMEs) through streamlined compliance measures and the abolition of the Dividend Distribution Tax (DDT) further enhances India's attractiveness to foreign investors.

The Indian government has also implemented targeted measures to attract foreign investment across key sectors. In the pharmaceutical industry, expedited environmental clearances have streamlined processes, while exemptions from customs duties and health-related support have benefited the medical devices sector. Initiatives like the PLI Scheme and other electronics-focused programs are designed to strengthen India's global position in Electronics System Design and Manufacturing (ESDM). Additionally, extended environmental clearances and supportive policies from the Reserve Bank of India help maintain a favorable investment environment, even in the face of challenges like COVID-19.

Box 10: The strategic changes introduced to encourage more FDI in India

Reduction of Corporate Tax Rate with Gradual Phasing Out of Exemption/ Incentives: India has undertaken initiatives to reduce corporate and effective tax rates to encourage investment. Beginning with the Finance Act of 2016, corporate tax rates have been gradually lowered while phasing out certain exemptions and incentives. Building on this policy, the Taxation Laws (Amendment) Act, 2019, introduced an option for companies to pay taxes at a concessional rate of 22 per cent (plus applicable surcharge and tax) if they forgo certain exemptions and incentives (Central Board of Direct Taxes, India, n.d.).

Special Tax Breaks for Foreign Investors: The budget introduces special tax breaks aimed at foreign investors, particularly sovereign wealth funds that are willing to commit for the long term. These incentives are designed to attract patient capital, promoting sustained investments that contribute to economic growth and stability.

Digital Industry and Infrastructure Boost: Measures to boost the digital industry and increase investments in the infrastructure sector demonstrate India's commitment to modernization and growth. Developers of specific infrastructure projects aligned with India's vision are eligible to claim a 100 per cent deduction on capital expenditures incurred exclusively for project development. Despite the global economic slowdown, India's focus on these sectors positions it as a strong contender for foreign investments.

Tax Holidays for Specific Sectors: A tax holiday is available for profits earned by businesses involved in handling, storage, and transportation of food grains, commercial production or refining of mineral oils, processing, preservation, and packaging of fruits or vegetables, and operating and maintaining hospitals in rural areas. The tax holiday period ranges from five to ten years, with rebates of 30 per cent, 50 per cent, or 100 per cent in the initial years, followed by a 30 per cent rebate in the later years.

Manufacturing Promotion and Export Expansion: The budget announcement includes the introduction of schemes aimed at boosting the manufacturing of electronics and medical devices. These initiatives are expected to enhance domestic production, increase exports, and attract investments in these critical sectors.

GST Simplification: Efforts to simplify the Goods and Services Tax (GST) system are intended to create a more business-friendly environment. This simplification is expected to reduce complexities and bureaucratic hurdles, making it easier for both domestic and foreign businesses to operate in India.

Enhancing Ease of Compliance for Taxpayers: India has implemented specific initiatives to simplify and ease compliance for taxpayers. The Faceless Assessment Scheme (2019) and the Faceless Appeal Scheme (2020) were introduced to promote minimal interaction and maximize governance through the digitization of assessment and appellate processes. To enhance efficiency and transparency within the income tax department, all communications and notices are now required to have a computer-generated Document Identification Number. Additionally, the process of filing returns and adhering to other compliance norms has been further simplified, significantly improving the tax environment in India.

Support for MSMEs: MSMEs are a vital part of India's economy. The budget introduces measures such as eliminating audit requirements for MSMEs with a turnover of up to Rs. 5 crores, simplifying compliance and fostering a more favorable business environment.

Abolishment of DDT: The removal of DDT has been widely welcomed by foreign investors. This change eliminates a significant disincentive that foreign companies previously faced, making India a more attractive destination for expanding business operations.

The Indian government has also taken steps to promote foreign investments sector-wise, underscoring its commitment to fostering a favorable investment climate:

1. **Pharmaceutical Industry:** Expedited environmental clearances for pharmaceutical projects have been introduced, streamlining processes and encouraging investments in this crucial sector.

2. **Medical Devices:** To support the medical devices industry, the government has provided exemptions from basic customs duties and health tax on the import of essential items such as ventilators, masks, personal protective equipment (PPE), test kits, and the inputs used in their manufacture.

3. **Electronics Sector (ESDM):** The Ministry of Electronics and Information Technology (MEITY) has launched several schemes, including the PLI Scheme, the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), and the Modified Electronics Manufacturing Clusters Scheme (EMC 2.0). These initiatives aim to enhance India's position in the global ESDM sector and attract significant foreign investments.

4. **Environmental Clearances:** The extension of validity for prior environmental clearances ensures uninterrupted operations for projects expiring during specific periods, thereby fostering investor confidence.

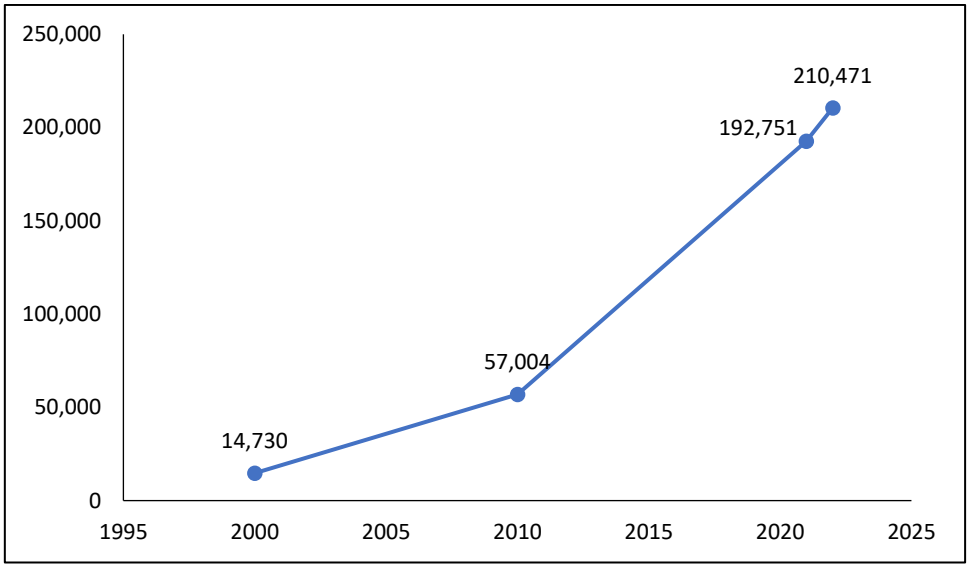
5. **Financial Support by RBI:** The Reserve Bank of India (RBI) has introduced several policies to address financial stress due to COVID-19, including easing credit flows, expanding liquidity, and improving market functioning. These measures ensure a supportive financial environment for foreign investors.

The comprehensive approach adopted by the Indian government covers a broad range of sectors and initiatives, reflecting the nation's commitment to fostering a favorable investment ecosystem. By implementing these measures, India aims to attract foreign investments, stimulate economic growth, and establish itself as a resilient and dynamic global player in the investment and business landscape.

B. Incentives offered by Vietnam to attract foreign investments

Vietnam has strategically positioned itself as an attractive investment hub for foreign investors seeking to diversify its portfolios, capitalizing on its favorable geographic location, competitive labor force, and cost efficiency. The Vietnamese government has continually improved its business climate by implementing reforms and enhancing investment incentives, thereby increasing its appeal on the global investment stage (Bloomberg Tax, n.d.).

Figure 75: Rise in FDI stock in Vietnam (in million USD)



Source: World Investment Report 2024

One of the most notable and impactful aspects of Vietnam's investment landscape is its tax incentives. The government has introduced various measures to provide CIT incentives to both foreign and local investors, targeting sectors and areas that align with the nation's development strategies (Figure 75) .

Vietnam offers a robust array of tax incentives to attract foreign investment, including preferential CIT rates of 10 per cent, 15 per cent, and 17 per cent for certain sectors, such as high-tech enterprises. These incentives also include tax holidays, with CIT exemptions for up to four years, followed by a partial tax holiday. Additionally, Vietnam's tax incentives are tailored to sectors such as renewable energy, healthcare, and education, as well as to disadvantaged locations, including Special Economic Zones (SEZs) and High-Tech Zones (HTZs). Large manufacturing projects that meet specific investment criteria benefit from a 10 per cent tax rate for 15 years, along with customs duty exemptions and land rental fee waivers, reducing financial burdens and fostering a favorable investment climate. The box below outlines Vietnam's main strategy for attracting FDI.

Box 11: Key aspects of Vietnam's tax incentive strategy include

Preferential Tax Rates: Vietnam offers a range of preferential tax rates, allowing companies to pay CIT at rates lower than the standard 20 per cent. These rates include 10 per cent, 15 per cent, and 17 per cent, and can apply either throughout the project's lifespan or for a specified period, depending on specific provisions. For certain sectors, such as high-tech enterprises, the preferential tax rate can begin from the first year of revenue generation.

Tax Holidays: The tax incentive strategy includes tax holidays, which exempt companies from CIT for a defined period, usually around four years. Following this initial tax holiday, firms may qualify for a partial tax holiday, where they pay only 50 per cent of the usual tax rate. This tax holiday typically starts from the first year of profit generation or the fourth year of revenue generation, whichever comes first. In some cases, businesses can benefit from both tax holidays and preferential tax rates simultaneously.

Additionally, Vietnam has introduced customs duty incentives and land rental fee exemptions, further reducing financial burdens for businesses.

The following highlights key components of Vietnam's tax incentives:

1. **Eligibility Criteria:** Tax incentives in Vietnam are granted based on sector, location, and investment size, ensuring that businesses in specific areas and industries receive tailored benefits.
2. **Incentives for Prioritized Sectors:** Industries such as high-tech, software, research and development, renewable energy, education, and healthcare are designated for tax incentives. Companies in these sectors can benefit from preferential tax rates for specified periods or for the entire duration of their projects.
3. **Incentives in Disadvantaged Locations:** Vietnam provides tax incentives for firms operating in areas with challenging socio-economic conditions. SEZs, HTZs, and Information Technology Parks (ITPs) also qualify for these incentives.
4. **Size of Project Incentives:** Large manufacturing projects that meet specific criteria, such as substantial investment capital or significant revenue generation within a defined timeframe, are eligible for a 10 per cent tax rate for 15 years, along with tax holidays and reduced CIT rates.
5. **Exemption from Customs Duties:** Businesses can receive exemptions from import duties for various scenarios, including imports for fixed asset formation, export processing contracts, software production, scientific research, and technological development.
6. **Incentives on Land Rental:** Projects that align with certain conditions, such as those in encouraged sectors or specific geographical locations, receive land rental fee exemptions. These exemptions vary based on the project's nature and socio-economic impact.

On April 23, the Prime Minister signed Decision 508/QD-TTg, which approves the tax system reform strategy through 2030. The strategy aims to modernize and enhance the effectiveness of the taxation regime, aligning Vietnam's tax policies with international practices to achieve key targets for 2025 and 2030.

A number of measures were proposed, which include:

VAT	Broaden the tax base, apply a single VAT rate, and simplify VAT credit and refund regulations.
Special Consumption Tax (SCT)	Extend the SCT to additional products and gradually increase rates on tobacco, beer, and spirits.
Import/Export Duty	Reduce import duty rates, review duty policies to boost exports, and tackle tax evasion.
CIT (Corporate Income Tax)	Revise or eliminate inconsistent CIT incentives, promote investments in key sectors, and address transfer pricing and BEPS.
PIT (Personal Income Tax)	Simplify PIT by reviewing taxable items and finalization procedures.
Natural Resources Tax (NRT)	Review tax base determination for NRT.
Property Taxes	Extend the exemption of agricultural land taxes and discourage property speculation.
Environmental Tax	Review and apply environmental taxes to items contributing to pollution.

Source: Incentives for Foreign Investors in Vietnam

3.7.3 Competitive Position of Bangladesh: Advantages and Disadvantages

The strategic approaches adopted by Bangladesh, India, and Vietnam in attracting FDI reflect their unique strengths and challenges within the global economic landscape. Bangladesh's slow but steady progress in FDI inflows underscores its growing appeal, particularly in sectors like RMG and energy, yet it still faces competition from regional peers like India and Vietnam.

A. Competitive Advantages

Bangladesh's strategic geopolitical location, combined with improvements in its business environment and infrastructure, makes it a compelling destination for investors. The government is undertaking several large-scale infrastructure projects, including the Rooppur Nuclear Power Plant, the Rampal Coal Power Project, and the Dhaka Metro Rail, alongside the development of 100 economic zones over the next 15 years. Additionally, trade agreements such as SAFTA and APTA enhance Bangladesh's access to South Asian markets. According to the World Bank, extra trade in South Asia is projected to be worth $11 billion, underscoring Bangladesh's significant role in the region.

By 2030, Bangladesh is expected to become the ninth largest consumer market globally, driven by substantial economic and demographic changes. Key factors contributing to this growth include consumer optimism, innovation, a rising middle and affluent class (MAC), a dynamic young workforce, and robust economic resilience. HSBC reports that Bangladesh is anticipated to outpace established markets like the UK and Germany,

as well as fast-growing peers such as Vietnam and Thailand. The expanding MAC population, projected to grow from approximately 12 million in 2015 to 34 million by 2025 (17 per cent of the total population), is a major driver of increased consumer demand. This growth is supported by high household savings rates, low national debt, and significant remittance inflows (The Financial Express Bangladesh, 2021). With household consumption accounting for 69 per cent of GDP and gross fixed capital formation at 31 per cent of GDP in 2021, Bangladesh is well-positioned to shield its economy from external shocks and sustain its strong investment trends.

Bangladesh's demographic profile offers a substantial advantage for efficiency-driven and market-seeking investments. With a median age of 28 years, younger than India, Indonesia, Vietnam, and Thailand, Bangladesh has a vibrant and youthful population. The country boasts a large working-age demographic, with 68.4 per cent of its 114 million citizens being of working age. This, combined with a homogenous culture marked by high degrees of linguistic, religious, and ethnic uniformity, fosters cohesive economic development. The nation's demographic dividend, along with rising purchasing power, creates fertile ground for investments in skill development and manpower exports, particularly in sectors like healthcare, light engineering, and fishing. This demographic and economic dynamism positions Bangladesh as an attractive destination for efficiency-seeking and market-expanding investments.

Bangladesh offers a wide range of tax incentives aimed at attracting and retaining foreign investment. Key incentives include substantial tax holidays, such as a 100 per cent income tax exemption for the first ten years, followed by a reduced tax rate for the subsequent two years. Investors also benefit from exemptions on dividends, capital gains, and royalties for up to ten years, significantly enhancing the financial appeal of investing in Bangladesh. Additionally, the country provides duty-free import facilities for capital machinery, construction materials, and raw materials, reducing initial investment costs and fostering industrial growth.

Moreover, Bangladesh has established Double Taxation Avoidance Agreements (DTAs) with over 40 countries. These agreements provide relief from double taxation, making the country an attractive destination for multinational companies looking to optimize their tax liabilities. Policies allowing 100 per cent foreign ownership and the full repatriation of capital and profits further boost investor confidence, ensuring that foreign investors can manage and repatriate their earnings without restrictions.

Bangladesh's SEZs offer additional advantages, with 100 approved economic zones providing various incentives to developers and manufacturing unit investors. These zones support regional industrial diversification and economic growth by offering numerous benefits, such as tax holidays, duty-free imports, and full repatriation of earnings, with a particular focus on high-tech parks and export processing zones (EPZs).

Non-fiscal incentives, including Most Favored Nation (MFN) status, no ceiling on investment, and access to foreign currency loans, further enhance Bangladesh's appeal to foreign investors. These incentives, along with sector-specific support, solidify the country's position as a competitive and attractive investment destination.

B. Competitive Disadvantages

Bangladesh faces several challenges that hinder its ability to attract and retain FDI, despite its strengths. The country struggles with underdeveloped infrastructure, particularly in transportation and energy, which lags behind regional competitors like India and Vietnam. Although improvements are being made, inadequate transportation networks, congested ports, and substandard industrial facilities, combined with bureaucratic hurdles, low productivity, and a complex taxation regime, continue to limit operational efficiency and raise costs for investors.

The complex, fragmented regulatory landscape in Bangladesh: The investment process requires involvement from 23 different government agencies, necessitating numerous approvals and clearances that increase both costs and timelines for investors. This complexity is exacerbated by a conservative bureaucracy that often exhibits reluctance toward profit repatriation, further deterring FDI. In contrast, neighboring countries have streamlined regulations to attract foreign investment. Regulatory uncertainty in Bangladesh also diminishes investor confidence, as high levels of ambiguity and a lack of coordinated efforts among government authorities discourage foreign investors, creating an environment where the perceived risks outweigh potential gains.

Trade logistics and infrastructure inefficiencies: The inefficiencies of trade logistics and infrastructure also compromise the nation's competitiveness. Cumbersome customs procedures, inadequate transportation networks, and congested ports obstruct the smooth flow of goods, increasing operational costs and deterring potential investors. Although there have been some recent improvements in logistics performance, Bangladesh still lags behind its competitors, causing FDI to gravitate towards countries with more efficient logistics ecosystems.

Another important issue is low productivity: Addressing the challenges of labor productivity and skill development requires significant investments in human capital infrastructure. Despite substantial growth in value added per worker over the past two decades, Bangladesh's progress remains modest compared to peer countries. For example, Bangladesh's value added per worker is only 80 per cent of Vietnam's, half of India's, and a mere quarter of the average seen in upper-middle-income countries (UMICs). This gap between demographic potential and development infrastructure underscores the need for robust investments in education, healthcare, and skill development to fully harness Bangladesh's demographic dividend and transition to a knowledge-based, inclusive economy.

Taxation regime in Bangladesh: The country relies heavily on indirect taxes, particularly the Value Added Tax (VAT), which constitutes a significant portion of government revenue. However, the multiplicity of taxes and levies, coupled with frequent changes in tax policies and rates, contributes to a lack of predictability in the taxation system. This unpredictability makes it difficult for investors to plan their financial strategies and navigate the complexities of profit repatriation, further deterring FDI inflows.

Political stability is another critical concern. While Bangladesh has enjoyed relative stability in recent years, its history of political volatility raises concerns for long-term investors. This contrasts with Vietnam's single-party system, which ensures policy continuity, and India's democratic governance, which, despite regional challenges, generally provides a stable investment environment.

4. Policy Recommendations

4.1 Recommendations for Agro-processing Sector

1. Enhancing Infrastructure for Agro-Processing and Exports

- **Establish Standard Laboratories**: Establishing standard laboratories within Bangladesh is crucial to enhancing the country's agro-processing and export capabilities. By setting up well-equipped laboratories with international accreditation, Bangladesh can ensure faster and more reliable testing, boosting foreign buyers' confidence and improving export performance.

- **Frozen Trailer Facilities**: Developing dedicated frozen trailer facilities is critical for reducing the high transportation costs of perishable goods. Currently, private transportation costs for frozen products are prohibitively high, estimated at around BDT 60,000 per truck for a trip from Dhaka to Narsingdi. Establishing a network of frozen trailer facilities can significantly lower these costs, enhance supply chain efficiency, and enable SMEs to participate more competitively in the market.

- **Implementation of the National Logistics Policy**: The recently introduced national logistics plan, which includes critical components like cold chain logistics and temperature control, should be implemented effectively to enhance the efficiency of the logistics sector. This would significantly benefit exports of perishable goods, such as food products and pharmaceuticals, requiring stringent temperature management. A robust cold chain logistics system will improve the quality and shelf life of export products, reduce delays, lower transportation costs, and enhance overall supply chain efficiency, boosting Bangladesh's export potential.

2. Policy and Tax Support for Competitiveness

- **Tax Benefits**: To support the growth of the agro-processing sector, reducing direct import taxes on raw materials is essential. This measure will be particularly beneficial as Bangladesh transitions out of its LDC status. Additionally, the current cash incentives, which have already decreased from 20 per cent to 10 per cent, will no longer be available post-graduation. Lowering import taxes can help offset these changes, enabling agro-processing firms to remain competitive by reducing production costs.

- **Enforce Existing Laws**: Effective enforcement of existing export laws is crucial for maintaining Bangladesh's competitiveness in international markets. Although the country has favorable export regulations, their weak implementation often undermines their effectiveness. Enhancing accountability among enforcing agencies, such as port authorities, is essential to ensure compliance and streamline export processes. This will build trust with international buyers, who rely on consistent quality and timely deliveries.

- **Reduce Shipping Time**: Reducing the time required to transport products from depots to shipping facilities is critical for increasing operational efficiency and meeting market demands. Streamlining procedures and optimizing logistics can reduce this time from seven to three days, enabling businesses to respond more quickly to market changes and enhancing global competitiveness.

3. Developing Human Capital and Sustainable Practices

- **Dedicated Training Departments**: Establishing dedicated training departments for agro-processing within agricultural universities and TVET institutes is essential for building a skilled workforce capable of meeting industry demands. By integrating agro-processing into curricula and offering specialized courses, Bangladesh can cultivate a workforce skilled in modern agro-processing technologies and practices.

- **Contract Farming**: Promoting contract farming is vital for creating a sustainable and efficient agricultural supply chain. Providing farmers with targeted training on best practices—such as

appropriate pesticide use and modern farming techniques—can significantly improve crop yields and quality. Instead of direct financial assistance, offering essential inputs like high-quality seeds, seedlings, and fertilizers can enhance production outcomes, ensuring alignment with market demands and quality standards.

4. Strengthening Supply Chain and Logistics

- **Decentralized Supply Chain:** Decentralizing the supply chain and reducing the influence of intermediaries can directly benefit farmers by allowing them to retain a larger share of their profits. This approach improves transparency, lowers costs, and increases supply chain efficiency, ultimately enhancing farmers' income and financial stability.

- **Rail and Waterway Utilization:** Leveraging existing railways and waterways for transporting agricultural products has significant potential. Initiatives like the mango train, which ensures timely delivery and reduces spoilage, can be expanded to other products such as vegetables, fruits, and grains. This would increase the accessibility of local produce to both national and international markets, boosting export volumes.

5. Advancing Technological and Industrial Growth

- **Crop Agriculture Models:** Bangladesh can improve its crop agriculture practices by adopting models from countries with advanced agricultural systems, such as Malaysia, India, the USA, and the UK. These countries offer valuable insights into modern farming techniques, sustainable practices, and technology integration. Tailoring these practices to local conditions can boost yields, improve efficiency, and promote sustainable agriculture, contributing to food security and economic growth.

- **Preservative Production Industry:** Encouraging the development of preservative production plants within Bangladesh can establish a robust backward-linking industry. This initiative would reduce reliance on imported preservatives, decreasing delays and minimizing dependency on foreign suppliers. A strong domestic preservative industry would provide agro-processors with a reliable supply of essential materials, improving the quality and shelf life of locally produced goods.

4.2 Recommendations for Jute and Jute Products Sector

1. Policy and Regulatory Measures

- **Regulating Plastics Usage:** The jute and jute products sector faces declining competitiveness due to the increased use of plastics. Implementing policies to regulate plastic usage and mandating jute sacks for agro-product packaging would significantly benefit the sector's revival.

- **Regulating Middlemen:** Taking measures to regulate middlemen will help mitigate price fluctuations in the market. Additionally, the government should establish fixed prices for raw materials to stabilize the supply chain.

- **Grading Regulations:** Implementing "grade-wise" product segmentation is crucial for the sector's growth and sustainability. Addressing unethical practices, such as adding water or other impurities to inflate short-term profits, is essential. Establishing a robust grading system will improve product quality and rebuild buyer confidence in the industry.

- **Policy Incentives for Diversification:** Bangladesh lags significantly in diversifying jute products. The national jute policy currently emphasizes raw jute production, leaving minimal room for innovation in high-value jute products. Policymakers should focus on diversifying jute products to maximize the sector's potential.

- **Subsidies for Diversification:** The 20 per cent cash subsidy provided for the export of diversified jute products (with more than 50 per cent jute content) should be extended for the next 5-10 years to support sector growth. Also, subsidies should be provided for the import of advanced machinery to encourage modernization and efficiency.

- **Reducing Tax Deducted at Source (TDS):** TDS should be reduced from 2 per cent to 0 per cent for jute and jute products. Lowering TDS will encourage farmers and traders to invest more in this sector.

- **Resolving Anti-Dumping Issues:** The government should intensify efforts to address the anti-dumping duty issue with India, the largest importer of Bangladeshi jute. Resolving this issue is critical to sustaining and expanding jute exports.

- **Revising Security Deposits for Leasing Jute Mills:** To attract investors, the government should revise the current 36-month security deposit requirement for leasing jute mills under BJMC. Otherwise, this policy may deter young entrepreneurs from entering the market.

- **Highlighting Sustainability:** Promoting the environmental benefits of jute—such as low water usage, pesticide-free cultivation, carbon neutrality, and biodegradability—is essential for the sector's sustainability. Establishing a "Better Jute Initiative" (BJI), modeled after the successful Better Cotton Initiative (BCI), could provide significant advantages to farmers while ensuring a traceable, eco-friendly supply chain for brands and retailers.

2. Technology Adaptation

- **Upgrading Outdated Machinery:** The inefficiency caused by outdated machinery has been a primary reason for the closure of public mills. Newly leased private mills must invest in advanced technologies to improve efficiency and competitiveness.

- **Adopting Energy-Saving Appliances:** Energy-saving technologies, including solar energy solutions, should be adopted to reduce energy costs. By cutting expenses and increasing productivity, such measures will make the sector more sustainable and competitive.

3. Research and Development

- **Investment in R&D:** Increased investment in research and development is critical for advancing the jute sector and introducing innovative solutions.

- **Skill Development Programs:** Structured training programs should be implemented to address skill gaps and enhance worker capabilities. Expanding skill development initiatives across the sector is vital for long-term growth.

- **Collaborations with Design Institutes:** Institutes such as BUTEX, BUFT, and NIFT should collaborate with the jute industry to develop innovative and diversified jute-based products that align with modern fashion trends.

- **Jute-Cotton Blended Fabrics:** Research is needed to develop consumer-friendly jute-cotton blended fabrics. Simultaneously, promoting the environmental and sustainability benefits of jute-based products will foster greater consumer acceptance and demand.

4.3 Recommendations for IT and ITES Sector

1. Regulatory and Legal Framework

- **Formulate Proper Guidelines and Rules**: Develop comprehensive guidelines for the valuation of IT and ITES firms to ensure consistent and reliable assessments, building investor confidence and fostering sector growth.

- **Enact Legislation on Venture Capital:** Introduce a venture capital act tailored for IT and ITES industries to attract investments, address key legal issues, and drive entrepreneurship and innovation.

- **Enhance Intellectual Property Rights for IT and ITES**: Strengthen IP protection through robust legal frameworks and enforcement mechanisms to encourage R&D, safeguard innovations, and attract foreign investors.

2. Infrastructure Development

- **Develop Comprehensive Facilities in IT Parks:** Expand IT park infrastructure to include essential amenities such as transportation, healthcare, and education to attract long-term investments and improve employee productivity.

- **Improve Digital Infrastructure:** Invest in faster mobile internet and broader broadband coverage to enhance operational efficiency, enable remote businesses, and foster inclusive digital growth.

3. Strategic Planning and Policy Stability

- **Establish a Long-Term Strategy for IT and ITES:** Create consistent, long-term policies, such as fixed import tax rates until 2041, to provide stability, encourage investment, and align with global trends.

4. Market Positioning and Financial Systems

- **Market Impact of Country Branding:** Promote Bangladesh as a global hub for affordable, high-skilled labor through effective branding to attract international investments and drive economic growth.

- **Establish a Universally Accepted Payment System:** Develop a globally recognized payment system to streamline transactions, secure money transfers, and support formalization in the IT sector.

4.4 Action Plan for the Agro-processing Sector

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
Establish Standard Laboratories	1. Identify strategic locations for laboratory establishment across Bangladesh	Ministry of Agriculture, BSTI	Short term	Site assessment reports, budget allocation	Number of locations identified
	2. Procure necessary equipment and recruit trained personnel for labs	Ministry of Agriculture, BSTI	Medium-term	Funding for equipment, hiring plan, training programs	Number of labs equipped and operational
	3. Secure international accreditation for the laboratories to meet global standards	Ministry of Agriculture, BSTI	Medium-term	Accreditation fees, partnership with international labs, compliance audits, staff training	Number of labs accredited internationally
	4. Develop a public awareness campaign to promote the use of local testing facilities among exporters	Ministry of Industries, Ministry of Agriculture and other relevant agencies	Medium-term	Marketing materials & outreach programs	Increase in the number of businesses using local labs
Tax Benefits	1. Review and revise the current tax structure on imports of raw materials for agro-processing	National Board of Revenue (NBR), Ministry of Finance	Short term	Economic impact analysis, stakeholder consultations	Reduction in tax rates for key raw materials
	2. Implement the new tax structure and communicate changes to stakeholders, including agro-processors and importers	NBR, Ministry of Agriculture and Relevant Associations	Medium-term	Tax policy revisions, communication strategy	Increase in raw material imports, stakeholder satisfaction survey results
	3. Monitor and evaluate the impact of tax reductions on the competitiveness of agro-processing firms	Ministry of Finance, Bangladesh Bureau of Statistics	Long term	Data collection systems, periodic impact assessments	Improved cost competitiveness of agro-processing firms
Contract Farming	1. Develop training programs focused on best practices in contract farming, such as pesticide use and modern techniques	Ministry of Agriculture, Agricultural Extension Offices	Short term	Curriculum development, training materials, expert trainers	Number of farmers trained, improvement in yield quality and quantity

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	2. Establish supply chains to distribute high-quality seeds, seedlings, and fertilizers to farmers under contract	Ministry of Agriculture, Relevant Associations, private sector partners	Medium-term	Inventory of high-quality inputs, logistics coordination	Increase in adoption of quality inputs, crop yield improvements
	3. Facilitate partnerships between processors and farmers to formalize contract farming agreements	Ministry of Agriculture, BAPA or other relevant agro-processor Associations	Medium-term	Legal templates, partnership agreements, awareness campaigns	Number of formalized contracts, farmer satisfaction surveys
	4. Monitor the impact of contract farming on farmer incomes and processor supply chains	Ministry of Agriculture, IMED (Implementation, Monitoring and Evaluation Division) and Relevant agencies,	Long term	Data collection tools, impact evaluation frameworks	Increased farmer incomes, stable supply chains for processors
Develop Dedicated Frozen Trailers Facility	1. Conduct a feasibility study to determine the best locations for frozen trailer facilities based on demand and logistics	Ministry of Commerce, private logistics companies, Bangladesh Freight Forwarders Associations and other relevant associations.	Short term	Feasibility study funding, logistics analysis	Completion of study, identified locations
	2. Develop a public-private partnership model to finance and operate the frozen trailer facilities	Ministry of Commerce, Bangladesh Bank, PPP Authority, private sector investors	Medium-term	Investment plans, partnership agreements, financial incentives	Number of PPP agreements signed, funds raised
	3. Construct and operationalize the frozen trailer facilities with an emphasis on cost reduction for SMEs	Ministry of Commerce, BRTA, private logistics companies	Medium-term	Construction contracts, equipment procurement	Reduction in transportation costs per truck
Establish Dedicated	1. Establish agro-processing departments within agricultural universities and TVET institutes	Ministry of Education, UGC	Medium-term	Budget allocation for new departments, curriculum development	Number of new departments established; courses offered

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
Training Departments	2. Develop specialized courses focused on agro-processing technologies and practices	Ministry of Education, TVET institutes	Medium-term	Course development funding, faculty training	Enrollment numbers in new courses, graduation rates
	3. Facilitate partnerships with industry players to provide practical training and internships	Ministry of Education, NSDA, Ministry of Industries, industry associations	Medium-term	Partnership agreements, internship placement programs	Number of partnerships, internships offered
	4. Monitor and assess the employment outcomes of graduates from these programs	Ministry of Education, UGC, Bangladesh Bureau of Statistics	Long term	Graduate tracking systems, employment surveys	Employment rate of graduates in agro-processing sector
Enforce Existing Laws	1. Conduct a comprehensive review of current export laws and their enforcement	Ministry of Commerce, Bangladesh Export Promotion Bureau (EPB)	Short term	Legal review team, audit of enforcement practices	Report on enforcement gaps and recommendations
	2. Strengthen accountability mechanisms for enforcement agencies, such as the port authority	Ministry of Commerce, Port Authority, Customs	Medium-term	Training programs, enhanced monitoring and reporting frameworks	Reduction in export processing time, increase in compliance rates
	3. Implement regular audits and evaluations to ensure compliance with export laws	Ministry of Commerce, Port Authority, Customs	Long term	Audit teams, evaluation frameworks	Number of audits conducted, compliance improvement metrics
	4. Develop a feedback mechanism for exporters to report challenges with enforcement practices	Ministry of Commerce, Sector Associations	Short term	Feedback channel development, communication tools	Number of reports received, resolution rate
Reduce Shipping Time	1. Analyze current logistics processes to identify bottlenecks causing delays in shipping from depots	Ministry of Shipping, Port Authority, private logistics firms	Short term	Process mapping tools, data analysis software	Bottlenecks identified, report on current average shipping times
	2. Implement process improvements, such as streamlined customs procedures and better coordination among logistics firms	Ministry of Shipping, customs, private logistics firms	Medium-term	Process improvement plans, training for logistics staff	Reduction in average shipping time to 3 days

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	3. Invest in digital technologies to enhance tracking and coordination of shipments	Ministry of Shipping, private logistics firms	Medium-term	Technology procurement, system integration	Increase in on-time deliveries, reduced shipment delays
	4. Monitor and report on shipping times to assess the impact of improvements on operational efficiency	Ministry of Shipping, logistics companies	Long term	Data collection systems, performance reports	Continued reduction in shipping times, stakeholder satisfaction surveys
Implementation of National Logistics Policies	1. Establish a task force to oversee the implementation of the national logistics plan	PMO, Ministry of Commerce,	Short term	Task force formation, operational guidelines	Task force operational, milestones achieved in logistics policy
	2. Develop guidelines for the establishment and operation of cold chain logistics facilities across key export zones	PMO, Ministry of Commerce,	Short term	Guideline documents, stakeholder consultations	Number of guidelines published, stakeholder adherence rates
	3. Launch infrastructure projects to build and upgrade cold chain logistics systems, including refrigerated storage and transport	PMO, Ministry of Commerce, private sector investors, private sector logistics firms and relevant associations	Medium-term	Infrastructure investment plans, public-private partnerships	Number of cold chain facilities built, reduction in spoilage rates
	4. Conduct periodic reviews to ensure compliance with national logistics standards and assess areas for further improvement	PMO, Ministry of Commerce,	Long term	Review frameworks, compliance audits	Increase in logistics efficiency, improved export quality metrics
Decentralized Supply Chain	1. Develop a policy framework to reduce the role of middlemen in the agro-processing supply chain	Ministry of Agriculture, agricultural cooperatives	Short term	Policy development resources, stakeholder meetings	Policy framework completed, number of middlemen transactions reduced
	2. Implement a direct sales platform to connect farmers directly with processors and retailers	Ministry of Commerce, ICT Division, Ministry of Agriculture, technology partners	Medium-term	Platform development funding, technology infrastructure	Number of transactions through platform, increase in farmer income

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	3. Provide training to farmers on using digital tools for direct sales and supply chain management	Ministry of Agriculture, agricultural extension offices	Medium-term	Training materials, digital tools, outreach programs	Number of farmers trained, increased digital transactions
	4. Monitor the impact of decentralized supply chains on farmer incomes and supply chain efficiency	Ministry of Commerce, academic institutions	Long term	Data collection tools, impact studies	Improvement in supply chain efficiency, increase in farmer incomes
Rail and Waterways Utilization	1. Assess the current capacity and condition of railways and river ports for agricultural product transport	Ministry of Railways, Ministry of Shipping, port authority, other relevant departments	Short term	Assessment reports, logistical evaluations	Report on current capacity, infrastructure gaps identified
	2. Develop a strategic plan to enhance cargo train and river port facilities for year-round agricultural product transport	Ministry of Railways, Ministry of Shipping, port authority	Medium-term	Strategic planning resources, investment funding	Increase in agricultural products transported via rail and waterways
	3. Launch pilot projects to test the feasibility of expanded rail and waterway transport for specific agricultural products	Ministry of Railways, Ministry of Shipping	Medium-term	Pilot project funding, logistics coordination	Success of pilot projects, increase in transported goods
	4. Scale successful pilot projects to a national level, ensuring comprehensive rail and waterway coverage	Ministry of Railways, Ministry of Shipping	Medium-term	National implementation plans, additional investment funding	National coverage achieved, increased export volumes
Crop Agriculture Models	1. Identify best practices and technologies from countries with advanced agricultural systems	Ministry of Agriculture and relevant agencies and associations, international partners.	Short term	Research funding, international collaboration agreements	Report on best practices, number of technologies identified for adaptation
	2. Develop pilot projects to test the adaptation of advanced agricultural models and technologies in local conditions	Ministry of Agriculture and relevant agencies, private sector partners	Medium-term	Pilot project funding, technology procurement	Success of pilot projects, farmer adoption rates

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	3. Establish knowledge exchange programs with partner countries to facilitate technology transfer and skill development	Ministry of Agriculture, international organizations	Medium-term	Exchange program funding, partnership agreements	Number of exchange programs, participant satisfaction rates
	4. Monitor and evaluate the impact of new agricultural practices on crop yields, sustainability, and farmer incomes	Ministry of Agriculture, IMED	Long term	Data collection systems, impact evaluation frameworks	Improvement in crop yields, increased farmer incomes
Preservative Producing Industry	1. Conduct a feasibility study to assess the potential for establishing preservative production plants in Bangladesh	Ministry of Industries, private sector investors	Short term	Feasibility study funding, market analysis tools	Completion of study, identified locations for plants
	2. Provide financial incentives and subsidies to encourage investment in preservative production facilities	Ministry of Finance, Ministry of Industries	Medium-term	Incentive programs, investment promotion strategies	Number of incentives granted, amount of investment attracted
	3. Establish quality standards and certification processes for locally produced preservatives	Ministry of Industries, BSTI	Medium-term	Standards development funds, certification bodies training	Number of certifications issued, compliance rates
	4. Monitor the growth and market share of the domestic preservative industry, adjusting policies as necessary to support expansion	Ministry of Industries, Ministry of Commerce	Long term	Market analysis tools, policy review mechanisms	Increase in market share, reduction in imports of preservatives

4.5 Action Plan for Jute & Jute Products Sector

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
Regulating Usage of Plastics	1. Implement regulations limiting plastic usage, particularly in agro-product packaging, and promote jute alternatives	Ministry of Environment, Ministry of Commerce, BSTI, Ministry of Textiles and Jute	Short term	Research on the harmful effects of the plastics, stakeholder consultations	Decrease in plastic usage, increase in jute sack/bag adoption
	2. Develop awareness campaigns about the benefits of jute over plastics, targeting both producers and consumers	Ministry of Environment, Ministry of Textiles and Jute, Bangladesh Jute Mills Association, Bangladesh Jute Spinners Association	Medium-term	Campaign materials, media partnerships	Public awareness levels, survey results
Regulating Middlemen	1. Conduct a market analysis to understand the impact of middlemen on price fluctuations in the jute market	Ministry of Commerce, Bangladesh Jute Mills Association, Bangladesh Jute Spinners Association	Short term	Market research funding, data collection tools	Report on market dynamics, price volatility metrics
	2. Establish regulatory measures and set a price range for raw jute to stabilize market conditions	Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Medium-term	Regulatory framework, price monitoring systems	Reduction in price volatility
Maintaining Price Consistency	1. Develop a government-led pricing strategy for raw jute and exported jute products to ensure consistency	Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Short term	Economic analysis tools, stakeholder engagement	Price stability reports, exporter feedback survey results
	2. Implement and monitor the pricing policy with regular adjustments based on market conditions and input costs	Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Medium-term	Monitoring systems, adjustment mechanisms	Consistent pricing data, stakeholders satisfaction level.
Policy Incentivizing Diversification	1. Put more emphasis on jute product diversification in the national policies along with raw jute production	Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Short-medium term	Policy review, expert consultations	Increase in value-added jute exports, number of diversified jute products

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	2. Create a conducive business environment by offering tax incentives and reducing bureaucratic barriers for jute product diversification	Ministry of Commerce, NBR, Ministry of Agriculture, Ministry of Textiles and Jute	Short-medium term	Incentive programs, systems review and analysis,	Increase in investments, number of new jute businesses
Subsidy on Diversification	1. Design an alternative to the cash subsidy program, for producers of high-demand diversified jute products, focusing on a 5–10 year support period	Ministry of Finance, Ministry of Commerce, Ministry of Textiles and Jute	Short term	Budget allocation, subsidy program guidelines	Number of subsidies granted, growth in diversified product market
	2. Monitor the impact of subsidies on production and export levels of diversified jute products	Ministry of Finance, Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Agriculture, Ministry of Textiles and Jute	Medium-term	Data collection tools, impact assessment reports	Increase in production/export levels, subsidy effectiveness reviews
Reduce TDS for Jute Products	1. Amend tax policy to reduce the TDS for jute products to 0 per cent	NBR, Ministry of Finance, Bangladesh Bank, Ministry of Agriculture, Ministry of Textiles and Jute	Medium-term	Tax policy revision resources, stakeholder consultations	Policy amendment completed, decrease in TDS rates
Resolving Anti-Dumping Issues with India	1. Engage in diplomatic negotiations with India to address the anti-dumping duty on Bangladeshi jute products	Ministry of Foreign Affairs, Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Mid-long term	Diplomatic resources, negotiation teams	Reduction/removal of anti-dumping duty, increase in exports to India
	2. Explore alternative markets and diversify export destinations to reduce dependency on India	Ministry of Commerce, Export Promotion Bureau (EPB), Ministry of Textiles and Jute	Long term	Trade mission resources	Number of new markets entered, export volume diversity
Revising Security Deposits for Leasing Jute Mills	1. Review and revise the current security deposit requirements for leasing jute mills to encourage new investors, especially new entrepreneurs	Ministry of Textiles and Jute, BJMC	Medium-term	stakeholder consultations	Reduction in required security deposits, increase in new entrepreneurs.

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	2. Implement a revised leasing policy and monitor its impact on investment levels in the jute sector	Ministry of Textiles and Jute, BJMC	Long term	Policy implementation tools, investor feedback systems	Increase in investments, number of new investors
Highlighting Sustainability	1. Launch a campaign promoting the environmental benefits of jute, including its biodegradability and low carbon footprint	Ministry of Environment, Ministry of Commerce, Ministry of Agriculture, Ministry of Textiles and Jute	Medium-term	Campaign funding, marketing materials	Public awareness levels, increase in jute product sales
	2. Partner with international organizations to highlight jute as a sustainable alternative in global forums and exhibitions	Ministry of Commerce, international trade bodies	Long term	Partnership agreements, participation in events	Number of partnerships, market share of jute products
Technology Adaptation: Upgradation of Jute Processing Technology	1. Conduct an assessment of current jute processing technologies and identify areas where advanced machineries are needed	Ministry of Textiles and Jute, private sector firms	Long term	Technology assessment tools,	Completion of assessment, areas identified for improvement
	2. Implement pilot projects for energy-efficient technologies in jute processing plants, focusing on renewable energy	Ministry of Textiles and Jute, private sector firms, Ministry of Power, Energy and Mineral Resources, Ministry of Environment	Long term	Pilot project funding, renewable energy technology procurement	Reduction in energy costs, increase in productivity
Research and Development: Jute-Cotton Blended Fabrics	1. Initiate R&D projects to develop jute-cotton blended fabrics in collaboration with textile industry stakeholders	Ministry of Textiles and Jute, BUTEX, BUFT,	Medium term	R&D funding, collaboration agreements	Number of new fabric types developed, reduction in cotton imports
	2. Test and market jute-cotton blended fabrics to assess market acceptance and potential for scale-up	Ministry of Commerce, textile industry partners.	Medium term	Market testing resources, consumer feedback tools	Market acceptance levels, sales volume of new fabrics
Investment in R&D and Skill Development	1. Increase funding for R&D initiatives focused on jute product innovation and	Ministry of Textiles and Jute, academic institutions, NSDA, Ministry of Commerce	Short term	R&D funding, training programs	Number of R&D projects, worker skill improvement metrics

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	diversification, including worker skill development programs				
	2. Establish partnerships between jute industry players and academic institutions for ongoing innovation and product development	Ministry of Textiles and Jute, BUTEX, BUFT.	Short-medium term	Partnership agreements, innovation funding	Number of new partnerships, increase in product innovation
Investment & Access to Finance: Attracting Investors	1. Launch an investor awareness campaign highlighting the benefits of investing in the jute sector, emphasizing sustainability and eco-friendliness	Ministry of Commerce, BIDA, Commercial Banks, Ministry of Agriculture, NGOs	Medium term	Campaign materials, outreach programs	Increase in investor inquiries, amount of investment in the jute sector
	2. Provide targeted financial incentives and low-interest loans for investors in the jute sector, ensuring funds are used appropriately	Ministry of Finance, Bangladesh Bank, Commercial Banks, NGOs.	Medium term	Loan programs, monitoring mechanisms	Increase in loans granted, compliance with loan conditions

4.6 Action Plan for the IT & ITES Sector

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
Formulate Proper Guidelines and Rules for Valuation	1. Develop standardized guidelines for the valuation of IT and ITES firms to ensure consistency and transparency	Ministry of Commerce, BASIS, ICT Division	Short term	Expert consultation (local & international), legal framework development, stakeholder engagement	Adoption of valuation guidelines, consistency in firm valuations
	2. Conduct workshops and training sessions for stakeholders to understand and apply the new valuation guidelines	BASIS, ICT Division, educational institutions	Short-Medium term	Training materials, venues, expert trainers	Number of workshops held, stakeholder feedback on guideline clarity
Enact Legislation on Venture Capital	1. Draft and pass a Venture Capital Act tailored to the IT and ITES sectors, addressing investor rights and tax incentives	Ministry of Finance, Bangladesh Investment Development Authority (BIDA), ICT Division	Medium term	Legal drafting resources, consultation with industry experts	Passage of the Venture Capital Act, increase in venture capital funding
	2. Develop a regulatory framework for venture capital that includes guidelines for fund management and exit strategies	Ministry of Finance, BIDA	Medium term	Regulatory development resources, industry feedback mechanisms	Number of venture capital firms registered, increase in funded startups
Enhance Intellectual Property Rights (IPR)	1. Strengthen the legal framework for IPR protection	Ministry of Law, Ministry of Commerce (MoC), ICT Division	Short term	Legal resources, stakeholder engagement	Number of IP registrations, reduction in IP infringement cases
	2. Launch awareness campaigns and provide support services for IP registration and protection	Ministry of Information, BASIS, ICT Division	Short–medium term	Campaign funding, support service setup	Increase in IP awareness, number of support service utilizations
Develop Comprehensive	1. Design and implement master plan for IT parks that includes transportation, education,	Bangladesh Hi-Tech Park Authority (BHTPA), ICT Division	Short-medium term	Local & international experts, infrastructure development funding	Number of facilities developed, investor and employee satisfaction rates

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
Facilities in IT Parks	healthcare, and recreational facilities				
	2. Partner with private and public entities to provide comprehensive services within IT parks	BHTPA, local government bodies, BASIS, BACCO	Medium-long months	Partnership agreements, service provision contracts	Number of partnerships formed, quality of services provided
Establish a Long-Term Strategy for IT and ITES	1. Formulate a long-term strategic plan for the IT and ITES sector	Ministry of Commerce, ICT Division	Short term	Expert consultation, Stakeholder engagement	Publication of strategy document, stakeholder endorsement
	2. Monitor and adjust the strategy based on sector performance and global trends	ICT Division, Bangladesh Bureau of Statistics (BBS)	Continuous	Monitoring tools, sector performance data, Stakeholder feedbacks	Periodic strategy updates, alignment with global IT trends
Improve Digital Infrastructure	1. Invest in expanding and upgrading mobile internet speeds and fixed broadband coverage nationwide	Bangladesh Telecommunication Regulatory Commission (BTRC), BIDA, private telecom operators	Medium-long term	Infrastructure investment, partnership with telecom operators	Increase in internet speeds, broadband coverage area
	2. Develop incentives for private sector participation in infrastructure development in underserved areas	BTRC, Ministry of Finance/ Bangladesh Bank, NBR	Medium term	Incentive programs, public-private partnership frameworks	Number of new infrastructure projects, increase in private sector investment
Country Branding	1. Create a global marketing campaign positioning Bangladesh as a hub for affordable, high-skilled labor in IT and ITES sectors	ICT Division, Ministry of Information, Ministry of Foreign Affairs (MoFA), Ministry of Commerce, BIDA, External Resource Division (ERD)	Medium term	Marketing campaign funding, international media partnerships	Increase in international business inquiries, brand recognition metrics

Recommendation	Specific Actions	Responsible Parties	Timeline	Resources Needed	Performance Indicators
	2. Participate in international trade shows and IT events to showcase Bangladesh's IT capabilities and workforce skills	ICT Division, BASIS, Export Promotion Bureau (EPB), Ministry of Commerce	Continuous	Event participation funding, trade show materials	Number of materials developed/ events attended; number of international partnerships formed
Universally Accepted Payment System	1. Develop and implement a universally accepted payment system to facilitate secure and transparent transactions for IT firms	Bangladesh Bank/ Ministry of Finance, ICT Division	Short-Medium term	Payment system development, regulatory compliance resources	Adoption rate of the payment system, reduction in informal remittances
	2. Partner with international financial institutions to integrate the payment system with global financial networks	Bangladesh Bank, Ministry of Finance	Medium term	Partnership agreements, integration tools	Number of international partnerships, increase in formal financial transactions

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Annex 1: Data and Index Calculation

Annex 1.1: Index Calculation

Domestic Market Size						
Sectors/Index	**Share of GDP (%)**	**Index (Share of GDP (%))**	**Domestic Investment Size (USD)**	**Index of Domestic Investment Size (USD)**	**FDI Size (Average of last 5 years) (USD)**	**Index of FDI Size (Average of last 5 years) (USD)**
Agro-processing	1.21	0.50	1,028,739,130	0.610	337,688,000	1.000
Light engineering and electronic goods	2.30	1.00	1,168,357,359	0.695	8,854,000	0.025
Leather & Leather Products	0.11	0.00	123,383,305	0.064	56,328,000	0.166
Home Textile	1.98	0.85	1,050,636,344	0.624	110,960,908	0.328
Jute & Jute Products	0.20	0.04	18,229,275	0.000	437,503	0.000
IT	1.26	0.53	1,673,922,096	1.000	37,776,000	0.111
Plastics & Plastic Products	0.13	0.01	100,059,384	0.049	2,401,425	0.006
Pharmaceuticals	1.83	0.79	1,497,886,373	0.894	70,968,000	0.209
Furniture	0.33	0.10	562,536,773	0.329	13,500,883	0.039
Max	2.30		1,673,922,096		337,688,000	
Min	0.11		18,229,275		437,503	

Source: Authors' calculation

Annex 1.1: Index Calculation

International Market						
Sectors/Index	**Export Share of Total Export**	**Index of Export Share of Total Export**	**Export Share of World Export**	**Index of Export Share of World Export**	**Sectoral Revealed Comparative Advantage**	**Index of Sectoral Revealed Comparative Advantage**
Agro-processing	2.393	1.000	10.24	0.729	0.196	0.000
Light engineering and electronic goods	1.117	0.428	14.03	1.000	0.066	0.000
Leather & Leather Products	1.991	0.820	0.08	0.005	25.551	0.019
Home Textile	2.199	0.913	0.36	0.026	4.837	0.004
Jute & Jute Products	1.648	0.666	0.001	0.000	1361.181	1.000
IT	1.133	0.435	13.66	0.974	0.077	0.000
API	0.539	0.169	2.01	0.143	0.239	0.000
Man Made Fibre based Garments	0.484	0.144	0.16	0.011	2.811	0.002
Plastics & Plastic Products	0.303	0.063	3.19	0.228	0.104	0.000
Pharmaceuticals	0.294	0.059	3.26	0.232	0.085	0.000
Furniture	0.162	0.000	1.27	0.090	0.113	0.000
Max	2.393		14.034		1361.181	1.000
Min	0.162		0.001		0.066	

Source: Authors' calculation

Annex 1.1: Index Calculation

Sector Readiness						
Sectors/Index	**Strength of Forward Linkage**	**Index of Strength of Forward Linkage**	**Strength of Backward Linkage**	**Index of Strength of Backward Linkage**	**Presence of Effluent Treatment Plant (%)**	**Index of Presence of Effluent Treatment Plant (%)**
Agro-processing	15.55	1.000	10.30	0.669	39.00	0.373
Light engineering and electronic goods	1.20	0.000	11.00	0.816	49.20	0.561
Leather & Leather Products	4.19	0.208	11.88	1.000	48.50	0.548
Home Textile	7.65	0.449	10.30	0.669	18.80	0.000
API	3.50	0.160	10.00	0.607	56.50	0.696
Man Made Fibre based Garments	3.00	0.125	7.10	0.000	42.70	0.441
Plastics & Plastic Products	2.90	0.118	8.24	0.238	27.00	0.151
Pharmaceuticals	5.70	0.314	9.86	0.577	73.00	1.000
Furniture	10.12	0.622	10.96	0.808	37.5	0.345
Max	15.55		11.88		73.00	
Min	1.20		7.1		18.8	

Source: Authors' calculation

Annex 1.1: Index Calculation

	SME Linkage				Job Creation and Quality	
Sectors/Index	**Sectoral Share of SMEs (%)**	**Index of Sectoral Share of SMEs (%)**	**Output Share of SMEs (%)**	**Index of Output Share of SMEs (%)**	**Share of Employment of Total Employment**	**Index of Share of Employment of Total Employment**
Agro-processing	41.63	0.000	54.57	0.539	5.23	1.000
Light engineering and electronic goods	61.79	0.601	54.57	0.539	0.99	0.090
Leather & Leather Products	61.50	0.593	54.57	0.539	1.97	0.300
Home Textile	51.65	0.299	54.57	0.539	2.89	0.497
Jute & Jute Products	51.35	0.290	54.57	0.539	1.71	0.243
IT	55.38	0.410	47.96	0.457	5.11	0.975
API	54.98	0.398	13.56	0.027	0.57	0.000
Plastics & Plastic Products	47.51	0.175	91.47	1.000	0.86	0.061
Pharmaceuticals	75.17	1.000	11.40	0.000	0.84	0.058
Furniture	52.85	0.334	42.36	0.387	1.69	0.240
Max	75.17		91.47		5.23	
Min	41.63		11.40		0.57	

Source: Authors' calculation

Annex 1.2: Data- Sub-indicators

	Domestic Market Size			International Market			Sector Readiness			SME Linkage		Job Creation and Quality
	Share of GDP (%)	Domestic Investment Size (USD)	FDI Size (Average of last 5 years) (USD)	Export Share of Total Export	Export Share of World Export	Sectoral Revealed Comparative Advantage	Strength of Forward Linkage	Strength of Backward Linkage	Presence of Effluent Treatment Plant (%)	Sectoral Share of SMEs (%)	Output Share of SMEs (%)	Share of Employment of Total Employment
Agriculture Machineries					0.001				49.17			
Agro-processing	1.21	102,873,913,009	337,688,000	2.39	10.236	0.196	15.55	10.30	39.00	41.63	54.57	5.23
API				0.54	2.014	0.239	3.50	10.00	56.50	54.98	13.56	0.57
Automobile									14.81			
Cement			22,068,000	0.02	0.001	0.355			34.30			
Ceramic				0.07					34.30			
Construction Materials	6.66	758,910,090,908	84,298,000	1.77								
Cosmetics & Toiletries					0.001							
Furniture	0.33	56,253,677,349	13,500,883	0.16	1.267	0.113	10.12	10.96	37.50	52.85	42.36	1.69
Garments Accessories									42.66			
Healthcare Services	1.65	160,146,465,279										
Home Textile	1.98	105,063,634,380	110,960,908	2.20	0.359	4.837	7.65	10.30	18.80	51.65	26.03	2.89
IT	2.56	167,392,209,589	37,776,000	1.13	13.662	0.077	5.01	9.97		55.38	47.96	5.11
Jute & Jute Products	0.20	1,822,927,539	437,503	1.65	0.001	1361.181	2.82	10.33		51.35	26.43	1.70
Leather & Leather Products	0.11	12,338,330,479	56,328,000	1.99	0.076	25.551	4.19	11.88	48.50	61.50	29.31	1.97
Light engineering and electronic goods	2.30	116,835,735,884	8,854,000	1.18	14.033	0.066	1.20	11.00	49.20	61.79	47.06	0.99
Luggage					0.003							
Man Made Fibre based Garments				0.48	0.160	2.811	3.00	7.10	42.70			
Medical Equipment					0.030							

	Domestic Market Size			International Market			Sector Readiness			SME Linkage		Job Creation and Quality
	Share of GDP (%)	Domestic Investment Size (USD)	FDI Size (Average of last 5 years) (USD)	Export Share of Total Export	Export Share of World Export	Sectoral Revealed Comparative Advantage	Strength of Forward Linkage	Strength of Backward Linkage	Presence of Effluent Treatment Plant (%)	Sectoral Share of SMEs (%)	Output Share of SMEs (%)	Share of Employment of Total Employment
Motorcycle and Parts					0.001					48.15	82.91	0.04
Pharmaceuticals	0.87	149,788,637,282	70,968,000	0.29	3.260	0.085	5.70	9.86	73.00	75.17	11.40	0.84
Plastics & Plastic Products	0.13	10,005,938,380	2,401,425	0.30	3.195	0.104	2.90	8.24	27.00	47.51	91.47	0.86
Seed					0.001							
Shipbuilding				0.01	0.005	0.017						
Tea				0.003	0.001	0.115						
Tourism					0.024							

Source: Authors' calculation

Annex 1.3: Data- Domestic Market Size

	2015-16 (Million BDT)	2016-17 (Million BDT)	Growth Rate (%)	2017-18 (Million BDT)	Growth Rate (%)	2018-19 (Million BDT)	Growth Rate (%)	2019-20 (Million BDT)	Growth Rate (%)	Average Output	Share of GDP	Average Growth Rate	ICOR (2019)	Investment (Million BDT)	Investment (Million USD)	Investment (USD)
Agro-processing	105,907	117,424	10.87	135,950	15.78	148,371	9.14	163,729	10.35	141368.50	1.21	11.53	4.9	7,990,216.82	102,873.91	102,873,913,009
API													6.7			
Construction Materials	615,521	669,508	8.77	735,954	9.92	811,387	10.25	884,914	9.06	775440.75	6.66	9.50	8	58,944,546.76	758,910.09	758,910,090,908
Cosmetics & Toiletries																
Furniture	23,578	27,504	16.65	33,564	22.03	42,255	25.89	52,208	23.55	38882.75	0.33	22.03	5.1	4,369,223.12	56,253.68	56,253,677,349
Healthcare Services	156,124	168,040	7.63	179,841	7.02	201,050	11.79	221,065	9.96	192499.00	1.65	9.10	7.1	12,438,575.96	160,146.47	160,146,465,279
Home Textile	187,371	195,154	4.15	226,640	16.13	257,512	13.62	241,249	-6.32	230138.75	1.98	6.90	5.14	8,160,292.48	105,063.63	105,063,634,380
IT	248,337	269,075	8.35	287,286	6.77	308,422	7.36	328,686	6.57	298367.25	2.56	7.26	6	13,001,352.92	167,392.21	167,392,209,589
Jute	20,761	22,651	9.10	24,428	7.85	23,555	-3.57	22,097	-6.19	23182.75	0.20	1.80	3.4	141,586.78	1,822.93	1,822,927,539
Leather & Leather Products	5,141	8,001	55.63	13,554	69.40	16,692	23.15	14,892	-10.78	13284.75	0.11	34.35	2.1	958,318.13	12,338.33	12,338,330,479
Light engineering and electronic goods	214,086	241,430	12.77	256,142	6.09	273,977	6.96	299,209	9.21	267689.50	2.30	8.76	3.87	9,074,631.61	116,835.74	116,835,735,884
Pharmaceuticals	68,421	78,078	14.11	86,325	10.56	112,586	30.42	129,204	14.76	101548.25	0.87	17.46	6.56	11,634,083.46	149,788.64	149,788,637,282
Plastics & Plastic Products	11,304	12,477	10.38	14,433	15.68	15,520	7.53	16,541	6.58	14742.75	0.13	10.04	5.25	777,161.23	10,005.94	10,005,938,381

Source: Statistical Yearbook 2020 and Study on Employment, Productivity, and Sectoral Investment in Bangladesh: 2019, GED

Annex 1.4: Data- FDI Inflow

	FDI Inflows (Net) by Sectors during the Fiscal Years						
	2022-23 (Million USD)	**2021-22 (Million USD)**	**2020-21 (Million USD)**	**2019-20 (Million USD)**	**2018-19 (Million USD)**	**Average (Million USD)**	**Average (USD)**
Agro-processing	255.99	137.12	307.31	157.14	830.88	337.688	337,688,000
Light engineering and electronic goods	3.28	10.12	3.08	1.98	25.81	8.854	8,854,000
Leather & Leather Products	121.16	39.26	17.82	30.15	73.25	56.328	56,328,000
Home Textile (Proxy)						110.96	110,960,908
Jute							417,012
IT	47.27	30.2	28.74	45.98	36.69	37.776	37,776,000
Plastics & Plastic Products (Proxy)							2,694,340
Pharmaceuticals	79.53	87.4	95.42	47.84	44.65	70.968	70,968,000
Furniture (Proxy)							18,127,681
Cement	19.93	23.32	36.50	15.05	15.54	22.068	22,068,000
Construction Materials	76.17	112	51.26	144.59	37.47	84.298	84,298,000

Source: Bangladesh Bank

Annex 1.5: Data- Export

	Export share of total domestic export					Export Share of World Export				Sectoral Revealed Comparative Advantage
	2022-23 (USD)	Export share	2021-22 (USD)	Export share	Average Export Share	Sectoral export in 2021 (USD)	Contribution of the sector in world export	Domestic export share	International export share	
Agro-processing	1,265,310,000	2.007	1,695,190,000	2.780	2.393	2,480,000,000,000	10.24	0.02007	0.10236	0.196
Light engineering and electronic goods	585,850,000	0.929	795,630,000	1.305	1.117	3,400,000,000,000	14.03	0.00929	0.14034	0.066
Leather & Leather Products	1,223,620,000	1.941	1,245,180,000	2.042	1.991	18,400,000,000	0.08	0.01941	0.00076	25.551
Home Textile	1,095,290,000	1.737	1,621,930,000	2.660	2.199	87,000,000,000	0.36	0.01737	0.00359	4.837
Jute	912,250,000	1.447	1,127,630,000	1.849	1.648	257,500,000	0.001	0.01447	0.00001	1361.181
IT	664,490,000	1.054	738,790,000	1.212	1.133	3,310,000,000,000	13.66	0.01054	0.13662	0.077
API	303,010,000	0.481	364,070,000	0.597	0.539	488,000,000,000	2.01	0.00481	0.02014	0.239
Man Made Fibre based Garments	284,650,000	0.451	314,820,000	0.516	0.484	38,900,000,000	0.16	0.00451	0.00161	2.811
Plastics & Plastic Products	209,860,000	0.333	166,250,000	0.273	0.303	774,000,000,000	3.19	0.00333	0.03195	0.104
Pharmaceuticals	175,420,000	0.278	188,780,000	0.310	0.294	790,000,000,000	3.26	0.00278	0.03261	0.085
Furniture	90,670,000	0.144	110,360,000	0.181	0.162	307,000,000,000	1.27	0.00144	0.01267	0.113
Shipbuilding	5,530,000	0.009			0.009	124,000,000,000	0.51	0.00009	0.00512	0.017
Luggage						65,500,000,000	0.27	0.00000	0.00270	0.000
Ceramic	43,390,000	0.069	41,360,000	0.068	0.068					
Tourism						585,000,000,000	2.41	0.00000	0.02415	0.000
Tea	2,340,000	0.004			0.004	7,800,000,000	0.03	0.00004	0.00032	0.115
Seed						8,850,000,000	0.04	0.00000	0.00037	0.000
Cosmetics & Toiletries						404,000,000	0.00	0.00000	0.00002	0.000
Cement	13,660,000	0.022			0.022	14,800,000,000	0.06	0.00022	0.00061	0.355

	Export share of total domestic export					Export Share of World Export				Sectoral Revealed Comparative Advantage
	2022-23 (USD)	Export share	2021-22 (USD)	Export share	Average Export Share	Sectoral export in 2021 (USD)	Contribution of the sector in world export	Domestic export share	International export share	
Logistics										
Medical Equipment						738,000,000,000	3.05	0.00000	0.03046	0.000
Agriculture Machineries						26,100,000,000	0.11	0.00000	0.00108	0.000
Motorcycle and Parts						38,100,000,000	0.16	0.00000	0.00157	0.000
Construction Materials			1,081,690,000	1.774	1.774					

Source: Export Promotion Bureau and Atlas of Economic Complexity

Annex 1.5: Data- SME

	Number of firms					Output In Million BDT				
	Total	**Small**	**Medium**	**SME**	**Share**	**Total**	**Small**	**Medium**	**SME**	**Share**
Agro-processing	9,397	3,762	150	3,912	41.63	1,263,747	450,604	239,009	689,613	54.57
Light engineering and electronic goods	280	138	35	173	61.79	211,081	10,977	88,364	99,341	47.06
Leather & Leather Products	1,369	814	28	842	61.50	221,751	54,517	10,476	64,993	29.31
Home Textile	12,753	6,221	366	6,587	51.65	1,268,688	190,930	139,254	330,184	26.03
Jute (Proxy)	13,270	6,412	402	6,814	51.35	1,331,177	202,844	149,009	351,853	26.43
IT										
API	251	103	35	138	54.98	121,526	5,692	10,786	16,478	13.60
Plastics & Plastic Products	943	399	49	448	47.51	661,469	592,097	12,939	605,036	91.47
Pharmaceuticals	149	81	31	112	75.17	268,624	11,472	19,147	30,619	11.40
Furniture	3,268	1,699	28	1,727	52.85	102,767	20,234	23,299	43,533	42.36
Motorcycle and Parts	54	24	2	26	48.15	14,835	1,967	10,333	12,300	82.91

Source: Survey of Manufacturing Industries (SMI) 2019

Annex 1.6: Data- Employment and Presence of ETP

	Employed population in SMI	Share of Employment of Total Employment	Presence of Effluent Treatment Plant (%)
Agriculture Machineries			49.17
Agro-processing	306,699	5.23	39.33
API	33,663	0.57	56.52
Automobile			14.81
Cement			34.3
Ceramic			34.3
Furniture	99,210	1.69	37.46
Garments Accessories			42.66
Home Textile	169,494	2.89	18.77
IT	300,000	5.11	
Jute	100,000	1.71	
Leather & Leather Products	115,668	1.97	48.5
Light engineering and electronic goods	58,188	0.99	49.17
Man Made Fibre based Garments		0.00	42.66
Motorcycle and Parts	2,561	0.04	
Pharmaceuticals	49,458	0.84	72.67
Plastics & Plastic Products	50,428	0.86	26.8

Source: Survey of Manufacturing Industries (SMI) 2019

Annex 2: Enterprise Survey Questionnaire

Investment Diversification of Priority Sectors After LDC Graduation

The survey aims to collect information from the selected enterprises in the agro-processing, jute and jute products, and IT and IT enabled services (ITES) sectors to diversify investment in Bangladesh's priority sectors. The data gathered through this survey will help assess the current status of enterprises in Bangladesh, evaluate the potential for attracting investment in the post-LDC era, and understand the enterprises' preparedness for LDC graduation. Such statistics will play a supportive role for the Bangladesh government and various organizations involved in planning and implementation in their decision-making processes. This survey is part of a specialized study conducted by the Bangladesh Investment Development Authority, the United Nations Development Programme, and the South Asian Network on Economic Modeling (SANEM).

All information collected from this survey will be kept confidential and will only be used for research purposes. The survey will gather data related to the enterprise's production, sales, infrastructure, workforce, financing, investment, business environment, innovation, and potential challenges and opportunities related to LDC graduation.

Respondent's Information:

Name	:
Designation	:
Mobile no	:
Email	:
Company name	:
Address of the Office	:
Address of the Factory	
Gender	: Male/Female/Third Gender/Prefer not to say
Date	:

Section A: General Information

Sl	Questions	Options	Conditions
A1.	Which sector does your company operate in?		
	a. Manufacturing: …….	a) Agro-processing b) bJute and Jute Products	
	b. Service: ……	a) IT and IT Services	
A2.	What is the company's ownership category?	Select one	
		a) Sole proprietorship b) Private Limited Company c) Public Limited Company d) Joint Venture/Family Business e) Joint Venture with Foreign Investors f) Others: …….	
A3.	For Joint Ventures, what is the share of the foreign ownership in the firm? [29]	a) 0-10% b) 11-30% c) 31-50% d) 50% +	This question is applicable if the answer of A2 is e.
	Please specify		
A4.	Are there any females among the owners?	Yes/No	If the answer of A4 is No, then jump to A5
A4.1	If yes, how many/what percentage?	a) 0-10% b) 11-30% c) 31-50% d) 50% +	
	Please specify		
A5.	Is the largest shareholder/owner also the Top Manager (i.e. Chief Executive Officer (CEO), Chief Operating Officer (COO) etc.?	Yes/No	
A6.	What percentage of the Top Managers are female?	a) 0-10% b) 11-30% c) 31-50% d) 50% +	
A7.	What year was the company established?		
A8.	How many permanent, full-time employees including managers did the company have in the establishment year? (permanent = employees with more than 1 year contract)		
A9.	How many permanent, full-time employees are currently working in the company?	**Agro-processing, Jute and Jute Products** a) Micro (1-25) b) Small (26-120) c) Medium (121-300) d) Large (300+)	

[29] All the options of this questionnaire will only be used for the validation purpose. Those questions which have options, also have the feature to write the exact value.

Sl	Questions	Options	Conditions
		IT and ITES a) Micro (1-15) b) Small (16-50) c) Medium (51-120) d) Large (120+)	
A10.	What percentage of the permanent, full-time employees are females?	a) 0-10% b) 11-30% c) 31-50% d) 50% +	
	Please specify		
A11.	Does the company have any international certifications? i.e., any ISO/HACCP certificates.	Yes/ No	
A11.1	If yes, please specify		
A12.	Which of the following benefits are there in the sector?	a) Easy and low cost of input materials b) Easily sourced input materials c) Significant local and regional market share d) Easy entry in foreign markets e) Prospect of export in new and old export market is high f) Easy and skilled labor force g) Sector-wise government incentives and facilities h) Future prospective sector i) Others (please specify)	

Section B: Production & Sales

Sl	Questions	Options	Conditions
B1.	What is the annual production cost of your company in the last fiscal year? (in BDT)	a) Below 50 lakhs b) 50 lakhs - 1 crore c) 1-5 crores d) 5-10 crores e) 10-50 crores f) 50+ crores	
	Please specify		
B2.	Using your current resources, are you able to operate at 100 per cent of your capacity? (Hint: think about the last fiscal year)	Yes/No	If the answer of B2 is Yes, then jump to B3
B2.1	If not, what is the current operation per cent in terms of full capacity?	a) Below 50% b) 51-80% c) 80%+	
B3.	Which three products/services make the largest share of your annual production?	Text	

Sl	Questions	Options	Conditions
B4.1 B4.2	What was the total annual sales in the last 2 fiscal years? (in BDT) FY 2021-22: FY 2022-23:	a) Below 20 lakhs b) 20-50 lakhs c) 50 lakhs - 1 crore d) 1- 5 crores e) 5-10 crores f) 10-50 crores g) 50+ crores	
	Please specify		
B5.	Did your company export any goods or services in the last fiscal year (FY22-23)?	Yes/No	If the answer to B5 is No, then skip the question B6.2 & B6.3. Otherwise, answer all the three questions of B6.
B6.1	What per cent of annual sales came from domestic sales (local market) in the last fiscal year?		
B6.2	What per cent of annual sales came from Indirect Export in the last fiscal year?		
B6.3	What per cent of annual sales came from Direct Export in the last fiscal year?		
B7.1	In the last fiscal year, for exports, what was the total cost of the compliance? (in BDT)	a) Below 10 thousand b) 10-50 thousand c) 50 thousand- 1 lakh d) More than 1 lakh	Answer the question only if B5 is Yes. If No, please jump to B8.1
	Please specify		
B7.2	Have you encountered any issues related to certification, standardization, and testing labs when exporting?	Yes/No	If no, then jump to B8.1
B7.4.1	If yes, what is the level of difficulty?	a) Very difficult b) Difficult c) Moderate d) Easy e) Very Easy	
B8.1	Have you imported any raw materials/inputs in the last fiscal year?	Yes/ No	
B8.2	In the last fiscal year, what percentage of the raw materials/inputs were imported?	a) 0-20% b) 21-40% c) 41-70% d) 70% +	If the answer of B8.1 is Yes, then answer B8.2, B8.3, 8.4. If No, jump to B8.5
	Please specify		
B8.3	In the last fiscal year, what was the percentage of the import cost of raw materials/inputs in terms of total production cost?	a) 0-20% b) 21-40% c) 41-70% d) 70% +	
	Please specify		
B8.4	Which raw materials were imported in the last fiscal year?	○ …….. ○ …….. ○ ……..	

Sl	Questions	Options	Conditions
B8.5	Are there enough raw materials available domestically for your needs?	Yes/No	
B9.	What is your targeted growth in sales for the next 5 years?	a) 0-10% b) 11-30% c) 31-50% d) 50%+	
	Please specify		

Section C: Infrastructure

Sl	Questions	Options	Conditions
C1.	What is the annual electricity cost for production? (in BDT)	a) Less than 1 lakh b) 1-5 lakhs c) 5-10 lakhs d) More than 10 lakhs	
	Please specify		
C2.	What is the cost of water for production in the last fiscal year? (in BDT)	a) Below 50 thousand b) 50 thousand to 1 lakh c) 1 to 5 lakhs d) More than 5 lakhs	
	Please specify		
C3.	What is the cost of gas for production in the last fiscal year? (in BDT)	a) Below 50 thousand b) 50 thousand to 1 lakh c) 1 to 5 lakhs d) More than 5 lakhs	
	Please specify		
C4.	What is the cost of internet annually for your company? (in BDT)	a) Below 50 thousand b) 50 thousand to 1 lakh c) 1 to 5 lakhs d) More than 5 lakhs	
	Please specify		
C4.3	Did you experience any disruption in the internet connection, in the last fiscal year?	Yes/ No	
C5.	Please rank the extent of disruption for each utility for current operation:		
C6.	What was the total transportation cost of your company in the last FY?	a) Below 50 thousand b) 50 thousand to 1 lakh c) 1 to 5 lakhs d) above 5 lakhs	
	Please specify		
C7.	What was the total cost of storage/warehouse of your company in the last FY?	a) Below 50 thousand b) 50 thousand to 1 lakh	

	No Disruption	Minor Disruption	Moderate Disruption	Major Disruption	Severe Disruption	Not Applicable
Electricity						
Water						
Gas						
Internet						

SI	Questions	Options	Conditions
		c) 1 to 5 lakhs d) above 5 lakhs	
	Please specify		
C8.	Does your company have access to adequate temperature-controlled logistics?	Yes/No	

Section D: Labour and Management

SI	Questions	Options	Condition
D1.	Occupation-wise distribution of labor force (%):		
	Labourers		
	Machine Operators		
	Supervisors/ Team Leaders		
	Administrative Staff		
	Engineers and Technologists		
	Sales and Marketing		
	Supply Chain Managers		
	Top Management		
D2.	Average monthly salary (in BDT)		
	Labourers	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		
	Machine Operators	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		
	Supervisors/ Team Leaders	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		
	Administrative Staff	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		
	Engineers and Technologists	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		
	Sales and Marketing	a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify		

SI	Questions		Options	Condition
	Supply Chain Managers		a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify			
	Top Management		a) 10 thousand or below b) 10 – 50 thousand c) 50 thousand – 1 lac d) More than 1 lac	
	Please specify			
D3.	The wages of the total labour force (permanent and temporary) account for what percentage of the total operation cost?		a) 10% or below b) 11-30% c) 30-50% d) 50%+	
	Please specify			
D4.	Skill level of workers (%):			
	D4.1	Low skill or unskilled		
	D4.2	Middle skilled		
	D4.3	High skilled		
D5.	To what extent do you think the following issues are challenging for the current labor force of your company?		a. Lack of specialized technical and vocational knowledge relevant to your industry. □ Very easy □ Easy □ Moderate □ Difficult □ Very difficult	
			b. Insufficient proficiency in utilizing technological tools and platforms required for your operations. □ Very easy □ Easy □ Moderate □ Difficult □ Very difficult	
			c. Failure to keep pace with evolving skill demands and industry advancements □ Very easy □ Easy □ Moderate □ Difficult □ Very difficult	
			d. Lack of adaptability to changing work environments and practices □ Very easy □ Easy □ Moderate □ Difficult	

SI	Questions	Options	Condition
		□ Very difficult	
		e. Other challenges not covered by the above options (please specify). □ Very easy □ Easy □ Moderate □ Difficult □ Very difficult	

Section E: Finance and Investment

SI	Questions	Options	Conditions
E1.	Have you taken any loans from domestic sources?	Yes/No	If no, jump to E1.7
E1.1	Which of the following sources was used to take the loans –	**Select multiple:** a) Loan from Private banks b) Loan from State-owned banks c) Loan from Non-Bank Financial institutions d) NGO e) Cooperatives f) Money lenders (Mohajon) and/or other informal sources g) Others	
E1.2	a) How many days did it take to get loans from 'Private bank'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		
	b) How many days did it take to get loans from 'State-owned bank'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		
	c) How many days did it take to get loans from 'Non-bank Financial Institutions (NBFI)'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		
	d) How many days did it take to get loans from 'NGO'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		
	d) How many days did it take to get loans from 'Cooperatives'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		

SI	Questions	Options	Conditions
	e) How many days did it take to get loans from 'Money lenders (Mohajon)'?	a) 7 days or below b) 8-30 days c) More than 30 days	
	Please specify:		
E1.3	Have you faced any difficulties in taking loans?	Yes/No	
E1.4	If yes, what is the level of difficulty?	a) Very easy b) Easy c) Moderate d) Difficult e) Very difficult	
E1.5	Have your application for loan(s) ever been rejected?	Yes/No	
E1.6	What were the main reasons for rejection?	a) Lack of necessary documents b) Not having enough collaterals c) Unacceptable guarantor d) Social discrimination e) Gender discrimination f) Lengthy procedure g) Others	
E1.7	What were the reasons for not taking loans?	a) Complicated and lengthy paperwork b) Not having enough collaterals c) Unacceptable guarantor d) Social discrimination e) Gender discrimination f) Self-fund g) Finance from relatives and family h) High interest rate i) Others	
E2.	In the last fiscal year, which funding sources were used for working capital?	Select multiple a) Company earnings b) Loan from Private banks c) Loan from State-owned banks d) Loan from Financial institutions e) Credit from suppliers f) Foreign investment g) Others	
E2.1	In the last fiscal year, what percentage of the working capital were funded from the following sources:	a) Company earnings: b) Loan from Private banks: c) Loan from State-owned banks: d) Loan from Financial institutions: e) Credit from suppliers: f) Foreign investment: g) Others	

SI	Questions	Options	Conditions
E3.	Have your company ever searched for foreign investment?	Yes/ No	If no, jump to E4
E3.1	What is your best source to search for foreign investment?	a) Government Agencies and Programs b) International Trade and Investment Conference/ Exhibitions c) Investment Promotion Websites d) Business Associations e) Banks and other Financial Institutions f) Venture Capital and Private Equity Firm g) Others	
E3.2	How easy was/is it to secure a foreign investment?	a) Very Easy b) Easy c) Moderate d) Difficult e) Very Difficult	
E4.	In your opinion, which country can be the best source of FDI for Bangladesh?	Text	
E5.	In your opinion, FDI can create the most impact in:	a) Infrastructure development b) Capacity building c) Employment generation d) Economic growth e) Technology transfer f) Innovation stimulation	
E6.	Have you ever used the BIDA/BEZA/BHTPA One Stop Service (OSS)?	Yes/ No	If no, jump to Section F
E6.1	On average, how long did it take to get a response from BIDA/BEZA/BHTPA OSS?	a) Below 7 Days b) 7-30 Days c) More than 30 Days	
	Please specify		
E6.2.	How satisfied are you with BIDA/BEZA/BHTPA One Stop Service (OSS)?	a) Very dissatisfied b) Dissatisfied c) Moderate d) Satisfied e) Very satisfied	

Section F: Business Environment

SI	Questions	Options	Conditions
F1.	How many man-hours (days) did your company spend to comply with government regulations, in the last fiscal year? (Hint: Tax file, License renew etc.)	a) 7 Days or below b) 7-30 Days c) More than 30 Days	
	Please specify		
F2	How many man-hours (days) did your company spend to file all the taxes, in the last fiscal year?	a) Less than 7 Days b) 7-30 Days	

<table>
<tr><th>Sl</th><th>Questions</th><th>Options</th><th>Conditions</th></tr>
<tr><td></td><td></td><td>c) More than 30 Days</td><td></td></tr>
<tr><td></td><td>Please specify</td><td></td><td></td></tr>
<tr><td>F3.</td><td>In the last fiscal year, has your company applied for import permit?</td><td>Yes/ No</td><td>If No, then jump to F5</td></tr>
<tr><td>F4.</td><td>How long did it take to receive the permit?</td><td>a) Less than 7 Days
b) 7-30 Days
c) More than 30 Days</td><td></td></tr>
<tr><td></td><td>Please specify</td><td></td><td></td></tr>
<tr><td>F9.</td><td colspan="2">Biggest Obstacle for the Company Currently-
<table>
<tr><td>Access to Land</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Domestic Finance</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Foreign Investment</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Electricity</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Water</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Gas</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Access to Internet</td><td>○ No obstacle
○ Minor Obstacle
○ Moderate obstacle
○ Significant Obstacle
○ Biggest obstacle
○ Not Applicable</td></tr>
<tr><td>Business License and Permits</td><td>○ No obstacle
○ Minor Obstacle</td></tr>
</table></td><td></td></tr>
</table>

SI	Questions	Options	Conditions
		○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	Customs and Trade Regulations	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	Tax Rates	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	Tax Administration	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	High Skill Labour Shortage	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	Labour Regulations	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
	Others	○ No obstacle ○ Minor Obstacle ○ Moderate obstacle ○ Significant Obstacle ○ Biggest obstacle ○ Not Applicable	
F6.	In which three areas do your sector need to improve the most?	a) Skill level of workers b) Technological upgradation c) Local value chain d) Global value chain e) Forward and backward linkage f) Design and packaging g) Quality control standardization, testing, and certification. h) Research and Development i) Lead time	

Sl	Questions	Options	Conditions
		j) Logistic system and cost k) Border compliance and cost l) Others	

Section G: Green Economy

Sl	Questions	Options	Conditions
G1.	In the last fiscal year, did the company monitor its Carbon emissions?	Yes/ No	
G2.	Has the company adopted any renewable energy technology for sustaining power?	Yes/ No	If yes, answer G3. Otherwise, jump to G4.
G3	If yes, what is the annual percentage of renewable energy?	a) 0-10% b) 11-30% c) 31-50% d) 50%+	
G4.	Is the waste or byproduct of the company disposed in an environment friendly manner?	Yes/ No	
G5.	Does your company have any LEED certificates?	Yes/ No	

Section H: Innovation

Sl	Questions	Options	Conditions
H1	Has your company taken any innovation strategies in the last three fiscal years?	Yes/ No	If no, jump to section I
H1.1	What percentage of the annual production cost is spent on Research and Development (RND)?	a) 0-10% b) 11-30% c) 31-50% d) 50%+	
	Please specify		

Section I: LDC Graduation

Sl	Questions	Options	Conditions
I1	Are you aware that Bangladesh will be graduating from LDC in 2026?	Yes/No	
I1.1	Are you aware of the following impacts of LDC graduation?	a) Loss of DFQF preferential treatment b) Stringent Rules of Origin in the export market c) Loss of TRIPS benefits d) Strict labor compliances e) Higher tariff in the export market f) Not aware of any of the above impacts	
I1.2	How will the LDC graduation of Bangladesh impact your sales target for the next 5 years?	a) Very easy b) Easy c) Moderate	

Sl	Questions	Options	Conditions
		d) Difficult e) Very Difficult	
I2	Do you anticipate an increase in investment in your sector after LDC graduation?	Yes/ No	If yes, go to I3. If no, answer I2.1
I2.1	If not, which areas need to improve most to attract investment in your sector?	a) Skilled worker b) Advanced technology c) Integration with local value chain d) Integration with global value chain e) Strengthening forward and backward linkage f) Marketing strategies including design and packaging g) Quality control standardization, testing, and certification. h) Research and development i) Lead time j) Logistic system and cost k) Border compliance and cost l) Infrastructure (power and other utilities) m) Others (please specify)	
I3.	To what extent do you think, the LDC graduation of Bangladesh will impact your export earning?	a) Very positive b) Positive c) No impact d) Negative e) Very negative	
I3.1	Will compliance-related issues (i.e., labor rights, customs procedures, etc.) pose a significant challenge for your sector after LDC graduation?	Yes/ No	
I4.	To what extent do you think, LDC graduation will impact import of raw materials?	a) Very Low b) Low c) Moderate d) High e) Very High	
I5.	In your knowledge, have any policies been implemented/taken for your sector regarding LDC graduation?	Yes/ No	
I5.1	If yes, do you believe these policies will be sufficient to address the challenges related to LDC graduation?	Yes/No	
I5.2	If no, what policies do you believe should be implemented to facilitate a smooth transition from LDC status for your sector?	Open Ended	

Section J: Investment Diversification

SI	Questions	Options	Conditions
J1.	What are the sub-sectors of your sector?		
J1.1	Which of the sub-sectors have more demand in the domestic market?		
J1.2	Which of the sub-sectors have more demand in the international market?		
J1.3	J1.3. Which countries does your company currently export to?		If the answer of B5 is yes, then answer this question
J1.4	Which countries have high potential in the export markets for your sector in the future?		
J1.5	Is your company willing to invest in any sub-sector other than your sub-sector (the sub-sector in which you are currently operating)?	Yes/No	If yes, answer J1.5.1. If no, answer J1.5.2
J1.5.1	If yes, in which sub-sector are you interested to invest?		
J1.5.2	If not, why not?		
J1.6	Which of the potential sub-sectors does your company have the necessary infrastructure and production capacity to invest in?		
J2.	Which countries are the main competitors in the international market in your sector?		
J3.	In which areas are these countries ahead of Bangladesh in terms of competition?	a) Easy and low cost of input materials b) Easily sourced input materials c) Significant local and regional market share d) Easy entry in foreign markets e) Skilled labors f) Advanced technology g) Local value chain h) Global value chain i) Strong backward and forward linkage j) Marketing strategies including design and packaging k) Quality control standardization, testing and certification l) Quality control standardization, testing and certification m) Lead Time n) Logistic System and Cost o) Easy administrative process p) Others	

Sl	Questions	Options	Conditions
J3.1	If others, please specify		
J4.	Do you think the LDC graduation will increase the level of foreign competition?	Yes/No	
J5.	Do you think the amount of investment in your sector is sufficient?	Yes/No	If no, answer J5.1. If yes, jump to J6.
J5.1	If not, what is the reason behind the insufficient investment?		
J6.	Do you think it is possible to attract more foreign investment in any sub-sector?		
J7.	What steps do you think the government should take to attract investment in your sector?		
J8.	How much investment do you think is required to achieve the targeted growth of your company in the next 5 years?	a) 50 lakhs or below b) 50 lakhs - 1 crore c) 1-5 crores d) 5-10 crores e) 10-50 crores f) 50+ crores	
J9.	Does your company enjoy any financial/policy benefits given by the government?	Yes/No	
J10.	What is the percentage increase in domestic market demand in your sector over the next 5 years?	a) 0-10 per cent b) 11-30 per cent c) 31-50 per cent d) 50 per cent+	
J11.	What is the percentage increase in international market demand in your sector over the next 5 years?	a) 0-10 per cent b) 11-30 per cent c) 31-50 per cent d) 50 per cent+	

Name of the Enumerator	
Signature	
Seal	
Date	
GPS Location	

Annex 3: KII Questionnaire

Annex 3.1 KII Questions for Agro-processing

Potential Investors:

Opportunities

1. What makes Bangladesh's agro-processing sector lucrative for investments? What are the sub-sectors that offer the highest potential for growth?
2. What are the targeted support programs by the government to help develop the sector?
3. How do you foresee the role of technological advancements and innovation in influencing investment decisions, and what sub-sectors do you observe stand to benefit the most?
4. How do you assess the role of sustainable practices and climate resilience in agro-processing investments?

Challenges

5. What are the key investment considerations for investors looking to enter the agribusiness sector, particularly in terms of risk management and market volatility?
6. What are the primary challenges you perceive that could hinder investment inflows after the LDC graduation, and how do you propose addressing them? Could you elaborate on the investment prospects after graduation?
7. How do you envision the role of international investors in driving investments after LDC graduation, and what measures could incentivize their participation?
8. Are there particular regulatory bottlenecks that you believe may deter investment initiatives and what regulatory reforms would you recommend mitigating these barriers?

Recommendations

9. What are your recommendations for policymakers to create an enabling environment that encourages sustained investment and growth in the agribusiness sector, aligning with global best practices?
10. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the IT sector of Bangladesh?

For the Private Sector:

Opportunities

1. How do you assess the current state of competitiveness of the sector? Which sub-sectors have the potential to grow quickly in the short term? Are there any "quick wins"?
2. What initiatives from the government have helped the development of the agro-processing sector?
3. What innovative approaches or partnerships do you envision as viable avenues for driving technological deepening and investment? Are there opportunities for collaboration or joint ventures with international partners that your organization is exploring to leverage expertise and resources for growth?
4. How do you assess the role of sustainable practices and climate resilience in agribusiness investments?

Challenges

5. What are the key challenges inhibiting the growth of the sector?
6. What are some challenges that face the sector after the LDC graduation?
7. What are the key infrastructural barriers in the sector and how can they be best addressed?
8. Are there specific regulatory hurdles or compliance issues that pose obstacles to investment/attracting investment or operational activities, and how do you navigate them?

9. What challenges does your organization encounter when considering further investments, and how do these challenges impact investment decision-making?
10. How would you assess the current status and challenges facing priority sub-sectors in attracting investments, particularly in light of impending changes post-LDC graduation?

Recommendations

11. How do you perceive the government's role in facilitating private sector investment and growth, and what areas require targeted policy interventions? Is this practised in any country?
12. In your view, what policy measures or incentives could enhance private sector participation and investment, foster sustainable growth and innovation, and encourage private sector investment?
13. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the jute sector of Bangladesh?

For Public Sector Representatives:

1. How would you assess the current status and challenges facing priority sectors in attracting investments, particularly in light of impending changes post-LDC graduation?
2. What role do you envision for the government in supporting the agro-processing sector, and what steps have been taken to promote investment and sectoral development?
3. What strategic initiatives or support programs are being considered to stimulate investment after the LDC graduation?
4. From your perspective, what regulatory reforms or interventions are further necessary to remove barriers and create a conducive environment for investment in the agro-processing?
5. Are there specific opportunities for PPPs or collaboration initiatives that you see as instrumental in driving investment and innovation in the sector?

Annex 3.2 KII Questions for IT

Potential Investors:

Opportunities

1. How do you assess the competitiveness and scalability of Bangladesh's Digital Economy sector?
2. Could you elaborate on the investment prospects you envision in the IT & ITES sector? Which particular areas within IT & ITES have potential for growth & development?
3. What other factors make investment in the IT & ITES sector lucrative? Any specific incentives from the government?
4. How do you foresee the role of technological advancements and innovation in influencing investment decisions, and what sub-sectors do you believe stand to benefit the most?

Challenges

5. What are the primary challenges you perceive that could hinder investment inflows after the LDC graduation?
6. Are there particular regulatory and infrastructure barriers that you believe may deter investment initiatives?
7. What challenges does your organization encounter when considering further investments, and how do these challenges impact investment decision-making? How do you assess the investment climate and risk factors?

Recommendations

8. What are your recommendations for policymakers to create an enabling environment that encourages sustained investment and growth in the Digital Economy/IT, aligning with global best practices?

9. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the IT sector of Bangladesh?

For the Private Sector:

Opportunities

1. What specific sub-sectors do you find most promising for investment, and why?
2. Which sub-sectors have potential to grow quickly in the short-term? Are there any "quick wins"?
3. What initiatives from the government have helped the development of the IT/ITES/ Digital Economy sector?
4. What innovative approaches or partnerships do you envision as viable avenues for driving technological deepening and investment?

Challenges

5. What are the key challenges inhibiting the growth of the sector?
6. What are some challenges that face the sector after the LDC graduation?
7. What are the key infrastructural barriers in the sector and how can they be best addressed?
8. Are there specific regulatory hurdles or compliance issues that pose obstacles to investment/attracting investment or operational activities, and how do you navigate them?
9. What challenges does your organization encounter when considering further investments, and how do these challenges impact investment decision-making?
10. How would you assess the current status and challenges facing priority sub-sectors in attracting investments, particularly in light of impending changes post-LDC graduation?

Recommendations

11. In your view, what policy measures or incentives could enhance private sector participation and investment, foster sustainable growth and innovation, and encourage private sector investment?
12. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the jute sector of Bangladesh?

For Public Sector Representatives:

1. How would you assess the current status and challenges facing priority sectors in attracting investments, particularly in light of impending changes post-LDC graduation?
2. What role do you envision for the government in supporting the digital economy sector, and steps have been taken to promote investment and sectoral development?
3. What strategic initiatives or support programs are being considered to stimulate investment after the LDC graduation?
4. From your perspective, what regulatory reforms or interventions are further necessary to remove barriers and create a conducive environment for investment?
5. How is the government supporting digital literacy programs to bridge the digital divide and promote inclusivity?
6. Are there specific opportunities for PPPs or collaboration initiatives that you see as instrumental in driving investment and innovation?

Annex 3.3 KII Questions for Jute & Jute Products

Potential Investors:

Opportunities

1. How do you assess the competitiveness and scalability of Bangladesh's jute sector?

2. Which particular areas within jute & jute-related products have the potential for growth & development?
3. What other factors make investment in jute & related products lucrative? Any specific incentives from the government?
4. How do you foresee the role of technological advancements and innovation in influencing investment decisions, and what sub-sectors do you believe stand to benefit the most?

Challenges

5. What are the primary challenges you perceive that could hinder investment inflows after the LDC graduation?
6. Are there particular regulatory and infrastructure barriers that you believe may deter investment initiatives?
7. What challenges does your organization encounter when considering further investments, and how do these challenges impact investment decision-making?

Recommendations

8. What are your recommendations for policymakers to create an enabling environment that encourages sustained investment and growth in the Jute sector, aligning with global best practices?
9. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the jute sector of Bangladesh?

For the Private Sector:

Opportunities

1. What specific jute sub-sectors do you find most promising for investment, and why?
2. Which sub-sectors have the potential to grow quickly in the short term? Are there any "quick wins"?
3. How do you perceive the market opportunities for sustainable and eco-friendly jute products domestically and internationally?
4. What initiatives from the government have helped the development of the sector?
5. What innovative approaches or partnerships do you envision as viable avenues for driving investment and fostering growth after LDC graduation? Is this followed in any country?

Challenges

6. What are the key challenges inhibiting the growth of the sector?
7. What are some challenges that face the jute sector after the LDC graduation?
8. What are the key regulatory & infrastructural barriers in the sector and how can they be best addressed?
9. What challenges does your organization encounter when considering further investments, and how do these challenges impact investment decision-making?
10. How would you assess the current status and challenges facing priority sub-sectors in attracting investments, particularly in light of impending changes post-LDC graduation? How do you assess the investment climate and risk factors?

Recommendations:

11. What strategies do you employ to mitigate risks associated with fluctuations in raw material prices and demand?
12. Considering the potential loss of preferential market access post-graduation, are the steps the government is considering sufficient? What further strategies do you propose to mitigate the adverse effects on export-oriented industries?

13. How do you perceive the government's role in facilitating private sector investment and growth, and what areas require targeted policy interventions? Is this practised in any country?
14. What recommendations do you have for policymakers to address key challenges and create an enabling environment that encourages private sector investment and development of the sector?
15. Are there any specific blockers to the suggested reforms that could hamper progress in these reforms? Who are the potential enablers that could champion progress in the jute sector of Bangladesh?

For Public Sector Representatives:

1. Does the government see jute as a priority sector for diversification and development?
2. What role do you envision for the government in supporting the jute sector and how can policy frameworks be optimized to achieve this?
3. What policies are in place to support sustainable jute cultivation practices and ensure fair wages for jute farmers and workers?
4. What strategic initiatives and support programs are being considered to stimulate investment after the LDC graduation? How is the government facilitating market access and export promotion for jute products?
5. What mechanisms are in place or being considered to facilitate knowledge sharing and capacity building, particularly in emerging sectors with growth potential such as diversified jute products?
6. Are there specific opportunities for PPPs or collaboration initiatives that you see as instrumental in driving investment and innovation?
7. What are your recommendations for policy interventions and institutional mechanisms to foster a conducive business environment and attract sustainable investments after LDC graduation?

Annex 4: General Questions for FGD

- What are some opportunities in the Sector that makes it a priority sector for Bangladesh?
- Which sub-sectors have potential to grow quickly in the short-term? Are there any “quick-wins”?
- What are the key challenges inhibiting the growth of the sector?
- What are the key barriers in access to finance that restrict growth of the sector?
- What are the key regulatory barriers in the sector and how can they be best addressed?
- What are the key infrastructural barriers in the sector and how can they be addressed?
- What other areas in business/regulatory environment restricts investments in the sector?
- What lessons can Bangladesh take from global best practices?
- What role should government play in supporting the sector’s growth and attract investment? What are the key policy initiatives that can be taken?
- What challenges would there be for government supporting this sector?
- Who are the potential supporters and blockers? How can recommendations be framed accordingly for maximum effectiveness?

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