



Government of the People's Republic of Bangladesh
WTO Wing
Ministry of Commerce
Report
on

IDENTIFICATION OF TRADE-RELATED GRADUATION CHALLENGES AND PREPARATION OF SECTOR-SPECIFIC TRADE ROADMAPS FOR OVERCOMING THE CHALLENGES

DIAGNOSTIC TRADE INTEGRATION STUDY UPDATE (DTISU) OF BANGLADESH:
TRADE ROADMAP FOR SUSTAINABLE GRADUATION (TRSG) PROJECT



Publication Period : **May 2023**

Publication : **WTO Wing Ministry of Commerce**

Copyright : @ WTO Moc
Ministry of Commerce
Government of the People's Republic of Bangladesh

Design & Printed by : **Printing Zone**
141, Arambag, Motijheel
Dhaka-1000

Government of the People's Republic of Bangladesh
WTO Wing
Ministry of Commerce



Preface

Bangladesh has made impressive socio-economic progress during the last decade, in particular. Bangladesh has been recommended for graduation from LDC status in 2026. As a result, Bangladesh will face a number of challenges related to trade. In this context, this study on 'Identification of Trade-related Graduation Challenges and Preparation of Sector-Specific Trade Roadmaps for Overcoming the Challenges' was conducted by Bangladesh Foreign Trade Institute (BFTI). The said study was initiated by the WTO Wing, Ministry of Commerce, Government of the People's Republic of Bangladesh under Diagnostic Trade Integration Study Update (DTISU) of Bangladesh: Trade Roadmap for Sustainable Graduation (TRSG) Project, funded by the Enhanced Integrated Framework (EIF).

The study had been undertaken to analyze trade-related graduation challenges and prospects of the 12 sectors of goods and services, including Readymade Garments (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical Products, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Software & IT related Services, Tourism, Nursing and Midwifery Services. The study highlights sector-specific strengths, weaknesses, opportunities, threats, and strategies to overcome them for realizing the export potential and sustainable export-led growth. In addition, this study prepared a roadmap for enhancing the capacity of the export-oriented sectors to underpin the key opportunities and challenges and recommended concrete actions to address the challenges.

I extend my sincere gratitude to the WTO Wing, Ministry of Commerce, Government of the People's Republic of Bangladesh, key experts, consultants and the researchers who have worked relentlessly to ensure the completion of this study. Their unwavering support and commitment have been instrumental in making this study a reality. I am grateful to my BFTI team members, in particular, who extended tremendous support in this regard.

In response to the preparation of a smooth transition and sustainable graduation of the country, I hope this report will facilitate substantial improvements in the 12 sectors of Bangladesh for ensuring export diversification and improvement of trade competitiveness. This study is expected to have significant implications for the policy makers in the areas of 12 sectors in Bangladesh for overcoming LDC graduation challenges and ensuring sustainable economic growth and development.

A handwritten signature in black ink, appearing to be 'Jafar Uddin', written in a cursive style.

Dr. Md. Jafar Uddin
Chief Executive Officer
Bangladesh Foreign Trade Institute

Table of Contents

List of Tables-----	iv
List of Figures-----	v
List of Abbreviations-----	vii
নির্বাচী সারসংক্ষেপ-----	xv
Executive Summary -----	xxiv
Introduction -----	1
Objectives of the study -----	2
Scope of the study -----	2
Methodology of the study -----	2
Implementation of Bangladesh 2016 DTIS: An update -----	4
Review of Bangladesh’s trade performance-----	9
Trade related key challenges of sustainable graduation of Bangladesh-----	10
Identification of sector specific trade-related graduation challenges: 12 sectors of Bangladesh-----	12
Ready Made Garments (Knitwear and Woven)-----	12
Pharmaceuticals & API-----	19
Leather and Leather Goods-----	29
Non-Leather Footwear-----	41
Light Engineering Including Electronics and Electrical Sector-----	52
Plastics Industry-----	59
Shipbuilding Sector-----	69
Agro Products and Processed Foods-----	78
Fisheries and Livestock Sector-----	88
Fisheries Sector-----	88
Livestock Sector-----	97
Software & IT related Services Sector-----	107
Tourism Sector-----	113
Nursing and Midwifery Services-----	122
Sector specific LDC graduation related challenges-----	136
Trade Roadmap for sustainable graduation and implementation matrix -----	138
Conclusions-----	140
References-----	141
Annexure- Trade roadmap for sustainable graduation-----	149

List of Tables

Table 1: Export-import statistics of Bangladesh	9
Table 2: Seven thematic sub-committees and their key role	11
Table 3: Existing and MFN tariff applied by major destination (%)	14
Table 4: SWOT analysis of RMG sector	16
Table 5: SWOT analysis of pharmaceutical and API sector	25
Table 6: SWOT analysis of the leather and leather goods sector	36
Table 7: Distribution of top 10 non-leather footwear importers country average global share (year 2015 -2021) (In billions USD)	42
Table 8: SWOT analysis of non-leather footwear sector	48
Table 9: SWOT analysis of light engineering sector including electronics and electrical	57
Table 10: Top global exporters of plastic products (Under HS code 39) (Value in million US\$)	59
Table 11: Import trend for plastics and rubber articles thereof	61
Table 12: Import of selected commodities of plastics (HS Code 4-digit level) (value in million US\$)	61
Table 13: Destination analysis of Bangladesh and global perspective for plastic (HS 39)	62
Table 14: SWOT analysis of plastic sector	64
Table 15: Export of shipbuilding sector in USD million	71
Table 16: SWOT analysis of the shipbuilding sector	73
Table 17: Top global exporters of agricultural products and processed food (in million \$)	78
Table 18: Export value of vegetables, fruits and dry foods	80
Table 19: Destination analysis of Bangladesh and global perspective for selected agro products	81
Table 20: SWOT analysis of agro products and processed foods sector	84
Table 21: World fisheries sector exports during 2014-2021	88
Table 22: Cash incentives in Fisheries sector	91
Table 23: SWOT analysis of fisheries sector	92
Table 24: The top ten importers of livestock sector in 2021	97
Table 25: Production of milk, meat and eggs	98
Table 26: Export scenario of livestock sector (value in million USD)	99
Table 27: BD vs. global export scenario of livestock sector including 6 digits HS Code in FY 2021-22	99
Table 28: Destination analysis of Bangladesh and global perspective	100
Table 29: SWOT analysis of livestock sector	103
Table 30: SWOT analysis of software and IT-related service sector	111
Table 31: Overview of tourism sector	113
Table 32: SWOT analysis of tourism sector	117
Table 33: Attractive tourist spots including cultural, archaeological and historical places	118
Table 34: Fact sheet current status of nurses and midwives in the world evidence in 2020	122
Table 35: Estimated global health workforce supply versus “need” as defined by WHO for 2013 and 2030	124
Table 36: Number of nurses globally and density per 10 000 population, by WHO region, 2018	124
Table 37: Historical data number of midwives from Year 1970 to 2020 by region per 1000	125
Table 38: Top countries for immigrant registered nurses	127
Table 39: Top five countries to import nurses	127
Table 40: Nurse migration for overseas employment (1985-86), 1991-2004 and 2021-22	128
Table 41: Summary statistics of current status of Bangladeshi nurses, midwives and institutions	128
Table 42: technical requirement for nursing positions in the US and Canada	129
Table 43: SWOT analysis of nursing and midwifery sector	132
Table 44: Sector specific LDC graduation related challenges	136

List of Figures

Figure 1: Bangladesh's RMG export trend	12
Figure 2: Markets with potential for Bangladesh's exports of apparel & textile products including RMG	13
Figure 3: Monthly variation in RMG export of Bangladesh	16
Figure 4: Revenue of Bangladesh's pharmaceutical industry in million US\$	19
Figure 5: Export trend of Bangladesh pharmaceutical sector in US\$ million	20
Figure 6: Import of API (organic chemicals: HS 29) by Bangladesh in FY2020-21	20
Figure 7: Covid-19 Impact on export of pharmaceutical product in US\$ million	21
Figure 8: Top export destinations of pharma products from Bangladesh in FY2021-22	22
Figure 9: Export potential map for top 20 countries for pharmaceutical sector	22
Figure 10: Global import-export trend of leather sector	29
Figure 11: Export trend of leather sector (in million USD)	30
Figure 12: Export trend of leather and leather, leather footwear and leather goods (in million USD)	31
Figure 13: Raw hides (41), leather products (42), leather footwear (6403) export destinations	32
Figure 14: Import trend of leather, leather goods and leather footwear	32
Figure 15: FDI inflow in the leather and leather goods sector (in ml USD)	33
Figure 16: Sector-specific investment incentives and restriction	35
Figure 17: Impact of Covid-19 in the leather sector	36
Figure 18: % distribution of global footwear production by continent (Quantity)	41
Figure 19: Top five country consumption of footwear	42
Figure 20: % of global market share of top ten countries in non-leather footwear market	43
Figure 21: % of export growth of top ten countries	43
Figure 22: Annual production of footwear (In million pairs)	44
Figure 23: Bangladesh's consumption of footwear 2021	44
Figure 24: Annual import of non-leather footwear and footwear parts (In Million US\$)	45
Figure 25: Export volume of non-leather footwear in USD million	45
Figure 26: Comparison of Bangladesh's non-leather footwear with top exporting countries (Based on 4 Hs digit code 2021)	46
Figure 27: Bangladesh's non-leather export to different number of countries from 2017 to 2021	46
Figure 28: Export and Import growth performance % over years	48
Figure 29: World light engineering (LE) products export (2002-2021)	52
Figure 30: Bangladesh's export performance in light engineering products including electronics and electrical	53
Figure 31: Exports scenario of plastic products in Bangladesh	60
Figure 32: Export growth analysis of plastics during pre-COVID-19 and post COVID-19	63
Figure 33: Export trend of toys	66
Figure 34: Export performance of shipbuilding sector in million USD	69
Figure 35: Import payment of ships in USD million	70
Figure 36: Bangladesh's export performance in agro products and processed food sector (HS 04-24)	79
Figure 37: Import trend of agro-products and processed food (in million USD)	80
Figure 38: Net FDI inflows of food products in Bangladesh	81
Figure 39: Impact of COVID-19 on export of agro products and processed food	84
Figure 40: Export scenario of fisheries sector of Bangladesh	89
Figure 41: Import scenario of fisheries sector of Bangladesh	89
Figure 42: Monthly variation in the Fisheries Export of Bangladesh	91
Figure 43: Global import scenario of livestock sector	98

List of Figures

Figure 44: Global export trend of livestock sector ----- 98
Figure 45: Import scenario of livestock sector -----101
Figure 46: Impact of COVID-19 on the export of livestock sector ----- 102
Figure 47: World export scenario of software and IT-related services -----108
Figure 48: Travel & tourism (T&T) economic impact timeline, 2000 – 2021 -----114
Figure 49: Tourism export and import payment in USD million -----115
Figure 50: Estimated loss of turnover by tour operators in Bangladesh -----117
Figure 51: Estimated global demand and supply of health workers, by WHO/World in income group,
2013 and 2030 (in million) -----123
Figure 52: Projected increase (to 2030) of nursing stock, by region -----125
Figure 53: Top 20 countries of origin comprise non-OECD as well as the OECD or EU countries. ----- 126
Figure 54: Proposed Implementation, Monitoring and Evaluation and Resource Mobilization Arrangement ----- 139

List of Abbreviations

4IR	Fourth Industrial Revolution
ADB	Asian Development Bank
ADR	Alternate Dispute Resolution
AIN	Account Office Identification Number
AIT	Advanced Income Tax
API	Active pharmaceutical ingredients
ARF	ASEAN Regional Forum
ASEAN	Association of Southeast Asian Nations
B.Sc	Bachelor of Science
BAB	Bangladesh Accreditation Board
BACCO	Bangladesh Association of Contact Center and Outsourcing
BAPA	Bangladesh Agro-Processors Association
BAPI	Bangladesh Association of Pharmaceutical Industries
BARC	Bangladesh Agricultural Research Council
BARI	Bangladesh Agricultural Research Institute
BASIS	Bangladesh Association of Software and Information Services
BAU	Bangladesh Agricultural University
BB	Bangladesh Bank
BBA	Biman Bangladesh Airlines
BBA	Bachelor of Business Administration
BBS	Bangladesh Bureau of Statistics
BC	Bangladesh Customs
BCC	Bangladesh Computer Council
BCSIR	Bangladesh Council of Scientific and Industrial Research
BD	Bangladesh
BDT	Bangladeshi Taka
BEA	Bangladesh Electrical Association
BEPZA	Bangladesh Export Processing Zone Authority
BESIC	Bangladesh Small and Cottage Industries Corporation
BEZA	Bangladesh Economic Zones Authority
BFFEA	Bangladesh Frozen Foods Exporters Association
BFLLEA	Bangladesh Finished Leather, Leather Goods and Footwear Exporters' Association
BFRI	Bangladesh Fisheries Research Institute
BFSA	Bangladesh Food Safety Authority
BFTI	Bangladesh Foreign Trade Institute
BFVAEA	Bangladesh Fruits, Vegetables & Allied Product Exporter's Association
BGMEA	Bangladesh Garment Manufacturers and Exporters Association
BIDA	Bangladesh Investment Development Authority
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIPET	Bangladesh Institute of Plastic Engineering and Technology
BITAC	Bangladesh Industrial Technical Assistance Center
BIWTA	Bangladesh Inland Water Transport Authority
BKMEA	Bangladesh Knitwear Manufacturers and Exporters Association
BLPA	Bangladesh Land Port Authority
BLRI	Bangladesh Livestock Research Institute

BLS	Bureau of Labor Statistics (U.S)
BMET	Bureau of Manpower, Employment and Training
BMFA	Bangladesh Marine Fisheries Association
BNC	Bangladesh Nursing Council
BNMC	Bangladesh Nursing and Midwifery Council
BOESL	Bangladesh Overseas Employment and Services Limited
BoI	Board of Investment
BPC	Business Promotion Council
BPC	Bangladesh Parjatan Corporation
BPFMEA	Bangladesh Pet Flakes Manufacturers & Exporters Association
BPGMEA	Bangladesh Plastic Goods Manufacturers & Exporters Association
BPICC	Bangladesh Poultry Industry Central Council
BPO	Business Process Outsourcing
BRAC	Bangladesh Rural Advancement Committee
BRRRI	Bangladesh Rice Research Institute
BSBA	Bangladesh Ship Builders Association
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSE	Bovine Spongiform Encephalopathy
BSEC	Bangladesh Steel and Engineering Corporation
BSTI	Bangladesh Standards and Testing Institution
BTA	Bangladesh Tanners Association
BTB	Bangladesh Tourism Board
BTC	Bangladesh Tariff Commission
BTEB	Bangladesh Technical Education Board
BTRC	Bangladesh Telecommunication Regulatory Commission
BTTC	Bangladesh Trade and Tariff Commission
BUET	Bangladesh University of Engineering and Technology
BUFT	BGMEA University of Fashion & Technology
BUILD	Business Initiative Leading Development
BUTEX	Bangladesh University of Textiles
BWCCI	Bangladesh Women Chamber of Commerce and Industry
BWDB	Bangladesh Water Development Board
CAAB	Civil Aviation Authority of Bangladesh
CAD	Computer-Aided Design
CAGR	Compound Annual Growth Rate
CBHC	Community-Based Health Care
CCA	Controller of Certifying Authorities
CCBDF	Central Cattle Breeding and Dairy Farm
CCI&E	Chief Controller of Imports & Exports
CCs	Community Clinics
CCT	Conditional Cash Transfer
CCTV	Closed-Circuit Television
CD	Custom Duty
CDP	Committee for Development Policy
CEPA	Comprehensive Economic Partnership Agreement

CETP	Common Effluent Treatment Plant
CFC	Common Facilities Centre
CGFNS	Commission on Graduates of Foreign Nursing Schools
CHCP	Community Health Care Providers
CIF	Cost Insurance & Freight
CIT	Corporate Income Tax
CMT	Coastal and Maritime Tourism
CNC	Computer Numerical Control
CNMs	Certified Nurse Midwives
COEL	Centre of Excellence for Leather Skill Bangladesh Limited
CPA	Chittagong Port Authority
CRNAs	Certified Registered Nurse Anesthetistsss
CRS	Computer-Related Services
DAE	Department of Agricultural Extension
DBID	Digital Business Identity
DCCI	Dhaka Chamber of Commerce & Industry
DCO	Drug Control Ordinance
DEDO	Duty Exemption and Drawback Office
DFQF	Duty-Free Quota-Free
DGDA	Directorate General of Drug Administration
DGHS	Directorate General of Health Services
DGNM	Directorate General of Nursing and Midwifery
DIFE	Department of Inspection for Factories and Establishments
DITF	Dhaka International Trade Fair
DLS	Department of Livestock
DNMC	Dhaka National Medical College
DoE	Department of Environment
DoF	Department of Fisheries
DOT	Department of Textiles
DPDT	Department of Patents, Designs and Trademarks
DTIS	Diagnostic Trade Integration Study
DTISU	Diagnostic Trade Integration Study Update
DWT	Dead Weight Tonnage
EC4J	Export Competitiveness for Jobs
e-CAB	e-Commerce Association of Bangladesh
EDB	Ease of Doing Business
EDF	Export Development Fund
EIA	Environmental Impact Assessment
EIF	Enhanced Integrated Framework
EPB	Export Promotion Bureau
ERD	Economic Relations Division
ERF	Export Risk Fund
ESQ	Environmental Social and Quality
ETP	Effluent Treatment Plant
EU	European Union

EWU	East West University
F. A. O	Food and Agriculture Organization
FAS	Foreign Agricultural Service
FBCCI	Federation of Bangladesh Chambers of Commerce & Industries
FD	Finance Division
FDI	Foreign Direct Investment
FE	Foreign Exchange
FID	Financial Institutions Division
FTA	Free Trade Agreement
FTA	Fisheries Training Academy
FY	Financial Year
FYP	Five-Year Plan
GAP	Good Agricultural Practices
GCC	Gulf Central Committee
GDP	Gross Domestic Product
GED	General Economic Division
GMP	Good Manufacturing Practice
GoB	Government of Bangladesh
GSP	Generalized System of Preferences
GT	Gross Tonnage
GTF	Green Transformation Fund
HS Code	Harmonised System Code
HSD	Health Services Division
IACS	International Association of Classified Society
IATA	International Air Transport Association
IAT-BUET	Institute of Appropriate Technology-BUET
IBAIS	International Business Administration and Information System
ICAB	Institute of Chartered Accountants of Bangladesh
ICD	Inland Container Depot
ICEAB	International Conference on Environmental Aspects of Bangladesh
ICT	Information and Communications Technology
ICT ISC	ICT Industry Skills Council
ICTD	Information and Communications Technology Division
ICU	Intensive Care Units
IELTS	International English Language Testing System
IFC	International Finance Corporation
ILET	Institute of Leather Engineering & Technology
ILO	International Labour Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
IoT	Internet of Things
IPR	Intellectual Property Rights
IRD	Internal Resource Division
ISM	International Support Measures
ISP	Internet Service provider

IT	Information Technology
ITC	International Trade Centre
ITES	IT enabled Services
JMC	Joint Management Centre
KG	Kilogram
KII	Key Informant Interviews
KUET	Khulna University of Engineering & Technology
LC	Letter of Credit
LCS	Land Customs Stations
LDC	Least Development Country
LDDP	Livestock and Dairy Development Project
LE	Light Engineering
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LEIs	LE industries
LEISC	Light Engineering Industry Skills Council
LEPBPC	Light Engineering Product Business Promotion Council
LFMEAB	Leather Goods and Footwear Manufacturers and Exporters Association, Bangladesh
LGD	Local Government Division
LGED	Local Government Engineering Department
LLMC	Low and Low Middle-Income Countries
LPAD	Legislative and Parliamentary Affairs Division
LPI	Logistics Performance Index
LPNs	Licensed Practical Nurses
LRI	Leather Research Institute
LTR	Loan Against Trust Receipt
LVNs	Licensed Vocational Nurses
LWG	Leather Working Group
M&E	Monitoring and Evaluation
M.Sc	Master of Science
M2M	Machine to Machine
MBA	Master of Business Administration
MC	Ministerial Conference
MC12	12 Ministerial Conference
MDG	Millennium Development Goal
MEFWD	Medical Education and Family Welfare Division
MFN	Most Favored Nation
MHRA	Medicines and Healthcare products Regulatory Agency
MIC	Middle-Income Country
MLJPA	Ministry of Law, Justice and Parliamentary Affairs
MMF	Man-Made Fibre
MNCs	Multinational Corporations
MoC	Ministry of Commerce
MoCAT	Ministry of Civil Aviation and Tourism
MoE	Ministry of Education

MoEFC	Ministry of Environment, Forest and Climate Change
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoFood	Ministry of Food
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MoH&FW	Ministry of Health and Family Welfare
MoHFW	Ministry of Health and Family Welfare
MoIB	Ministry of Information and Broadcasting
MoIND	Ministry of Industry
MoLE	Ministry of Labour and Employment
MoPEMR	Ministry of Power, Energy and Mineral Resource
MoS	Ministry of Shipping
MoTJ	Ministry of Textiles and Jute
MoU	Memorandum of Understanding
MoWCA	Ministry of Women and Children Affairs
MoWR	Ministry of Water Resources
MoYS	Ministry of Youth and Sports
MPH	Master of Public Health
MPV	Multi-Purpose Vessel
MRA	Mutual Recognition Agreement
MRC	Migrant Resource Centre
MT	Metric Ton
NAB	NGO Affairs Bureau
NAP	National Adaptation Plan
NBFI	Non-Bank Financial Institution
NBR	National Board of Revenue
NCDs	Non-communicable Diseases
NCG	National Committee on LDC Graduation
NCLEX	National Council Licensure Examination
NDB	New Development Bank
NDC	Nationally Determined Contributions
NDDDB	National Dairy Development Board
NDP	National Drug Policy
NFIS-B	National Financial Inclusion Strategy of Bangladesh
NGO	Non-governmental Organization
NHTTI	National Hotel & Tourism Training Institute
NPO	National Productivity Organization
NPs	Nurse Practitioners
NRA	National Regulatory Authority
NRB	Non-Resident Bangladeshi
NSDA	National Skills Development Authority
NSDC	National Skills Development Council
NSP	National Skills Portal

NTTN	Nationwide Telecommunication Transmission Network
ODA	Official Development Assistance
ODM	Original Design Manufacturing
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturing
OHS	Occupational Safety and Health
PATA	Pacific Asia Travel Association
PCB	Printed Circuit Board
PCB	Pharmacy Council of Bangladesh
PCBA	Printed Circuit Board Assembly
PET	Polyethylene Terephthalate
pH	Potential of Hydrogen
PhD	Doctor of Philosophy
PMO	Prime Minister's Office
PPE	Personal Protective Equipment
PQP	Prequalification of Medicines Programme
PQW	Plant Quarantine Wing
PSC	Public Service Commission
PSTN	Public switched telephone network
PTA	Preferential Trade Arrangements
PU	Polyurethane
PVC	Polyvinyl Chloride
R&D	Research and development
RDCD	Rural Development and Cooperative Division
RHD	Roads and Highways Department
RJSC	Registrar of Joint Stock Companies and Firms
RMG	Ready-Made Garment
RN	Registered Nurse
RoO	Rules of Origin
RTA	Regional Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SANEM	South Asian Network on Economic Modelling
SAU	Sher-e-Bangla Agricultural University
SBW	Special Bonded-Warehouse
SDG	Sustainable Development Goals
SEIP	Skills for Employment Investment Program
SHED	Secondary and Higher Education Division
SMEF	Small & Medium Enterprise Foundation
SMEs	Small and Medium-Sized Enterprises
SOP	Standard Operating Procedure
SPS	Sanitary and Phytosanitary
SRO	Statutory Regulatory Order
SSC	South South Cooperation
SSD	SecurityServiceDivision
SWOT	Strength Weakness Opportunities Threats

TAO	Tariff Analysis Online
TCs	Technology Centers
TDAB	Tourism Developers Association of Bangladesh
TGA	Therapeutic Goods Administration
TMED	Technical and Madrasa Education Division
TOAB	Tour Operators Association of Bangladesh
ToT	Training of Trainers
TRIPS	The Agreement on Trade-Related Aspects of Intellectual Property Rights
TRSG	Trade Roadmap for Sustainable Graduation
TSE	Transmissible Spongiform Encephalopathy
TSP	Triple Superphosphate
U.S.	United States
UAE	United Arab Emirates
UGC	University Grants Commission
UHC	Upazila Health Care
UK	United Kingdom
UN	United Nations
UN-CDP	United Nations-Committee for Development Policy
UNCTAD	United Nations Conference on Trade and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nation Population Fund
UP	Utilization Permission
UPS	Uninterruptible Power Supply
USA	United States of America
USB	Universal Serial Bus
USD	US Dollar
USDA	United States Department of Agriculture
USFDA	United States Food and Drug Administration
USGBC	U.S. Green Building Council
VAT	Value-Added Tax
VOC	Volatile Organic Compound
VoA	Visa on Arrival
WB	World Bank
WHO	World Health Organizations
WIFI	Women ICT Frontier Initiative
WIP	Women in Parliaments
WIPO	World Intellectual Property Organization
WTO	World Trade Organization
WTTC	World Travel and Tourism Council

নির্বাহী সারসংক্ষেপ

জাতিসংঘের কমিটি ফর ডেভেলপমেন্ট পলিসির (সিডিপি) উদ্যোগে স্বল্পোন্নত দেশসমূহের স্বল্পোন্নত পর্যায়ে থেকে উত্তরণের সক্ষমতা যাচাই করতে ইতিমধ্যে দুটি ত্রিবার্ষিক পর্যালোচনা করা হয়েছে। প্রথম পর্যালোচনা করা হয় ২০১৮ সালে এবং দ্বিতীয়টি ২০২১ সালে। উভয় ত্রিবার্ষিক পর্যালোচনায় বাংলাদেশ তিনটি মানদণ্ড সফলভাবে পূরণ করতে পেরেছে। এর ফলে বাংলাদেশ ২০২৬ সালে উন্নয়নশীল দেশ হিসেবে স্বীকৃতি পাওয়ার অপেক্ষায় আছে। এই স্বীকৃতি গত এক দশকে দেশে চমকপ্রদ অর্থনৈতিক প্রবৃদ্ধির গতিপথকেই নির্দেশ করে। পাশাপাশি এ অর্জন দেশকে কিছু চ্যালেঞ্জের সম্মুখীন করবে। এসব চ্যালেঞ্জের মধ্যে উল্লেখযোগ্য-বাজার প্রবেশাধিকার, অগ্রাধিকারভিত্তিক সুবিধা হ্রাস, ডব্লিউটিওর চুক্তি অনুযায়ী ভর্তুকি প্রদানে বিধিনিষেধ, বিভিন্ন আঞ্চলিক ও দ্বিপাক্ষিক চুক্তিগুলোয় অগ্রাধিকারমূলক সুবিধা হ্রাস, মূল্য সংযোজনের শর্ত যোগ এবং অতিরিক্ত শুল্ক আরোপ ইত্যাদি।

তবে সবচেয়ে বেশি প্রভাবিত হবে দেশের রপ্তানি খাত। কারণ মোট রপ্তানির ৭১ শতাংশই সম্পন্ন হয় উন্নত এবং উন্নয়নশীল দেশের অগ্রাধিকারমূলক স্কিমের আওতায়। এই প্রেক্ষাপটে চ্যালেঞ্জ মোকাবেলার জন্য রপ্তানিমুখী শিল্পগুলোর সক্ষমতা বাড়াতে বাংলাদেশকে প্রয়োজনীয় পদক্ষেপ গ্রহণ করতে হবে। একটি সমন্বিত বাণিজ্য রোডম্যাপ বেসরকারি খাতসহ নীতিনির্ধারক ও অন্যান্য স্টেকহোল্ডারদের প্রয়োজনীয় পদক্ষেপ সম্পর্কে অবহিত করতে পারে।

বিশ্ব বাণিজ্য সংস্থার Enhanced Integrated Framework (EIF)-এর সহায়তায় বাংলাদেশ ২০১৬ সালে Diagnostic Trade Integration Study (DTIS) সম্পন্ন করেছে। এ গবেষণায় বাংলাদেশের রপ্তানি খাতের প্রতিযোগিতা সক্ষমতা বৃদ্ধি করতে ৪ টি পিলার সম্বলিত কৌশল সুপারিশ করা হয়েছিল। ১. নতুন বাজারে প্রবেশ করা ২. নতুন পণ্য প্রচলন করা ৩. শ্রমিক ও ভোক্তাদের কল্যাণে গুরুত্ব দেয়া ৪. সহায়ক পরিবেশ বজায় রাখা। DTIS ২০১৬ পরিচালনা করার সময় বাংলাদেশের এলডিসি গ্র্যাজুয়েশন পরিস্থিতি স্পষ্ট ছিল না বিধায় বিবেচনায় নেওয়া যায়নি। এরই ধারাবাহিকতায়, বাণিজ্য মন্ত্রণালয়ের উদ্যোগে EIF এর অর্থায়নে বাংলাদেশ ফরেন ট্রেড ইনস্টিটিউট LDC Graduation এর প্রেক্ষিতে বাণিজ্য-সম্পর্কিত চ্যালেঞ্জগুলির সনাক্তকরণ এবং চ্যালেঞ্জগুলি অতিক্রম করার লক্ষ্যে ১২টি সেক্টরের ট্রেড রোডম্যাপ তৈরি করার জন্যে উক্ত গবেষণাটি পরিচালনা করেছে। গবেষণাটিতে DTIS ২০১৬ এর ৪টি পিলারভিত্তিক যে অ্যাকশন ম্যাট্রিক্স বা কর্মপরিকল্পনা প্রস্তাব করা হয়েছিল তার পর্যালোচনা ও হালনাগাদ তথ্য সন্নিবেশ করা হয়েছে। পাশাপাশি, বাণিজ্য খাতসমূহের উপর কোভিড-১৯ এর প্রভাব বিশ্লেষণ করা হয়েছে। উপরন্তু, DTIS এর যে বিষয়গুলো টেকসই উন্নয়ন লক্ষ্যমাত্রা অর্জনে ভূমিকা রাখতে পারে তা চিহ্নিত করা হয়েছে।

এই গবেষণাটি রপ্তানিমুখী পণ্য ও সেবার মোট ১২টি খাত: তৈরি পোশাক বা আরএমজি (ওভেন ও নিটওয়্যার), ঔষধ শিল্প ওএপিআই, চামড়া ও চামড়াজাত পণ্য, নন-লেদার ফুটওয়্যার, হালকা প্রকৌশল (লাইট ইঞ্জিনিয়ারিং), ইলেক্ট্রনিকস ও ইলেক্ট্রিক্যাল পণ্য, জাহাজ নির্মাণ, প্লাস্টিক পণ্য, কৃষিপণ্য এবং প্রক্রিয়াজাতকৃত খাবার, মৎস্য ও প্রাণীসম্পদ, পর্যটন, সফটওয়্যার এবং আইটি সার্ভিস, নার্সিং ও ধাত্রীসেবার (মিডওয়াইফারি) উপর সম্পন্ন করা হয়েছে। এই গবেষণায় খাতসমূহের strengths, weaknesses, opportunities, threats (SWOT) বিশ্লেষণ করা হয়েছে। পাশাপাশি দুর্বলতাগুলো নিরসন করতে এবং হুমকিসমূহ মোকাবিলায় খাতসমূহের সক্ষমতা বৃদ্ধিতে একটি রোডম্যাপ তৈরি করা হয়েছে। গবেষণা প্রতিবেদনটি বিস্তৃত Literature review, key informant interviews (KIIs) এবং Stakeholder consultations থেকে তৈরি করা হয়েছে। বাংলাদেশ সরকারের বাণিজ্য মন্ত্রণালয় কর্তৃক গঠিত committee of experts প্রতিবেদনটি পর্যালোচনা করে এবং সবশেষে ১২টি খাতের অংশীজনদের কাছ থেকে প্রতিবেদনটি যাচাই করার জন্য একটি validation workshop আয়োজন করা হয়।

তৈরি পোশাক (নিটওয়্যার এবং ওভেন)

তৈরি পোশাক শিল্পে বাংলাদেশ সরকারের বিশেষ গুরুত্ব রয়েছে। অষ্টম পঞ্চবার্ষিক পরিকল্পনা, ২০২১-২৪ রপ্তানি নীতি এবং জাতীয় শিল্প নীতি ২০২২এ এই শিল্পকে অগ্রাধিকারমূলক খাত হিসেবে ঘোষণা করা হয়েছে। এছাড়াও সরকার এ খাতে বিভিন্ন আর্থিক ও অর্থবহির্ভূত প্রণোদনা দিয়েছে। গবেষণায় দেখা গিয়েছে যে এখানে শ্রমশক্তি বেশ সহজলভ্য, শ্রমব্যয়কম, সামাজিক ও পরিবেশগত কমপ্লায়েন্ট কারখানার পরিস্থিতি এ খাতের গুরুত্বপূর্ণ শক্তি হিসেবে কাজ করে। এছাড়া এ খাতের প্রধান দুর্বলতাগুলো হচ্ছে- আমদানিকৃত কাঁচামালের ওপর অতিনির্ভরশীলতা, অপরিপূর্ণ ট্রেড লজিস্টিক ও এর উচ্চমূল্য, স্থানীয়ভাবে উদ্ভাবনমূলক ডিজাইনের অনুপস্থিতি, স্বল্প শ্রম উৎপাদনশীলতা, পণ্যের বহুমুখিতার অভাব ইত্যাদি।

তবে বাংলাদেশের তৈরি পোশাকশিল্পের বেশ কিছু সম্ভাবনা রয়েছে যা এ খাত কাজে লাগাতে পারে। সরকারের থেকে নীতিগত সহায়তা (নগদ অর্থ প্রণোদনা, শুল্ক ও কর ফেরত নেয়ার সুবিধা, বন্ডেড ওয়্যারহাউজ সুবিধা) গ্রহণ, শুল্কমুক্ত কোটামুক্ত বাজার প্রবেশাধিকার সুবিধা, চীন থেকে কারখানা স্থানান্তর, ম্যান মেড ফাইবার ভিত্তিক পোশাক উৎপাদন, ইউরোপীয় ইউনিয়ন (ইইউ) থেকে পাওয়া জিএসপি সুবিধা বর্ধিতকরণের মতো সুযোগগুলো কাজে লাগিয়ে নিজেদের চ্যালেঞ্জ মোকাবিলা করতে পারে শিল্পকারখানাগুলো। পাশাপাশি এই খাত কিছু ঝুঁকির সম্মুখীন হতে পারে। এসব ঝুঁকি মধ্যে উল্লেখযোগ্য ২০২৬ সালের পর এলডিসি থেকে উত্তরণের পর অগ্রাধিকারমূলক সুবিধা হ্রাস, চলমান বৈশ্বিক অর্থনৈতিক মন্দার স্বল্প ও দীর্ঘমেয়াদি প্রভাব, নিরবিচ্ছিন্ন বিদ্যুৎ ও গ্যাস অপরিপূর্ণতা ইত্যাদি।

গবেষণাটিতে এলডিসিভুক্ত দেশ হতে উত্তরণের পর বাংলাদেশের তৈরি পোশাক খাত যেসব চ্যালেঞ্জের সম্মুখীন হবে তা থেকে উত্তরণের জন্য বেশ কিছু সুপারিশ সম্বলিত একটি রোডম্যাপ যুক্ত করা হয়েছে। সম্ভাবনাময় দেশ ও বাজারগুলোর সাথে বাণিজ্যচুক্তি সম্পন্ন করা, ম্যান মেড ফাইবার ভিত্তিক পোশাক উৎপাদনে সক্ষমতা বৃদ্ধি করা, ইইউ এর থেকে পাওয়া জিএসপি সুবিধা ২০৩০ সাল পর্যন্ত বর্ধিত করার পাশাপাশি জিএসপিপ্লাস এর জন্য ফলপ্রসূ আলোচনা করা, নতুন নতুন বাজার অনুসন্ধান, স্থানীয় ব্র্যান্ডগুলোর আন্তর্জাতিকীকরণে সাহায্য করা এসব সুপারিশের মধ্যে অন্যতম।

ঔষধ ও এপিআই ইন্ডাস্ট্রি

বাংলাদেশের ঔষধ ইন্ডাস্ট্রি বিগত কয়েক বছর ধরে উল্লেখযোগ্য প্রবৃদ্ধি অর্জন করেছে। স্থানীয় চাহিদার প্রায় ৯৮ শতাংশই মিটিয়ে থাকে দেশের ঔষধ শিল্প। এছাড়া যুক্তরাষ্ট্র, যুক্তরাজ্য, কানাডা, অস্ট্রেলিয়া ও ইউরোপীয় ইউনিয়নসহ (ইইউ) বিশ্বের ১৫০ টিরও বেশি দেশে বাংলাদেশের ঔষধ রপ্তানি হয়। তবে এলডিসিভুক্ত দেশগুলোর কাতার থেকে উত্তরণের ফলে বাংলাদেশের ঔষধ শিল্পের ওপরও নানামুখী চাপ সৃষ্টি হবে। ঔষধ খাত মূল্য সংযোজন, পেটেন্ট পরিশোধ এবং ঔষধ উৎপাদনের জন্য লাইসেন্স পেমেন্টের মতো চ্যালেঞ্জের সম্মুখীন হবে। অধিকন্তু এইচএস কোড বিশ্লেষণে দেখা গিয়েছে এ খাতের মোট রপ্তানি আয়ের ৬৭ শতাংশ আসে একটি পণ্য (HS-300490: Other medicaments of mixed or unmixed products, for retail sale) থেকে। আরো অনেক দেশে রপ্তানি বৃদ্ধিতে বাংলাদেশ খুবই সম্ভাবনাময়। গবেষণায় দেখা গিয়েছে যে, শক্তিশালী শিল্প ভিত্তি, প্রতিযোগিতামূলক শ্রমশক্তি, আমদানি বিকল্প ঔষধের জন্য উৎপাদন সুবিধা, শাস্ত্রীয় মূল্যে মানসম্পন্ন ঔষধের প্রাপ্যতা ইত্যাদি এই খাতের গুরুত্বপূর্ণ শক্তি হিসেবে কাজ করছে। বিশ্ব বাজারে প্রবেশের বিশাল সুযোগ, এপিআই-এর জন্য করমুক্তি এবং প্রণোদনা, বিশ্বব্যাপী এপিআই বাজারে রপ্তানি সম্ভাবনা ইত্যাদির মতো সুযোগগুলো এই খাতের অন্যতম সম্ভাবনা হিসেবে কাজ করছে। এছাড়া এপিআই আমদানির ওপর অতিনির্ভরশীলতা, এপিআই উৎপাদন সংক্রান্ত বিভিন্ন চ্যালেঞ্জ, জুই এবং ল্যাব টেস্টিং কেন্দ্রের স্বল্পতা, এপিআই পার্কগুলোয় গ্যাস সংযোগ পাওয়া নিয়ে অনিশ্চয়তা, শিল্প পুট প্রদান বিষয়ক চ্যালেঞ্জ, bioequivalence test-এর অভাবের মতো সমস্যা এখানে রয়েছে।

मध्ये ग्राज्येशनेर पुर्वे पावलिंक डोमेने यतटा संभव उड्डावन एवं known molecule-गुलो निशुत करा, पेटेन्ट मूल्य परिशोध एड्डाते पेटेन्टयोग्य molecule-ए स्वनिर्भरता अर्जन करा, एवं API उतपादने R&D एवं API molecule synthesis-ए विनियोग वृद्धि करा उल्लेखयोग्य ।

चामडा एवं चामडाजात पण्य

चामडा एवं चामडाजात पण्यशिल्लके रणुनि वल्लुमुखीकरणेर एकटि संभावनामयखात हिसेवे चिह्णित करा हय्येछे । चल्लिशेर दशकेर दिके एहि खातटिर यात्रा शुरु हय्य । वर्तमाने बांग्लादेशेर चामडा शिल्ल देशेर जिडिपिते दशमिक ७ शतांश एवं शिल्ल उतपादने प्राय २ शतांश अवदान राख्छे । २०२१-२२ अर्थवहरे मोट रणुनिकृत पण्येर २.८ शतांश छिल चामडाजात पण्य; सेदिक थेके एटि एखन बांग्लादेशेर द्वितीय वृहत्तम रणुनि खात । एहि सेक्तेरेर SWOT विश्लेषणे एहि खातटिर येसव शक्तिमत्तर दिक प्रकाशित हय्येछे ता ह्छे- प्रतियोगितामूलक श्रम व्यय, सहजलभ्य श्रमिक, काँचामालेर स्थानीय उतस, उदोयोजादेर संस्फमता, तत्परता, परिवर्तनशील परिस्थितिते मानिये नेयार मानसिकता एवं क्रेतादेर चाहिदा मेटानोर संस्फमता । कारखानागुलोेर परिवेशगत, सामाजिक ओ निरापत्ता मानरस्फार स्फेद्रे आनुज्जातिक नीतिमालासमूह पालने संस्फमतार अभाव, आमदानिकृत काँचामालेर ओपर निर्भरशीलता, आर्थिक सीमावद्धता, सहयोगी शिल्लेर घाटितिसह नाना धरनेर दुर्बलताओ रय्येछे खातटिते ।

साभार ट्यानारि एस्टेटे एकटि ट्यानारि क्लास्टर स्थापन करा गुरुतुपूर्ण पदस्फेप हलेओ कार्यकर वज्य शोधनागारेर (सिइटिपि) अभाव आनुज्जातिक मानदगु रस्फा एवं लेदार ओयार्किंग ग्रुपेर सार्टिफिकेट पाओयार स्फेद्रे वडु बाँधा हय्ये रय्येछे ।

क्रमवर्धनशील आनुज्जातिक रणुनि बाजार, २०२१-२०२८ रणुनि नीतिते सर्वोच्च अग्रधिकारमूलक खात हिसेवे स्वीकृति पाओया, स्थानीय बाजारे चाहिदा वृद्धि, देशे एवं विदेशे विनियोगेर सुयोग, सरकारेर नीति समर्थन, उन्नत ओ उन्नयनशील देशगुलो थेके उतपादन स्थानान्तरेर मतेो बेशकिछु सुयोग ए खातके संभावनामय करे तुलेछे । कठोर आनुज्जातिक मान ओ शर्तेर समस्यो, भियेतनाम ओ भारतेर मतेो एशियार देशगुलोेर सङ्गे तीव्र प्रतियोगिता, आनुज्जातिक बाजारे अग्रधिकारभित्तिक प्रवेशेर सुविधा ओ शुक्कमुक्त कोटामुक्त सुविधा हारानो एवं लजिस्टिक समस्यो ए खातेर प्रधान रूँकि हिसेवे विवेचित ह्छे ।

सरकार चामडा ओ चामडाजात पण्य थेके वर्तमानेर वार्षिक १ बिलियन मार्किन डलार रणुनि आयके २०३० सालेर मध्ये १० बिलियन मार्किन डलारे उन्नित करार लक्ष्य काज करछे । एलडिसिभुक्त देश थेके उन्नरणेर पर प्रतिकूलता प्रशमित करार जन्य बेशकिछु पदस्फेप निते हवे । एलडिसि थेके उन्नरणेर संभाव्य वागिज्य लोकसान काटिये उठते विद्यमान प्रणेदनागुलो काजे लागिये उतपादनशीलता वाडाते हवे । स्थानीय काँचामालेर व्यवहार, व्याकओयार्ड लिंकेज व्यवहार एस्फेद्रे बेश गठनमूलक काज हवे । सबचेयेगुरुतुपूर्ण विषय ह्छे परिवेशगत, सामाजिक एवं मान संश्लिष्ट कमप्लायेस निशुत करा, एलडरिडिजि सार्टिफिकेशन पेते संस्फमता वाडानो । एलडिसि संक्रान्त च्यालेञ्जगुलो मोकाबिला करे ए खातेर रणुनि वृद्धिर कौशल संमलित एकटि रोडम्याप प्रस्ताव करा हय्येछे गवेषणाटिते ।

नन-लेदार फुटुओय्यार

२०२१ साल नागद नन-लेदार फुटुओय्यारेर वैश्विक बाजारेर आकार दाँडावे ७७५.७० बिलियन मार्किन डलार । विश्वबाजारे जूतार सबचेये वडु आमदानिकारक युक्तराष्ट्र । २०२१-२२ अर्थवहरे बांग्लादेशेर नन-लेदार फुटुओय्यार रणुनि ८५० मिलियन मार्किन डलारे पोँछेछे । विश्वेरणुनि हओया बेशिरभाग फुटुओय्यार एशियार देशगुलो सरवराह करे; एर मध्ये चीन ओ भियेतनाम शीर्ष रणुनिकारक । जूता उतपादने बांग्लादेश विश्वव्यापी ८म स्थाने रय्येछे एवं २०१७ थेके २०२१ साल पर्यंत बांग्लादेशेर जूता उतपादन प्रतिवहर गडे ७ शतांश हारे वृद्धि पेयेछे । अन्यादिके २०२१-२०२२ अर्थवहरे ए खातेर रणुनि वृद्धिर हार छिलो ७० शतांश ।

নন-লেদার বা সিনথেটিক ফুটওয়্যার রপ্তানি বৃদ্ধির পাশাপাশি PUMA, H&M এবং Skechers এর মতো আন্তর্জাতিক ব্র্যান্ডগুলোর সাথে অংশীদারিত্বের সুবাদে এই প্রবৃদ্ধি বেড়েছে।

বাংলাদেশের নন-লেদার ফুটওয়্যার খাত নিয়ে SWOT বিশ্লেষণে প্রতীয়মান হয় স্বল্পমূল্যে শ্রমিক পাওয়া ও কাঁচামালের সহজলভ্যতা এ খাতের অন্যতম শক্তি। তবে আমদানি নির্ভরশীলতা, বিদ্যুতের ঘাটতি এবং অরিজিনাল ইকুইপমেন্ট ম্যানুফ্যাকচারিং (ওইএম) থেকে অরিজিনাল ডিজাইন ম্যানুফ্যাকচারিং (ওডিএম) এ স্থানান্তরের ধীরগতি, উচ্চ বৈশ্বিক চাহিদা ও বিনিয়োগ সম্ভাবনার সুযোগ, এশিয়ার অন্যান্য দেশ থেকে সৃষ্ট প্রতিযোগিতা, এসএমইর জন্য তহবিল ঘাটতি এবং এফডিআই অনুমোদন বিলম্বিত করার মতো দুর্বলতাও রয়েছে খাতটিতে। গবেষণাটিতে শিল্পউৎপাদন বৃদ্ধি, ওডিএম সক্ষমতা বৃদ্ধি, ব্যাকওয়ার্ড লিংকেজ উন্নত করা, বিদ্যমান প্রণোদনার ব্যবহার, আন্তর্জাতিক গুণগতমানের শর্ত নিশ্চিত করা, বাজার প্রবেশাধিকার বৃদ্ধি, নতুন বিনিয়োগ আকর্ষণ এবং এলডিসিভুক্ত দেশ হতে উত্তরণের পর সম্ভাব্য চ্যালেঞ্জ মোকবিলায় প্রণোদনা ক্ষিম গ্রহণ এবং রপ্তানি প্রবৃদ্ধি বাড়াতে একটি রোডম্যাপ প্রণয়ন করা হয়েছে।

লাইট ইঞ্জিনিয়ারিং, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল পণ্য

বাংলাদেশের অর্থনীতিতে লাইট ইঞ্জিনিয়ারিং, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল খাত উল্লেখযোগ্য অবদান রেখে চলেছে। দেশের ৪০ হাজার সক্রিয় লাইট ইঞ্জিনিয়ারিং কোম্পানিতে ছয় থেকে আট লাখ কর্মী কর্মরত আছে। SWOT বিশ্লেষণে দেখা গিয়েছে, ইলেক্ট্রনিকস এবং ইলেক্ট্রিক্যাল পণ্যসহ হালকা প্রকৌশল খাতে যেমন শ্রমশক্তি ও অবকাঠামোর (সড়ক, রেল ও নদীপথে পরিবহন) সহজলভ্যতা রয়েছে তেমনি মানবপুঁজিরও সহজপ্রাপ্যতা রয়েছে, এগুলো এ খাতের অন্যতম শক্তি। পুঁজিসহজলভ্য না হওয়া, দক্ষ মানবসম্পদের অভাব, আন্তর্জাতিক মানসম্পন্ন পরীক্ষা ও সার্টিফিকেট প্রদানকারী কেন্দ্রের অনুপস্থিতি, ব্যবসার অধিক খরচ, নিরবিচ্ছিন্ন বিদ্যুৎ সংযোগ না থাকা, সুপারভাইজার, ম্যানেজার ও শিল্প শ্রমিকদের প্রয়োজনীয় প্রশিক্ষণের অভাব এবং স্থানীয়ভাবে নকল ইলেক্ট্রনিক পণ্যগুলো এ খাতের অন্যতম দুর্বলতা। শুষ্কমুক্ত বাজার সুবিধা, সহায়ক নীতিমালা ও প্রণোদনা, রপ্তানি গন্তব্যের দেশগুলোর সাথে মুক্ত বাণিজ্য চুক্তি অথবা কমপ্রিহেনসিভ ইকনোমিক পার্টনারশিপ এগ্রিমেন্ট এর সম্ভাবনা, বর্ধনশীল মধ্যম আয়ের জনগোষ্ঠী নিয়ে বৃহৎ স্থানীয় বাজারের মতো নানাবিধ সুবিধাও রয়েছে খাতটির।

২০২৬ সালে এলডিসি থেকে উত্তরণের পর অগ্রাধিকারমূলক সুবিধা কমে যাওয়ার মতো কিছু সমস্যা সৃষ্টি হবে। এর সাথে নিরবিচ্ছিন্ন গ্যাস ও বিদ্যুৎ সরবরাহের সংকট, দীর্ঘমেয়াদী ঋণ সুবিধা না

পাওয়া, পরিবেশগত দূষণ, ট্রেড লজিস্টিকের উচ্চমূল্য এ খাতের প্রবৃদ্ধির অন্যতম অন্তরায়। এ গবেষণায় এলডিসি থেকে উত্তরণের পর এ খাতে যেসব সমস্যা হবে তা মোকাবেলার জন্য প্রস্তাবিত রোডম্যাপে কিছু সুপারিশ করা হয়েছে। সুপারিশসমূহের মধ্যে শক্তিশালী ব্যাকওয়ার্ড লিংকেজ ইন্ডাস্ট্রি প্রতিষ্ঠা, কমন ফ্যাসিলিটি সেন্টার (সিএফসি) স্থাপন, রপ্তানি বাজারে বৈচিত্র্য আনা এবং এক্সপোর্ট রিস্ক ফান্ড (ইআরএফ) গঠন করা উল্লেখযোগ্য।

প্লাস্টিক

স্থানীয় ও আন্তর্জাতিক বাজারে প্লাস্টিক পণ্যের চাহিদা বেড়েই চলেছে। বিশ্বে মাথাপিছু ৫০ কেজি করে প্লাস্টিক ব্যবহৃত হয়। ২০২১ সালে সারা বিশ্বে ৮০৬ বিলিয়ন ডলার মূল্যমানের প্লাস্টিক পণ্য রপ্তানি হয়েছে; আর এ সময় রপ্তানিতে শীর্ষে ছিল চীন। বর্তমানে বাংলাদেশের জিডিপিতে প্লাস্টিক খাতের অবদান ১ শতাংশ। ২০২১-২২ অর্থবছরে বাংলাদেশ ১৬৬.২৫ মিলিয়ন ডলার মূল্যমানের প্লাস্টিক পণ্য রপ্তানি করেছে। SWOT বিশ্লেষণে প্রতীয়মান হয়েছে তৈরি পোশাক, প্রক্রিয়াজাতকৃত খাবার, স্বাস্থ্যসেবা, খেলনার মতো শিল্পগুলোর সাথে প্লাস্টিক খাত প্রত্যক্ষ এবং পরোক্ষভাবে জড়িত। এছাড়া এ খাতে নারী কর্মসংস্থান বৃদ্ধিকে শক্তি হিসেবে দেখা হয়। তবে আমদানিকৃত কাঁচামালের ওপর অতিনির্ভরশীলতা, টেস্টিং ল্যাবের অভাব, অপরিষ্কৃত ওয়্যারহাউস না থাকা এবং শিল্প হাতিয়ার হিসেবে ছাঁচ শিল্প না

থাকাকে এ খাতের দুর্বলতা হিসেবে দেখা হয়েছে। আন্তর্জাতিক ও স্থানীয় বাজারে প্লাস্টিক পণ্যের চাহিদা বৃদ্ধি, ক্রমবর্ধমান কমপ্লায়েন্ট কারখানায় উচ্চমানসম্পন্ন আরএমজি সংশ্লিষ্ট প্লাস্টিক Accessories তৈরির মতো বিষয়গুলো প্লাস্টিক খাত সম্প্রসারণের অন্যতম সুযোগ। গবেষণায় আধুনিক প্রযুক্তির অভাব, রপ্তানির ক্ষেত্রে দীর্ঘ ট্রানজিট টাইম, অস্বাভাবিক পরিবহন ব্যয় এবং অপর্যাণ্ড তহবিলকে এ খাতের প্রধান হুমকি হিসেবে চিহ্নিত করা হয়েছে।

উক্ত সমস্যাসমূহ সমাধানের জন্য গবেষণায় প্রস্তুত রোডম্যাপে পরিবেশগত, সামাজিক ও গুণগত মান সম্পর্কিত কমপ্লায়েন্স উন্নত করা, পুঁজির যোগান, প্রযুক্তিগত দক্ষতা বৃদ্ধি, বিভিন্ন মোড এবং ডাই এর টুলিং প্রক্রিয়া উন্নয়ন করা এবং গবেষণা ও উন্নয়নে আরো বিনিয়োগ করার পরামর্শ দেয়া হয়েছে।

জাহাজনির্মাণ খাত

একসময় বাংলাদেশ জাহাজভাঙা শিল্পের দেশ হিসেবে পরিচিত থাকলেও এখন নিজেদেরকে জাহাজনির্মাণকারী দেশ হিসেবে রূপান্তর করেছে। ছোট ও মাঝারি আকারের জাহাজের পাশাপাশি ডেনমার্ক, জার্মানি, ফিনল্যান্ড, নরওয়ের মতো ইউরোপীয় দেশের উত্তর সাগর এবং বাল্টিক সাগরের জন্য সমুদ্রগামী বহুমুখী জাহাজও তৈরি হচ্ছে বাংলাদেশে। তবে শীর্ষস্থানীয় জাহাজনির্মাণকারী দেশগুলোর তুলনায় বাংলাদেশের জাহাজশিল্প অনেক ক্ষুদ্র। বাংলাদেশের দক্ষ মানবশক্তি এবং কম খরচে শ্রমশক্তি পাওয়ার মতো সুবিধা রয়েছে। বৈশ্বিক জাহাজশিল্পের বর্তমান আকার ২০০ বিলিয়ন মার্কিন ডলার। অবকাঠামো উন্নয়ন এবং গবেষণায় আরো বিনিয়োগের মাধ্যমে বৈশ্বিকজাহাজ নির্মাণবাজারে নিজেদের সম্ভাবনাকে কাজে লাগাতে পারে বাংলাদেশ।

রপ্তানিকৃত পণ্যের সম্প্রসারণে জাহাজনির্মাণ খাতকে গুরুত্বপূর্ণ মাধ্যম হিসেবে দেখা হচ্ছে। SWOT বিশ্লেষণে প্রতিযোগিতাসক্ষম ও সহজলভ্য শ্রমশক্তি এবং যুদ্ধজাহাজ ও স্বল্প খরচে জাহাজ নির্মাণের সক্ষমতাকে এ শিল্পের শক্তি হিসেবে উল্লেখ করা হয়েছে। তবে খরচ, ঋণের উচ্চ সুদহার, সভরেন গ্যারান্টির অভাব, ব্যাংক গ্যারান্টির উচ্চ ফি, উচ্চ করপোরেট কর এ খাতের প্রতিবন্ধকতা হিসেবে চিহ্নিত করা হয়েছে। দেশের রপ্তানি ও অর্থনৈতিক প্রবৃদ্ধি সম্প্রসারণের জন্য এই সমস্যাগুলোর সমাধান জরুরী বলে উল্লেখ করা হয়েছে।

এই প্রেক্ষাপটে প্রস্তুত রোডম্যাপে স্টেকহোল্ডাররা জাহাজ নির্মাণ শিল্প উন্নয়ন নীতিমালা ২০২১ বাস্তবায়নের ওপর জোর দিয়েছেন। এই নীতিমালায় আর্থিক সহায়তা, ব্যাংক গ্যারান্টি এবং সভরেন ক্রেডিট গ্যারান্টির পাশাপাশি এনবিআর থেকে প্রণোদনা ও করমুক্তির স্পষ্ট নির্দেশনা দেয়া হয়েছে।

কৃষি পণ্য ও প্রক্রিয়াজাত খাবার

কৃষি খাত বাংলাদেশের প্রবৃদ্ধি ও গ্রামীণ উন্নয়নের প্রধান পরিচালক। ২০২১-২২ অর্থবছরে বাংলাদেশের জিডিপিতে কৃষিখাতের অবদান ছিল প্রায় ১৩ দশমিক ২ শতাংশ। মোট জনশক্তির ৪০ দশমিক ৬০ শতাংশই এখানে কর্মরত। ২০২১ সালে সারা বিশ্বে ২১৬২ বিলিয়ন ডলার মূল্যের কৃষিপণ্য রপ্তানি হয়েছে। SWOT বিশ্লেষণে বহুমুখী ও বিভিন্ন ধরনের ফসল উৎপাদন, নারীসহ শ্রমশক্তির সহজলভ্যতা, অনুকূল জলবায়ু এবং উর্বর জমি ও পানির মতো প্রাকৃতিক সম্পদের সহজপ্রাপ্যতা এখাতের অন্যতম শক্তি হিসেবে উল্লেখ করা হয়েছে। অন্যদিকে পর্যাণ্ড অবকাঠামোর অভাব ও উচ্চ প্রযুক্তির ব্যবহার না হওয়া অথবা উন্নত কৃষি প্রযুক্তি না থাকা, ফসল তোলার পর লোকসান, ম্যানুফ্যাকচারিং কন্ট্রাক্টের অনুমোদন পেতে প্রতিবন্ধকতা, দক্ষ মানবসম্পদের অভাব এবং বহুমুখী কাজে ব্যবহার উপযোগী বিশেষ কোল্ডস্টোরেজের অভাবকে এ খাতের অন্যতম দুর্বলতা হিসেবে চিহ্নিত করা হয়েছে। গবেষণায় বলা হয়েছে আন্তর্জাতিক বাজারে চাহিদা, প্রত্যক্ষ ও পরোক্ষ বিভিন্ন শিল্পের সাথে সংযোগ, সহায়ক সরকারি নীতিমালা এখাতের শক্তিশালী দিক। তবে এলডিসি থেকে উত্তরণের পর বাংলাদেশ সম্ভবত কৃষিখাতে ভতুর্কি দিতে পারবে না। এর ওপর স্বীকৃত ল্যাবরেটরির অনুপস্থিতি, ব্যাংক থেকে সহজে ঋণ না পাওয়া, প্রাকৃতিক দুর্যোগ, অতিমাত্রায় পরিবহন ব্যয়, মার্কেটিং চ্যানেলে মধ্যস্থত্বভোগীদের উপস্থিতিকে হুমকি হিসেবে চিহ্নিত করা হয়েছে।

গবেষণার প্রস্তাবিত রোডম্যাপে নিরাপদ ও ভালোমানের খাবার নিশ্চিত করতে পদক্ষেপ গ্রহণ, ফসল কর্তন পরবর্তীপ্রক্রিয়া আরো উন্নত করা, পণ্যের গুণগত মান রক্ষায় অর্থায়ন ও কমপ্লায়েন্স বজায় রাখা এবং রপ্তানিযোগ্য কৃষি পণ্যের মান ধরে রাখার মতো পরামর্শ দেয়া হয়েছে।

মৎস্য ও প্রাণিসম্পদ খাত

মৎস্য খাত

অভ্যন্তরীণ জলাশয় থেকে মাছ ধরায় বাংলাদেশ তৃতীয়। অন্যদিকে জলজ চাষের জন্য পঞ্চম এবং সামুদ্রিক মাছ উৎপাদনে বিশ্বেগারতম বাংলাদেশ। ২০২১-২২ অর্থবছরে মৎস্য খাতের জিডিপি প্রবৃদ্ধি ছিল ২.৮ শতাংশ এবং সামগ্রিক কৃষিখাতে মৎস্য শিল্পের অবদান ছিল ২১.৮৩ শতাংশ। স্থানীয়ভাবে যেমন মাছের চাহিদা বাড়ছে তেমনি দেশের রপ্তানি আয়ের ক্ষেত্রেও মৎস্যশিল্প গুরুত্বপূর্ণ হয়ে উঠেছে। মাছ ও মাছ থেকে তৈরি পণ্য বিশ্বের ৫২টি দেশে রপ্তানি করে থাকে বাংলাদেশ। এর মধ্যে ইউরোপীয় ইউনিয়ন (ইইউ), যুক্তরাষ্ট্র, জাপান, রাশিয়া এবং চীন প্রধান রপ্তানি বাজার। রপ্তানিকৃত মাছের মধ্যে ইলিশ, চিংড়ি, তেলাপিয়া এবং পাঙাশ অন্যতম। রপ্তানিকৃত মাছের মধ্যে পাঙাশ সম্প্রতি যুক্ত হয়েছে।

সামুদ্রিক ও মিঠা পানির বড় উৎস, সম্ভা শ্রমের সহজলভ্যতা, নতুন নতুন প্রযুক্তি গ্রহণ, মাছের অধিক চাহিদা, জলজ চাষের সম্ভাবনাকে এ খাতের ইতিবাচক দিক হিসেবে উল্লেখ করা হয়েছে SWOT বিশ্লেষণে। আর এ খাতের প্রধান প্রধান দুর্বলতাগুলো হলো, অতিরিক্ত মাছ ধরা, দুর্বল অবকাঠামো, প্রয়োজনীয় নীতিমালা ও তা প্রয়োগের অভাব, জলবায়ু পরিবর্তনের কারণে সমুদ্রপৃষ্ঠের উচ্চতা বৃদ্ধি, পানির তাপমাত্রা পরিবর্তন এবং লবণাক্ততা বেড়ে যাওয়ায় মাছের আবাসস্থলের ওপর পরিবর্তন। এছাড়াও বাজারজাতকরণের দুর্বলতা, গভীর সমুদ্র থেকে মাছ ধরার জন্য দক্ষ জনবল ও ট্রলারের অভাবের মতো সমস্যাও রয়েছে এ খাতে। পাশাপাশি নগদ অর্থ প্রণোদনা, ভালো মানের মাছের খাবারের দুস্পাপ্যতার এ খাতের অন্যতম চ্যালেঞ্জ।

এ খাতের উৎপাদনশীলতা ও ব্যবসায়িক সম্ভাবনা বাড়ানোর জন্য প্রতিবন্ধকতাগুলো খতিয়ে দেখে গবেষণাটিতে একটি ট্রেড রোডম্যাপ প্রস্তাব করা হয়েছে। প্রস্তাবিত রোডম্যাপে জেলে এবং মৎস্য খাতের মধ্যবর্তী পর্যায়ের কর্মকর্তাদের জন্য প্রশিক্ষণ কর্মসূচি চালুর সুপারিশ করা হয়েছে। এছাড়াও পর্যাপ্ত মৎস্য অবতরণ কেন্দ্র স্থাপন, শিক্ষা ও গবেষণা প্রতিষ্ঠানগুলোর সাথে সংযোগের মাধ্যমে গবেষণা কার্যক্রমে আরো সহযোগিতা করা, নতুন প্রযুক্তির পরীক্ষামূলক চালনার ব্যবস্থা এবং ফিশারিজ ইকোনমিক জোন গঠনেরও পরামর্শ দেয়া হয়েছে।

প্রাণিসম্পদ খাত

বাংলাদেশের অর্থনীতিতে প্রাণিসম্পদ খাত উল্লেখযোগ্য অবদান রাখছে। খাতটি কর্মসংস্থান সৃষ্টির পাশাপাশি খাদ্য নিরাপত্তা নিশ্চিতও ভূমিকা রেখেছে। ২০২১-২২ অর্থবছরে জিডিপিতে এই খাতের অবদান ছিল ১.৯০ শতাংশ, যেখানে সামগ্রিক কৃষি খাতে এ খাতের অবদান ছিল ১৬.৫২ শতাংশ। বাংলাদেশ উন্নয়নশীল দেশে উত্তরণের পর রপ্তানিতে ভর্তুকিসুবিধা দিতে পারবে না। একটি SWOT বিশ্লেষণে খাতটির শক্তিমত্তা, দুর্বলতা, সুযোগ এবং ঝুঁকির দিকগুলো চিহ্নিত করা হয়েছে। এই খাতের মূল শক্তির মধ্যে প্রথমেই রয়েছে প্রচুর পরিমাণে পোলট্রি (হাঁস-মুরগি) ও গবাদিপশু (গরু-ছাগল) পালনের জন্য অনুকূল পরিবেশ। এছাড়াও আছে শিক্ষিত উদ্যোক্তা, উন্নত সংকর জাত উন্নয়ন সুবিধা, সম্ভাবনাময় দেশীয় জাতের উৎস এবং উচ্চ উৎপাদনশীল গরুর সহজলভ্যতা। অপরদিকে খাতটির মূল দুর্বলতার মধ্যে রয়েছে-প্রাণীখাদ্যের ঘাটতি ও উচ্চ মূল্য, সীমিত পরিমাণে দুধ সংগ্রহ এবং প্রক্রিয়াকরণ সুবিধা, পশু পালনের জন্য অপরিপািত চারণভূমি, বর্জ্য ব্যবস্থাপনা চর্চার অভাব, গবেষণা ও উন্নয়ন অবকাঠামোর সংকট, মানসম্পন্ন জাতের পশুর অভাব, দক্ষ কর্মীর অভাব, স্থানীয়পর্যায়ে বাজারের যথাযথ তথ্যের ঘাটতি। পাশাপাশি অনুন্নত কসাইখানা তথা মাংস প্রক্রিয়াকরণ সমস্যা তো রয়েছেই। উন্নতমানের লাইভস্টক পণ্যের উচ্চ চাহিদা, বাণিজ্যিক পশুর ক্ষেত্রে ক্রস ব্রিডিং অর্থাৎ সংকরায়ণের মাধ্যমে নতুন ও শক্তিশালী জাতের উদ্ভাবন,

পশুপালনে নারী ক্ষমতায়ন ও অংশগ্রহণ এবং হালহাল পণ্য রপ্তানির সম্ভাবনা প্রাণিসম্পদ খাতের সুযোগ হিসেবে বিবেচিত হতে পারে। এ খাতের চ্যালেঞ্জের মধ্যে রয়েছে যোগ্যতাসম্পন্ন পশু চিকিৎসকের অভাব, অপরিষ্কার ঔষধ ও ভ্যাকসিন, রোগ নির্ণয়ও চিকিৎসা সরঞ্জামের সংকট, গবাদিপশুর শারীরিক সুরক্ষা ঘাটতি, ছোট আকৃতির গবাদিপশুর (যেমন: ছাগল) অতি সংবেদনশীলতা বা দুর্ঘটনাপ্রবণতা ও মৃত্যু। এছাড়া রয়েছে ব্যাংকের সীমিত ঋণসহায়তা, বিভিন্ন রোগের প্রাদুর্ভাব এবং জলবায়ু পরিবর্তনের ঝুঁকি। জলবায়ুপরিবর্তনকে বড় ঝুঁকি হিসেবে দেখা হয় কেননা এর ফলে সৃষ্টি বৃষ্টিপাতের ধরণ, তাপমাত্রা এবং আবহাওয়ায় বড় ধরনের পরিবর্তন ঘটে। গবাদিপশুর উৎপাদন, খাদ্য সুরক্ষা এবং খাদ্য ব্যয় বৃদ্ধিতে যা প্রভাবকের ভূমিকা পালন করে। এলডিসি থেকে উত্তরণের ফলে যে প্রতিকূলতা তৈরি হবে সেটি কমাতে সামগ্রিক উৎপাদন বৃদ্ধি, বিদ্যমান প্রণোদনার যথাযথ ব্যবহার, এবং মাংসের উৎপাদন বাড়াতে পোলট্রির উৎপাদন বৃদ্ধি ও দুগ্ধজাত পণ্যের উৎপাদন বাড়ানো কার্যকর ব্যবস্থা হতে পারে।

গবেষণায় প্রস্তাবিত রোডম্যাপে কমিউনিটিভিত্তিক ক্ষুদ্র দুগ্ধ উৎপাদন খামার গড়ে তুলতে 'জাতীয় দুগ্ধ উন্নয়ন বোর্ড' গঠন ত্বরান্বিত করার পরামর্শ দেওয়া হয়েছে। এছাড়া গবেষণাটিতে প্রত্যক্ষ ও পরোক্ষভাবে জড়িত বেসরকারি পর্যায়ে গবাদিপশু মোটাতাজাকরণের পদ্ধতি উন্নত করার পরামর্শ দেওয়া হয়েছে। একই সঙ্গে অপ্রচলিত এবং নতুন বাজারে প্রাণিসম্পদ খাতের পণ্য রপ্তানিতে প্রণোদনা চালু করার কথা বলা হয়েছে। পাশাপাশি বিদ্যমান বাজারগুলোয় নেওয়া যেতে পারে নতুন পণ্য রপ্তানির উদ্যোগ। এছাড়া বাণিজ্যসংক্রান্ত তথ্যের জন্য কৃষক নেটওয়ার্ক গড়ে তোলা এবং বাণিজ্যসংক্রান্ত তথ্য প্রচারের জন্য ইন্টারনেটভিত্তিক যোগাযোগ ব্যবস্থা জোরদার করার মাধ্যমে সরকারও বিভিন্ন পদক্ষেপ নিতে পারে।

সফটওয়্যার ও তথ্যপ্রযুক্তি সম্পর্কিত সেবা খাত

সফটওয়্যার ও তথ্যপ্রযুক্তি সম্পর্কিত সেবা একটি উদীয়মান খাত, যা বাংলাদেশের অর্থনীতিতে গুরুত্বপূর্ণ অবদান রাখছে। বাংলাদেশের বিশ্ববিদ্যালয়গুলোর তথ্য ও প্রযুক্তি বিভাগসমূহ থেকে প্রতিবছর প্রায় ২৫ হাজার শিক্ষার্থী পাশ করে বের হচ্ছে। এসব শিক্ষার্থীদের যদি ইন্টারনেট অব থিংস বা আইওটি, কৃত্রিম বুদ্ধিমত্তা বা এআইয়ের মতো সর্বাধুনিক প্রযুক্তি খাতে যুক্ত করা যায় তবে বাংলাদেশও খাতটিতে প্রতিযোগিতাসক্ষম হয়ে উঠবে। বিশ্ববিদ্যালয় ও আইটি শিল্প খাতের দুর্বল সম্পর্ক, সাইবার নিরাপত্তা ঝুঁকি, অর্থায়নের অভাব ইত্যাদি খাতটির কয়েকটি চ্যালেঞ্জ হিসেবে হাজির রয়েছে। তথাপি, ডেমোগ্রাফিক ডিভিডেন্ড বা জনমিতিক সুবিধা, আইটি ভিলেজ প্রতিষ্ঠা, দেশব্যাপী যোগাযোগ ব্যবস্থা গড়ে তোলা, অনুকূল নীতিগত কাঠামো (প্রণোদনা প্রদানের ক্ষেত্রে রপ্তানি নীতি ২০২১-২৪'এ শীর্ষ অগ্রাধিকারমূলক খাত), সরকারের স্মার্ট বাংলাদেশ নীতি, রপ্তানির মূল্যের ওপর নগদ প্রণোদনা, ভ্যাট কমানো এবং করপোরেট আয়কর মওকুফের মতো বিষয়গুলো খাতটির প্রসারে সহায়ক ভূমিকা পালন করেছে। অপরদিকে, ২০২৬ সালের পর এলডিসি উত্তরণের কারণে Intellectual Property Rights (IPR) বা মেধাস্বত্ত্ব অধিকার নীতি কঠোরভাবে আরোপ, স্থানীয় তথ্যপ্রযুক্তি মানবসম্পদ (এইচআর) সংগ্রহের জন্য বাংলাদেশে বিদেশী সংস্থাগুলোর অনিয়ন্ত্রিত প্রবেশ, ব্যবসা পরিচালনার ক্ষেত্রে উচ্চ ব্যয়, বিদেশে মেধা পাচার, ব্যবসাবান্ধব পরিবেশের অভাবএবং ভাষাগত প্রতিবন্ধকতা খাতটির টেকসই বৃদ্ধির ক্ষেত্রে সবচেয়ে বড় বাধা।

এ গবেষণায়, এলডিসি উত্তরণের চ্যালেঞ্জ মোকাবেলায় বাংলাদেশের সফটওয়্যার ও তথ্যপ্রযুক্তি-সংক্রান্ত সেবা খাতের জন্য প্রণীত রোডম্যাপে বেশ কয়েকটি সুপারিশ করা হয়েছে। এর মধ্যে রয়েছে, সারা দেশে নিরবিচ্ছিন্ন ইন্টারনেট সংযোগ সুবিধার প্রসার, আরো অধিক তথ্যপ্রযুক্তি প্রশিক্ষণ ও ভোকেশনাল বা কর্মমুখী প্রতিষ্ঠান গড়ে তোলা। এছাড়া রয়েছে উদ্ভাবনী পণ্য উৎপাদনের জন্য উদ্ভাবনী সংস্কৃতিকে প্রাতিষ্ঠানিক রূপান্তরে প্রচার ও অনুপ্রেরণা দেওয়া। একই সঙ্গে প্রযুক্তি পণ্যকে বৈচিত্র্যময় করতে আন্তর্জাতিক মানের অবকাঠামো ও কারখানার সঙ্গে বৃহৎ পরিসরে হাই-টেক পার্ক/সফটওয়্যার টেকনোলজি পার্ক/আইটি প্রশিক্ষণ ও ইনকিউবেশন সেন্টার গড়ে তোলার বিষয়েও সুপারিশ করা হয়েছে।

পর্যটন খাত

সাম্প্রতিক বছরগুলোতে বাংলাদেশের পর্যটন খাত একটি সম্ভাবনাময় খাত হিসেবে আবির্ভূত হয়েছে। ২০২০-২১ অর্থবছরে এ খাতটির মাধ্যমে বাংলাদেশের রপ্তানি হয়েছে ২১৮.১৩ মিলিয়ন মার্কিন ডলার যা পূর্ববর্তী অর্থবছরে ছিল ৩১৮.৫০ মিলিয়ন মার্কিন ডলার। বৈশ্বিকজিডিপিতে পর্যটন ও ভ্রমণ খাতের অবদান ১০.৩ শতাংশ। ২০২১ সালে বৈশ্বিক পর্যটন ও ভ্রমণ খাতের আকার ছিল ৯.৬ ট্রিলিয়ন ডলার। জাতীয় পর্যটন নীতিমালা ২০১০ এবং বাংলাদেশ পর্যটন বোর্ড আইন ২০১০-এর আওতায় এদেশের পর্যটন খাত নিয়ন্ত্রিত এবং পরিচালিত হয়। রপ্তানি নীতিও এ আইনের আওতাভুক্ত। পর্যটন খাত সংশ্লিষ্ট সরকারি ও বেসরকারি খাতের অংশীজনদের অংশগ্রহণে এ খাতের একটি SWOT (সক্ষমতা, দুর্বলতা, সুযোগ ও ঝুঁকি) বিশ্লেষণে দেখা গেছে, বাংলাদেশের পর্যটন খাতের অবকাঠামো যথাযথ উন্নত নয়। চিত্তবিনোদনমূলক ও অবকাশযাপন উভয় ক্ষেত্রেই পর্যাপ্ত সুযোগ সুবিধা নেই। অপরিপূর্ণ নতুন বিনিয়োগ ও প্রত্যক্ষ বিদেশী বিনিয়োগের (এফডিআই) অভাব, দক্ষ জনশক্তির ঘাটতি, অত্যধিক পণ্য ও পরিষেবা ব্যয় এবং ই-ভিসা প্রক্রিয়ার সমস্যা তো রয়েছেই। এছাড়া বিদেশী মুদ্রায় পেমেণ্টসংক্রান্ত জটিলতা খাতটির সম্প্রসারণে সবচেয়ে বড় প্রতিবন্ধকতা হিসেবে চিহ্নিত হয়েছে। চ্যালেঞ্জ সত্ত্বেও, এই খাতে কর্মসংস্থানের সুযোগ সৃষ্টির পাশাপাশি সামাজিক ও সাংস্কৃতিক বিপুল সম্ভাবনা রয়েছে। কোভিড-১৯ মহামারীর কারণে পর্যটন খাত তীব্র সংকটের মুখে পড়ে। এর পরে খাতটি ধীরে ধীরে পূর্বের অবস্থায় ফিরে আসছে।

গবেষণায় প্রস্তাবিত রোডম্যাপে কর মওকুফ, নীতিগত সহায়তা, বিশেষ করে বাজেট সহায়তা এবং কম সুদের ঋণ প্রদানের প্রস্তাব করা হয়েছে যা স্থানীয় উদ্যোক্তা ও ব্যবস্থাপকদের উৎসাহিত করতে পারে। এছাড়া পর্যটন পণ্য বা আকর্ষণ কার্যক্রমে মনোযোগ খাতটির প্রসারণে অবদান রাখতে পারে। এর পাশাপাশি প্রয়োজনীয় অবকাঠামো উন্নয়ন, দক্ষ জনশক্তি গড়ে তোলা এবং পর্যটনবান্ধব ওয়েবসাইট বাংলাদেশের প্রাকৃতিক ও সাংস্কৃতিক ঐতিহ্য পরিদর্শনে স্থানীয় ও আন্তর্জাতিক পর্যটকদের উদ্বুদ্ধ করতে পারে।

নার্সিং ও ধাত্রীসেবা খাত

সার্বজনীন স্বাস্থ্যসেবা, রোগীর নিরাপত্তা ও দুর্যোগ প্রস্তুতিসহ জাতীয় ও আন্তর্জাতিক স্বাস্থ্য সুরক্ষার লক্ষ্যমাত্রা অর্জনে অত্যন্ত গুরুত্বপূর্ণ খাত নার্সিং ও ধাত্রীসেবা। বিশ্বব্যাপী প্রতি ১০ হাজার জনসংখ্যার মধ্যে নার্সের সংখ্যা ৩৬.৯ জন। ২০৩০ সালের মধ্যে ১৫.৫ মিলিয়ন স্বাস্থ্যসেবা পেশাজীবীর চাহিদা তৈরি হবে বলে আশা করা হচ্ছে। অন্যদিকে বর্তমানে বিশ্বব্যাপী ৯ লাখ ধাত্রীর ঘাটতি রয়েছে, যা ২০৩০ সালের মধ্যে ৭ লাখ ৫০ হাজারে নেমে আসবে বলে ধারণা করা হচ্ছে। রেজিস্টার্ড বা নিবন্ধিত নার্সদের বৃহত্তম সরবরাহকারী দেশ ফিলিপাইন। দ্বিতীয়স্থানে রয়েছে আমাদেরপ্রতিবেশী দেশ ভারত। বিশ্বেনার্স ও স্বাস্থ্যসেবা কর্মী আমদানিতে শীর্ষে রয়েছে যুক্তরাষ্ট্র ও যুক্তরাজ্য। ১৯৮৫ থেকে ২০২২ সালের মধ্যে বাংলাদেশমোট ৪ হাজার ২৪৫ জন নার্স রপ্তানিতথা বিদেশে পাঠিয়েছে। দেশে বর্তমানে স্নাতক ও স্নাতকোত্তর ডিগ্রির পাশাপাশি নার্সিং, মিডওয়াইফারি এবং অর্থোপেডিক ডিপ্লোমাসহ প্রতি বছর ৩০ হাজারের অধিক নার্স ও মিডওয়াইফ তৈরির সক্ষমতা রয়েছে। বাংলাদেশের নার্সিং ও মিডওয়াইফারি খাতের শক্তির দিক হলো- মানসম্মত শিক্ষা ও বার্ষিক ৩৫ হাজার নার্স ভর্তির সক্ষমতা। খাতটির দুর্বল দিক হলো-লাইসেন্সিং পরীক্ষার জন্য সুনির্দিষ্ট জ্ঞান ও পাঠ্যক্রম কার্যকরে দক্ষতার ঘাটতি এবং ভাষাগত প্রতিবন্ধকতা। সুযোগের মধ্যে রয়েছে, কর্মসংস্থানের উচ্চ চাহিদা এবং সরকারী নীতিগত সহায়তা। অন্যদিকে চ্যালেঞ্জের মধ্যে রয়েছে, বিশ্ব স্বাস্থ্য সংস্থার (ডব্লিউএইচও) সেইফগার্ড কর্মসূচি, তীব্র প্রতিযোগিতা ও এ পেশার প্রতি নেতিবাচক সামাজিক দৃষ্টিভঙ্গি।

বাংলাদেশের নার্সিং ও ধাত্রীসেবা খাত থেকে বিদেশে কর্মী পাঠানো তথা রপ্তানি বৃদ্ধির সুযোগ রয়েছে। সেক্ষেত্রে নার্সিং শিক্ষকদের ঘাটতি পূরণ এবং এই সম্ভাবনাময় খাতটিকে কাজে লাগাতে কিছু প্রস্তাব রোডম্যাপে অন্তর্ভুক্ত করা হয়েছে। এর মধ্যে রয়েছে-উন্নত শিক্ষা ও পাঠ্যক্রম বিকাশের জন্য সুযোগ তৈরি করা, শিক্ষকদের জন্য প্রশিক্ষণ ইনস্টিটিউট স্থাপন করা ও বৈশ্বিকস্বাস্থ্যখাতে প্রবেশের সুযোগ বৃদ্ধি করা ইত্যাদি।

LDC গ্রাজুয়েশনের পরে উল্লিখিত ১২টি সেক্টর যেসকল চ্যালেঞ্জের সম্মুখীন হবে তার মধ্যে; অগ্রাধিকারভিত্তিক শুল্ক সুবিধা বিলোপ, কঠোরতর রুলস অব অরিজিন এবং প্রণোদনা প্রদানে বিধিনিষেধ অন্যতম। প্রাথমিক রপ্তানি খাত হিসেবে, তৈরি পোষাক খাত ইইউ, কানাডা এবং অস্ট্রেলিয়া, যুক্তরাজ্য, জাপান, দক্ষিণ কোরিয়া ইত্যাদিতে অগ্রাধিকারমূলক শুল্ক সুবিধা হারানোর কারণে রপ্তানি উল্লেখযোগ্যভাবে হ্রাসের সম্মুখীন হতে পারে। ঔষধ শিল্প উল্লেখযোগ্য প্রতিবন্ধকতার মুখোমুখি হতে পারে কারণ এটি মূলত WTO-এর TRIPS এর উপর নির্ভরশীল, যা ১ জানুয়ারী ২০৩৩ পর্যন্ত LDC-এর ফার্মাসিউটিক্যাল পণ্যগুলির পেটেন্ট সুরক্ষা এবং লাইসেন্সিং বাধ্যবাধকতায় বিশেষ ছাড় প্রদান করে। LDC থেকে উত্তরণের পরে চামড়া ও চামড়াজাত পণ্য, নন-ল্যেদার ফুটওয়্যার, হালকা প্রকৌশল, প্লাস্টিক, জাহাজ নির্মাণ, কৃষি পণ্য এবং কৃষি প্রক্রিয়াজাত খাদ্য খাতের জন্য বিদ্যমান অগ্রাধিকারমূলক শুল্ক সুবিধা, রপ্তানি ভর্তুকি এবং নগদ প্রণোদনা বন্ধ হয়ে যাবে। এতে পণ্যের দাম বেড়ে যাবে এবং বিদ্যমান বাজারে প্রতিযোগিতার সক্ষমতা হারাতে পারে। এই চ্যালেঞ্জগুলি ছাড়াও, দেশটি আর উন্নত দেশগুলি থেকে Official Development Assistance এর অধীনে অনুদান এবং স্বল্প সুদে ঋণের জন্য যোগ্য বিবেচিত হবে না যা মৎস্য ও প্রাণিসম্পদ খাতের প্রবৃদ্ধির উপর বিরূপ প্রভাব ফেলতে পারে। সফটওয়্যার এবং আইটি সম্পর্কিত পরিষেবা খাত TRIPS চুক্তির অধীনে কমপ্লায়েন্স জটিলতার সম্মুখীন হতে পারে তবে পর্যটন এবং নার্সিং ও ধাত্রী সেবার মতো খাতগুলি LDC গ্রাজুয়েশনের পর বিপাকে পড়ার কম ঝুঁকিতে থাকবে। অন্যদিকে, এলডিসি থেকে উত্তরণ নতুন সুযোগ নিয়ে আসবে। এটা আমাদের ক্রেডিট রেটিং উন্নত করা, FDI আকৃষ্ট করা, দেশের ব্র্যান্ড ইমেজ উন্নত করা, প্রতিযোগিতামূলক বৈশ্বিক বাজারে টিকিয়ে রাখার জন্য বেসরকারি খাতের উৎপাদনশীলতা বৃদ্ধি, উদ্ভাবনের উন্নত পরিবেশ এবং মেধাসম্পদ স্বল্প সুরক্ষায় ভূমিকা রাখবে। এছাড়া ভর্তুকি হ্রাস ও কর সংস্কারের মাধ্যমে সরকারের রাজস্ব ব্যবস্থাপনা উন্নতকরণের মাধ্যমে খাতওয়ারি প্রবৃদ্ধি নিশ্চিত সহায়তা করবে।

Executive Summary

Bangladesh met thresholds for all three criteria in the 1st and 2nd United Nations-Committee for Development Policy (UN-CDP) triennial review in 2018 and 2021 consecutively and is on the pathway to LDC Graduation in 2026. While the graduation demonstrates Bangladesh's impressive growth trajectory over the years, this will also pose multifaceted challenges with regard to market access, preference erosion, subsidies under WTO agreements, preferential benefits in the regional and bilateral agreements, value addition conditions, additional tariff. Export is expected to be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. Given the context, this is imperative for Bangladesh to take measures for enhancing the capacity of the export-oriented industries to address the graduation challenges. To that end, a comprehensive trade roadmap may inform policymakers and all other stakeholders including the private sector about the measures that need to be implemented.

In 2016, Bangladesh completed its Diagnostic Trade Integration Study (DTIS) with the support of Enhanced Integrated Framework (EIF) under World Trade Organization (WTO). The DTIS identified a four-pillar strategy comprising pillars titled 1) Breaking into new markets; 2) Breaking into new products; 3) Improving worker and consumer welfare; and 4) Building a supportive environment that may help accelerate the growth of the export sector and open up new sources of competitiveness. However, the graduation scenario was not evident and could not be taken into consideration while conducting the DTIS 2016. In this context, Bangladesh Foreign Trade Institute conducted this study to identify trade-related graduation challenges and prepare trade roadmaps for 12 sectors to overcome the challenges. The study included a review and update of the DTIS 2016 action matrix or action plan that was proposed based on the 4 pillars. Also, the impact of Covid-19 on the identified sectors has been analyzed in the study. Additionally, aspects of DTIS that can contribute to the achievement of the Sustainable Development Goals have been elucidated.

The study covers 12 sectors of goods and services, RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. The study illustrates sector-specific strengths, weaknesses, opportunities, threats, and strategies to overcome them to realize the export potential and sustain an export-led growth. The study also proposed roadmap for enhancing the capacity of the export-oriented sectors to underpin the key opportunities and challenges and recommend concrete actions to address the challenges. The findings of the study have been generated from an extensive literature review, key informant interviews (KIIs) and stakeholder consultations. The committee of experts formed by the Ministry of Commerce, the government of Bangladesh reviewed the key findings of the report, and lastly, a validation workshop was organized to validate the findings of the study from the key stakeholders of the 12 sectors.

Readymade Garments (Knitwear and Woven): Bangladesh government has given special attention to the Readymade Garments (RMG) by declaring it a priority sector in the 8th Five Year Plan, Export Policy 2021-24, National Industrial Policy 2022 and provided various fiscal and non-fiscal incentives. The study found availability of labor force, less labor cost, competitive price, strong backward linkage industries, socially and environmentally compliant

factories, etc. as the key strengths of the sector. The sector faces challenges in terms of improving productivity, moving up the value chain and diversify to high-value products, adopting state-of-the-art technologies, further strengthening backward and forward linkages, attracting FDIs and many more. High dependency on raw materials imports, inadequacy and high costs of trade logistics, long lead-time and absence of local innovative design services are the key weaknesses of this sector. The sector can leverage the opportunities such as policy support from the government (cash incentives, duty drawback, bonded warehouse facilities, etc.), DFQF market access facilities, extension of EU GSP facility, relocation of factories from China, production of MMF based apparel items, etc. The sector's external threats include: preference erosion due to LDC graduation after 2026, current global economic recession and its short-term and long-term impacts, lack of uninterrupted quality power and gas supply, etc.

A set of actions are put forward in a roadmap with a view to addressing the graduation challenges of Bangladesh's RMG sector. Signing trade-agreements with potential countries/markets, effective negotiation for extending EU-GSP facilities until 2030 and for GSP+, exploring new markets, increasing capacity of manufacturing MMF-based RMG products, supporting home-grown brands or internationalization of home-grown brands are some of the recommendations made in this chapter.

Pharmaceuticals & API Industry: Bangladesh's pharmaceutical industry has witnessed phenomenal growth over the years catering to 98% of local demand and exporting to 150+ countries including the USA, UK, Canada, Australia, EU. Given the graduation context, the pharmaceutical sector may face challenges regarding value addition, patent payment and license payment for pharmaceutical production. Moreover, in HS code analysis, it was found that export earnings from a single product (HS-300490; Other medicaments of mixed or unmixed products, for retail sale) contributes 67% of the total export of the pharmaceutical sector. Bangladesh has the potential to expand its export base to many more countries as Bangladeshi pharmaceuticals products maintain standards in quality and are cost-effective. The study identified that, robust industrial base, competitive workforce, manufacturing facilities for import substitute drugs, availability of quality medicine at affordable prices, etc. as strengths of this sector. The sector may leverage opportunities like huge scope to further penetrate into the world market, tax holidays and incentives for API, export potential in the global API market, etc. The study revealed that over-dependence on API import, challenges related to API production, lack of R&D and lab testing facilities, lack of uncertainty in gas connection in API park, challenges regarding the payment of industrial plots, lack of bioequivalence test facility, and having less patentable molecules create challenges for the sector.

The study proposed a roadmap for the sector which includes proposed actions like ensuring as many innovations and known molecules in the public domain as possible before graduation, avoiding implications of enforcement of the patent regime, as the sector lacks patentable molecules, becoming self-reliance in API production enhancing investment in R&D and API molecule synthesis etc.

Leather and Leather goods: The leather and leather goods sector has been identified as one of the potential sectors for export diversification. The sector started its journey in the 1940s, and presently contributing about 0.6% of the nation's GDP and around 2% of industrial production. The sector is the second-largest export industry in the country as in FY2021-22 it accounted for 2.4% of the total export of goods. SWOT analysis of the study revealed the major strengths of this sector are competitive labor cost, availability of labor force, local source of raw materials, entrepreneur's resilience, agility, and mindset to adapt to changes, and capacity of meeting buyers' demand. This sector has many inherent weaknesses like lack of compliance with international environmental, social, and safety standards in the factories and manufacturing premises, dependency on the import of raw materials, access to finance constraints, lack of backward linkage, etc. Establishment of a cluster of tanneries at Savar Tannery Estate was a significant step forward, but for lack of a well-functional central effluent treatment plant (CETP) remains a serious constraint to production of leather for meeting international compliance standards and getting Leather Working Group (LWG) certification. Opportunities like growing global leather export market, designation as the highest priority sector in export policy 2021-2024, rising demand in the domestic market, local and foreign direct investment scopes, government policy support, relocation of manufacturing from developing and developed countries, etc. make this sector quite prospective. However, stricter international standards and compliance issues, stiff competition from other Asian economies like Vietnam, India, preference erosion of special & differential treatment and DFQF facilities, and logistic problems, pose challenges to realize the sector's huge potential. The government is working to increase the existing \$1 billion yearly export revenue from leather and leather goods to \$10 billion by 2030. As a key manufacturing sector, the leather sector has substantial opportunities to contribute to export diversification and growth.

In order to mitigate the LDC graduation adversities, the study proposed a trade road map to enhance the export potential of this sector by circumventing the ramifications of the LDC graduation challenges. The roadmap outlines interventions for increasing the productivity to tackle potential trade loss after LDC graduation, utilizing existing incentives, utilizing of local raw material (rawhide), and developing backward linkages. Importantly, creating awareness of compliances, ensuring ESQ and ESG compliance, and building capacity for LWG certification are also suggested in the roadmap.

Non-Leather Footwear: The global market for non-leather footwear is projected to reach USD365.3 billion by 2027. The US is the largest global importer of footwear. Bangladesh's non-leather footwear exports reached USD450 million in FY2021-22. Asian countries export the most footwear globally, with China and Vietnam being the top exporters. Bangladesh ranks 8th globally in footwear manufacturing and saw a 6% increase in footwear production from 2016 to 2021, and 30% exports growth rate in FY 2021-22. This growth is fueled by non-leather/synthetic footwear exports and partnerships with international brands like PUMA, H&M, and Skechers. The study conducted a SWOT analysis of the non-leather footwear sector in Bangladesh, revealing strengths such as low-cost labor and availability of raw materials, weaknesses such as import dependency, power supply shortages, and slow OEM-to-ODM transformation, opportunities such as high global demand and investment potential, and threats such as competition from other Asian economies, lack of funds for SMEs, and delays in FDIs approvals.

In the proposed roadmap, the study recommended increasing industrial productivity, building capacity in ODM, developing backward linkages, utilizing existing incentives, ensuring international quality compliance, enhancing market access, attracting fresh investment, and introducing incentive schemes for value addition to alleviate LDC graduation and sectoral challenges in the non-leather footwear industry.

Light Engineering Sector including Electronics and Electrical Products: The light engineering (LE) sector including electronics and electrical products is making a significant contribution to the economy of Bangladesh by employing more or less 6,00,000-8,00,000 people in 40 thousand active light engineering companies. A SWOT analysis of the study on light engineering including electronics and electrical sector found that the availability of workforce, infrastructure (road, rail and river transportation), availability of globally cost-competitive human capital, etc. are the key strengths of sector. High cost of capital, lack of skilled human resources, absence of international-standard testing and certification facilities, higher cost of doing business, interruptible power supply, lack of proper training for industrial workers, supervisors, and managers and locally counterfeit electronic products are weaknesses of the sector. The sector has opportunities like duty-free market access, favorable policy and incentives, potential Free Trade Agreement/CEPA with export destination countries, large domestic market with a growing middle-income class, etc. However, factors like preference erosion due to LDC graduation after 2026, interrupted supply of gas and power, lack of access to low cost, long term financial resources, environmental pollution issues, high costs of trade logistics, are serious impediments to the sector's growth.

In the proposed roadmap, a set of recommendations are put forward with a view to addressing the graduation challenges of the light engineering sector. Creating strong backward and forward linkages, establishing Common Facility Centers (CFCs), diversifying the market base, and introducing Export Risk Fund (ERF) are some of the recommendations made for the sector's growth and diversified market.

Plastic:The plastic sector is witnessing increasing demand both in domestic and international markets. The average per capita global usage of plastic is 50 kg. In 2021, the world export value of plastic products was a staggering \$806 billion having China as the top exporter. Currently, the Plastics sector contributes to 1 percent of the GDP in Bangladesh. In FY 2021-22, Bangladesh exported plastic products worth USD166.25 million.SWOT analysis of the sector suggested that Plastic's contribution to forward and backward linkage industries of other sectors such as ready-made garments, processed food, healthcare, toys and increasing female participation can be regarded as the strengths of the sector. On the other hand, high dependency on imported raw materials, absence of testing labs, lack of adequate warehouses, absence of the art tool mould industries etc. have been identified as some of the key weaknesses. Increasing demand in the global and domestic market, increasing compliant factories producing high quality RMG related plastic accessories are some of the key opportunities of this sector. Lastly, lack of modern technology, longer lead time in export, higher freight cost, inadequate access to funds have been identified as threats.

In the roadmap, the study recommended interventions for improving compliance, increasing access to finance, development of technical skills, improving the tooling (e.g. mould and die manufacturing), developing R&D, etc. for increasing competitiveness of this sector.

Shipbuilding Sector: Once known as a shipbreaking nation, Bangladesh has transitioned itself to a shipbuilding country, exporting small and medium-sized ships as well as ocean-going multi-purpose vessels including for icy waters of the North Sea and Baltic Sea for highly competitive European countries such as Denmark, Germany, Finland, Norway, etc. While the industry is still small compared to major shipbuilding countries, Bangladesh has advantages such as skilled manpower and lower labor costs. Bangladesh shows the potential to capitalize the global shipbuilding market, which is worth around \$200 billion, by improving its infrastructure and investing in research and development. The country sees its shipbuilding industry as a key element in expanding its range of export goods. A SWOT analysis of the industry identified strengths such as a cheap and available workforce and the capability of making warships and low-cost ships. However, the sector faces hindrances such as high financing costs, high interest rates on loans, lack of sovereign guarantees at minimal cost, higher bank guarantee fees and higher corporate taxes, which need to be addressed to expand the industry's export and economic growth potential. Given the context, the roadmap stressed on the implementation of the Shipbuilding Industry Development Policy 2021. The policy has clear guidelines for providing financial support, bank guarantee, and sovereign credit guarantee along with incentives and tax breaks from NBR.

Agro Products and Processed Foods: The agriculture sector has been a predominant driver of growth and rural development in Bangladesh, accounting for almost 13.02 percent of the gross domestic product (GDP) in FY 2020-21 and providing employment for more than 40.60 percent of the total workforce. Globally, agricultural products worth of USD2162 billion were exported in 2021. A SWOT analysis of the sector identified diversified and high yielding crop, availability of labor force including women, extension services to farmers, favourable climatic condition, availability of natural resources including fertile land and water as the strengths of the sector. On the other hand, lack of infrastructure facilities and access to high-tech or enhanced farming technology, post-harvest losses, constraint in getting permission for contract manufacturing, lack of skilled human resources and lack of multipurpose specialized cold storage have been identified as weaknesses of the sector. The study identified demand in the international market, presence of forward and backward linkage industries, favourable government policies, as the key opportunities of the sector. Moreover, after LDC graduation, Bangladesh may not be allowed to provide subsidies in the agriculture sector. In addition to this, lack of accredited laboratory, lack of access to loans from Banks, natural disaster, high transportation cost, presence of middlemen in marketing channel have been identified as the threats.

In the proposed roadmap, the study recommended interventions in ensuring safe and quality food products, improving post-harvesting process, access to finance and compliance with product quality requirements, maintaining traceability of exportable agro products etc.

Fisheries Sector: Bangladesh ranks third in fish production from inland waterbodies, fifth for producing fish for aquaculture, and eleventh for producing marine fish in the world. The GDP growth in the fisheries sector was 2.08 percent and the contribution of the fisheries sector in the overall agriculture sector was 21.83 percent in FY 2021-22. While there is a growing local demand for fish, fisheries have also become important for the country's

export earnings. Bangladesh exports fish and fish products to 52 countries of which main markets are European Union, the USA, Japan, Russia, and China. Major export items are shrimps, hilsha, tilapia and pangas. The SWOT analysis identified some of the sector's strengths which are: large marine and freshwater resources, high demand for fish, aquaculture potential, availability of competitive labor, adoption of new technologies and practices, contribution to food security, etc. while the main weaknesses are: overfishing, poor infrastructure, lack of regulation and enforcement, climate change resulting in rising sea levels and changes in water temperature and salinity impacting fish habitats, poor market access, shortage of qualified personnel and fishing trawlers for the deep sea fishing, etc. Challenges regarding cash incentives, scarcity of high-quality feed, seed are the potential threats for this sector.

The proposed roadmap of this sector recommended developing and implementing training programs for fishermen, and intermediate-level officials of the fisheries sector in response to industry needs, setting up adequate fish landing centers, collaborating on research through connecting with academic institutions and think tanks, leveraging marine fisheries resources, creating a fisheries economic zone, etc.

Livestock Sector: Bangladesh's livestock sector is a significant contributor to the country's economy, providing employment opportunities for millions of people and contributing to food security. The contribution of the sector to the GDP in FY 2021-22 is 1.90 percent and overall agricultural sector is 16.52 percent. SWOT analysis revealed that major strengths of the sector include abundance of poultry and livestock, favorable environment for rearing, educated entrepreneurs, improved cross breed development, availability of potential Indigenous genetic resource and availability of high yielding cow. Major weaknesses of the sector include low availability and high price of feed and fodder, limited milk collection and processing facility, limited grazing space for animal resources, lack of waste management practices, lack of R&D facilities, absence of quality livestock breed, lack of skilled labour and qualified personnel, absence of market information for smallholders and poor quality of slaughter houses. High demand for quality livestock products, emergence of newer & stronger varieties through crossbreeding of commercial livestock, women's empowerment and involvement in the livestock, and export potential of halal products can be regarded as the opportunities of the livestock sector. The threats of the livestock sector include, absence of disease diagnosis and treatment facilities, lack of physical security of animal resources, small livestock (e.g., goat) susceptible to water related injuries and death, limited credit support from banks, disease outbreaks, climate change resulting in changes in rainfall patterns, temperature, and extreme weather events affecting livestock production and food security, increasing feed costs. In order to mitigate the LDC graduation adversities, increasing the productivity, utilizing existing incentives, developing meat, poultry and dairy production can be effective measures.

The study proposed a trade road map for sectoral export growth which illustrates these measures more vividly with in-depth action plans. The study recommended introducing the 'National Dairy Development Board' for the development of community-based smallholder dairy farms. The study also recommended the improvement of the existing cattle fattening system by strengthening private enterprises' backward and forward linkage system. Incentives for exporting livestock products to non-traditional markets and exporting new products in existing markets may be introduced. The government may also undertake several steps including establishment of farmers' networks for trade related information and strengthening internet-based communication systems for disseminating trade related information.

Software & IT related Services Sector: The software and IT-related services is an emerging sector making a significant contribution to the economy of Bangladesh. Universities of Bangladesh produce 25000 IT graduates annually and if they could be productively engaged in the latest disruptive technologies such as IOT, AI, etc. Bangladesh would turn into a major player. SWOT analysis found cost-competitive young workforce, low infrastructure cost (i.e., internet cost, electricity, hardware, etc.), setup of Hi-Tech Parks, capacity to adapt new technology etc. as some of the key strengths of this sector. Weak relationship between universities and the IT industry, cyber security threats, lack of access to finance, etc. remain some of the weaknesses of this sector. However, factors like demographic dividend, establishment of IT village, nationwide connectivity, favorable policy structure (top priority sector in Export Policy 2021-2024, incentives etc.), government's policy on SMART Bangladesh, cash incentive on export value, reduction of VAT and exemption from corporate income tax provide the sector with growth opportunities. On the contrary, stringent imposition of IPR (intellectual property rights) due to LDC graduation after 2026, unregulated entry of foreign firms in Bangladesh to source local IT human resource (HR), high cost of doing business, brain drain to foreign countries, lack of business-friendly ecosystem, language barrier, etc. threaten the sustained growth of the sector.

Spreading seamless internet connectivity nationwide, establishing more IT training and vocational institutes, promoting and inspiring to institutionalize an innovation culture for generating innovative products and services generation to diversify IT products, full functioning Hi-Tech Parks /Software Technology Parks /IT Training and Incubation Centers with international standard infrastructure and facilities are some of the interventions proposed in the roadmap.

Tourism sector: Tourism sector of Bangladesh has emerged as a promising sector in the recent years. In FY2020-21, the export of the travel sector was amounting USD 218.13 million which was USD 318.50 million in the previous year. Globally, the sector comprises 10.3% of global GDP amounting US\$9.6 trillion in 2021. The tourism sector is regulated and governed under Bangladesh Tourism Policy 2010 & Bangladesh Tourism Board Act 2010 including export policy. SWOT analysis of this sector identified that underdeveloped tourism infrastructure, lack of entertainment facilities both physical and recreational facilities, insufficient new investment and FDI, inadequate skilled human resources and higher cost of products and services and E-Visa Procedures and lack of facilities in the payment system for foreign currency are the key challenges for the expansion of the sector. Despite challenges, this sector has huge potential with employment opportunities as well as social and cultural benefits. Due to Covid-19, the tourism sector faced challenges, however, the sector is gradually recovering.

In the roadmap, the study recommended that providing tax holidays, policy support, especially budgetary support, and low-interest loans may encourage local entrepreneurship, management, and operation of tourist products that can contribute to expanding the sector. Along with this, necessary infrastructure development, ensuring the security of the tourists, development of skilled manpower and a tourism-friendly website can encourage national and international tourists to visit the natural and cultural heritage of Bangladesh.

Nursing and Midwifery Services: Nursing and midwifery are crucial for achieving national and international health goals, including universal health coverage, patient safety, and disaster preparedness. The global nursing density is

36.9 nurses per 10,000 population, but there is a projected need for 15.5 million more healthcare professionals by 2030. Additionally, there is a shortage of 900,000 midwives globally, which is projected to fall to 750,000 by 2030. The Philippines is the largest exporter of registered nurses, with India in second place. The USA and UK are the largest importers of nurses and health professionals in the world. Bangladesh has exported a total of 4,245 nurses between 1985 and 2022. Currently, Bangladesh has the capacity to produce more than 30,000 nurses and midwives generated from Bachelor's and Master's degrees, as well as diplomas in nursing, midwifery, and orthopedic nursing. The nursing and midwifery sector in Bangladesh has strengths such as high-quality education and capacity to enroll 35,000 nurses annually. Weaknesses include inadequate number of faculties in implementing specific curriculum, lack of knowledge for licensing exams, language barrier, etc. Key opportunities include high demand for job placement and government policy support, while key threats include WHO safeguard measures, competition from other Asian countries, and social restrictions. The nursing and midwifery sector in Bangladesh has opportunities for export growth.

The study proposed a trade roadmap with a comprehensive action plan to achieve sectoral export growth. Increasing knowledge on second/foreign language and communication skills, improving teaching methodology, and curriculum, harmonizing the education standards and licensure examination, enhancing market access in export destinations country, and creating a country-wide collaborative effort to advance nursing education are some of the key recommended actions reflected in the roadmap of the study.

Preference erosion, stringent rules of origin and loss of incentives are the key challenges the 12 sectors are most likely to encounter after LDC graduation. As a primary export sector, RMG sector may face significant decrease in export to the EU, Canada and Australia, UK, Japan, South Korea etc. due to loss of preferential tariff. The Pharmaceuticals sector may experience significant hurdle as it mainly depends on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of WTO which provides special exemption in patent protection and licensing requirements for pharmaceutical products of LDCs till 1 January 2033. After the graduation, preferential tariff, export subsidy and cash incentives will cease to exist for leather & leather goods, non-leather footwear, light engineering, plastic, shipbuilding and agro products & processed foods sectors which may increase the product price decaying the appeal to current markets. Apart from these usual challenges, the country will no longer be eligible for grants and low-interest loans under official development assistance (ODA) from developed nations which may adversely impact fishery and livestock sector's growth and global competitiveness. Software & IT related Services Sector may come across complications from computer and related services (CRS) related compliance required under the TRIPS agreement but tourism and nursing & midwifery services sectors are less like to face any graduation adversities directly. However, Graduation will offer new opportunities in terms of improving the credit rating, attracting FDI, improving country brand image, enhancing the productivity of the private sector to sustain in the competitive global market, better environment for innovation and protection of intellectual property rights, improving the government revenue regime by reducing subsidies and tax reforms which will also help expedite sectoral growth.

Introduction

Bangladesh is on course to graduation from a Least Developed Country in 2026 having fulfilled all the three criteria in 2018 and 2nd triennial review in 2021. Bangladesh aspires to become a developed country by 2041. Strong GDP growth over the past decade with an average of over 6.3% has resulted in GDP per capita growing to around US\$ 2462 in FY2020-21. Bangladesh was also elevated into a lower-middle-income country in 2015 as per the World Bank criteria. Growth has also resulted in a decline in poverty levels, which fell to 20.5% of headcount poverty and 10.5% of hardcore poverty in FY 2020-21 and an improvement in other social indicators such as infant mortality, universal primary education, maternal health, malaria and other disease, gender equality and women empowerment and life expectancy.

Under the 8th Five-year Plan (8th FYP) the Government sees private sector as central to the country's future prosperity. The Government also envisages trade as a vital ingredient in Bangladesh achieving economic development, poverty reduction, job creation and improving productivity and competitiveness. According to the IMF, to boost private investment and potential growth over the medium term and make the growth processes more inclusive, Bangladesh needs wide-ranging structural reforms. This will require enhancing productive investments, which would address key bottlenecks in the economy. The government has adopted National Financial Inclusion Strategy of Bangladesh (NFIS-B) covering the period 2017-2021 to help inclusive growth followed by medium term goals for achieving SDGs by 2030 and the long-term phase for emerging as developed country by 2041. In 2016, Bangladesh completed its Diagnostic Trade Integration Study (DTIS) with the aid of the EIF fund. The DTIS identified a four-pillar strategy that may help accelerate the growth of the export sector; a priority for jobs and growth, improve consumer and worker welfare, and open up sources of competitiveness beyond low-wage labor. The DTIS 2016 suggested the four-pillar strategy to address Bangladesh's trade-related difficulties. However, the graduation scenario was not evident and could not be taken into consideration while conducting the DTIS 2016.

As Bangladesh has been placed on the pathway to graduate from the LDC status, the next three years will be vital to further increase and sustain its current development pace in order to serve as a springboard for the graduation of Bangladesh in 2026. It is considered that the ensuing graduation from LDC status will mostly affect the trade of Bangladesh. It will lose the preferential market access in the potential export markets which may badly affect the overall export basket of the country. Incentivizing the export led domestic industry will also face WTO binding rules to limit the support that may make the industries less competitive in the world market. Trade being considered as the main engine of growth and socio-economic development needs proper attention and strategic focus to overcome the graduation challenges.

According to a WTO study, Bangladesh may lose 14.4% of its export volume just after graduation from the LDC status. Trade may be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. Bangladesh will also not be eligible to provide export subsidies after graduation. Thus, Bangladeshi products may lose their competitiveness in the international markets. Thus, initiatives are to be taken to enhance the capacity of the export sectors. Therefore, preparation of roadmaps for potential export sectors within the purview of this study will inform the policymakers and other stakeholders including the private sector the post-graduation challenges and ways forward to address them.

Objectives of the study

The specific objectives of the study are:

- The specific objectives of the study are:
- Identify and update the priority areas of DTIS 2016 with a view to contribute to the sustainable graduation from LDC, supporting the implementation of Sustainable Development Goals taking into account of the effect of COVID-19 pandemic.
- Identify the trade related key challenges of sustainable graduation of Bangladesh from the LDC status considering effect of COVID-19 pandemic.
- Prepare a sector specific “Trade Roadmap for Sustainable Graduation (TRSG)” to overcome the trade related challenges including resource mobilization strategy for sustainable graduation from LDC.

Scope of the study

Bangladesh has been placed on the pathway to graduate from the LDC status in 2026. Therefore, this study will cover the identification of graduation challenges and prepare a roadmap for overcoming the trade related challenges. The possible loss of preferential access in the world market of Bangladeshi product and services, loss of preferential Rules of Origin facilities, TRIPS transition in general and in the pharmaceutical sector, subsidies under WTO Agreements, other WTO related Special and Differential Rights, Preferential benefits in the regional and bilateral agreements the country is involved, possible effect on Official Development Assistance (ODA) and FDI etc. It will also be focused on sector-based trade related challenges. The sectors are RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. The unfinished activities of the Action Matrix of the DTIS 2016 and its updates will also be the area of study of this DTIS Update.

The DTIS Update study will also include a “Trade Roadmap for Sustainable Graduation (TRSG)” which will make a mapping of a sector specific strategy that the country will need to overcome the trade related challenges including resource mobilization strategies.

Methodology of the study

The methodology of this study applied a mixed approach. The data are analyzed using both qualitative and quantitative methods. The methodology of collecting information and data included literature review, Key Informant Interviews (KII), stakeholder consultation as well as different secondary sources.

Desk Review: Multiple methods of data gathering are used covering both quantitative and qualitative data. Available data from acceptable national agencies such as Export Promotion Bureau (EBP), Bangladesh Bank (BB), National Board of Revenue (NBR), etc. and international agencies such as UN Comtrade, International Trade Centre (ITC), UNCTAD, World Bank (WB), etc. sources are used for a reasonable time frame of the most recent years. In the same fashion, available literatures were collected and reviewed to develop a general idea of various aspects of the targeted sectors. Several industry related plan, policies, such as National Industrial Policy 2022, Export Policy

2021-24, 8th Five-Year plan, Import Policy Order 2021-24, RMG Business Expansion and Simplification Policy Guidelines 2020, Leather and Leather Goods Development Policy 2019, etc. published research papers from the internet were used as study tools.

Key Informant Interviews (KII): Semi-structured questionnaires for each sector were developed and applied as the instrument for conducting the interviews. The participants for the interview were policy-level officials, think tanks, academia and trade-related agencies.

Stakeholder Consultation: 12 stakeholder consultations on "Trade related Graduation Challenges and Preparation of Sector Specific Trade Roadmaps" were held for each of the sector to generate valuable insights from the relevant stakeholders. The stakeholder consultation revealed more information on the industry's inherent issues and potentials.

Review by the Committee of Experts: Ministry of Commerce, Government of the People's Republic of Bangladesh formed a Committee of Experts to review the study report of DTIS Update and the Trade Roadmap for Sustainable Graduation (TRSG). The Committee of Experts included experts representing all relevant Ministries, Divisions, and private sector associations. The committee of experts reviewed the final draft report in a meeting presided over by the Senior Secretary, Ministry of Commerce, Government of the People's Republic of Bangladesh.

Validation Workshop: A validation workshop was organized to validate the study after review by the Committee of Experts. Key stakeholders related to the 12 sectors presented their opinions and validated the findings of the report at the validation workshop.

Data Analysis: Statistical analysis was conducted through Microsoft Excel while analyzing quantitative data. SWOT analysis method has been used to identify major sectoral strengths, opportunities, weaknesses and threats. Initially, existing literature, conducted KIIs and opinions from the stakeholder consultations were analyzed for sorting out relevant data/information, insights and perspectives.

Implementation of Bangladesh 2016 DTIS: An update

Bangladesh with the help of EIF fund completed its Diagnostic Trade Integration Study (DTIS) in 2016. The DTIS identified a four-pillar strategy that could contribute to accelerated development of the export sector, a priority for jobs and growth; enhance worker and consumer welfare; and enable sources of competitiveness beyond low-wage labor. The DTIS 2016 recommended four-pillar strategy to address the trade related challenges of Bangladesh.

The first pillar is breaking into new markets through (a) better trade logistics to reduce delivery lags, as world markets become more competitive and newer products demand shorter lead times, to generate new sources of competitiveness and thereby to enable market diversification and (b) better exploitation of regional trading opportunities in nearby growing and dynamic markets, especially East Asia and South Asia.

The second pillar is breaking into new products through (a) more neutral and rational trade policy and taxation and bonded warehouse schemes; (b) concerted efforts to spur domestic investment and attract foreign direct investment and to contribute to export promotion and diversification, including easing of the energy and land constraints; (c) strategic development and promotional efforts for trade in service.

The third pillar is about improving worker and consumer welfare by (a) improving skills and literacy, (b) implementing labor and work safety guidelines, and (c) making safety nets more effective in dealing with trade shocks.

The fourth pillar is building a supportive environment, including (a) sustaining sound macroeconomic fundamentals and (b) strengthening the institutional capacity for strategic policymaking aimed at the objective of international competitiveness to help bring focus and coherence to the government's reform efforts.

The study also endeavored to cover a number of growing export sectors like shipbuilding, pharmaceutical products, IT-enabled Services etc. Some of the areas such as the macroeconomic environment, skills development, energy constraint, and creation of effective safety nets, are not explored in the study. Implementation updates of the DTIS 2016 are presented as follows:

Pillar 1: Breaking into new markets

A. Improving trade facilitation

- National Trade Facilitation Committee has been established for the coordination of trade, transport, and logistics strategies across different sectors and modes of transport.
- To address the issue of unloading containers in the port or immediate vicinity of the port, a coordinated strategy was adopted to improve the performance of Dhaka-Chattagram corridor including a new inland container depot (ICD) near Dhirasram Railway Station, Gazipur, Dhaka-Chattogram four-lane highway, Pyra deep sea port. Ministry of Civil Aviation and Tourism has drafted a policy which will allow private investment in cargo handling at airport.
- For reducing customs clearance times, Bangladesh extends Authorized Economic Operators facilities to 12 companies, Time release study has been conducted on Benapole land port in 2022, ASYCUDA world has been implemented in all Land Customs Stations (LCS) and NBR signed MoU with 38 ministries, agencies to implement National Single Window.
- To address the trade finance gaps Bangladesh Bank has approved guidelines for setting up and operating digital platform for facilitating the financing of trade receivables of MSMEs.
- Ministry of Commerce is already working on facilitating trade as yearly licensee renewal has been increased to at least five years instead of a one-year renewal culture. Moreover, the new Import Policy Order 2021-2024 has also simplified processes for traders.

B. Promoting Economic Integration with Asia

- Motor Vehicle Agreement was signed between Bangladesh, Bhutan, India, and Nepal in June 2015.
- Bangladesh and Bhutan signed the “Agreement on movement of traffic-in-transit and protocol”.
- Three joint working groups between Bangladesh and India on Trade, Customs, and Inland Water Protocol meet periodically for discussing bilateral issues.
- Bangladesh and India have established seven border haats while nine more new border haats are in pipeline.
- Agreement was signed between BSTI and Bureau of Indian Standards for mutual recognition of food-related and other test certificates.
- Initiative taken to start negotiation with Indian counterpart regarding a Comprehensive Economic Partnership Agreement (CEPA).
- Initiatives taken to sign Free Trade Agreement, Japan and Singapore.
- Steps taken to conduct feasibility studies for Concluding FTA with China
- Regional trade agreement policy 2022 has been formulated to provide guideline to negotiate, sign and implement trade treaty.
- National Tariff Policy 2023 has been drafted to rationalize tariff to enhance competitiveness of domestic industries.

Pillar 2: Breaking into new products

A. Rationalizing trade policy to level the playing field:

- Initiatives taken for removing anti-export bias of trade taxes and the trade policy regime to encourage diversification.
- The Value-Added Tax and Supplementary Duty Act 2012 has been effective from July 2019 which is expected to promote compliant traders, close tax loopholes, and ensure better collection of legitimate revenue.
- The BTC Act 1992 has been reviewed in 2020 and BTC has been replaced by BTTC-Bangladesh Trade and Tariff Commission.
- The Draft Customs Act 2014 incorporates new provisions for extending bonded warehouse facility to a wider range of exporters and their supply chain members.
- MoC has reviewed the existing programs related to the fiscal incentives and tax holidays.
- National quality policy 2015 has been formulated for streamlining quality standards.
- For facilitating trade, BSTI has rolled out implementation of the e-certification mark program.
- For enhancing clarity in the Plant quarantine act 2011, plant quarantine rules 2018 has been drafted.

B. Improving the environment for domestic and foreign investment

- BIDA was formed on September 1, 2016 through the enactment of the Bangladesh Investment Development Authority Act 2016, merging Board of Investment (BOI) and then Privatization Commission.
- BIDA has already signed MoUs with 39 organizations, 19 of which are providing 58 services from their One Stop Service platform.
- Prequalification license has been given to establish 21 private economic zones out of which 12 private economic zones received license finally.

Pillar 3: Improving worker and consumer welfare

A. Improving skills and literacy

- A National Skills Development Authority (NSDA) was established in 2018 to plan and coordinate all skill development activities of the country.
- In addition, National skills development policy 2021 and National skills development plan 2022-2027 was formulated to meet the demand of local and international labor market.
- A National Skills Portal (NSP) has been developed with a total of 16 modules including real time data on employment demand and supply, online registration with graduate tracking, training evaluation, trainee assessment and certification opportunities.

B. Implementing labor and work safety guidelines

- Under the agreements with European and American retailers, inspections of most factories have been completed following workplace safety standards.
- These factories need regular monitoring, and the government has taken initiatives to strengthen its monitoring capacity by recruiting adequate staffs.
- 178 Leadership in Energy and Environmental Design (LEED) certified companies and 550 companies are in the pipeline to be green or certified.

Pillar 4: Building a supportive environment

A. Sustainable macroeconomic framework

- Bangladesh has been able to successfully overcome the catastrophic situation created by the COVID-19 pandemic.
- The effective implementation of various fiscal and financial incentive packages brought back the vitality of the economy in the shortest possible time.
- Continuing its record of sound macroeconomic management will help Bangladesh tackle two major challenges which include usual price hikes in the international market and secondly, controlling imported inflation in the local market originating from the price hike in the international market.

B. Building institutions for trade policy coherence and implementation

- The Draft Customs Act 2014 has incorporated mandatory consultation with related stakeholders including BTTC before enactment of any new legislation, rules, orders, tariff rates according to the provision of WTO TFA.
- The “Modernization and Strengthening of BSTI” project is being implemented by the government.
- A modern energy efficient testing laboratory has been established in the BSTI head office and BSTI is taking steps to get its Product Certification Systems fully accredited.
- Several BSTI laboratories have already been awarded accreditation from the National Accreditation Board for Testing and Calibration Laboratories, India in the field of chemical, mechanical and biological testing.
- Government is considering more effective involvement of the private sector to liberalize the market for testing and certification.

Supporting implementation of sustainable development goals: Priority areas of DTIS

The Government of Bangladesh is striving towards the ambitious goal of reaching the furthest behind first, through adopting the 'whole-of-society' approach and implementing the 'leaving no one behind' agenda. Since 2020, the challenge of achieving the SDGs has been magnified by an increase in the frequency and intensity of human-made crises and natural disasters in the global economy, as well as the challenges of responding to the Covid-19 pandemic. Although the economy started to rebound in 2021, it slowed down again towards the end of the year due to new

Covid-19 variants and continued global vaccine inequity, along with rising inflation, supply chain disruptions, policy uncertainties, and the global impact of the Russia-Ukraine war. According to the Sustainable Development Report 2022, Bangladesh has made remarkable progress in implementing SDGs. Bangladesh has ranked 104 among 163 countries in 2022 whereas its ranking was 116 in 2019. In accordance to the same report, East and South Asia has progressed on the SDGs more than any other region since their adoption in 2015, Bangladesh along with the Cambodia showing the most progress of all countries.

The Sustainable Development Goal 8 aims to develop decent work and economic growth through promoting sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all. Pillar 3 and 4 of the DTIS 2016 outlined proposals for improving worker and consumer welfare and building a supportive environment that embeds the SDG 8 meticulously. By developing National Skills Development Authority (NSDA), National skills development policy 2021 and National skills development plan 2022-2027 as well as National Skills Portal (NSP), the country is improving skills and literacy of the workforce. Moreover, following the international workplace safety standards, adopting Leadership in Energy and Environmental Design (LEED) and green certification the country is implementing labor and work safety guidelines for ensuring decent work for all. Effective implementation of various fiscal and financial incentive packages to bring back the vitality of the economy in the shortest possible time has been ensured. In addition, initiatives for drafting customs act for mandatory consultation with related stakeholders before enactment of any new legislation, rules, orders, tariff rates have been taken. Through these, the country has exhibited robust and sustainable macroeconomic framework along with building institutions for trade policy coherence and implementation. Progress of SDG 8: Decent Work and Economic Growth implied that the shift of the average annual growth rate of real GDP per capita of Bangladesh to 5.74 percent in FY2020-21 from 5.34 percent in the baseline FY 2016-17 is remarkable, especially because of the Covid-19 shock after the pandemic, GDP per capita based on PPP is reported at USD 6,613 in 2021 and USD 5,995 in 2020, according to the World Bank. The unemployment rate does not show any noticeable change during the period. Along with a fluctuating trend from 1999 to 2012. Bangladesh's long-term unemployment rate has been steady at around 4.4 percent. In addition to other challenges, Covid-19 has been a big blow to the core principles of the concept of sustainable development: inclusiveness and leaving no one behind. Increasing labor productivity, reducing the unemployment rate especially for young people and women, and improving access to financial services and benefits are essential components of sustained and inclusive economic growth in Bangladesh.

SDG 9 narrates building resilient infrastructure, promoting sustainable industrialization, and fostering innovation. Pillar 1 and 2 of DTIS 2016 prioritize interventions for achieving SDG-9 relevant goals. Following Pillar 1, improving trade facilitation through customs modernization, developing ports and supporting infrastructures like roads, waterways, ICDs, and developing a National Trade Facilitation Committee for the coordination of trade, transport, and logistics strategies across different sectors and modes of transport, initiative of implementing national single window have enabled the country to build resilient infrastructure and promote sustainable industrialization. Pillar 2 suggested rationalizing trade policy to level the playing field and improve the environment for domestic and foreign investment. In this regard, the country has taken initiatives for removing the anti-export bias of trade taxes and the trade policy regime to encourage diversification as well as revised relevant VAT, customs, BTC, quarantine etc. acts for policy coherence. Also, through the one-stop service system for investment facilitation and providing licenses for private economic zones, industrialization, technology transfer and innovation are fostered. In order to achieve SDG9, the government has been prioritizing the building of resilient infrastructure, promoting inclusive sustainable industrialization, and fostering innovation in its overall policy framework. The Road Sector Master Plan (2010-2030) guides investments in the road sector with the objectives of protecting the value of RHD assets, increasing connectivity, and improving road safety, among others. To maintain an uninterrupted road network, initiatives have been taken to build new bridges at different locations. The improvement of rail communication and transport services has been included as a priority sector in the national document on the 8th Five-Year Plan and Perspective Plan, Vision 2041 and more budgets have been provided for the development of the railways than at any time in the past. Bangladesh is

developing a National Adaptation Plan (NAP) under UNFCCC to formulate an integrated adaptation strategy and activities to meet the long-term impact of climate change. Meanwhile, a NAP Road Map has also been prepared. In addition, Bangladesh has prepared a Nationally Determined Contribution (NDC) Plan to manage growing emissions without compromising the required development. The government has also developed the NDC Implementation Road Map. The policies aim to ensure a developed and efficient transport and communication system that will connect Bangladesh with international and regional road networks as well as with other ICT networks. From this point of view, Padma Bridge, Metro-rail, Mass Rapid Transit, Dhaka Elevated Expressway, Karnaphuli Tunnel, and some other mega-projects are being implemented which are contributing to the trade and GDP growth of the country. Also, several measures have been undertaken for the development and maintenance of navigability of different river routes, ensuring the safe movement of watercraft, development of inland river ports, creating infrastructure facilities to carry container goods in inland waterways, etc.

SDG 17 suggests strengthening the means of implementation and revitalizing the global partnership for sustainable development. From the trade perspective, Pillar 1 of DTIS 2016 suggested promoting economic integration with Asia and Bangladesh has adopted several measures like signing motor vehicle agreement with Bhutan, India, and Nepal, signing the agreement on the movement of traffic-in-transit and protocol with Bhutan, starting negotiations with Indian counterpart regarding a Comprehensive Economic Partnership Agreement (CEPA), taking steps to conduct feasibility studies for concluding Free Trade Agreement with China, Japan and Singapore, formulating regional trade agreement policy and so on. The government has also adopted various measures for smooth and sustainable graduation from LDC which will complement SDGs implementation and has established the South-South Cooperation Cell to harness the potential of SSC and Triangular Cooperation. Measures have been adopted to reinforce green and circular economy by facilitating increased financing for renewable energy including solar home system and solar irrigation programs. South-South cooperation has been a crucial part of this, as is Bangladesh's membership and leadership in institutions like ASEAN Regional Forum, BIMSTEC, New Development Bank, and SAARC, as well as with UN agencies and programs around the world. The country is well on its way to building global partnerships for sustainable development.¹

In recognition of Bangladesh's steady progress in achieving the Sustainable Development Goals (SDGs). Sheikh Hasina, the Honourable Prime Minister of Bangladesh was conferred with the SDG Progress Award in September 2021 by the UN-sponsored Sustainable Development Solutions Network (SDSN). This award is an international recognition of Bangladesh's success in spearheading the SDGs. Bangladesh's efforts for sustainable development have been apparent even before 2015 when SDGs were adopted, for instance, the success of Bangladesh in achieving the targets of MDGs is acclaimed globally when the Honourable Prime Minister was awarded with 'UN MDG Awards 2010' and South-South Award 'Digital Health for Digital Development' in 2011 for her innovative idea to use the Information and Communication Technology to accelerate the progress of the health of women and children. In addition, in June 2013, Bangladesh received the 'Diploma Award' from Food and Agriculture Organization for achieving the MDG-1 target of halving poverty well ahead of the deadline set by the world community. Besides this, Bangladesh was honoured with 'special recognition' for its outstanding progress in fighting hunger and poverty. In September 2013, Honorable Prime Minister was awarded with 'South South Award' for her government's achievements in alleviating poverty. She was awarded 'UNESCO Peace Tree Award' in 2014 for her commitment to women's empowerment and girls' education. In 2015, Bangladesh was awarded the prestigious Women in Parliaments Global Forum Award, known as WIP award, for its outstanding success in closing gender gap in the political sphere.²

¹ General Economic Division (2022) Sustainable Development Goals: Bangladesh Progress Report 2022

² General Economics Division (2015) Millennium Development Goals (MDGS): End-Period Stocktaking and Final Evaluation (2000-2015)

Review of Bangladesh's trade performance

Securing its ten-year economic journey with growth of more than six percent, Bangladesh has made outstanding progress in all areas of economic, social, and human development. Despite the COVID-19 epidemic, Bangladesh's GDP grew by 3.45 percent in FY2019–20 compared to 7.88 percent in FY2018–19. According to a rough projection, Bangladesh can achieve 7.25 percent GDP growth in FY2021-22³, demonstrating the economy's robustness. GDP was US\$464.98 billion, with a US\$2824 GNI per capita in FY2021–22, up from US\$2,591 in FY2020–21.

Bangladesh's economy has benefited greatly from foreign trade, which accounts for 28% of its GDP.⁴ The government of Bangladesh developed a strategy for the development of the manufacturing sector in the eighth five-year plan, making the export sector one of the main drivers of development with an export led growth strategy. The following table shows the import-export statistics of Bangladesh signifying the growth of trade over the years:

Table 1: Export-import statistics of Bangladesh

FY	Total Export (Value in Million US\$)	Export Growth Rate (in %)	Total Imports (Value in Million US\$)	Import Growth Rate (in %)
2016-17	38,500		48,212	
2017-18	41,254	7.15	59,027	22.4
2018-19	47,028	13.99	62,884	6.5
2019-20	39,755	-15.46	55,635	-11.5
2020-21	45,367	14.12	61,609	10.7
2021-22	60,971	34.40	91932	49.2

Source: EPB pocket export statistics FY2021-2022

Since the volume of foreign trade is increasing over the years, and the country is on the way to graduate from LDC status, for sustaining the growth trend the government of Bangladesh is focusing on trade diversification for developing competitiveness.

Bangladesh's foreign trade has started to return to a positive trend confronting the adverse effect of the COVID-19 pandemic. In FY 2019-20, total export earnings decreased by 15.46 percent to US\$39.76 billion compared to the previous FY2018-19 earning amounting to US\$ 47.03 billion. Export earnings stood at US\$45.37 billion during FY2020-21, which was 14.12 percent higher than the export earnings in the same period of FY2019-20. Likewise, the previous fiscal year, the incremental growth rate of the goods and services reaches US\$60.97 billion in FY2021-22 which is 34.40 percent higher than that of the previous year. Total merchandise export in FY2021-22 increased by 34.38 percent to US\$52.08 billion in contrast to US\$38.76 billion in FY2020-21. Service export increased by 34.49 percent and reached US\$8.89 billion in FY2021-22 which was US\$6.61 billion in FY2020-21. In FY2021-22, RMG export experienced 35.47 percent growth compared to the previous fiscal year. Export of Home textile, Leather & Leather products, Agricultural Products, Engineering Products and Chemical Products (including Pharmaceuticals) increased by 43.28 percent, 32.23 percent, 13.04 percent, 50.40 percent and 29.76 (for pharmaceuticals 11.69%) percent respectively. However, the export of Jute and Jute goods decreased by 2.91 percent.

A review of major commodity-wise exports shows that total 8 commodity sectors during July-June in FY 2021-2022 are: Woven Garments (62), Knitwear (61), Home Textiles (63), Frozen and Live Fish (01-03), Agricultural Products Commodities (04-24), jute and jute products (53, 630510), leather and leather goods and footwear (41-43, 6403) and engineering goods (71-88) earned USD 49,098.71 million which was 94.27% of total export earnings.

³ Bangladesh Bureau of Statistics (BBS 2021-22)

⁴ The World Bank- World Bank national accounts data, and OECD National Accounts data files

The total merchandise Import Payments of Bangladesh during FY2021-2022 and FY2020-2021 amounted to US\$82.49 billion¹³ and US\$54.40 billion respectively, reflecting a 51.64 percent increase in dollar terms¹. In FY2019-20, total merchandise Import Payments of Bangladesh was US\$48.70 billion which was 11.71% lower than that of the FY2020-2021.

Bangladesh's export economy is dominated by RMG manufacturing as the RMG sector contributes around 83 percent of all export earnings for the country. Bangladesh has one of the lowest wage rates in the world, which has fueled an expanding industrial base led by the RMG industry. It is well-positioned, however, to diversify its exports and move up the value chain. The country also has large pharmaceutical, footwear, and agricultural-processing industries. Other important sectors include construction, information, and communication technology (ICT) and business process outsourcing, light engineering, ship building, leather products, jute products, and ceramic products. Moreover, services like tourism, software and IT and nursing and midwifery also present the country with new avenues to explore for enhancing export earnings.

Trade related key challenges of sustainable graduation of Bangladesh

Bangladesh has come a long way in terms of development since it gained independence. Improvements in income, poverty, and human development are remarkable. Since 2009 the development progress has been extremely swift, especially in terms of acceleration of GDP growth. Consistent with this upward trend, in FY 2019 the per capita income was \$1909, which is more than 20 times the per capita income at independence. As of 2015, Bangladesh is officially considered a lower middle-income country (LMIC), as defined by the World Bank. In 2018, it also met the criteria to be removed from the United Nations' list of Least Developed Countries (LDC). After going through the usual UN system clearance and notification processes, the likely date for formally graduating out of LDC designation is 01 January 2026. However, the graduation and its consequences have their own challenges that need to be addressed judiciously and effectively, as Bangladesh aspires to move forward further and become a developed country within next two decades. Bangladesh's successful progress towards LDC graduation implies that the special and differential benefits in the areas of international trade and financial relations with the other countries and the global community in general will be changed and terms and conditions of further engagement will be altered. It has been evident that some of the benefits Bangladesh has been enjoying as an LDC, particularly in areas of preferential market access, and relaxed conditions of trade, investments, and finance, have been very helpful and have enabled Bangladesh to reach the juncture for graduation. The rapid expansion on the trade-oriented manufacturing sector, and the rise of service sector to support the manufacturing industries, largely owe to the easy and preferential access to the markets of the developed world. Such growth in the manufacturing and service sectors have created substantial employment opportunities and contributed to poverty reduction, higher per capita income, and myriads of other socio-economic developments, which are reflected in high achievements towards the Millennium Development Goals, and now towards fulfilling the Sustainable Development Goals. In short, Bangladesh has been able to gain from the benefits offered by S&D treatments, and the International Support Measures including those specifically meant for the LDCs, towards her journey to end the LDC status and graduate into a Middle-Income Country (MIC).

Serving as a double edge sword, LDC graduation can present both opportunities and challenges for Bangladesh. From the trade perspective, potential challenges of LDC graduation are:

- Bangladesh will lose Duty-free market access in different countries like EU, UK, Japan, Canada, Russia, and Australia etc. According to a study, due to graduation, trade is expected to be affected the most as 71% of total export is done under preferential schemes of developed and developing countries. The biggest risk or challenge of LDC graduation will be loss of preferential market access but Bangladesh is already working for mitigating this risk as persuasion is ongoing with Japan, Australia, EU, and other export destination countries for keeping the seamless

market access. Bangladeshi export products will be less competitive in the international markets as currently due to preferential treatment Bangladesh products have tariff benefits in many markets. However, after the LDC graduation as the export incentives will be gone, cost of production will go high and exported goods may lose appeal to foreign markets.

- Bangladesh will not be eligible to provide export subsidies after graduation. Since the country is providing various cash incentives to the exporters now, after the LDC graduation, this facility will not be available, which may reduce export earnings for the current firms and entrepreneurs. This may lead to slow growth of some of the export sectors, since the sectors still requires government support.

- The country will face more stringent Rules of Origin which are a powerful trade policy instrument arbitrating the market access of goods and guiding firms’ outsourcing, export, and investment decisions around the world. As a least developed country (LDC) Bangladesh is granted preferential tariff treatment in the markets of developed and developing countries under several schemes and arrangements of RoO. Since the industry now uses raw materials for exporting various goods, after graduation the country is likely to face higher tariff rates in its exporting countries.

Preparedness of Bangladesh regarding LDC graduation

The government of Bangladesh started focusing on ensuring smooth and sustainable graduation immediately after receiving the CDP’s recommendation for graduation in February 2021. A National Committee on LDC Graduation (NCG) was formed on 27 April 2021 under the Chairmanship of the Principal Secretary to the Hon’ble Prime Minister. A well-structured institutional arrangement has also been developed and relevant key stakeholders are playing their roles within this structural framework- an inclusive approach is applied for outlining action plans for priority areas.

The NCG has been providing an effective platform to support sustainable graduation involving all the relevant stakeholders on board since its inception. The NCG has identified the broad impacted sectors or issues following the GED’s impact assessment to dent the potential losses due to the erosion of ISMs, particularly trade-related ISMs beyond graduation. Seven thematic subcommittees have been formed under the guidance of the NCG to address various core issues.

Table 2: Seven thematic sub-committees and their key role

SI	Subcommittee	Lead	Key Role
1.	Preferential Market Access & Trade Agreement	Ministry of Commerce	Continue LDC-specific preferential market access and negotiate FTA/ PTA/CEPA
2.	Intellectual Property Rights (IPR)	Ministry of Industries	Identify challenges and opportunities of graduation-related IP issues
3.	WTO Issues (Other than market access & TRIPS)	Ministry Of Commerce	Identify WTO inconsistent measures and devise negotiating strategies for safeguarding newly graduating LDCs, etc.
4.	Investment, Domestic Market Development & Export Diversification	Prime Minister’s Office	Identify challenges and opportunities in the areas of investment, market development & export diversification
5.	Internal Resource Mobilization & Tariff Rationalization	Finance Division, M/O Finance	Identify measures for tariff rationalization and resource mobilization
6.	Smooth Transition Strategy	ERD, M/O Finance	Support research and prepare a detailed roadmap for a smooth transition strategy
7.	Branding Bangladesh Abroad	BIDA	Attract foreign investment and prepare a strategy for branding Bangladesh abroad

Source: National Committee on LDC Graduation, Prime Minister’s Office, Government of Bangladesh (February, 2023)

The Seven thematic sub-committees have developed timebound action plans for sustainable graduation. The NCG will closely monitor the progress of the implementation of the action plans identified and apprise time to time to the Honorable Prime Minister for her strategic policy direction.

Identification of sector specific trade-related graduation challenges: 12 sectors of Bangladesh

The study covers 12 sectors of goods and services, including RMG (Woven and Knitwear), Pharmaceuticals and API, Leather and Leather Goods, Non-Leather Footwear, Light Engineering including Electronics and Electrical, Shipbuilding, Plastic Products, Agro-products and Processed foods, Fisheries and Livestock, Tourism, Software and IT service, Nursing and Midwifery service. In this section, synopses of the sectors, SWOT analysis and sector-specific trade-related graduation challenges of the 12 sectors are explored.

Ready Made Garments (Knitwear and Woven)

Overview of the sector

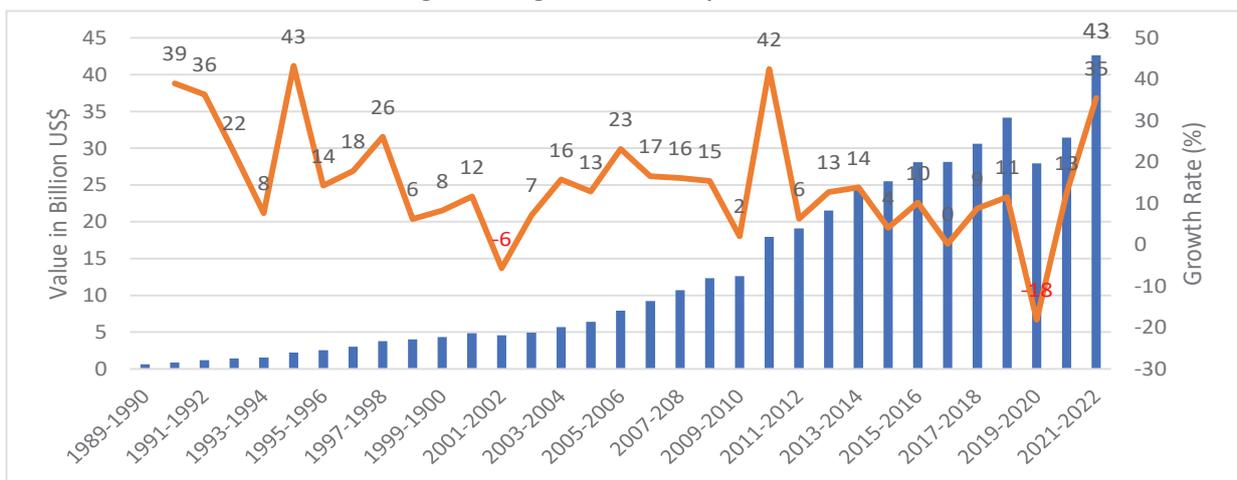
The readymade garment (RMG) is an export-oriented labor-intensive manufacturing sector which consists of knitwear and woven garments and is a key pillar of Bangladesh's economy, making significant contribution to create employment opportunities and poverty reduction and foreign currency earnings. It contributes 81.82% (USD 42.61 billion) of the national export and experienced 35.47% growth in FY 2021-22 (EPB, 2022). The sector created some 4 million jobs mostly for women.⁵ The contribution of the sector to overall GDP is around 11-12 percent. About 220 RMG products were -exported to more than 160 countries (EPB, 2022). The RMG sector in Bangladesh comprises a wide variety of clothing including T-shirts, singlets, vests, trousers, breeches, jerseys, pullovers, briefs, shirts, anoraks, wind-cheaters, babies' garments, etc. This sector has been progressively growing over the years.

Global demand for RMG

The world import demand for RMG amounted to about US\$506 billion in 2021 where Bangladesh's contribution is 8.8 per cent - the second position after China claiming 31 per cent (ITC) In terms of export, the global RMG export grew annual average rate (CAGR) by 2.52% from 2012 to 2021. In export value, knitwear exports increased from US\$211.20 billion to US\$271.48 billion and woven wear exports increased from US\$193.12 to US\$234.24 billion in 2012 to 2021 respectively. The sector comprised 2.28% of total world export in 2021 where knitwear 1.24% (world ranked 16th in export value), and woven wear 1.07% (18th).⁶

Export and import status of RMG sector

Figure 1: Bangladesh's RMG export trend



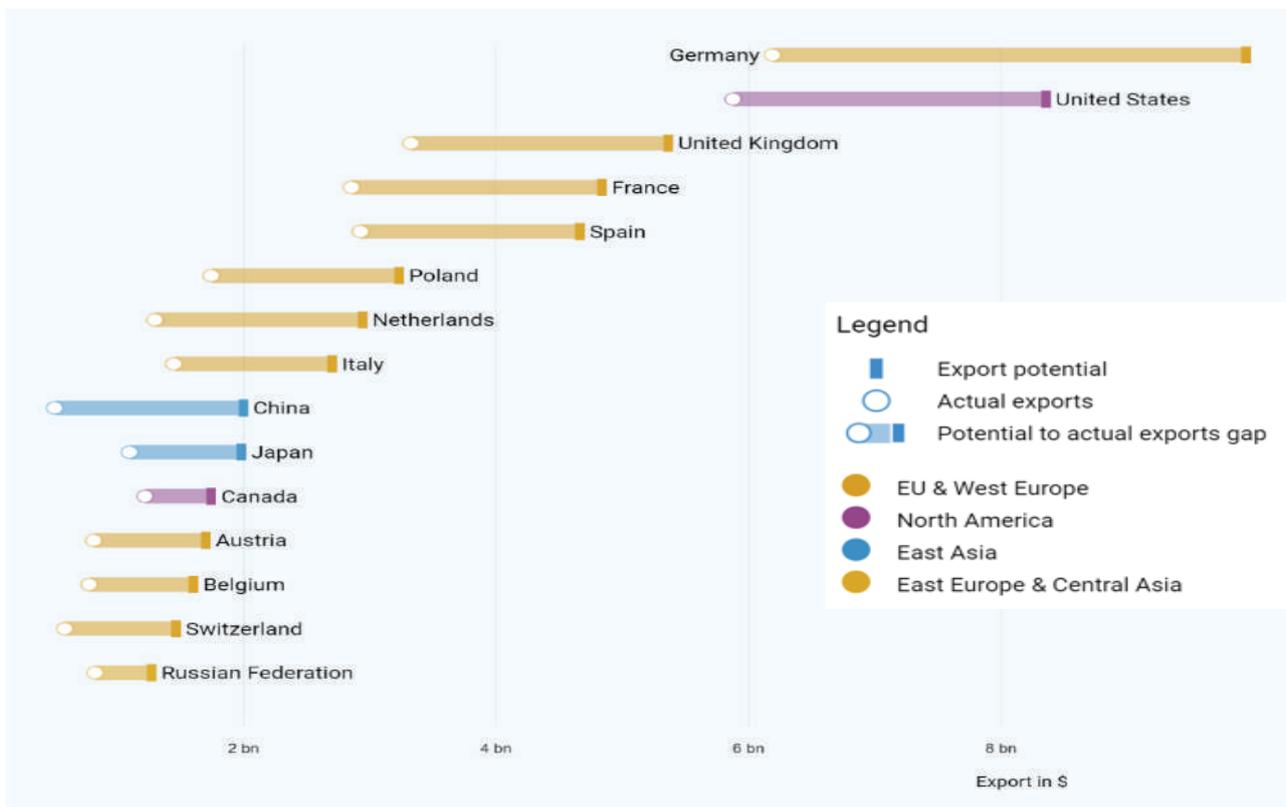
Data source: Export Promotion Bureau (EPB)

⁵ 8th Five Year Plan, 2020, Bangladesh, Page-8

⁶ ITC trade map

The RMG sector has been experiencing positive growth trends since FY 1989-90 to FY 2021-22. The major importers of Bangladeshi RMG are EU (50.22%), USA (21.15%), U.K (10.55%), Canada (3.11%), Japan (2.58%), Australia (1.91%), India (1.68%) and so on in FY 2021-22 (data source: EPB).

Figure 2: Markets with potential for Bangladesh’s exports of apparel & textile products including RMG



Source: ITC Export Potential Map

According to the ITC export potential map, the suppliers with greatest potential to export RMG products are China, Bangladesh and Viet Nam. The sector has in value terms, leaving room to realize additional exports worth \$303 billion. The markets with greatest potential for Bangladesh’s exports are Germany, United States and France. Germany shows the largest absolute difference between potential and actual exports in value terms, leaving room to realize additional exports worth \$3.4 billion. Bangladesh has negligible RMG import demand which was about US\$609 million and 1.12% share of total imports in FY 2020-21.

Market access

Bangladesh’s RMG exports have been concentrated in two major destinations – EU and North America. Currently, Bangladesh enjoys duty free access in 52 countries which includes the EU, Australia, New Zealand, Norway, Switzerland, Japan, Iceland, Russia, South Korea, Canada, Chile, India, Turkey, China.⁷ After graduation, Bangladesh may face certain tariff in the destination countries. Existing and MFN tariff in major destinations of Bangladesh is shown in Table 3.

⁷ Bangladesh Investment Handbook (2020), page-103, Bangladesh Investment Development Authority (BIDA)

Table 3: Existing and MFN tariff applied by major destination (%)

S.L.	Countries	Tariff currently Bangladesh export faces		MFN Tariff Rate (2022-2023)	
		Knitwear (61)	Woven Garments (62)	Knitwear (61)	Woven Garments (62)
1	European Union	0.00	0.00	11.60	11.54
2	USA*	11.80	9.91	11.80	9.91
3	UK	0.00	0.00	11.55	11.51
4	Canada	0.00	0.00	16.81	15.32
5	Japan	0.00	0.00	8.63	9.13
6	Australia	0.00	0.00	4.49	4.39
7	India	0.00	0.00	25.0	25.0
8	China	0.00	0.00	6.83	6.72
9	Saudi Arabia	5.06	5.03	5.06	5.03
10	Africa (South Africa)	41.32	40.11	41.32	40.11

Source: WTO Tariff Analysis Online (TAO)

The clothing sector including RMG will face certain tariffs on importation. Except for USA, Saudi Arabia, South Africa Bangladesh gets GSP facility for export to the EU and other countries. After LDC graduation, exporters will have to pay MFN tariff rates as applicable after the year of graduation. The current MFN tariff rates are mentioned in the table-3 that indicates that in major destinations like the EU and Canada, an 11 to 16% MFN tariff can be applied after LDC graduation.

Investment including FDI

It is imperative for Bangladesh to diversify into high value products moving up the value chain that requires new, large investments. An enabling business environment can also attract entrepreneurs from China willing to relocate their factories. Since 1990s, Bangladesh has adopted a number of policies to support private sector growth and increase the inflow of foreign direct investment (FDI). Entrepreneurs are now stepping up with fresh investments in the RMG sector that is currently on a roll with an excellent flow of work orders. The larger share about 55% of manufacturing sector captured by textile and wearing FDI inflows (Net) in 2021. According to Bangladesh Bank data, FDI in textile & wearing including RMG sector attracted 9.26% of total FDI inflows to Bangladesh during 2012-2022 calendar years.

Gender perspective in RMG Sector

Women in the Ready-Made Garments (RMG) industry in Bangladesh holds various jobs, including workers, sewing operators, and quality controllers. The ILO-UN Women survey reveals that although the percentage of women has decreased to 60.5% in 2018 from 63.4 per cent in 2010, they still make up the majority of workers in Bangladesh's RMG industry. The proportion of women in managerial and supervisory positions is around 9.1 percent.⁸ According to a survey by South Asian Network on Economic Modelling (SANEM), the pay disparity for Bangladesh's female garment workers ranges from 51% to 60%, depending on the location and the living wage benchmark in the country's five major industrial zones, including Dhaka. However, it also found that the pay disparity for male employees still ranges from 45% to 54%. According to ILO Study, the average monthly wage of men workers was higher than women workers⁹. Another study found that female workers are affected by a consistently high gender pay gap, earning 25% lower average wages per month compared to male workers.¹⁰

⁸ ILO and UN Women, "Enterprise level survey", Study on the Ready-made Garment Sector in Bangladesh, 2018.

⁹ Improving Working Conditions in the RMG Sector Phase-II: Baseline Study Report (2017)

¹⁰ Future of Work for Female Garment Workers in Bangladesh, 2022

Environment perspective: green industry initiatives

The green industry calls for a shift to cut down carbon emissions and less natural resources-based production as a part of its response to global environmental challenges. This way, installing green buildings is a vital component of the green industry. Bangladesh's RMG sector is embarking on green production methods by installing USGBC LEED (Leadership in Energy and Environmental Design) certified green buildings, adopting energy and water-efficient technology. Currently, Bangladesh has 178 LEED-certified green garment factories, while another 550 factories are in the pipeline to be green or certified (USGBC directory). The RMG industry has indeed matured with some of the world's greenest factories (the top 3 eco-friendly and 8 of the top 10 garment factories in the world are in Bangladesh.¹¹ This green building not only ensures energy and water efficiency and structural safety but also serves the health and well-being of the workers by maintaining a healthy work environment by controlling noise levels, ensuring proper ventilation, sufficient sunlight exposure, etc. European Green Deal policy might be encouraged by the initiative.

Policies governing the sector

8th Five Year Plan: To counter the effects of tariffs on inputs and ensure supply of inputs at international prices, the Government in its 8th Five Year Plan has put in place two mechanisms: (a) The special bonded-warehouse (SBW) scheme used largely by the RMG sector and occasionally by others, and (b) the Duty Exemption and Drawback (DED) scheme, both managed by the Bangladesh Customs.

Export Policy 2021-24: High-value added readymade garment (RMG) and denim, manmade fibre and garments accessories are among top prioritized areas in export policy 2021-24. These sectors can avail the facilities including supply of investment credit at a reduced rate of interest on a high priority basis; reduced corporate tax rate; moratorium on income tax; various cash incentives in electricity, water, gas, etc. utility services. 100% export-oriented RMG factories can import raw materials duty-free. VAT exemption has been given on supply of goods under sub-contract between the manufacturing units when both are enjoying the bonded facility.

Industrial Policy 2022: The RMG sector has been considered one of the industries which are significant for 'Export Diversification'. Several facilities, including cash and investment incentives, would be provided to facilitate the RMG sector. **Import Policy Order 2021-24:** Different supports for RMG sector such as sample collection (category wise 15 and in total 1,500 annually without permission), raw materials (no cost basis import approved in UD) & machinery import are provided in the import policy order 2021-24.

RMG Business Expansion and Simplification Policy Guidelines 2020: For the expansion and easing business for RMG sector, the Bangladesh government has introduced a policy in 2020. The policy suggested some recommendations which includes resolving technical fault in uploading documents to the website by Bangladesh Bank, reducing lead time to achieve competitiveness, exploring GSP+ facility in EU market after graduation from LDC, introducing 'One Stop Service' as per laws of BIDA, promoting high value added RMG products, providing policy support for developing backward linkage for woven garments, exploring duty free facilities for the RMG sector after LDC graduation, preparing agencies to improve trade facilitation and ease of doing business and strengthen the relevant institutional capacity for the faster services.

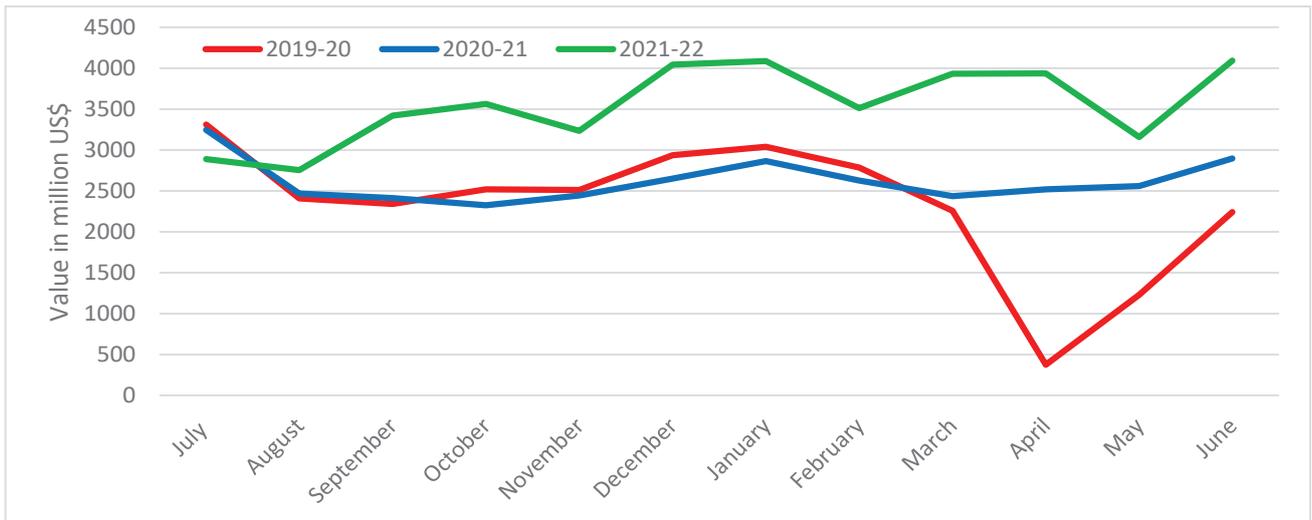
Impact of COVID-19 on the sector

The major markets for RMG have been severely affected by COVID-19 pandemic. There was shift in consumer spending across the globe as people moved more towards consumables and commodity

¹¹ 8th Five Year Plan and BGMEA

goods dropped in the sales and usage of various items such as clothing due to the lockdown and transportation embargos. Reportedly, Bangladesh received order cancellations worth several billion US dollars. Moreover, some retailers in export destinations started to file for bankruptcy protection, causing significant worries to suppliers in Bangladesh in apprehension of cancellation of orders. The figure below shows decline of RMG export values from February 2020 to April 2020. However, exports gained momentum in FY 2021-2022.

Figure 3: Monthly variation in RMG export of Bangladesh



Data Source: Export Promotion Bureau (EPB)

Challenges and opportunities of the RMG sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the RMG sector.

Table 4: SWOT analysis of RMG sector

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. Availability of labour force/Advantage of demographic dividend 2. Competitive labour cost 3. Competitive price 4. Strong government commitment and support (cash incentives, duty drawback, bonded warehouse facilities etc.) 5. Strong backward linkage industries 6. High quality products 7. Organized sectoral leadership 8. Captive power generation capacity 9. Socially and environmentally compliant factories 10. Extensive negotiation experiences with buyers 	<ol style="list-style-type: none"> 1. Lack of skilled labour lowering productivity 2. High dependency on raw material imports including cotton fabrics 3. High transport costs 4. Lack of global standard training for supervisors and mid-level managers 5. High cost of funds 6. Absence of innovative design 7. Slow adoption of modern technology in manufacturing 8. Insufficient capacity in managing compliance (Environment, Social and OHS) in small and medium factories 9. Over dependence on buying houses for most marketing functions 10. Over capacity of basic products weakens price negotiation

Opportunities	Threats
1. DFQF market access facilities	1. Preference erosion due to LDC graduation after 2026
2. Extension of EU GSP facility	2. Current global economic recession
3. Potential relocation of Chinese production base	3. Weak infrastructure causing longer lead time
4. Country branding	4. Lack of uninterrupted quality power and gas supply
5. High demand for basic products in global market	5. Lack of enforcement of IPR
6. Investment opportunity in Circular Fashion and renewable energy	6. Environmental pollution
7. Potential FTA/CEPA with export destination countries	7. Lack of environment compliance in terms of carbon emission
8. Production of MMF based apparel items	8. Impact of zero tariff due to potential FTA/CEPA
9. Capacity to produce high end product	9. Zero-tariff facility to competing countries by destination countries
	10. Unfair Competition of Brands and retailers

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Availability of labour force and competitive labour cost: The presence of a sizable labor force in Bangladesh's RMG industry might be viewed as a strength in terms of output and expansion. Due to the availability of unskilled workers employed, Bangladesh's RMG sector enjoys low labor costs, which keeps production costs low and makes Bangladeshi RMG competitively priced.

Competitive price: Bangladesh leverages competitive labour costs for being cost-effective in production and securing a competitive position in the global market. The education level of Bangladesh's workforce has also improved noticeably which may help the RMG sector become more productive and competitive.

Strong government commitment and support: The government of Bangladesh is supporting the RMG sector with reduced corporate tax, cash incentives, duty drawbacks and bonded warehouse facilities. However, it should be noted that the availability of decent working conditions and pay ensured by the government as well as the productive use of the labour force are also significant elements in assuring the long-term development of the RMG industry in Bangladesh.

Strong backward linkage industries: The RMG business in Bangladesh heavily depends on the backward linkage sector. Backward linkages provide the RMG sector with raw materials, packaging, accessories, and other inputs. Recent data from Bangladesh Bank shows that the value addition of the sector is rising.

Key weaknesses

Lack of skilled labour lowering productivity: The study found that the RMG sector suffers from a shortage of skilled labor and inadequate global standard training for supervisors and mid-level managers that lower the productivity of this sector.

Absence of innovative design and slow adoption of modern technology in manufacturing: The absence of innovative design and slow adoption of modern technology in manufacturing limits the country's capacity to produce and export high-value-added RMG products.

Insufficient capacity in managing compliance (Environment, Social and OHS) in small and medium factories: Though Bangladesh's RMG sector is embarking on green production methods by installing USGBC LEED (Leadership in Energy and Environmental Design) certified green buildings, and adopting energy-and water-efficient technology, SMEs lack the capacity in managing compliance (Environment, Social and OHS).

Moreover, the overcapacity of basic products weakens price negotiation with buyers which reduces the industry's revenue generation potential. High dependency on raw materials (yarn, cotton, and fabrics) imports, inefficiency and high costs of trade logistics, high cost of production, and long lead-time are some of the other weaknesses that restrain the competitiveness of this sector.

Key opportunities

Production of MMF-based apparel items: More than 75 percent of the world's clothing is made from MMF. Whereas, cotton apparel makes for approximately 75 percent of the total apparel exports from Bangladesh. The global RMG market is shifting from cotton to MMF-based products which is opening new avenues for Bangladesh to explore.

DFQF market access facilities and possible extension of EU GSP facility: Bangladesh will enjoy DFQF market access facilities until graduation. However, to sustain the preferential market access facility, Bangladesh may negotiate with EU for the extension of the GSP and GSP+ facilities.

Potential FTA/CEPA with export destination countries: Potential FTA/CEPA with export destination countries will allow preferential market access and may provide the country with opportunities to retain and expand global RMG market share.

Potential relocation of Chinese production base: Bangladesh can leverage the advantages raised from geopolitical issues since Chinese-based production has been shifting to other countries.

Country branding: As the 2nd largest RMG exporter in the world, the country's image also presents the country with an opportunity to produce high-value products and explore new markets.

Also, the sector can leverage the opportunities such as high demand for basic products in the global market, investment opportunities in circular fashion and renewable energy, etc.

Key threats

Preference erosion due to LDC graduation after 2026: Preference erosion threatens the sector with loss of competitiveness in markets where the country enjoys DFQF and preferential market access.

Weak infrastructure causing longer lead time: According to the World Bank Logistics Performance Index 2023, Bangladesh ranks 88th out of 139 countries. Bangladesh currently holds an LPI score of 2.6 and score of 2.3, 2.3, 2.6, 2.7, 2.4 and 3 respectively in customs, infrastructure, international shipments, logistics competence, tracking & tracing and timeliness. Infrastructural hindrances and logistics challenges pose threats to the trade growth of the RMG industry.

Unfair competition of brands and retailers: There are challenges in terms of competition with foreign products and competitors with the limited variety and quality that Bangladesh produces. RMG exporters expressed the view that international brands are constantly squeezing the price of products while making increasing demand for stricter compliance.

The sector's external threats also include current global economic recession and its short-term and long-term impacts, lack of uninterrupted quality power and gas supply, lack of enforcement of IPR, etc.

Pharmaceuticals & API

Overview of Pharmaceutical and API Sector

Bangladesh's pharmaceutical industry has witnessed phenomenal growth over the years catering to 98% of local demand and exporting to 150+ countries including the USA, UK, Canada, Australia and EU. With a current market size of over USD 3 billion¹² the pharmaceuticals sector has been growing at an annual rate of 16.7%¹³ and is expected to exceed USD 6 Billion by 2025. After the formulation of the National Drug Policy 1982, the industry embarked on an accelerated growth path. The sector contributes around 1.8% to the Gross Domestic Product (GDP). As a result, Bangladesh now stands proudly as the only LDC country which has a well-developed pharma sector. The success story of pharmaceutical sector is citable but the sector has to travel a long way to achieve expected position both in domestic and international markets.

The Bangladeshi drug is dominated by the branded generic products accounting for almost 80% of the drug produced locally. Top ten producers of the pharmaceutical products produce 70% of the domestic market. The sector is capable of producing all types of dosage forms tablet, capsule, liquid preparations, dry suspension, injections, ointment/cream, nasal spray, lyophilized vials, eye drops, meter dose inhalers, dry powder inhalers, large volume parenteral and pre-filled syringes, etc. to more sophisticated such as insulin, hormones, anti-cancer products, etc.

Domestic market size of pharmaceutical industry

Active pharmaceutical ingredients (API) are the principal constituents of medicines. Unfortunately, a major percentage of demand for APIs is met through import. Though the government has taken initiatives to build an API park for synthesizing pharmaceutical raw materials in Bangladesh awaiting being operational after installation of utility facilities and effluent treatment plant.

Figure 4: Revenue of Bangladesh's pharmaceutical industry in million US\$



Source: BAPI 2021

Currently Bangladesh's pharmaceutical industry is able to source only 10% of the total API requirement domestically. The estimated market size of the APIs is around US\$730 million. It is estimated that demand for APIs will reach around US\$1,409 million in the year 2025.¹⁴ At present, there are 26 API producers in the country which produce around 40 API molecules. While domestic demand for APIs is growing rapidly, local production remains low in relation to the demand, leading to significant API imports.

¹² BAPI 2021

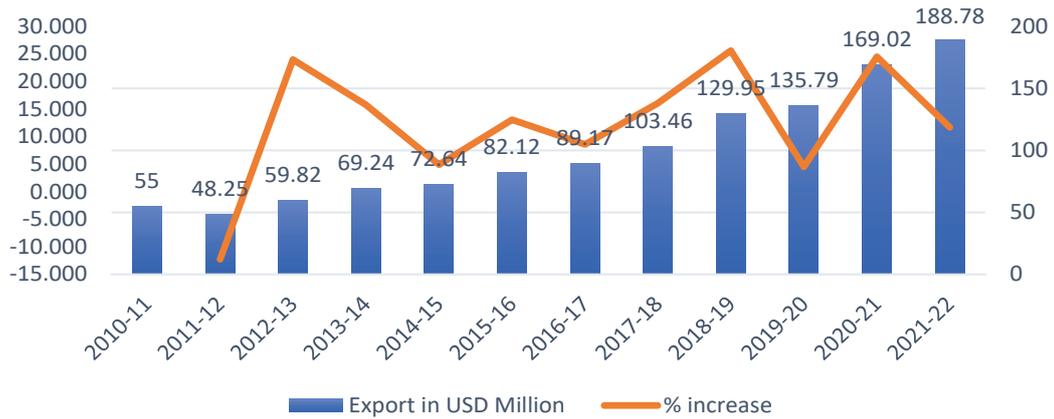
¹³ EPB Data from 2015-16 to 2021-22

¹⁴ Report on Pharmaceuticals sector in Bangladesh, MRC Bangladesh Ltd. 2017

Export trend of pharmaceutical sector

According to BAPI data, the pharmaceutical industry exports medicines to 150+ countries¹⁵ including USA, UK, Canada, Australia, Germany, EU, etc. As per BAPI data, around 1,200 products have been accredited for import by the authorities at the importing countries. The sector’s current export earning was more than \$188.78 million in FY 2021-22.

Figure 5: Export trend of Bangladesh pharmaceutical sector in US\$ million



Source: EPB 2021-22

The market of pharmaceutical export is concentrated on the HS Code: 300490 (other medicaments of mixed or unmixed products, for retail sale) which amounts to US\$110.84 million in FY 2020-21 and US\$ 124.40 million in FY2021-22. It is around 66% of total export of pharmaceutical products.

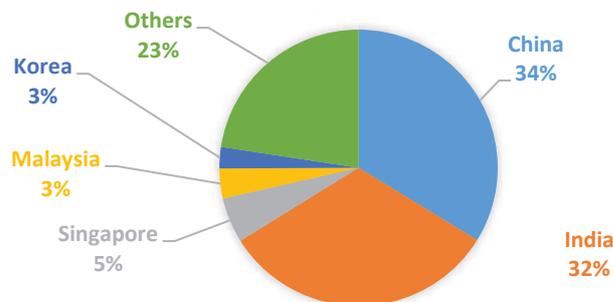
Import of pharmaceutical products

As mentioned earlier, Bangladesh imports only 2% of the drugs required in the country. The trend over the past decade shows that imports of pharmaceutical products have increased. In FY2011-12, Bangladesh imported pharmaceutical product amounting to US\$119 million which increased to US\$291.8 million in FY2020-21 according to Bangladesh Bank data. Major HS Code wise import payment of pharmaceutical products shows that Bangladesh imported Medicament for therapeutic use under HS Code 3004 amounting to US\$181 thousands in FY 2021-22.

Import of active pharmaceutical ingredients (API)

Bangladesh is highly dependent on imports of API, in recent times 90%¹⁶ of API are imported from different countries mostly China and India which reflects the necessity for strengthening backward linkage in API production in Bangladesh. In FY 2021-22, Bangladesh sourced 34% of API from China and 32% of API from India.

Figure 6: Import of API (organic chemicals: HS 29) by Bangladesh in FY2020-21



Source: Bangladesh Bank

¹⁵ <http://www.bapi-bd.com/bangladesh-pharma-industry/overview.html>

¹⁶ Export of Pharmaceutical Sector upon LDC graduation: Strategies & Way forward, Mustafizur Rahman, Ph.D working paper 2022 and Author’s own interview with BAPI

4-digit level HS Code wise API products or organic chemicals import data shows that Bangladesh imported major API ingredients under HS Code 29 in FY 2021-22 while import of API materials in FY2020-21 amounted to US\$1.27 Million.

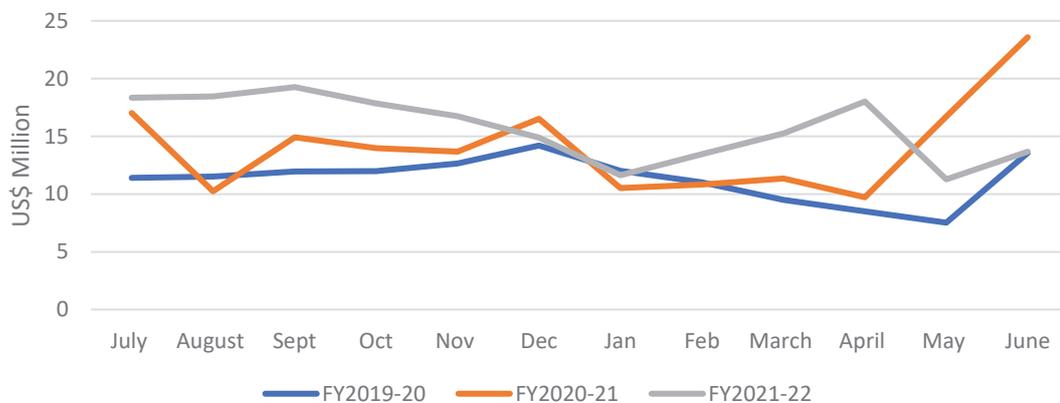
Global pharmaceutical product market

The Statista’s market outlook indicated that the commercially so-called “blockbusters” drug can generate more than US\$1 billion¹⁷ a year. It implies that a single product can play a major role as certain segment of market is driven by a small number of drugs. According to Statista market projection, the revenue in the pharmaceutical sector was expected to reach US\$ 1,109 billion in 2022.¹⁸ It also mentioned that the largest market segment of pharmaceutical products is oncology drugs amounting to US\$ 188.90 billion in 2022. Similarly, it is expected that by 2027, pharmaceutical revenue will be US\$ 1431 billion with 5.23% annual growth.

Impact of Covid-19 pandemic on pharma industry

The sudden outbreak of the pandemic in 2019 directly hit the healthcare and pharmaceutical sectors of Bangladesh, as sourcing API from the China and other countries hampered due to disruption in supply chain. In response to the Covid-19 pandemic, the global health facilities and the health sector had to bear great strain. Due to Covid-19, India had banned the export of all raw materials related to Covid-19 medicine while China went into complete lockdown. It caused scarcity of the raw materials required for production of medicines for Bangladeshi industries. Meanwhile, international drug price soared during that period. Hence, dependency on imports may erode the sector’s international competitiveness. However, export data from FY2019-20 to FY 2021-22 shows that the amount of export increased during the pandemic period and even after the pandemic period. In FY2019-20, the total export amounted to US\$135.79 million and it rose to US\$188.78 million in FY2021-22.

Figure 7: Covid-19 Impact on export of pharmaceutical product in US\$ million



Source: Export Promotion Bureau

FDI in pharmaceutical sector

Government welcomes foreign investors in Bangladesh's health sector, especially in active pharmaceuticals and equipment manufacturing. According to Bangladesh Association of Pharmaceutical Industries (BAPI), the country's pharma companies have a demand for around USD 613.43 million* worth of raw materials, which is growing by 12% per year. During Covid-19, everything from pulse oximeters to high-flow nasal cannula had to be imported. As of now along with imported API, most of the medical devices are being sourced from different countries. At present, Bangladesh needs to increase investment in molecular biological products. In addition, investment is required in building specialized hospitals and creating skilled human resources. In FY2020-21, the total FDI in pharmaceutical sector amounted to US\$ 81 million. According to the ICAB study, till January 31, 2019, foreign investment in listed pharmaceutical industries was on the rise.¹⁹

¹⁷ Statista Pharmaceutical products outlook 2022.

¹⁸ Pharmaceuticals - Worldwide | Statista Market Forecast 2021

* Exchange rate 97.81 BDT per US Dollar, BBS 2022-23

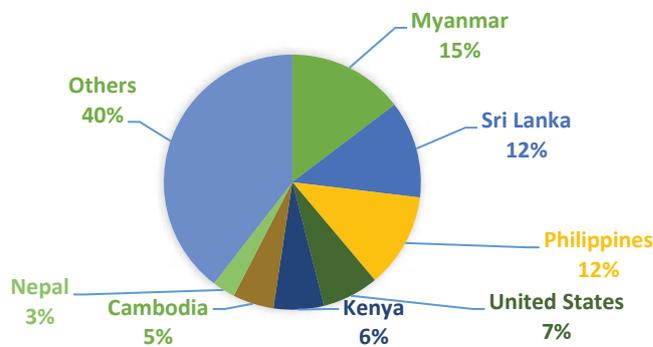
¹⁹ ICAB Study: <http://www.icmab.org.bd/wp-content/uploads/2019/07/10.Bangladesh.pdf>

Market diversification of pharmaceutical products

Exporting pharmaceutical product requires to follow stringent regulations of the importing countries. Added to that are the requirements for registration, language and cultural preferences, national packaging standards and industry protection mechanisms. And to initiate registration process for entering a new market, exporters require a significant investment in money, time and paperwork to register the product in the target country. Given the registration process and quality standard, it implies that sales on the global market are quite competitive with firms from around the world vying for business. As generic products are branded in less regulated markets, pharmaceutical firms also need to make significant investments in sales and marketing to create product demand and these investments are made without a guarantee of future sales.

Figure 8: Top export destinations of pharma products from Bangladesh in FY2021-22

Export in FY22 = 188.8 Million USD

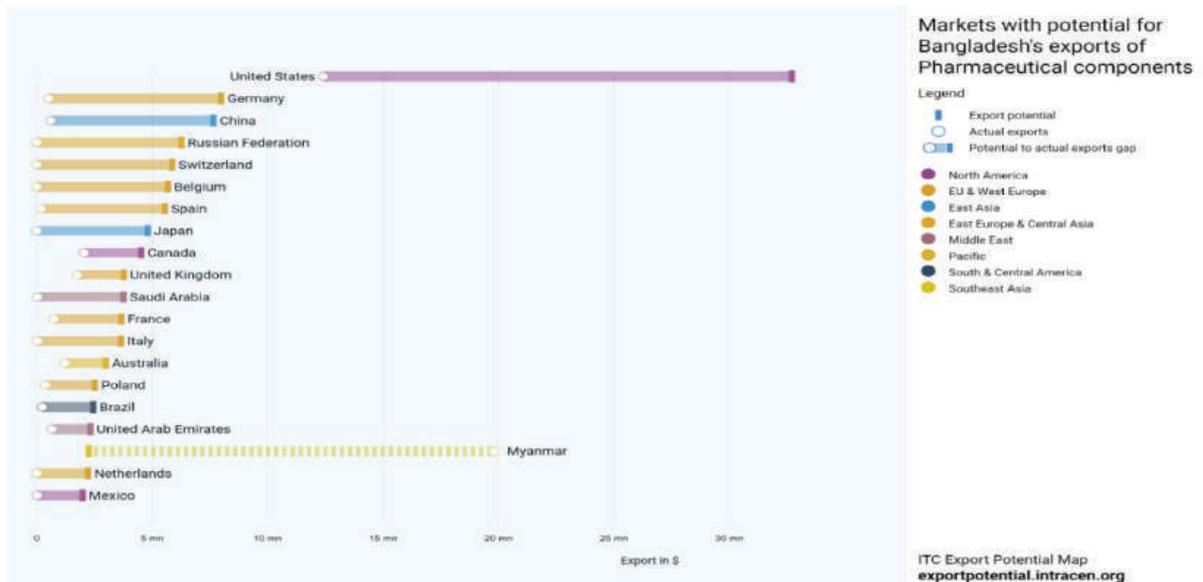


Source: EPB

Potential export market for pharmaceutical product

Except those countries cited in the figure 8, Bangladesh has the potential to export to Russia, Switzerland, Belgium, Spain, Japan, Canada, United Kingdom, Saudi Arabia, France, Italy, Australia Poland, Brazil, United Arab Emirates, Myanmar, Netherlands and Mexico. The markets with greatest potential for Bangladesh’s exports are United States, Germany and China.

Figure 9: Export potential map for top 20 countries for pharmaceutical sector



The graph shows that there is a significant gap between the potential and actual exports of Bangladesh in various markets, with the largest difference being in the USA market. Bangladesh has the potential to increase its exports by \$20 million in the USA, \$8-10 million in Germany and China, and about \$50 million in Europe. Additionally, in Myanmar, there is a potential to export an extra \$15 million, particularly in the pharmaceutical industry. Therefore, it is crucial for Bangladesh to diversify its markets to capitalize on the available export potential.

Gender perspective in Pharmaceutical and API Sector

The pharmaceutical and active pharmaceutical ingredient (API) sector of Bangladesh has historically been male-dominated, with few opportunities for women to advance in the industry. However, in recent years, there has been a growing recognition of the need for gender diversity and inclusion in the sector. According to the survey of manufacturing industries by Bangladesh Bureau of Statistics the pharmaceutical industry has around 11,000 or more female workers which constitutes 25% of total workforce. The survey also discovered that in the pharmaceutical industry, female workers in production and related roles constitute only 17%, whereas in administrative and managerial positions, the number is as low as 2%²⁰. Therefore, it is crucial to address the gender gap in the pharmaceutical industry and promote gender diversity and inclusion across all levels of the workforce. Although some pharmaceutical companies have implemented policies to promote gender equality, such as providing equal opportunities for men and women in hiring and promotion, and ensuring safe and respectful workplaces for all employees. Despite these efforts, there is still a long way to go to achieve true gender equality in the industry. More research and action are needed to identify and address the barriers that women face in accessing opportunities in the pharmaceutical and API sector of Bangladesh²¹.

Policies regulating the pharmaceutical sector

Directorate General of Drug Administration (DGDA) is the drug regulatory authority of Bangladesh. DGDA monitors and regulates all the activities of Allopathic, Ayurvedic, Unani, Herbal & Homoeopathic drug manufacturers. DGDA also works as licensing authority of drugs for issuing license to manufacture, store, sell, import and export of medicines. It has also put restrictions on manufacturing of 1,700 non-essential or harmful drugs²². The activities of DGDA are guided by the following Laws and policies²³ :

- The Drug Act 1940
- The Drug Rules 1945 and their amendments
- The Drug Rules 1946 and their amendments
- The Drug (Control) Ordinance 1982 and its amendments
- The Drug (Control) Ordinance Amendment Act 2006
- National Drug Policy 2016

API policy 2018

The Bangladesh government is taking steps to reduce the country's dependence on imports for active pharmaceutical ingredients (APIs) by establishing an API industrial park. The API policy 2018 has been formulated to attract \$1 billion in investment in API production by 2032, with the aim of reducing import dependence to 80%. The policy proposes incentives such as unconditional tax holidays for five years for all API and laboratory reagent producers, and a 100% tax holiday for producers who can manufacture at least five molecules each year. Additionally, VAT and VAT deduction at source will be waived on locally made API, laboratory reagents, and all raw materials, among other benefits.

²⁰ Survey of Manufacturing Industries, Bangladesh Bureau of Statistics, 2019.

²¹ Women at Work, ADB Brief, ADB, ADBBRIEFSNO.68, 2012.

²² www.dgda.gov.bd/

²³ www.dgda.gov.bd/index.php/downloads/directorate-info

The policy proposes a 20% cash incentive for manufacturers who make at least 20% value addition. However, the government will review the value addition condition after 2026. Additionally, raw material manufacturers will be allowed to retain 40% of their export earnings. The policy also suggests that manufacturers of three APIs or laboratory reagents annually will receive a 22.5% cut in corporate tax, resulting in them paying only 7.5% in tax. Non-listed companies that fail to meet the conditions will pay a regular corporate tax of 30%, while listed companies will pay 22.5%, according to the NBR proposal.

Export policy

The Bangladesh government has declared Pharmaceuticals as the "Thrust Sector" in the Export Policy 2021-24. In addition, the policy aims to address the establishment and creation of Active Pharmaceutical Ingredient (API) in Dhaka and Chittagong, as well as increase foreign investment in the pharmaceutical industry through attractive incentives. Moreover, the policy prioritizes export incentives and policies for API and reagents and may pursue Mutual Recognition Agreements (MRA) with countries like the USA, the Philippines, and other exporting markets.

Incentives in pharmaceutical sector

Pharmaceutical products are recognized as one of the highest priority sectors in the export policy. Under the Industrial policy, the sector will get the following incentives;

- Incentive will be given on capital investment
- Exempted Tax & duty on manufactured product
- Refunding the accreditation cost and insurance premium of the product
- Providing subsidy on the current capital investment
- Providing tax exemption and tax holiday depending on different location and set up
- Special incentives will be given in the priority and high priority area of the sector like Tax & Duty exemption is considered under Income Tax Ordinance, VAT & SD rule and the Customs Act
- Rationalizing the tariff and duty structure to import the essential raw materials of the industry
- There are export subsidy against the export of Active Pharmaceuticals Ingredients (API) 20%;
- Export Subsidy against the export of Pharmaceutical Products (Medical/Surgical Instruments and Appliances 10%
- Exemption of customs duties on capital machineries

Income tax ordinance& Act and Customs Act and VAT & SD Act 2016

- The pharmaceuticals ingredient and radio pharmaceuticals are eligible for tax exemption under Income Tax Act 2022 and Income Tax 2022, section 46CC of Income Tax Ordinance (10 years)
- 50% of income derived from export is exempted from tax
- The accelerated depreciation method for accounting income taxes can be availed for machinery and plants used by an entity that does not enjoy tax exemption
- Capital machineries are subject to reduced rate from customs duties
- Raw materials to be used for producing export goods are exempted from import duties
- Approval from the Chief Controller of Import & Export is required for import duty exemption.

Challenges and opportunities of pharmaceutical and API sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the pharmaceutical and API sector.

Table 5: SWOT analysis of pharmaceutical and API sector

<p>Strengths</p> <ol style="list-style-type: none"> 1. Robust Industrial base 2. White collar workforce costs less than competitive countries 3. Manufacturing facilities for import substitute drugs 4. Availability of quality medicine at affordable price 5. Sufficient capability to invest for expansion of pharma and API 6. Available human resources for formulation of pharmaceutical finished products 7. Many companies have international accreditation and many others are in pipeline 8. Export-led improvement for quality control has taken off 	<p>Weaknesses</p> <ol style="list-style-type: none"> 1. More than 90% APIs are imported 2. Insufficient investment in API, R&D, reverse engineering and technical know-how 3. Unavailability of accredited bioequivalence study center/ contract research organization 4. Lack of Knowledge regarding stringent regulatory barriers in destination countries. 5. Insufficient patentable molecules and API 6. Import of API chemical reagents requires permission from several authorities (DGDA, Department of Explosives, Department of Narcotics Control, MoC, MoInd, etc.) 7. Inadequate skilled labour and technical workforce for API manufacturing 8. Scanty expertise in Synthesis Chemistry 9. Lack of know how about patent enforcement
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Huge scope to further penetrate into the world market 2. Tax waiver, cash incentives up to graduation 3. Patent waivers for patented products until graduation 4. Tax holiday, incentive for API 5. Regulatory environment protects domestic market and facilitates contract manufacturing 6. Demographic shift and enhanced life expectancy creating enormous demand for generic drug 7. Enough data to file the first generic of the patented molecules 8. Capability of setting up factory in foreign country 9. Export potential in the global API market 	<p>Threats</p> <ol style="list-style-type: none"> 1. Erosion of WTO TRIPS agreement waiver after graduation affecting price 2. Lack of protection option for domestic industry in IP and Patent act 3. Absence of strong IPR enforcement 4. Globalization led extremely competitive international market 5. Complex biosimilar product registration guideline 6. Export to patent granting countries will require patent owner's permission 7. Insufficient cold chain facilities for export 8. API park yet to be functional. 9. National Board of Revenue yet to implement tax incentive proposed in API Policy 10. Shift of chemical synthesis-based production to biotech-based production

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Robust Industrial base: The Pharmaceutical sector of Bangladesh has been transforming and evolving since the early 80s. The pharmaceutical industry is one of the most developed technology sectors in Bangladesh. Manufacturers produce almost all type of medicine which includes high tech products like insulin, hormones, anti-cancer products etc. This sector provides 98% of the total medicinal requirement of the local market. Number of registered allopathic pharmaceutical companies is 284 of which number of functional companies is around 213.

Competitive labour cost: Bumpas, J., Kostermans, K., & Nair, D. urged that pharmaceutical labor costs are approximately 30% less in Bangladesh than that of the India. The industry faces challenges in the technical training because Bangladesh's educational system lags behind global levels. At present, pharmaceutical white collar workforce cost is less than other countries, implying the comparative advantage of the sector than that of competing countries.

Manufacturing facilities for import substitute drugs: The rapid rise of non-communicable diseases (NCDs), such as cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes, among the Bangladeshi population has led to a growing demand for drugs used for their treatment. These drugs include anti-cancer agents, anti-diabetic medications, vaccines, insulin, and others. While Bangladesh has some facilities to produce medicines for NCDs, they are still predominantly imported, creating an opportunity to enhance local production.

International Accreditation of many Pharmaceutical Industries: Given the facilities and support provided by the government, this sector is maturing over time. Hence, leading pharmaceutical companies have increasing focus on expanding their business in the highly regulated markets, including USA, UK, Canada, Australia, Germany, EU etc. This sector's leading companies Square, Incepta, Beximco, Opsonin, Renata, Healthcare, ACI, Eskayef, ACME Laboratories Ltd., Aristopharma Ltd. and Drug International Limited, etc. have attracted huge attention from clients abroad, achieving nearly all major GMP accreditation like USFDA, UK MHRA, EU GMP, Health Canada, TGA Australia, ANVISA (Brazilian Health Regulatory Agency), GCC, etc.

Key weaknesses

Over dependence on API Import: Using imported API, pharmaceutical industries primarily produce branded generic drug. According to BAPI data, about 80% of the drugs sold in Bangladesh are generics and 20% are patented drugs. Because Bangladesh API capacity is insignificant, firms import approximately 90% of their APIs.

Insufficient investment in API and R&D: For constraints related to price and quality competitiveness, many Bangladeshi pharmaceutical companies cannot meet the global standards. Efforts to build capacity, make investment in research and innovation and maintain quality and standard both for domestic and foreign used medicine are also inadequate. Increasing competition in international market compelling firms to seek low-cost manufacturing sources and reduce the cost of production. Multinational corporations (MNCs) are closing excess capacity of API production and searching for new, less expensive suppliers from developing countries where shift their whole manufacturing process. Due to cost constraints in the European and US health markets and narrow product pipelines from innovative firms, generic firms' growth is more than the non-generic firms. Domestic investment in API and R&D can address the need for the industry and can create the opportunity of self-reliance.

Challenges of Drug Testing Laboratories: Drug testing is the most expensive tool in the drug regulatory process, since it is the only means to verify if a product is counterfeit or substandard. There are two drug-testing laboratories in Bangladesh, one in Dhaka which is prequalified by the World Health Organization (WHO). The other is in Chittagong but not prequalified by the WHO. Though WHO Prequalification of Medicines Programme (PQP) helps ensure that medicines supplied by procurement agencies meet acceptable standards of quality, safety and efficacy. Although the Dhaka laboratory has the status of directorate general, the Chittagong laboratory is significantly under-resourced.

Limited bioequivalence test facility: A bioequivalence test of exportable product is required for the registration of that product both in moderately-regulated and highly-regulated regime. Bangladesh has limited facilities for bioequivalence study. A company has to carry out its bioequivalence test in a foreign country paying exorbitant testing charge amounting to US\$ 50000-100000 according to a study by World Bank. Bumpas, J., Kostermans, K., & Nair, D. (2007) urged that because of this reason, many pharmaceutical manufacturers don't show interest to register their products in foreign countries that require Bioequivalence tests.

Extra expenses for registering a product in potential export market: In exporting the pharmaceutical product in foreign markets, a pharmaceutical company has to get registration from the drug or food administration authority of respective governments. The process of registration of a product into foreign country is so cumbersome that companies often open an office in the foreign market for this purpose. Commercial Councilors in Bangladesh missions can help in this regard.

Lack of patentable Molecules : The sector needs to ensure that as many innovations and known molecules as possible are in the public domain before graduation, to avoid the implications of enforcing a patent regime, given the sector's lack of patentable molecules. To this end, concrete measures should be taken to strengthen capacities, particularly in the following areas: IP law and patent law, chemical synthesis, patent examination, synthesis chemistry expertise, lab technicians, and accreditation specialists. Accordingly, Bangladesh should make use of the relevant research exemption as per Section 38 of the Patent Act 2022.

Challenges related to API Production : There are practical challenges related to basic chemical import permission for API, as an entrepreneur has to take permission from seven to eight organizations to import the product from the sourcing countries. For example, an individual has to take permission from the Department of Narcotics Control, Department of Explosives, Bangladesh National Authority for Chemical Weapons Convention, Ministry of Industry, Ministry of Commerce and Directorate General of Drug Administration of Bangladesh. Two leading pharmaceutical companies informed the study team that it took 11 months and 9 months respectively to get the permission of importing basic chemical.

Key opportunities

Reaping the TRIPS Benefit: Thanks to the flexibility provided by TRIPS, businesses operating in Bangladesh have been able to create generic versions of drugs that are patented elsewhere and sell these products in local markets, as well as to other LDCs or non-members of WTO who have not implemented patent protection. Proper utilization of this patent waiver flexibility has made Bangladesh the only LDC country with adequate pharmaceutical manufacturing ability and almost self-reliant. However, after graduation, such exemptions will no longer apply. The TRIPS agreement has turned Bangladesh into a center for affordable and high-quality generic medicines and contract manufacturing, with the potential to export to more than 100 countries worldwide.

Export Potential in the global API market: The global API market is expected to grow to USD 319.07 billion by 2025. In particular, the market for APIs used in generics is expected to grow substantially due to the scheduled patent expiry of blockbuster drugs, an increase in healthcare expenses, and supportive government policies for generics. Furthermore, China, one of the major API producers, is shifting its production base due to concerns about cost and sustainability. As labor costs rise in China, many producers are beginning to relocate their plants to other cost-competitive locations. Bangladesh, with an established formulation industry and access to the WTO patent waiver, would be an ideal location for API production.

Regulatory environment protects domestic market and facilitates contract manufacturing: Contract manufacturing for export to a regulated market is permitted under the current National Drug Policy (NDP). However, it is a significant financial opportunity that also poses some challenges. The domestic pharmaceutical firm must have a facility that is accredited by a regulated market. The Drug Control Ordinance (DCO) prohibits foreign firms from selling products in Bangladesh unless they have a manufacturing presence in the country. This has created opportunities for Bangladeshi firms to initiate contract manufacturing for domestic distribution with multinational corporations (MNCs) that already have a presence in Bangladesh.

Key threats

Erosion of WTO TRIPS Agreement waiver: According to the TRIPS agreement under WTO, as a least developed country, Bangladesh would get patent exemption on pharmaceutical products till 2026. If domestic manufacturers want to maintain the production process after the grace period, they may have to pay royalties on patent, otherwise will face patent violation. Given the fact, the overall price of medicine in Bangladesh will increase.

Impacts on the development of the API segment: The government of Bangladesh has indicated that it expects patent protection to increase prices of pharmaceutical products, particularly the API. Bangladesh may also have to lift restrictions on imports, which could subject local industry to competition from large-scale manufacturers in other countries such as India and China that benefit from economies of scale and strong supply chain. This could exert downward pressure on prices for some products in the short run but could also have negative impact on domestic industries and local players. At present having established API industries, Bangladesh has only just started to produce API.

Non-operational API Park: Government of Bangladesh has taken an initiative to establish an API park near Dhaka, but slow progress makes the sector suffer. Uncertainty in gas connection, challenges regarding the payment for plot, extra service charge imposed by BSCIC, requirement of Environmental Impact Assessment (EIA) certificate, inactive central fire extinguishing service handicapped the API park from being operational.

Prices of medicines and health care costs: The South Centre (2020)²⁴ argues that, as a result of the reinstatement of patents, domestic companies have to buy the API or molecules only from the patent holder companies. Then few companies have the opportunities to control the market and hence South center urged “the lack of competition could lead to a significant increase in the price of medicines, particularly for therapeutic areas concerning non-communicable diseases which will be among the major contributors to the disease burden of Bangladesh.” In addition to reduced competition, production costs would rise as local producers would need to pay royalties and other costs associated with compliance with intellectual property rights.

NBR yet to implement tax incentive proposed in API Policy: The National Board of Revenue (NBR) is likely going to continue a tax break till 2032 for local pharma raw material producers, subject to complying with certain conditions, such as introducing at least five new ingredients a year. The facility was proposed to be extended to 2032 on certain conditions, as per a NBR proposal to the finance ministry. Accordingly, to stay eligible for the tax break, raw material suppliers will also have to spend 1% of their annual turnover on R&D. As per stakeholder consultation and KII, it was found that domestic API company cannot reap the benefit of tax break due to non-cooperation from NBR.

²⁴ The South Centre is the intergovernmental organization of developing countries that helps developing countries to combine their efforts and expertise to promote their common interests in the international arena. It specially promotes IPR regime that are supportive to public Health.

Leather and Leather Goods

Overview of the leather sector

Leather is one of the most potential sectors for both domestic and export growth in Bangladesh, thanks to the country's large supply of low-cost labor and raw materials. The industry has the potential to participate in global value chains, enter new markets, and serve the growing domestic demand. Considering its high potential for producing and exporting high-value-added diversified products, the Government of Bangladesh has been putting special emphasis on this sector in various national policies and strategies. The Government of Bangladesh also declared the leather sector as the Product of the Year in 2017. The global market scenario for the leather industry indicates that the global leather goods market size was valued at USD 242.85 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 6.6% from 2023 to 2030.²⁵ The leather goods market in North America is the largest in the world, followed by the market in Europe. The Asia Pacific region is the fastest-growing region, driven by an increase in demand for high-end and luxury items, with China and India dominating the market. However, Europe has surpassed Asia as the dominant region in the global leather products market, with the largest revenue share. The regional market is expected to develop further due to the product's rising popularity and the region's growing online sales³². The following figure shows the global import-export trend of the leather sector, including leather, leather goods, and leather footwear.

Figure 10: Global import-export trend of leather sector



Source: ITC data

The leather sector has demonstrated consistent growth over the years despite a decline in global imports during the pandemic. However, in 2021, global imports began to rise, indicating sustained demand for leather products in the market. The USA was the top importer of leather footwear and goods, while China and Italy were the top importers of leather.

Although during the pandemic-stricken years global imports declined but in 2021 imports began to rise which indicates consistent demand for leather products in the global market. Global export of the leather sector hit a bump in the pandemic years of 2019 and 2020 but in the following year, the export trend has seen positive recovery. Global leather demand is dispersed around various countries for instance, in 2021, the USA was the top importer of leather footwear and leather goods. China and Italy were the top importers of leather (41). Among the top importers of leather goods, the position of Germany, France, Italy, and Netherlands indicates good export potentiality in the EU zone. China, South Korea and UK also exhibit substantial leather item imports in recent years.

Although the leather industry in Bangladesh started in the 1940s, it was mainly developed on a large scale in the 1970s contributing as one of the largest industries in Bangladesh. During the initial stage, production and exports

²⁵Grand View Research (2022) Leather Goods Market Size, Share & Trends Analysis Report By Type (Genuine Leather, Synthetic Leather, Vegan Leather), By Product, By Region, And Segment Forecasts, 2023 - 2030

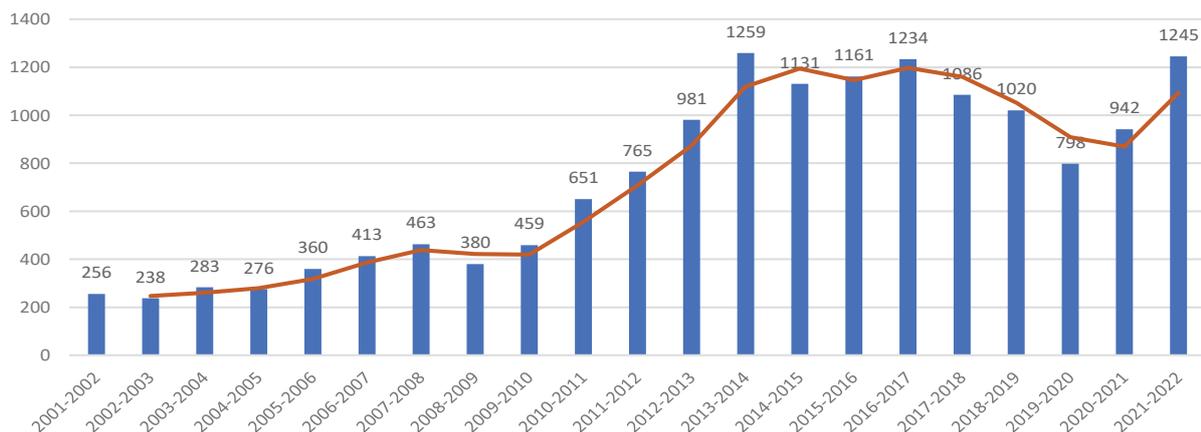
were mainly dependent on wet blue leather. Later on, it was realized that producing finished goods can add up to 90% value to leather goods. In 1990, the government of Bangladesh restricted the export of raw hide and wet blue leather for promoting structural transformation and increasing the production of higher-value-added leather goods. This initiative contributed to the growth of the industry as it led the entrepreneurs further modernize their operations to produce high-quality products.

Currently, the leather sector has been identified as one of the potential sectors for export diversification. A significant contributor to the economy both in terms of its domestic share and exports the sector contributes about 0.6% of the nation's GDP and around 2% of industrial production.²⁶ The sector is the second-largest export industry contributing 2.4% of the total export of goods²⁷ in FY2021-22. By volume, Bangladesh occupies about 3.0% of the world's leather and leather products market, 1.8% of the world's cattle stock and 3.7% of goat stock. The industry directly and indirectly employed 850,000 workers where about 60% of employees are female.²⁸ There are about 200 tanneries in the sector, along with 3500 SMEs, 90 large firms, and 15 large companies.²⁹ The export revenue of the leather, leather goods and leather footwear sector during the financial year 2021-2022 was US\$1,245.18 million against 941.67 million in the same period last year which is 32.23% higher than the previous FY. Based on the International Trade Center data, Bangladesh is the 18th top exporter of the leather products globally.

Leather products in Bangladesh include various segments, including crust leather, wet blue leather, finished leather, and split leather, as well as finished products like gloves, shoes, belts, bags, jackets, suitcases, wallets, etc. With its abundance of labor and natural resources and successful development experiences in the RMG industry, Bangladesh is ideally suited for the production of leather as well as high-value leather goods and footwear. The government of Bangladesh is working pro-actively to jack up the industry as it has relocated of all tanneries from Hazaribagh to a properly designed and controlled new industrial estate in Savar. Besides providing various incentives and support measures, the government has planned to build three more leather industrial estates: 1. Leather and Engineering Industrial Park in Rajshahi, 2. Multi-sectoral Industrial Park at Mirsharai in Chattogram and 3. Leather Industrial Park in Dhaka.

Export trend

Figure 11: Export trend of leather sector (in million USD)



Source: EPB statistics

²⁶ Leather Sector Export Roadmap, A strategic framework for accelerated export growth, IFC World Bank (2019)

²⁷ EPB Monthly Summary Sheet July-June 2021-2022

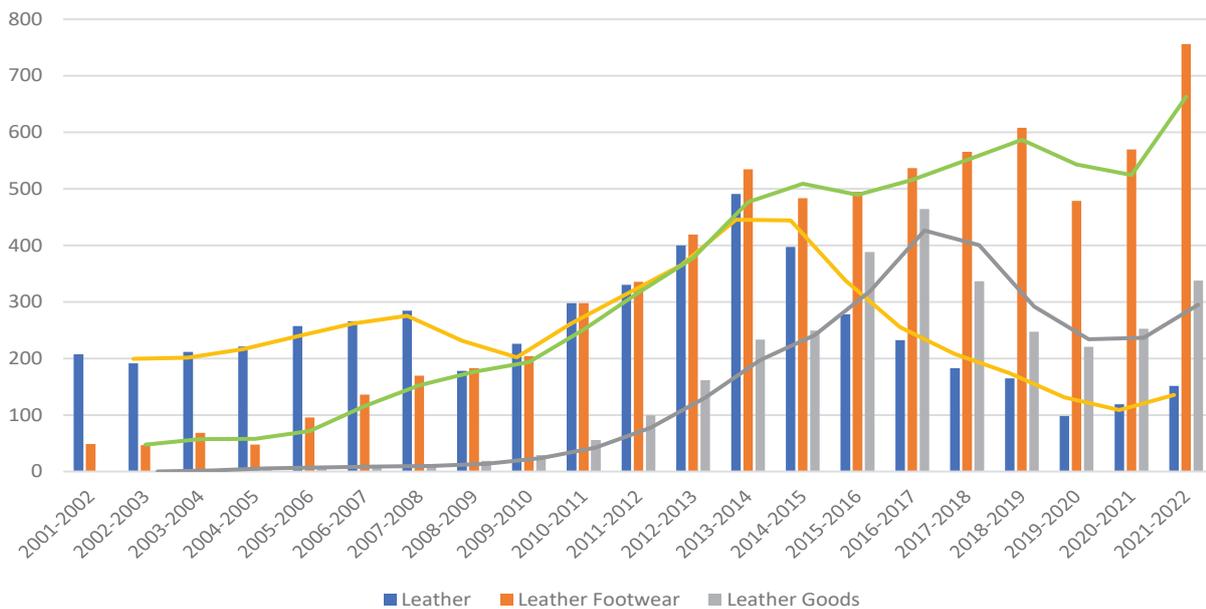
²⁸ Developing the Leather Industry in Bangladesh, ADB Briefs November 2018.

²⁹ BUILD Research (2022) Leather sector export roadmap

Despite being the second, the share of this sector in the total goods export is satisfactory. The recent COVID-19 has severely impacted the growth of this sector and it is still recovering from that shock.

The leather and leather goods industry showed a 32% growth in FY22, while it was about 18% in FY 2020-21. The export growth shows the upward trend. Leather goods are exported under 3 categories, which are: Leather (HS code Chapter 41), Leather Products (42) and Leather Footwear (6403). Among these categories, leather footwear is the most exported product. The figure (12) below presents a comparative picture of export of leather and leather goods products:

Figure 12: Export trend of leather and leather, leather footwear and leather goods (in million USD)



Source: EPB statistics

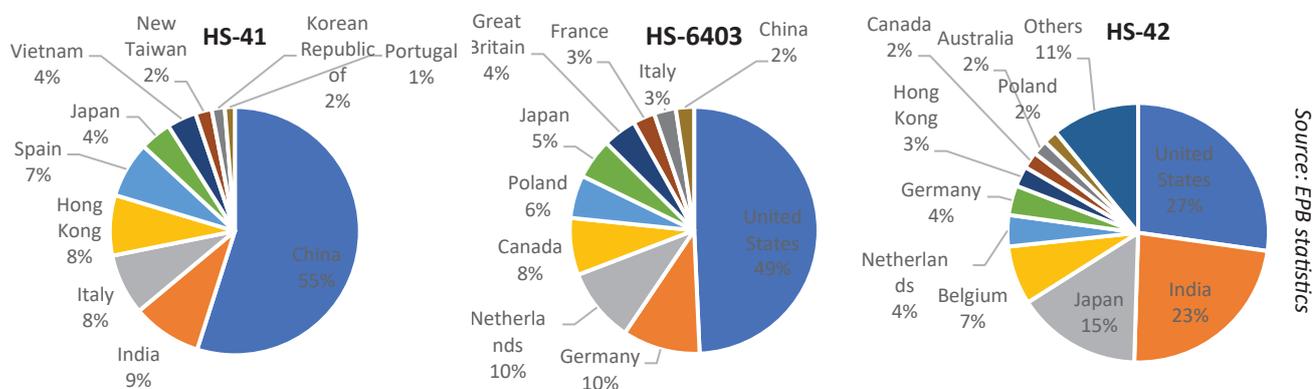
Export of leather (41) showed a 27% growth in FY22, while it was about 21% in FY 2020-21. Although leather used to dominate over leather goods and footwear it began to decline from FY15. However, from FY2021 this sector has been showing positive growth since government permitted export of rawhide and semi-processed leather – widely known as wet blue in 2020.

In FY2021-22, Leather footwear (6403) export was US\$756.18 million which accounted for 60% of the all the leather sector exports. Export of leather footwear showed a 33% growth in FY22, while it was about 19% in FY 2020-21. In the global footwear market, Bangladesh is ranked 18th. On the global market, Bangladesh contributes just 1.8% of this industry. Orders from China, the main exporter of leather goods, have started arriving in Bangladesh³⁰ which provides growth opportunity of this sector in future. Export of leather goods (HS code 42) has showed a 35.63% growth in FY22, while it was about 15% in FY 2020-21.

Leather and leather products of Bangladesh are mostly exported to several developed countries such as the UK, Argentina, Austria, Australia, Belgium, Canada, Switzerland, Chile, Germany, Denmark, Italy, Netherlands, Spain, Finland, as well as to some Asian and Middle Eastern countries like UAE, China, Japan, South Korea, Hong Kong. The following figure (13) illustrates major export destinations of leather, leather footwear and leather goods:

³⁰ Textile Today (2022), Footwear export potential Bangladesh’s footwear exports will reach \$1 bn in current FY

Figure 13: Raw hides (41), leather products (42), leather footwear (6403) export destinations



Source: EPB statistics

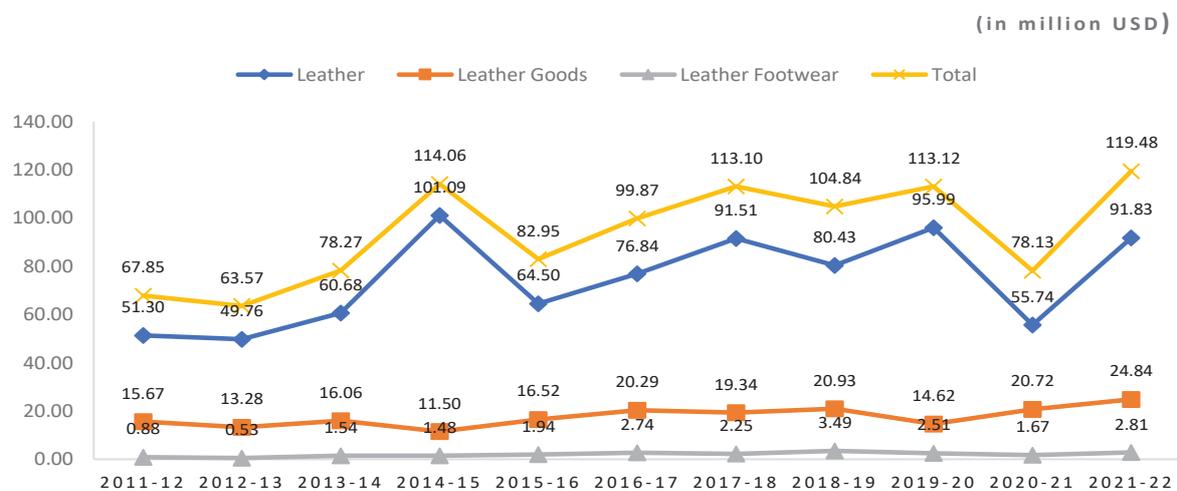
In FY2021-22 55% of the leather or raw hide was exported to China. After China, India stands for 9% of the export. Hong Kong and Italy had 8% of the export of Bangladesh for leather or raw hides.

Around 49% of the leather footwear export of Bangladesh was to the United States in FY 2021-22. Germany, Netherlands and Canada were the other largest export destination after the US for footwear export from Bangladesh. India was the second major export destinations and Japan was third as 23% and 15% of leather products were exported to these countries respectively.

Import trend

Lack of adherence to compliance standards is a serious constraint to export of raw hides. So far, only three tanneries in Bangladesh have received Leather Working Group (LWG) standard certificates. Thus, some of the exporters in the leather and leather goods sector now import raw hides from other countries. The abundant supply of domestic raw hides is mostly used for local production and hence remains underutilized. Leather goods and leather footwear are also imported from different countries like China, India, Hong Kong, Italy, Belgium etc.

Figure 14: Import trend of leather, leather goods and leather footwear



Source: Bangladesh Bank

In FY2021-22 total import of leather, leather goods and leather footwear increased by about 53% compared to the previous FY. From FY2015-16, the total import of leather and leather goods is increasing gradually. In FY2021-22 raw hides and skins and leather import stood for 77% of the total leather, leather goods, and footwear import. As raw hides and skins and leather imports show an upward trend, over the years, leather goods and leather footwear imports are also indicating a slow but steady growth.

Investment

According to the Leather goods and Footwear Manufacturers & Exporters Association of Bangladesh (LFMEAB), the sector includes 200 tanneries, 3500 SMEs, 90 Large Firms, 15 big enterprises, and more than 60% of the workforce are women in this industry.

Figure 15: FDI inflow in the leather and leather goods sector (in ml USD)



Source: Bangladesh Bank

The sector has not been able to generate sufficient Foreign Direct Investment despite its huge potential. Though there was a rise in FDI inflow during 2016-2018, the sector has been facing a downward trend for the past few years. As per the Bangladesh Bank’s report, Leather & Leather products generated US\$ 26.52 million FDI inflows in 2021 which was only 0.9% of total FDI. Moreover, Korea,

Source: Bangladesh Bank

Hong Kong and China together constitute more than 85% of the total FDI inflows into Bangladesh’s leather and leather goods sector³¹ while the top investor countries like USA, Singapore are not investing in this particular sector.

Status of diversification

Over the years Bangladesh’s leather exports has not increased compared to top exporting countries like Italy, United States of America, Brazil, China, Germany. In FY 2021-2022, Italy exported products under a total 37 of six digits of HS code where Bangladesh’ leather export included only 19 six-digit HS code (chapter 41). Compared to the top exporters of leather goods, Bangladesh is also exporting almost the similar number of 6-digit HS codes (under Chapter 42) over the years. However, export volume is relatively trivial as the volume is still far behind the top exporters like China and Italy. In terms of product diversification, leather footwear sector is relatively at the same level of the leading exporters as Bangladesh’s leather footwear export matches with all available segments of leather footwear exported by the leading exporter countries. However, there is opportunity for Bangladesh to further diversify its export products under leather (chapter 41) and leather (chapter 42) goods.

In 2002 Bangladesh exported leather to 37 countries, in 2018 it exported to 48 countries but in 2021 export destination included only 38 countries. For leather (41) the market diversification status shows the country is not expanding its export destinations over the years and there is scope of increasing the number of export destinations.

Once Japan was the country’s prime export destination for leather, leather products and leather footwear accounting for around 18 per cent of the country’s overseas sales. Currently, export destinations include the European Union, the USA, Italy, France, Germany, Canada, Poland, the UK, Belgium, and Spain. New and emerging markets of the sector include Turkey, South Korea, Brazil, Mexico, South Africa, Australia, Russia, China and UAE.³² In FY 2020-21 Bangladesh exported USD 337.62 million worth of leather products (42) which is 33.63% higher than the previous year. In 2002

³¹ Foreign Direct Investment and External Debt, July-December, 2021, Statistics Department Bangladesh Bank

³² Diversification helps drive up exports of leather goods, shoes- LFMEAB

Bangladesh's export was limited to 51 countries while in 2021, the number increased to 107 countries. Similarly, in 2002, Leather footwear were exported to only 45 countries whereas in 2021 exports are reaching to 101 countries. Leather export has yet to achieve more volume and the country's export market share is trivial.

In 2021, Bangladesh's exports to China amounted to only 2% of its total import. Only 1.31% of Hong Kong's leather import was from Bangladesh and the rest top importers have less than 1% of imports from Bangladesh.

Although Japan is one of the prime export destinations for the country's leather products, in 2021 Bangladesh's export to Japan contributed only 1.21% of its total import. Bangladesh served only .59% of USA imports and .89% of China's import amount. However, leather footwear market share shows relatively good performance in 2021 Bangladesh claiming 2.29% of the market share in the USA's total import of leather footwear. The country had more than 1% of the market share in Germany, France, China and the Netherlands. Poland imported about 4% of its total leather footwear from Bangladesh in 2021.

Gender perspective in Leather and Leather Goods sector

According to LFMEAB, the leather industry in Bangladesh indirectly and directly employs about 0.85 million people, of whom 70 percent are women. The leather and leather goods development policy 2019 mentions promoting the participation of women entrepreneur in the leather sector by providing training, and loans without mortgage. Leather goods and footwear sector is providing opportunities for women entrepreneurship. However, according to the Survey of Manufacturing Industries (SMI) 2019³³, among total entrepreneurs engaged in manufacture of leather and related products, 38% are women. Women's participation is less in tannery sector in view of the hazardous work conditions entailing a lot of health risks. Most of the women participants in this industry are engaged in production & related activities, women's participation is barely visible in owner/director/ partner, administrative & managerial, clerical & sales. However, this sector has no wage discrimination and provides suitable opportunities for women like the RMG sector. The Leather Goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB) revealed that approximately 65 percent of workers in their members' export-oriented factories are women. LFMEAB also noted that women are increasingly represented in management and ownership positions in this sector, including on company boards. Women are also taking up management and ownership positions in the sector, including on company boards, and new SMEs are being developed and run by women. As leather goods exports are consistently rising and women form a significant part of the workforce, there is potential to further enhance women's involvement in international and regional trade in this sector, benefiting them from the overall expansion of the industry.³⁴

Environmental aspects of this sector

Environmental issues are largely attributed to Bangladesh's tannery subsector where environmental compliance remains a pertinent issue due to untreated effluent and chemicals. Leather goods and footwear sector is largely following the international environmental guidelines and compliances. Bangladesh is facing challenges in exporting leather and leather goods to Europe because of the absence of the Leather Working Group (LWG) certificate. The LWG is an environmental audit protocol that evaluates various aspects of leather manufacturing, including traceability, social responsibility, health and safety, and chemical management. Only four out of around 150 tanneries in Bangladesh are LWG certified, whereas India has 139, China has 103, and Vietnam has 14 such units.

³³ Survey of Manufacturing Industries (SMI) 2019- Bangladesh Bureau of Statistics

³⁴ Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016.

In the past, the Bangladesh leather industry had noncompliance issues with environmental standards, particularly in Hazaribagh, where untreated waste and chemicals from the tanneries and leather processing factories were harming the rivers and environment. To address this, the industry has been relocated to a planned industrial zone on the outskirts of Dhaka, Savar Leather Industrial Park. However, it has yet to see full operational efficiency.

Policies governing the sector

In view of the huge prospect of the leather and leather goods sector, the Government of Bangladesh has taken several policies to support the growth of this sector which are:

Export Policy 2021-24: Export Policy 2021-24, defined this sector as the highest priority sector.

Import Policy Order 2021-24: Cash LC facility will be available along with existing back-to-back LC facilities, in case of import of raw-materials for 100% export-oriented industries operating under bonded warehouse system. Import duty exemption on capital machineries. Limited import facility without import permit for exporters Sample.

Leather and Leather Goods Development Policy 2019: Target: Total export earnings to US\$5 billion and increase the contribution of this sector to the GDP from existing 0.5 percent to 1 percent by 2024. Three industrial estates dedicated for leather and tannery industries are being set-up by the government in the areas of Rajshahi, Savar and Chattogram. EDF (Export Development Fund) credit facility offered by Bangladesh Bank at 4.5% interest rate. Deduction of AIT from export proceeds 0.25% (265-AIN/Income Tax/2018 (Published on 6th September 2018), National Board of Revenue)

The Leather and Leather Goods Development Policy of 2019 provides a comprehensive framework for the sustainable and competitive growth of the leather industry in Bangladesh. The policy aims to promote environmentally-friendly production systems and provide fiscal support to the leather sector, such as low-interest loans and incentives for green industries. The policy also emphasizes the development of human capital and the introduction of a traceability system through the establishment of a laboratory.

To encourage investment in the sector, the government of Bangladesh has offered various incentives and support systems. According to the Bangladesh Investment Development Authority (BIDA), these include investment policies, regulations, and fiscal incentives for the leather industry. These measures are intended to attract investment, increase productivity, and enhance competitiveness in the sector.

Figure 16: Sector-specific investment incentives and restriction

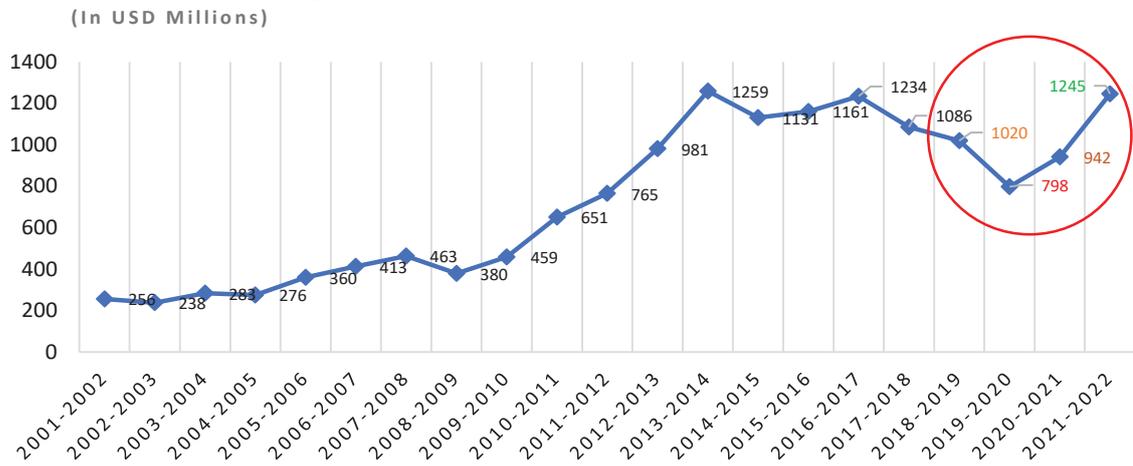
Incentives	<p>General:</p> <ul style="list-style-type: none"> ▪ Reduced CIT for 5 to 10 years depending on location. ▪ Import duty exemption on capital machineries. ▪ Regulatory/ supplemental duty exemption for footwear producer using materials such as tube, pipe, plastic, PVC screen, textile/ knitted fabric. <p>For exporters:</p> <ul style="list-style-type: none"> ▪ 50% tax exemption for income derived from export. ▪ No VAT imposition on export goods. ▪ Bonded warehousing facility for large import of materials. ▪ 15% cash incentive on export value of leather goods/ footwear, and 5% on crust leather from Savar Estate.
Restriction	No specific restriction exists upon the entry of foreign investors.

Impact of COVID-19 in the leather sector

The COVID-19 pandemic had a significant negative impact on the leather industry, including footwear, apparel, and accessories categories. Sales of footwear declined by close to 32% in the U.S. at the end of the first two quarters of 2020. The pandemic caused a massive 40% decrease in work orders for finished and processed leather from major exporting countries, leading to a 28% decrease

in overall revenue for the industry. Leather, leather footwear, and leather goods all suffered losses of almost 67%, 27%, and 12%, respectively, after the pandemic's effects.

Figure 17: Impact of Covid-19 in the leather sector



Source: EBP Statistics

This export trend shows that export started to dwindle in FY2017-2018 and hit a significant drop in FY 2019-20, the pandemic-inflicted year. The lingering impact of covid-19 also prevailed in FY 2020-21, however, in FY2021-22 the export trend showed recovery from the pandemic impacts.

Challenges and opportunities of the leather and leather goods sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the leather and leather goods sector.

Table 6: SWOT analysis of the leather and leather goods sector

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. Competitive labor cost 2. Availability of labor force 3. Local Source of raw Materials 4. High quality of leather 5. Entrepreneur’s resilience, agility, and mindset to adapt to changes 6. Capacity of meeting design quality 7. Marketing and branding capacity 8. Export Culture 9. Capacity of meeting buyers’ demand. 10. There are large firms currently supplying to reputable global brands 11. Large number of SMEs in the sector 	<ol style="list-style-type: none"> 1. Lack of compliance with international standards regarding environmental, social, and safety issues 2. Dependency on import of molds, accessories, and components resulting in higher cost and longer lead-time 3. Limited availability of R&D and technology for product design 4. Lack of training facility and institutional education 5. Limited access to finance, for technology upgradation and expansion particularly for SMEs 6. Insufficient accredited laboratory facility at international standards 7. Absence of SOP for Tannery Sector 8. Import tax on raw materials 9. Absence of proper solid and liquid waste management causing environment pollution 10. Meagre traceability in locally produced leather

Opportunities	Threats
<ol style="list-style-type: none"> 1. Large and growing domestic and global leather export market 2. Government policy support as a highest priority sector in Export Policy 2021-2024 3. Local and Foreign direct investment opportunity 4. Global Branding of the industry 5. Relocation of manufacturing from developing and developed countries 6. Geographic Advantages 7. Demographic Dividend 8. Diversification of Leather and Leather Goods 9. Piggyback opportunity 10. Establishment of technology and design center 	<ol style="list-style-type: none"> 1. Stricter international standards, compliance and sustainability issues. 2. Stiff competition from other Asian economies like Vietnam, India, etc. 3. Preference erosion of special & differential treatment and DFQF facilities 4. Trade logistic constraints 5. Anti-export biasness 6. Potential non-availability of workers 7. Lack of policy for ensuring ease of doing business 8. Rising vegan culture 9. Consumer preference towards non-leather items

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Competitive labor cost: Bangladesh has a comparative advantage in terms of labor cost, with the minimum wage currently standing at \$77.153 per month, which is lower than other major competitors like Vietnam, Pakistan, and China. Vietnam's minimum wage This advantage provides a strong competitive edge for Bangladesh's export-oriented industries, including the leather industry. Although China, Vietnam, and India remain major competitors, Bangladesh's competitive labor cost has and will continue to strengthen its position in the global market. As China shifts towards high-tech, capital-intensive manufacturing, its market share for leather goods is expected to decrease, which may lead to the relocation of these industries to regions with lower labor costs, further benefiting Bangladesh.

Availability of labor force: Labor force participation rate, total (% of total population ages 15+) (modeled ILO estimate) in Bangladesh was reported at 56.97 % in 2021, according to the World Bank collection of development indicators, compiled from officially recognized sources. Bangladesh's labor force participation rate for 2021 was 39.38%.³⁵ With the sufficient availability of workforce in the country, the leather sector faces no problems in finding workers.

Local Source of Raw Materials: Among the country's major export sectors, the entire supply of raw materials for only leather and jute products comes from local sources. Bangladesh has the world's 12th largest cattle stock and a local supply base of raw leather products (hides and skins). Almost 50% of hides and skins are sourced during the Islamic religious festival, necessitating material collection and processing, as well as financing in a very short period of time. As a result, a large number (85%) of animals are slaughtered by unskilled seasonally involved people affecting the quality and traceability of hides/ skins and generating significant waste. This also inhibits local leather from being priced more favorably for export. Despite these facts, the abundant availability of animal skins provides an indigenous strong source of easy raw materials for the leather sector.

Entrepreneurs' resilience, agility, and mindset to adapt to changes: Entrepreneurial mindset and enthusiasm for global practice adaptation of leather sector businesses and SMEs also serve as a strength. Key insights revealed leather sector businesses are keen to follow all global standards but current compliance issues hinder their ability. Moreover, entrepreneurs are already trying their best to replicate best manufacturing practices in the leather sector.

³⁵ Macrotrends, Bangladesh Labor Force Participation Rate 1990-2022 available at- <https://www.macrotrends.net/countries/BGD/bangladesh/labor-force-participation-rate>

Capacity of meeting demand and design quality: Although this industry does not have ODM capacities, current local suppliers are capable of meeting design quality and volume prescribed by foreign buyers. The KII findings revealed that after working with a buyer for a certain period if the design quality orders are well met, then there can be substantial opportunities for joint designing of products too. This signifies the strength and potential of this sector for future growth.

Key weaknesses

Lack of compliance with international environmental, social, and safety standards in the factories and manufacturing premises: The poor compliance of the leather sub-sector in Bangladesh, both in environmental and social indicators, is a crucial hindrance to its growth. Workers lack a safe and healthy working environment and are exposed to toxic chemicals without Personal Protective Equipment (PPE), leading to health hazards. Inefficient toxic waste disposal also poses environmental concerns. To reap the potential benefits, the industry must ensure Environmental, Social, and Quality (ESQ) compliance due to rising concerns by international buyers. European and American buyers only purchase goods from certified factories, and non-compliant factories sell tanned leather to Chinese companies at rates 40% lower than international markets.

Dependency on import of raw materials and lack of backward linkage: Bangladesh produces sufficient raw materials or skins, but hides are not usable for global export due to environmental compliance demands in the leather goods industry. The country relies heavily on imports for accessories, machinery, molds, and chemicals needed for leather processing, resulting in increased costs. This has hindered the development of raw material industries like adhesive, lace, mold, and chemical production within the country. Modernizing equipment for leather production is also mainly acquired from overseas, and the cost of importing production-related chemicals further increases the price of leather preparation. The COVID-19 pandemic disrupted the supply chain, causing a significant slowdown in production and export capacity.

Access to finance, for technology upgradation and expansion of units is constrained for SMEs: The tannery subsector consists of many small, family-run tanneries that lack financial and technological support, which limits their potential for exportation. The lack of capital and funding, especially for small and medium-sized tanneries, is a significant challenge faced by the industry. Due to the high rate of loan default in the industry, it is challenging for tanners to obtain financing. The industry has received significant investment, but the majority of it is still in default due to falling exports and rising processing costs.

Limited availability of necessary technology and software for product design: Currently leather businesses follow the OEM approach where products are sold by the manufacturer based on the buyer's specifications. Local manufacturers lack the ODM or original design manufacturing capacity due to the absence of necessary technology and software for product design. Moreover, only a trivial amount of leather goods and footwear manufacturing firms have the capacity of ODM with their own design labs.

Lack of environmental safety and infrastructure development for ETP: The CETP at Savar is not fully functioning. The delay in setting up a fully functional CETP hampered production which has put a huge financial burden on the tanners. In addition, the tannery estate project is yet to provide proper support to the linked sectors like chemical, raw leather suppliers, and casual workers and did not create any accommodation facilities for the huge number of workers who are, directly or indirectly, related to this sector. Also, the global standard of using water for washing a ton of rawhide is 30,000 liters but in the case of Bangladesh, the tanners use more than 65,000 liters of groundwater. Moreover, proper solid waste management is yet to be developed.

Key opportunities

Large and growing global leather export market: The market for leather goods was valued at USD 242.85 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 6.6% from 2023 to 2030. Increasing consumer disposable income, changing fashion trends, bettering living conditions, and rising domestic and international tourism are the main market drivers. The growing need for attractive, current, and comfy leather footwear, accessories, clothing, and other products is projected to be profitable for the industry.³⁶ Global demand for leather goods presents the sector with immense export opportunities.

Designated as a priority sector in Export Policy 2021-2024: The government made the new Export Policy 2021-24 with the highest priority attached to 14 sectors including leather in order to increase much-needed foreign currency earnings. According to this policy, exporters can borrow up to 90% of the amount specified in the irrecoverable letter of credit or confirmed contract. The leather sector is granted a 50% tax exemption for income earned from exports, as well as an import duty exemption for capital machinery. Additionally, leather sector exporters will receive financial assistance from the export-readiness fund. These supportive policies offer ample export opportunities for the leather sector.

Rising demand in the domestic market: The leather industry in Bangladesh has the opportunity to expand its domestic market in addition to exports to global market. The domestic footwear market in Bangladesh has been steadily rising, estimated at over 30 million pairs in 2018, and increasing at a rate of 10-15% per year with per capita consumption increasing to 3 pairs from 1.7 pairs a few years ago due to expanding middle-class population. Currently dominated by the informal sector, the market is expected to shift to modern retail chains and outlets with urbanization and a rise in the working population.

Local and foreign direct investment opportunity: Currently, the leather sector in Bangladesh is turning into a hotspot for foreign investment due to the country's low manufacturing costs, availability of low-cost raw materials, and its ability to benefit from trade advantages for exporting. New investors from Japan, Taiwan, and Vietnam are highly interested to invest in this sector either in joint ventures or in companies they could establish themselves. The export incentive on crust leather and leather is a major factor drawing foreign direct investment (FDI) to this sector. Moreover, the large domestic market of leather is also a driving factor behind attracting FDI in this sector. Currently, total investment in leather and leather goods and footwear is more than \$1 billion, of which some \$700 million is from domestic investors while the remaining \$300 million is from foreign investors are involved in exporting manufactured items. Foreign investments in this sector mainly came from Germany, Taiwan, China, India, and Italy.³⁷

Relocation of manufacturing in developing from developed countries: In recent years, the tanning industries in developed countries have been shrinking due to pollution problems and high labor costs, creating an opportunity for developing countries like Bangladesh to benefit from this shift. Additionally, China, which has long been the market leader in the global leather industry, is losing market share due to rising costs and increasing demand for non-leather products. This provides opportunities for Bangladesh to become a direct investment hub for the global leather industry, including the relocation of factories from China.

Key threats

Stricter international standards and compliance issues: The leather industry in Bangladesh has enormous potential, but its growth is hindered by non-compliant factories. This industry has access to sufficient raw materials, but the lack

³⁶ GVR Report Leather Goods Market Size, Share & Trends Analysis Report By Type (Genuine Leather, Synthetic Leather, Vegan Leather), By Product (Footwear, Home Décor & Furnishing), By Region, And Segment Forecasts, 2022 - 2030

³⁷ Policy Review/Policy Study/Policy Paper Preparation on Leather and Leather Goods Development Policy 2019, SANEM (2021)

of compliance improvement makes it difficult to guarantee a fair price for their goods on the global market. Unless compliance standards are improved, the country may face export restrictions and reduced potential for growth, especially as it faces stricter international standards following its graduation from LDC status.

Stiff competition from other Asian economies like Vietnam, India and etc.: As in RMG sector, Bangladesh is facing tough competition mostly from Vietnam and India in leather sector. Vietnam's compliance and infrastructure strengths have helped it to become a formidable competitor in the global market. For example, in the first seven months of 2022, Vietnamese leather and footwear exports increased by 13% compared to the same period the previous year, reaching 14 billion US dollars. Vietnam's footwear exports alone rose by 6.1%, totaling 17.77 billion US dollars, which highlights the country's competitive power and growth potential in the leather sector compared to Bangladesh.

Preference erosion of special treatment and DFQF facilities: Currently, Bangladesh enjoys duty-free/quota-free access to many developed countries due to its status as a least-developed country (LDC) under the Generalized System of Preferences (GSP). This gives it a competitive advantage over China, a major competitor in the leather goods market, which is subject to additional duties to access the same markets. However, Bangladesh is set to graduate from LDC status, which will result in the loss of these advantages. Additionally, the government currently provides a 15% cash incentive on the export value of leather goods/footwear, which is likely to stop after the graduation. This could cause the cost of production to rise and make leather products less competitive. Furthermore, without preferential market access, Bangladesh's leather products will face heavy competition from other countries.

Logistic problems: The leather industry in Bangladesh is likely to face difficulties in handling a large number of export orders in the future, as the country's logistics performance index (LPI) is low compared to regional competitors. The sector is also challenged by rising logistics and shipping costs, as well as inadequate communication infrastructure, complex tax and customs procedures, lengthy banking transactions, transportation bottlenecks, slow handling of products at the port, high cost of doing business, unpredictability of tax regimes, and difficulties in handling foreign direct investments and joint ventures.

Lack of policy for ensuring ease of doing business: Despite progress with the policy environment for the private sector that has spurred the expansion of private investment, the overall investment climate for Bangladesh remains substantially weaker than those found in competing countries. This is reflected in the global rankings of investment climate prepared by the World Bank as well as by the World Economic Forum. For example, the World Bank's 2020 Ease of Doing Business (EDB) ranks Bangladesh at 168th out of 190 countries. The leather sector is currently not generating more entrepreneurs and these issues can be a serious threat to its further growth and development.

Non-Leather Footwear

Overview of the Sector

Global overview: The global non-leather footwear market is based on the five Harmonized Commodity Description and Coding System (HS) under four-digit HS codes typically correspond to the following categories: waterproof (HS6401), rubber and plastic (HS6402), leather (HS6403), textile (HS6404), and other (HS6505). The non-leather products' market size is forecasted to reach US\$365.3 billion by 2027 after growing at a Compound Annual Growth Rate (CAGR) of 5.1% during the forecast period 2022-2027.³⁸ In 2021 global footwear production increased by 8.6%, exceeding 22 billion pairs. Non-leather footwear in Bangladesh takes several forms, including jute-based espadrilles, canvas or rubber tennis shoes, molded polyurethane and polyvinyl chloride (PVC) shoes, and artificial leather shoes.

Globally, non-leather footwear products such as sneakers, athletic footwear, and textile & other footwear are dominant in the global market. The Sneakers segment is expected to experience a compound annual growth rate (CAGR) of 7.95% between 2022 and 2027, with revenue amounting to US\$72.72 billion in 2022, while the United States generates the highest revenue at US\$21,580.00 million in 2022. The athletic footwear market is expected to generate \$50.91 billion revenue in 2022 with a 6.71% yearly expansion rate (CAGR 2022-2027), while the United States generates the highest revenue at US\$14,480.00 million, with projected volume growth of 16.3% in 2023, and anticipated volume reaching 580.9 million pairs by 2027. The Textile & Other Footwear category generated US\$133.60 billion revenue in 2022, expected to expand by 5.61% yearly (CAGR 2022-2027), with China generating the highest revenue at US\$38,620.00 million in 2022.³⁹

Global Production of the Non-Leather footwear industry

Figure 18: % distribution of global footwear production by continent (Quantity)



World Footwear Yearbook Report, World Footwear, 2022

Figure 18 indicates that Asia dominates the global footwear market, accounting for 88.2% of the world's footwear production, followed by South America at 4.7%, Africa at 2.9%, and Europe and North America at 2.8% and 1.4%,

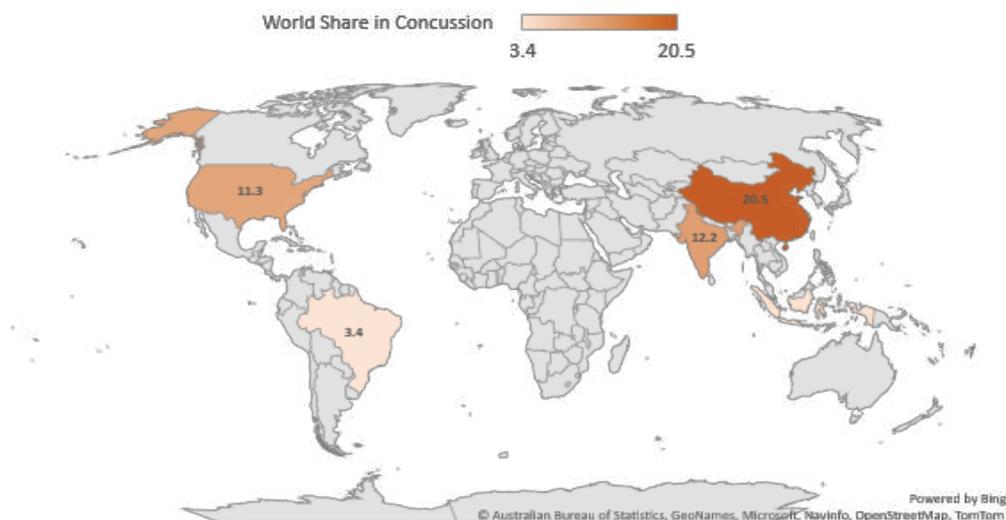
³⁸ Non-leather Products Market - Industry Analysis, Market Size, Share, Trends, Application Analysis, Growth and Forecast 2022 – 2027, Industry Arc, 2022.

³⁹ Statista Outlook, 2022, <https://www.statista.com/outlook/cmo/footwear/sneakers/worldwide>

respectively, with Oceania having no share in the global market. In terms of global production in pairs (million) in 2021, the Asia Pacific region dominated the global footwear market with China, India, Vietnam, and Indonesia producing more than 75% of the world's footwear. The global production in 2020 was lower due to the pandemic, and Bangladesh ranked eighth in the world in footwear production, having produced 401 million pairs in 2021.

Global consumption of the non-Leather footwear industry

Figure 19: Top five country consumption of footwear



Source: World Footwear Yearbook Report, World Footwear, 2022

Asia led the global footwear market with a consumption share of 56.1% in 2021, followed by North America (14.9%) and Europe (13.3%). China and India are the top two markets, with 20.5% and 12.2% of global consumption, while the United States consumed 11.3%.

Import situation of global non-Leather footwear industry

Table 7: Distribution of top 10 non-leather footwear importers country average global share (year 2015 -2021) (In billions USD)

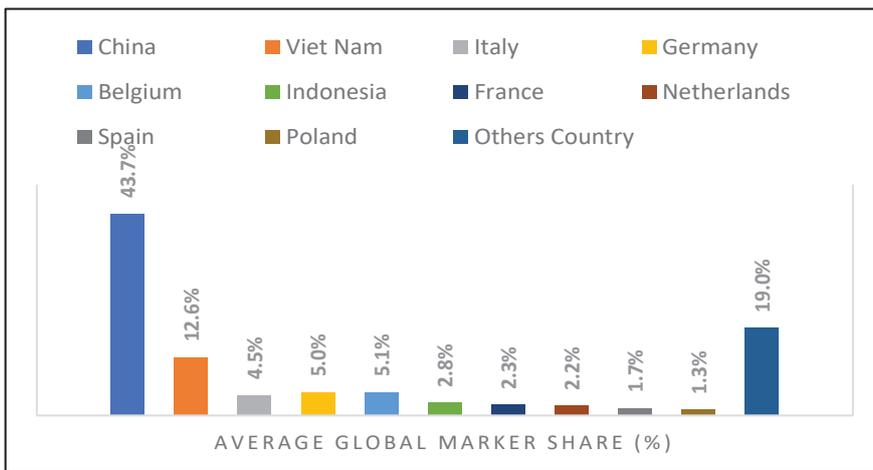
SL. No	Importers Country	Value (Billions USD)	Global Share %
1	United States of America	15.76	19.0%
2	Germany	7.44	9.0%
3	France	4.29	5.2%
4	Italy	3.70	4.5%
5	China	2.68	3.2%
6	Netherlands	2.28	2.7%
7	United Kingdom	3.60	4.4%
8	Japan	3.95	4.8%
9	Belgium	2.50	3.0%
10	Spain	2.32	2.8%
11	Others Country	34.53	41.5%
Total	World	83.06	100.0%

Source: ITC calculations based on UN COMTRADE and ITC statistics

The USA is the largest importer of footwear with a 19.0% share, followed by seven European countries led by Germany, while Japan and China have 4.8% and 3.2% shares respectively, and other countries share 41.5% of the global import market. The statistics shows that the USA experienced a 4% growth rate in import in 2020-21, surpassing the growth rates of the United Kingdom, Italy, and other European countries, which have recently shown increasing import growth rates, while China's import growth rate decreased from 11% in FY 2017-18 to 9% in FY 2020-21.

Export situation of global non-Leather footwear industry

Figure 20: % of global market share of top ten countries in non-leather footwear market



Sources: ITC calculations based on UN COMTRADE and ITC statistics

China has maintained its position as the foremost exporter of footwear globally for over a decade, holding 43.7% of total export in 2021. The remarkable success story of the footwear industry over the past ten years is attributed to Viet Nam, which currently holds the second position and accounts for 12.6% of worldwide exports. According to Figure 20, Belgium and Germany ranked third and fourth with a 5.1% and 5% export share respectively of non-leather footwear. Other countries contributed about 19% to the global export of non-leather footwear.

China has maintained its position as the foremost exporter of footwear globally for over a decade, holding 43.7% of total export in 2021. The remarkable success story of the footwear industry over the past ten years is attributed to Viet Nam, which currently holds the second position and accounts for 12.6% of worldwide exports. According to Figure 20, Belgium and Germany ranked third and fourth with a 5.1% and 5% export share respectively of non-leather footwear. Other countries contributed about 19% to the global export of non-leather footwear.

Figure 21: % of export growth of top ten countries



Sources: ITC calculations based on UN COMTRADE and ITC statistics

The global non-leather footwear exports are exhibiting a positive trend, except for Belgium, which is demonstrating a negative trend. The export leader China has experienced a growth rate of 5% in the year 2021. The second largest exporter Viet Nam had 3% growth. However, in 2021 Poland experienced the highest growth of 9%.

Bangladesh's overview

Bangladesh's production of the non-Leather footwear

Figure 22: Annual production of footwear (In million pairs)



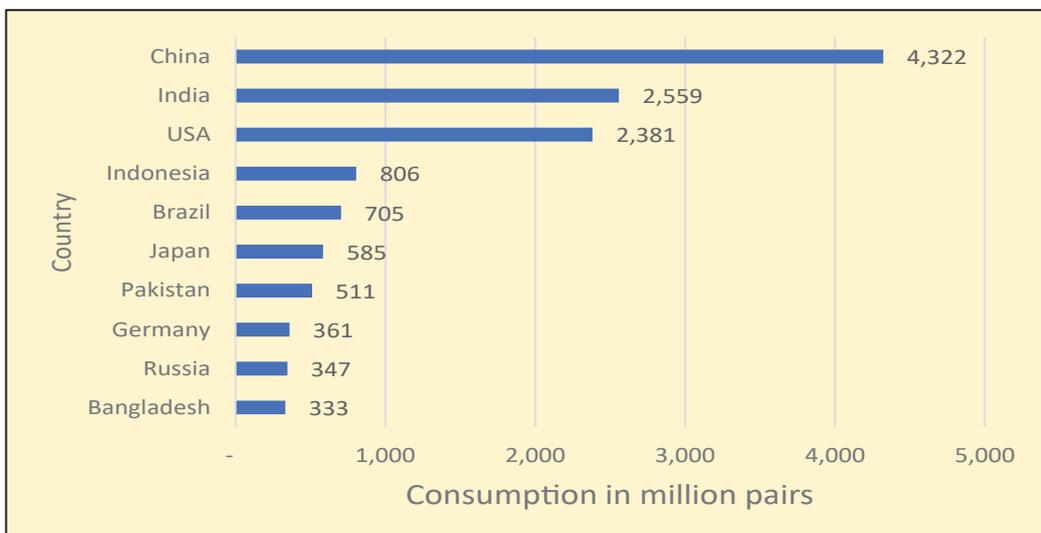
Bangladesh has experienced a 6% growth in footwear production from 2016 to 2021, becoming the 8th largest producer of both non-leather and leather footwear in the world, with its output increasing from 378 million to 401 million pairs of footwear during this period. According to the statistics, the Sneakers segment in Bangladesh

Source: Statista outlook, 2022

is projected to yield \$215.20 million in revenue in 2022. It is anticipated to have an annual growth rate of 8.47% between 2022 and 2027, with a predicted volume growth of 12.5% in 2023. The Athletic Footwear segment is expected to show a volume growth of 14.3% in 2023 and the Textile & Other Footwear segment is expected to show a volume growth of 12.6% in 2023.⁴⁰

Bangladesh's consumption of the non-Leather footwear

Figure 23: Bangladesh's consumption of footwear 2021

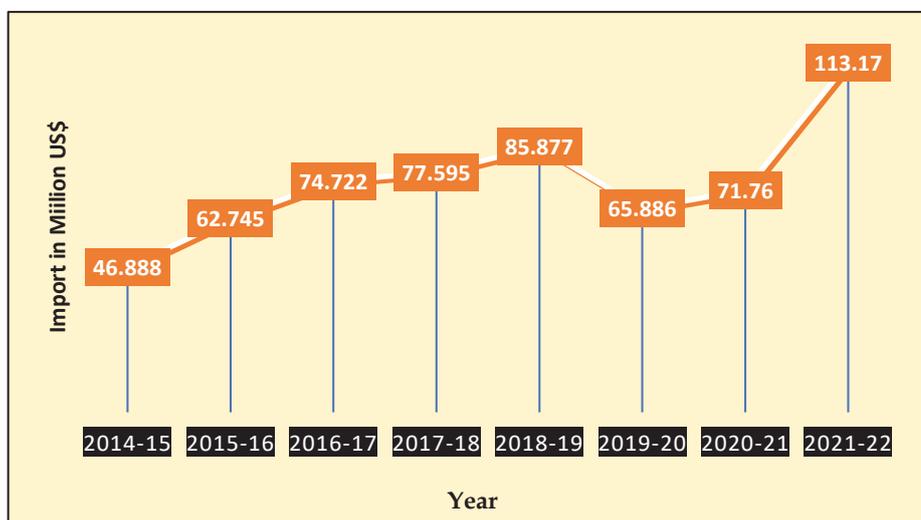


China, consuming a whopping 4,322 million pairs of footwear, leads the top footwear consumers worldwide, with Bangladesh ranking 10th and India coming in second, having consumed 2,559 million pairs in 2021.

⁴⁰ <https://www.statista.com/outlook/cmo/footwear/sneakers/bangladesh>

Import situation of Bangladeshi Non-Leather footwear industry in Bangladesh

Figure 24: Annual import of non-leather footwear and footwear parts (In Million US\$)

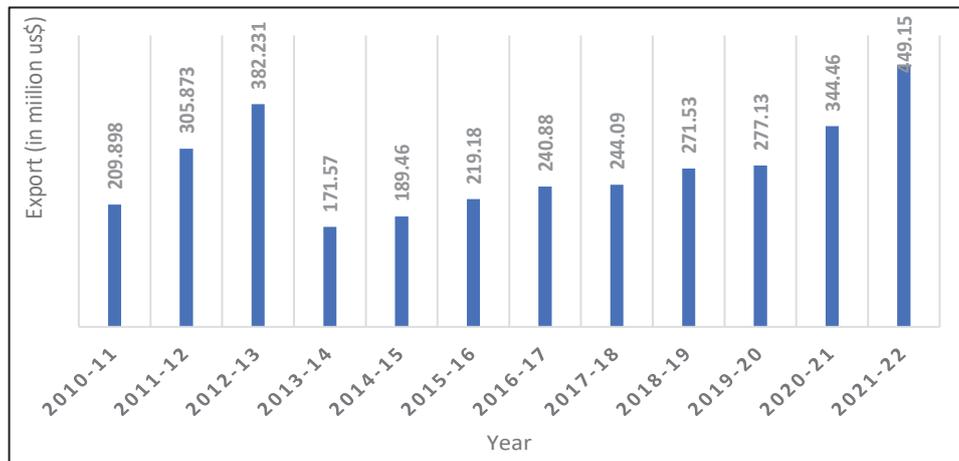


Source: Bangladesh Bank (BB)

Bangladesh imports non-leather footwear and footwear components primarily from China, India, France, Hong Kong, and Indonesia. Bangladesh has significantly increased its imports by 141% from FY 2014-15 to FY 2021-22, with non-leather footwear imports worth US\$ 46.9 million in FY 2014-15 rising to US\$ 113.17 million in FY 2021-22.

Export situation of Bangladesh Non-Leather footwear industry in Bangladesh

Figure 25: Export volume of non-leather footwear in USD million



Source: Export Promotion Bureau (EPB)

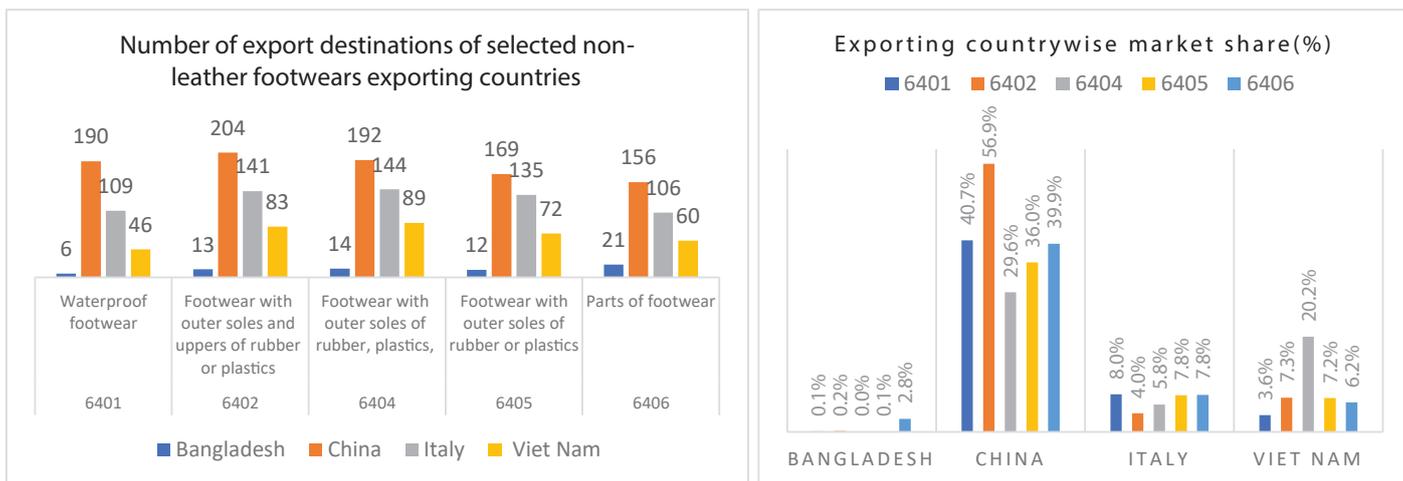
The global market for non-leather products is predicted to grow at a 5.1% CAGR and reach US\$ 365.3 billion by 2027. The shift towards synthetic footwear among younger generations has led to an upward trend in Bangladesh's non-leather footwear exports, with the sector generating

about US\$ 450 in export revenue In FY 2021-22, marking the highest export revenue ever, and experiencing an average annual growth of about 20% over the previous five years. In FY 2021-22 the growth rate was 30% which is also the highest-ever growth in the last 10 years. Bangladesh is emerging as a leading supplier of non-leather footwear for low prices and good quality. The country is now supplying sports shoes, sandals, flip-flops, and boots to a number of leading global retailers including Kappa, Skechers, Decathlon, Steve Madden, Puma, Fila, Graceland, Jenny Fairy, Denali Shoes, Ben Sherman, Hugo Boss, and H&M.⁴¹ The main export destinations for Bangladesh of this sector are Spain, France, Netherlands, South Korea, India, Italy, and Germany.

⁴¹Non-Leather Goods, Bangladesh Investment Authority (BIDA), 2019

Status of product diversification

Figure 26: Comparison of Bangladesh's non-leather footwear with top exporting countries (Based on 4 Hs digit code 2021)

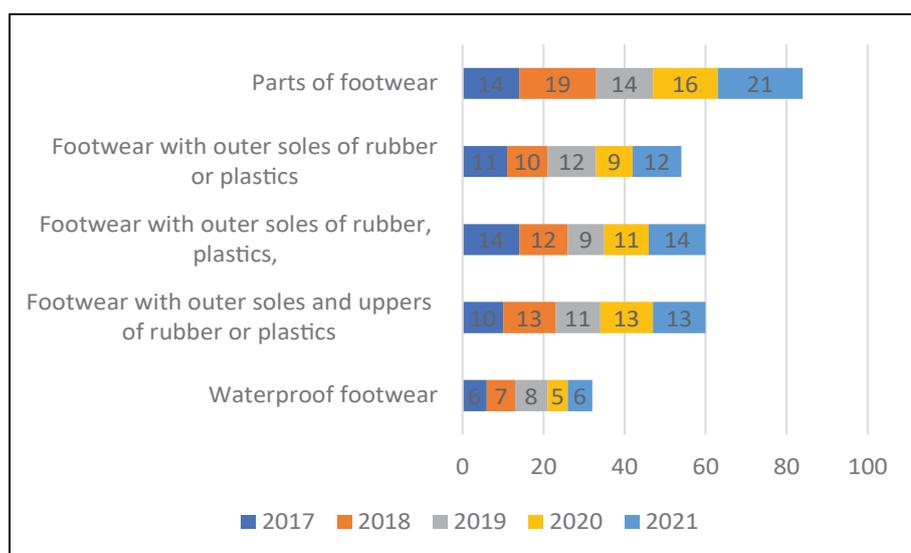


Source: ITC and BFTI Analysis

In the year 2021, under HS Code 64, China led the export market for Waterproof footwear products (HS code 6401) by exporting to 190 countries. Italy exported to 109 countries, Viet Nam exported to 46 countries, and Bangladesh exported to only 6 countries. In Figure 26, it can be observed that China held a market share of 40.7% in the export of Waterproof footwear products, while Italy had 8%, Viet Nam had 3.6%, and Bangladesh had only 0.1%.

Status of market diversification

Figure 27: Bangladesh's non-leather export to different number of countries from 2017 to 2021



Bangladesh exported parts of footwear worth US\$ 260 million to 21 countries in 2021, with footwear having outer soles of rubber or plastics exported to 12 countries (US\$ 68.38 million), outer soles and uppers of rubber or plastics exported to 14 countries (US\$ 12.48 million), and waterproof footwear exported to 6 countries (US\$ 2.34 million), indicating a gradual market diversification of these products.

Source: ITC Data

Gender perspective in non-leather footwear Sector

The non-leather footwear sector of Bangladesh employs around 1.2 million people, with approximately 70% of the workforce being women.⁴² However, women face significant challenges in terms of employment, wages, and training opportunities. Women are more likely to accept low-paid and insecure jobs due to their limited access to opportunities outside of the home. Only 28% of women workers in the sector receive training compared to 43% of men. Women workers in the non-leather footwear sector earn around 35% less than their male counterparts⁴³. Addressing gender inequality in the sector requires efforts to increase access to education and training for women, address gender-based wage gaps, and promote women's leadership and decision-making roles in the industry⁴⁴. The consistent growth of footwear exports presents a significant opportunity for women to participate more actively in international and regional trade in this sector. As women form a substantial part of the workforce, further enhancing their involvement could lead to greater benefits for them, as well as contribute to the overall expansion of the industry.

Environment aspects of the sector

The non-leather sector in Bangladesh is worth \$1 billion but generates 1,500 tons of solid waste, 22,000 cubic meters of wastewater, and 200 tons of air pollutants every day, posing significant environmental hazards. The use of hazardous chemicals in the industry exacerbates these risks, and the low level of compliance with environmental regulations is a concern⁴⁵. Concerted efforts are needed by the industry and government to ensure sustainable development while minimizing the impact on the environment and human health⁴⁶.

Policies governing the sector

The Bangladeshi government prioritizes the non-leather footwear industry and provides various incentives, including cash incentives of 4%-20%, duty-free imports of raw materials and equipment, tax holidays, and generous bank credit. The government also supports the non-leather footwear industry through monitoring, assessing, and promoting it globally, providing uninterrupted utility supply, priority facilities for air travel, and attracting FDI for further development.

The import of raw materials for 100% export-oriented industries under the bonded warehouse system, including the non-leather footwear industry, will remain valid under Cash LC procedure with back-to-back LC facilities and import duty exemption on capital machineries, as listed in the top priority sectors in the Export Policy 2021-24 and Industrial Policy 2016.

Incentive in Non-Leather footwear industry

Those investors registering with BIDA for their investment projects are able to benefit from the following key incentives and privileges

- Corporate Income Tax (CIT) exemption of up to 10% on the production of jute and jute products.
 - Reduced Corporate Income Tax (CIT) for 5 to 10 years for industries undertaking the production of artificial fiber.
- Duty-free access to 52 countries, including the European Union (EU), under the Generalized System of Preference (GSP) framework for suppliers of non-leather goods.

⁴² Women's Participation, Constraints, and Opportunities for Trade in Bangladesh, Australian Aid, Partnership for South Asia, World Bank Group, 2016

⁴³ International Labour Organization (ILO). (2017). Women in the Non-Leather Footwear Sector in Bangladesh: Challenges and Opportunities

⁴⁴ Centre for Policy Dialogue. (2019). Gender Wage Gap in the Non-Leather Footwear Industry in Bangladesh.

⁴⁵ ILO (2017). Hazardous chemicals and waste in the non-leather footwear sector in Bangladesh.

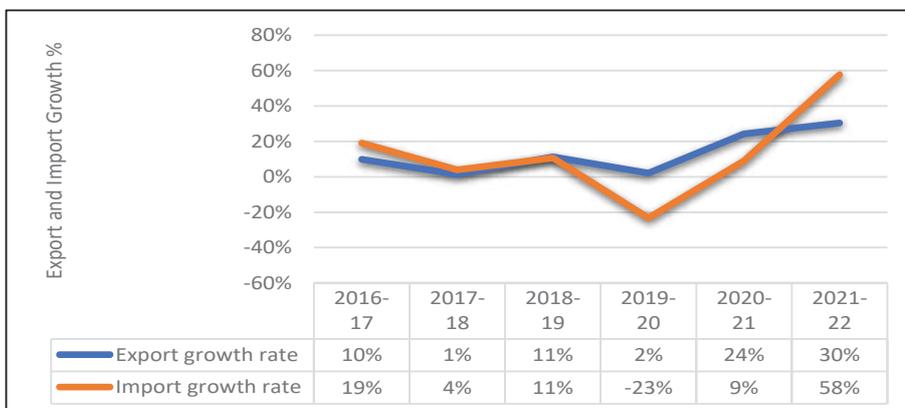
⁴⁶ BCAS (2016). The State of Environmental Pollution and its Impact on Health in Dhaka City. Bangladesh Center for Advanced Studies.

⁴⁷ Non-Leather Goods, Bangladesh Investment Authority (BIDA), 2019

Covid-19 impact on non-leather footwear industry

The COVID-19 pandemic also greatly affected the Non-Leather Footwear industry. The sector experienced lack of sales during the three major festivals of 2020 & 21 - Eid-ul-Fitr, Eid-ul-Azha and Pohela Boishakh (Bangla New Year) - as a result of the COVID-19 pandemic 40% of sales came down during that time.⁴⁸ Footwear exports worldwide fell by 17 billion dollars (31.1%) in 2020. At least 73% of factories laid off their 50% employees. The price of raw materials, particularly raw chemicals, polymeric materials, and packing materials, has significantly increased by 3% to 123% since December 2018. A study conducted by Global Business Review showed that 11.29% of small and medium businesses permanently closed due to the negative impact of the COVID-19 pandemic⁴⁹. According to ITC data in 2020, USA import of non-leather footwear products decreased to 24%, but increased to 33% after COVID-19 while during COVID-19 top importer countries decreased import except for China. As per ITC data, it is evident that during Covid-19 pandemic China's export growth rate decreased by 20%, Viet Nam export growth rate decreased to 10% compared to 2019.

Figure 28: Export and Import growth performance % over years



Source: EPB and BB Data

Bangladesh exported parts of footwear worth US\$ 260 million to 21 countries in 2021, with footwear having outer soles of rubber or plastics exported to 12 countries (US\$ 68.38 million), outer soles and uppers of rubber or plastics exported to 14 countries (US\$ 12.48 million), and waterproof footwear exported to 6 countries (US\$ 2.34 million), indicating a gradual market diversification of these products.

Challenges and opportunities of the non-leather footwear sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the non-leather footwear sector:

Table 8: SWOT analysis of non-leather footwear sector

Strengths	Weaknesses
1. Availability of labour force and low-cost labour	1. Import dependency on raw materials like plastic, PU, PVC and others materials
2. Availability of Raw materials (mold) for Organic Shoe, Espadrille, Hogla, Water Hysinth, Bana Shoe	2. Shortage of Gas and Power Supply
3. Domestic production of Last and Knife for PU, PVC and Textile Shoes	3. Slow pace of transformation from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM)
4. Locally manufactured machineries for repair and maintenance facilities for Espadrille	4. Limited availability of R&D and technology for product design
5. Capacity to produce international quality products	5. Lack of market research on international market, products, design, seasonality.
6. Accredited laboratory facility at international level	6. Lack of communication skill of the local entrepreneurs
7. Skilled labour in sewing non-leather footwear	7. Lack of skilled and semi-skilled labour
8. Existence of large firms with capacities to cater to reputable global brands	8. Lack of full time functionally of customs and different border post agency
	9. Lack of bonded warehouse facility for SMEs
	10. Lack of backward linkage industry for PU, PVC, upper materials, sole, zipper, mold, adhesive and different accessories

⁴⁸ COVID-19 Pandemic Outbreak Impact Analysis on Footwear Sector in Bangladesh, BRAC Institute of Governance and Development, BRAC University, 2019.

⁴⁹ Md. Rayhan Sarker, S. M. Abidur Rahman, A. K. M. Hedaitul Islam, Md. Farhan Fuad Bhuyan, Sunjida Enam Supra, Kauser Ali and K. M. Asadun Noor, Impact of COVID-19 on Small- and Medium-sized Enterprises, Global Business Review, 2022.

Opportunities	Threats
<ol style="list-style-type: none"> 1. High demand of non-leather footwear in EU, Western, Australia, Canada, Japan and etc. 2. Rising demand in the domestic and global (Safety shoe, Flip-Flop and Mule) market 3. Cash incentive of 20 % on export of jute products, carbon and jute particle boards and for PU PVC shoe 4% if bond is available,15% without bond 4. Rising demand for eco-Friendly shoes 5. Reduced corporate income tax (CIT) for 5 to 10 years for industries undertaking production of artificial fibre 6. Local and foreign direct investment opportunity 7. Advantages of geographical location 8. Duty-free access to 52 countries up to 2029. 9. Designated as a highest priority sector in Export Policy 2021-2024 10. High entrepreneurship opportunities 	<ol style="list-style-type: none"> 1. Lifting of trade preferential treatment in the near future 2. Stiff competition from other Asian economies like Vietnam, Pakistan, Indonesia, India and etc. 3. Longer lead time in export (Bond Facility, Product development and design) 4. Unavailability of or inadequate access to funds specially for SMEs 5. Absence of a market intelligence platform to keep pace with global trends 6. Unstable world economy 7. Procedure in FDIs approvals

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Availability of labour force and low-cost labour: Bangladesh has a large labor force of 6.9 million⁵⁰ and non-leather footwear manufacturing offers employment opportunities with lower wages for unskilled (US\$49) and skilled (US\$73 to US\$146) workers compared to Vietnam and China.⁵¹

Availability of raw materials: Bangladesh is the second-largest jute producer in the world, accounting for an estimated annual production of 1.349 million tones, and is also the greatest supplier of jute fiber globally, providing abundant raw materials (mold) for Espadrille. The local factory also produced raw materials for Organic Shoe, Hogla, Water Hysinth and Bana Shoe.⁵² Domestic production of last and knife for PU, PVC and Textile shoe: Bangladesh locally produces last and knife for PU, PVC, and Textile shoes.⁵³

Locally manufactured machineries for repair maintenance facilities for Espadrille: Different stakeholder informed that local engineers can repair and maintain the parts of non-leather footwear manufacturing machineries specially for Espadrille.

Capacity to produce international quality products: Brands and buyers like H&M, Puma, Decathlon, Fila and Kappa source products such as belts, bags, purses, sportswear, sandals, flip-flops, boots and fashion accessories from Bangladesh.⁵⁴

Accredited laboratory facility at international level: Bangladesh has a well-established and globally recognized testing facility that includes over 50 accredited government and private laboratories. This facility is known for its efficient testing procedures for various chemical products such as PVC and PU.⁵⁵

⁵⁰ World Bank Data, available at- <https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=BD>

⁵¹ Attracting Investment in Bangladesh—Sectoral Analyses • <http://dx.doi.org/10.1596/978-1-4648-0924-8>

⁵² <https://www.worldatlas.com/articles/top-jute-producing-countries-in-the-world.html>

⁵³ KII, Public Consultation, BFTI

⁵⁴ BIDA-available at https://bidaevents.gov.bd/assets/pdf/Non_Leather_Goods_Sector_Profile_E_Version.pdf

⁵⁵ Bangladesh Accreditation Board

Skilled labour in sewing non-leather footwear: Bangladesh's RMG industry, which consists of about 4.22 million workers, including 1.72 million men and 2.50 million women, can potentially replicate the same experience in the production of non-leather footwear, owing to the country's abundant availability of skilled labor.

Key weaknesses

Import dependency on raw materials: Bangladesh has a high dependence on imported raw materials such as plastic, PU, PVC, etc., for the production of non-leather footwear. As discussed earlier, the import growth rate has increased by 58% in the fiscal year 2021-2022.

Shortage of Gas and Power Supply: ADB's study on attracting investment in Bangladesh reveals that inadequate gas and power supply has hindered the production process, with stakeholders attributing the issue largely to the current state of the world economy for shortage of gas and coal supply.⁵⁶

Slow pace of transformation from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM): Bangladesh lacks educational, research, or training institutions that focus on non-leather footwear, which has resulted in a slow transition from Original Equipment Manufacturing (OEM) to Original Design Manufacturing (ODM) in the industry.

Limited availability of necessary technology and software for product design: Most non-leather shoe manufacturers have traditionally produced leather shoes, but with the increasing demand for non-leather footwear, there has been a shift in the production of leather shoes to the non-leather footwear industry. However, acquiring the software and technology required for product design has become challenging for the non-leather footwear industry due to this shift. Lack of R&D in design and pattern: Since Bangladesh lacks educational, research, or training institutions that are dedicated to non-leather footwear, this sector is likely to face challenges in funding Research and Development (R&D) activities for design and pattern-making.

Lack of Access to finance for technology upgradation and expansion: The non-leather footwear market in Bangladesh is dominated by SMEs, but many entrepreneurs struggle to obtain financing for upgrading technology and expanding their businesses, as highlighted by stakeholders during KII and public discussions.⁵⁷

Lack of leadership (Mid-level Management) within the sector, insufficient market research on international market, products, design, seasonality, lack of communication skill of the local entrepreneurs, shortage of skilled and semi-skilled labour, lack of backward linkage, absence of full-time functionality of Customs and different border post agency and lack of bonded warehouse facility for SMEs are others key weaknesses of the Non-Leather Footwear Sector.

Key opportunities

High demand of non-leather footwear: According to the World Footwear 2022 Yearbook, the USA consumes around 11% of all footwear worldwide, Japan 2.8%, and EU countries like Germany 1.7%. The ITC data also shows that the USA, EU, and Japan are the top importers of non-leather footwear and the demand trend is increasing.⁵⁸

⁵⁶ Attracting Investment in Bangladesh—Sectoral Analyses • <http://dx.doi.org/10.1596/978-1-4648-0924-8>

⁵⁷ KII, Public Consultation, BFTI

⁵⁸ The World Footwear 2022 Yearbook, 2022, (<https://www.worldfootwear.com/yearbook/the-world-footwear-2022-Yearbook/230.html>)

Rising demand in the domestic and global market: According to BIDA, a major growth catalyst for domestic consumption, is the young population (with 70% of the population under 40 years old) combined with growing disposable income (with a per capita GNI of USD 2,824 in FY22). According to conversations with many industry stakeholders, there is a substantial demand for safety shoes, flip-flops, and mules in the global market.⁵⁹

Cash incentives: Government has implemented a variety of cash incentive programs on non-leather footwear products, 4% or 15% depending on whether a bond is available for PU, PVC shoes.⁶⁰

Rising demand for eco-friendly Shoes: Bangladesh is the second-largest jute producer in the world with an average annual production of 1 million tons and it also has a strong ecosystem for the production of synthetic textiles. As consumers around the world shift to products made of jute, plastics, textile, and polyurethane (PU) leather, this trend will continue.

Reduced corporate income tax (CIT): Reduced Corporate Income Tax (CIT) for 5 to 10 years for industries commencing production of artificial fiber is one of the several incentives offered by BIDA.

Local and foreign direct investment opportunity: The establishment of 100 economic zones around Bangladesh is in progress and will largely solve the issue of accessing industrial land. Some of them are already functioning. These zones provide non-leather products industries with a prepared infrastructure, which may increase local and foreign direct investment prospects.

Duty-free access to 52 countries, designated as a highest priority sector in Export Policy 2021-2024 and high entrepreneurship opportunities are other key opportunities of the sector.

Key threats

Lifting of trade preferential treatment in the near future: Bangladesh will graduate from LDC in 2026, after the graduation Bangladesh will face different challenges and lifting of trade preferential treatment is one them.

Stiff competition from other Asian economies like Vietnam, Pakistan, Indonesia, India and etc.: The World Footwear Yearbook 2022 report states that Vietnam is the fastest-growing non-leather footwear industry and the second-largest exporter worldwide, while Indonesia ranks third, India ranks sixth, and Pakistani non-leather market is growing, posing stiff competition for Bangladesh after its LDC graduation.⁶¹

Longer lead time in export: During the KII and stakeholder consultation, some of the stakeholders expressed concern about longer lead time due to poor logistics.

Unavailability of or inadequate access to funds specially for SMEs: During the KII and stakeholder consultation, some of the stakeholders voiced worry about unavailability of or inadequate access to funds specially for SMEs.

Absence of a market intelligence platform to keep pace with global trends: Bangladesh lacks a dedicated platform for design and software development for non-leather footwear, and non-leather manufacturers lack market research on global trends, which is a major drawback in keeping pace with the industry.

^{59, 60} Non-Leather Goods, BIDA, 2020.

⁶¹ The World Footwear 2022 Yearbook, 2022, (<https://www.worldfootwear.com/yearbook/the-world-footwear-2022-Yearbook/230.html>)

Light Engineering Including Electronics and Electrical Sector

Overview of the sector

The light engineering (LE) sector in Bangladesh comprises a wide variety of parts/components, intermediate and final goods, including industrial machinery, spare parts for transport equipment, bicycles and parts, electrical equipment and parts (such as switches, sockets, lights, channel cable, fan, generator, compressor, accumulator, transformer), ferrous and non-ferrous casting products, mold and die, agricultural machinery, printing and packaging machinery, construction machinery, and many spare parts for almost all categories of machinery and equipment, etc. In FY 2021-22, Bangladesh exported 455 light engineering products to 114 countries (EPB, 2022). Realizing the potential of the sector, the government of Bangladesh has established 10 dedicated LE industrial parks and allocated 29.71 percent of the land area of Bangabandhu Sheikh Mujib Shilpa Nagar (10,043.12 acres) for small and medium industries. The Ministry of Commerce (MoC) is establishing three General Engineering Technology Centers, among which one is specifically focused on the Electrical & Electronics Sector named "Centre of Excellence of Engineering and Technology at Bangabandhu Hi-Tech City, Kaliakoir, Gazipur," another is specifically focused on the Light Engineering Sector named "Sheikh Rasel Institute of Engineering and Technology at Bangabandhu Sheikh Mujib Shilpa Nagar, Mirsarai, Chattogram," and the third one is specifically focused on the Plastics sector and Die-Mold sub-sector named "International Institute of Engineering and Technology, BSCIC at Chemical Industrial Park, Sirajdikhan, Munshiganj.

This sector has been steadily growing over the years, and one of the major contributing factors to this is the growing large domestic market demand with a growing middle-income class. Despite various challenges, domestic demand has helped it grow and sustain. The price and quality of the products are reasonable, although there is much room for improvement. Bangladesh faces challenges in terms of competition with foreign products due to the limited variety and quality of products that it produces.

Global overview of the sector

The sector covers a wide-range of component, intermediate, and final products that are clustered under main export groups HS code 71 to 88 and HS code 90.

Figure 29: World light engineering (LE) products export (2002-2021)



Data Source: International Trade Centre (ITC)

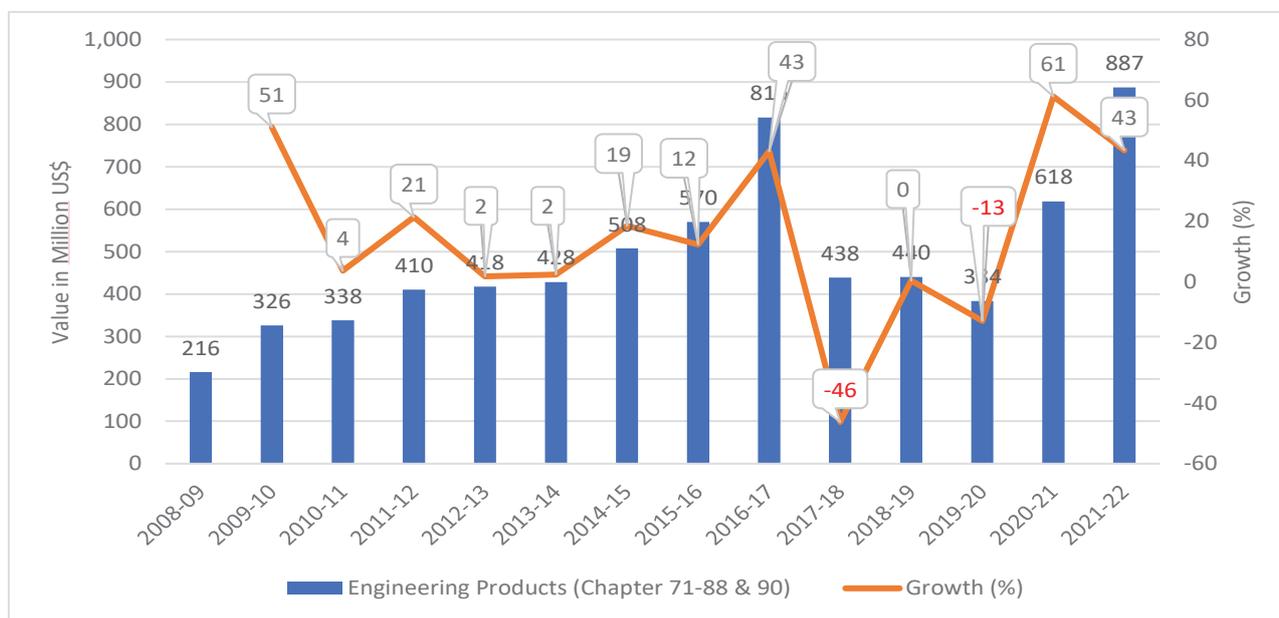
The light engineering (LE) sector including electronics and electrical products export grew on average (CAGR) by 6.46% from 2002 to 2021 (shown in figure 29) in the world. In export value, the electrical machinery and equipment and parts increased from US\$ 894 to US\$ 3,394 billion from 2002 to 2021. The sector comprised 49% of world export in 2021 where the electrical machinery and equipment held 15% (world-ranked 1st in export value), machinery, mechanical

appliances, nuclear reactors, boilers; parts thereof 11% (world-ranked 2nd), vehicles other than railway or tramway rolling stock, and parts and accessories 7% (world-ranked 4th) and optical, photographic, cinematographic, measuring, checking, precision, medical or surgical 3% (world-ranked 8th).

Export status of Bangladesh

The light engineering (LE) sector including electronics and electrical products has been experiencing positive export growth from FY 2008-09 to FY 2021-22 except in FY 2017-18 and FY 2019-20. During this period, the compound annual growth rate (CAGR) was 10.63% (shown in figure 30). The export amount increased from US\$ 216 to US\$ 887 million during the same period.

Figure 30: Bangladesh's export performance in light engineering products including electronics and electrical



Data Source: Export Promotion Bureau (EPB)

In terms of export, the sector is in its infancy in Bangladesh and the few key products that are exported include bicycles; copper waste and scrap; waste and scrap of stainless steel; sewing machines of industrial type; mould bases; lead-acid accumulators for starting piston engines; articles of iron or steel; refrigerators-freezers; semi-products of iron/steel; iron/steel bars; rods, hot-rolled, twisted, or with deformations from rolling process; mounted objective lenses, needles (excl. tubular metal or for sutures), catheters, cannulae; apparatus for switching; grinding or polishing machines; machinery parts other than ships' or boats' propellers and blades therefore; transformers, batteries, etc. The sector contributed close to 1.61% in 2021 of total exports from Bangladesh.

Bicycle is the single largest exportable product in Bangladesh's light engineering sector. This currently comprises about 19% amounting to US\$ 168 million in FY 2021-22 of total light engineering products exported by Bangladesh.

The demand for bicycles is growing as the vehicles are environment-friendly, social distance-friendly and safer modes of communication. The global market for bicycles is about US\$ 13 billion in size and Bangladesh contributes to around 1% of world export.

Optical and precision goods/objective lens includes cameras, projectors or photographic enlargers or reducers, prisms, mirrors and other optical elements, mounted, filters, optical, being parts of or fittings for instruments, apparatus and

appliances, framed for projectors and other devices and LED-based goods. Bangladesh exported USD 91.43 million worth of optical goods in FY 2021-22.

The global market for objective lenses is about US\$ 681 billion in size and Bangladesh contributes to around 0.02% of world export.

Electric products are one of the largest exportable products in Bangladesh's light engineering sector. This currently comprises about 11.28% amounting to USD 100.10 million in FY 2021-22 of total light engineering products exported by Bangladesh. Here, electric products include diodes, transistors and similar semiconductor devices. Bangladesh has shown a strong growth rate (CAGR) of 7.29% from FY 2011-12 to FY 2021-22 wherein exports increased from US\$ 49.54 million in FY 2011-12 to US\$ 100.10 million in FY 2021-22 for those goods. In addition, electric products also include electric accumulators, including separators, whether or not square or rectangular; parts, electric transformers and converters. The global market for electric products is about US\$ 3.38 trillion in size and Bangladesh contributes very negligible to the world export. Bangladesh has a great opportunity to capture a larger share of the global market.

Motorcycle exports have been recently added to the export basket. Bangladesh has a strong prospect in the motorcycle industry for export growth. It also has a huge opportunity to export parts and accessories for motorcycles and bicycles.

Import status of Bangladesh

Bangladesh's import demand for light engineering products was US\$22.13 billion which is 28.58% share of total imports in 2021⁶² (ITC, 2022). The major imported LE products including electronics and electrical products are waste and scrap of iron or steel (excluding slag, scale and other waste of the production) parts of telephone sets, telephones for cellular networks or other wireless networks and flat-rolled products of iron or non-alloy steel. Currently the sector meets only 50% of national demand.⁶³ The growing unmet demand creates opportunities for increasing local production as import substitution. Alongside, potential population (68% aged 15-64, data source statista.com, 2020) coupled with rising disposable income (per capita income of USD 2,824 in FY22, BBS) is a key growth driver for domestic consumption.

Investment including FDI

The light engineering sector, including electronics and electrical products, has the potential to attract foreign investment through the establishment of industries or knowledge sharing, thanks to Bangladesh's competitive labor force and supportive government policies. The government has created an environment conducive to foreign investment, including the establishment of special economic zones and pragmatic policies for tax holidays and repatriation of 100% profit earned by the foreign investors. It is important to invest in capacity building training to develop the labor force's skills and prepare for the next industrial revolution. The Skills for Employment Investment Program (SEIP) implemented by the Ministry of Finance is focused on up-skilling existing workers and supporting the capacity building of new entrants in the sector.

Gender perspective in Light Engineering sector

LE industries (LEIs) are situated scattered both in urban and rural areas in Bangladesh. Thus, the sector offers several job opportunities for women, particularly rural women. According to a study by Majumder (2022),⁶⁴ women work more than 70% in the electric industry's output level (such as fan and electrical products factories) and more than 50% at bicycle factories in Bangladesh.

⁶² International trade centre, Geneva, Switzerland

⁶³ Light engineering industries profile (June 2021), BIDA

⁶⁴ S. Majumder (2022), The Role of the Light Engineering Industry Sector in Achieving Sustainable Development Goals (SDGs) of Bangladesh.

Environment aspects

LEIs belong to the green category as per Bangladesh's environmental regulations. The LEIs belong to the smart industry category as per the country's environmental regulations. Smart industry category manufacturing firms are, by and large, free from environmental hazards⁶⁵. The recycling of scrap steel and iron, which are the primary products of the shipbreaking business, appears to be associated with Bangladesh's light engineering sector (LES), which is thought of as an environmentally benign activity.

Policies governing the sector

Bangladesh government declared "Light Engineering goods" as "Product of the year" for 2020 aimed at encouraging product-based export and also simultaneously stressed the need for taking appropriate measures to strengthen the light engineering sector and help explore its export potential.

The 8th Five Year Plan: The 8FYP growth strategy has put top priority on the production and exports of non-RMG manufacturing to diversify the production and export base in areas including processed food, leather and footwear, light engineering, and pharmaceuticals.

Export Policy 2021-24: The light engineering products (auto parts, bicycles, motorcycles, batteries etc.) are among the most prioritized ones and electric and electronic products have been considered as special development sectors for export diversification.

The policy aims to support the development of the light engineering sector in Bangladesh through a range of measures. These include the supply of investment credit at a reduced rate of interest, moratoriums on income tax, and various cash assistance facilities for utility services. The policy also prioritizes the sector in air transportation, provides duty drawback and bond facilities, supports infrastructure development, enhances technical assistance, and helps in production and marketing. Other initiatives include the development of a Light Engineering Cluster Village near Dhaka, the building of modernized laboratory and common facility centers, and capacity development for research and development. The policy also aims to attract foreign direct investment and encourage industry owners to include light engineering industries in the category of environmentally friendly green industries.

National Industrial Policy 2022: The light engineering sector has been considered one of the export diversification industries and electric and electronics as a special development industry. Several facilities, including environment-friendly industrial parks in different regions of the country are being implemented.

Light Engineering Industry Development Policy 2022: The policy has been gazetted on 29 September 2022 including timebound activity plan (2022-2027). The light engineering industry development policy has emphasized on:

- Development of the light engineering industry as a strong supporting industry for increasing contribution of industries to GDP to 40% by 2027;
- Identification of potential products and services of light engineering sector for continuous development
- Establishment of light engineering industries for manufacturing import-substitute light products
- Supporting establishment of industrial parks, common facility centers, industry clusters, etc. for ensuring production of high-quality products and services
- Establishment of Made in Bangladesh brand for light engineering products at home and in abroad

⁶⁵ Talukder, M.A. & Jahan, S.M. (2016). Light Engineering Business Ecosystem in Bangladesh: A Study on Institutional Preparedness. IOSR Journal of Business and Management, 18(12), 18

- Provide support for acquiring low-cost and long-term funding, tax subsidy and cash incentives for expansion of light engineering industries
- Support development of technological capacity of the light engineering industries for facing challenges of the 4th Industrial revolution (4IR)
- Investment in diversification of light engineering products through research and development as well as establishing metal research lab

National Motorcycle Industry Development Policy 2018: For the prospects of the motorcycle industry, the Bangladesh government has introduced the policy which provides special incentives for Research & Development (R&D), motorcycle tariff policy, development of backward linkages, market expansion, etc.

Sector Specifics Export Subsidy:

- 15% for exporting light engineering products including accumulator batteries (HS: 85.07.10 & 85.07.20) (FE Circular-26, September 2022, BB)
- 4% for domestically produced bicycles & parts export (FE Circular-26, September 2022, BB)
- 10% for consumer electronics, electrical home, and kitchen appliances (FE Circular-26, September 2022, BB)
- 10% for motorcycles export (FE Circular-26, September 2022, BB)

Other Incentives: 10-year exemption of corporate income tax⁶⁶ for newly established industries from July 1, 2021, till June 30, 2030, import duty exemption on capital machinery, reduced import duties on brass wire and copper plate as inputs for mold fabrication and reduced import duties on raw materials, tools, and equipment used for light engineering sector. Currently, Bangladesh enjoys duty free access to 52 countries which includes the EU, Australia, New Zealand, Norway, Switzerland, Japan, Iceland, Russia, South Korea, Canada, Chile, India, Turkey, China.⁶⁷

Impact of COVID-19 on the sector

The prevailing COVID-19 pandemic is upsetting the development of this sector from mid-2020. According to the International Trade Centre (ITC), during the surging of pandemic caused a massive 13.47% decrease in world export proceeds for light engineering products including electronics electrical from China, Germany, USA, Hong Kong, Japan, South Korea, Taipei, Mexico, Singapore, and Italy which accounts for more than 61% of the world exports. However, the sector is recuperating, buyers are now focusing more on health and health matters for COVID-19 which is counting cost to production in some cases.

The export destinations of Bangladesh have been severely buffeted by COVID-19. Due to the nature of the operators and the population density of the worksites, there is an exceedingly high risk of transmission. In that backdrop government made strict health and safety measures which persisted until significant changes occurred in the medical response protocol for COVID-19. Lockdown and social distancing measures stayed in places. That was particularly difficult in the Light Engineering Sector (LES) as most of them operate as micro-cottage level enterprises.

There was also shift in consumer spending across the nation as people have moved more towards consumables and commodity goods dropped in the sales and usage of various items such as cycles, motorcycles, cars, agricultural machinery due to the lockdown and transportation embargos. While many of these are likely to bounce back, such as agricultural equipment and motor vehicle production, some of these will take more time to return to their previous activity levels.

The COVID-19 pandemic has impacted the development of the light engineering sector globally and in Bangladesh, with a significant decrease in world export proceeds for electronics and electrical products. The sector is recovering, but buyers' focus shifted more on health and safety measures during pandemic, which affected production in some cases.

⁶⁶ Bangladesh Investment Development Authority (BIDA), available at <https://bida.gov.bd/light-engineering#>

⁶⁷ Bangladesh Investment Handbook (2020), page-103, Bangladesh Investment Development Authority (BIDA)

Challenges and opportunities of the light engineering sector including electronics and electrical sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities and threats that could impact the growth of the light engineering sector including electronics and electrical sector:

Table 9: SWOT analysis of light engineering sector including electronics and electrical

<p>Strengths</p> <ol style="list-style-type: none"> 1. Availability of workforce 2. 34 light engineering clusters spread over 18 districts across the country 3. Reverse engineering 4. Increased participation of Women labor force 5. Intermediary goods 	<p>Weaknesses</p> <ol style="list-style-type: none"> 1. Shortage of skilled labor lowering productivity 2. Absence of international-standard testing and certification facilities 3. Higher cost of doing business 4. Lack of proper training for industrial workers, supervisors, and managers 5. Locally counterfeit electronic products 6. Limited high quality diversified products 7. Absence of R&D facilities and lack of design capacity 8. Inadequate die & moulds manufacturing facilities 9. Lack of modern foundry 10. Insufficient heat treatment facility
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Duty-free market access 2. Favourable policy and incentives 3. Potential Free Trade Agreement/CEPA with export destination countries 4. Large domestic market with a growing middle class 5. 10-15% cash incentive on export value 6. 10-year exemption of Corporate Income Tax (CIT) for industries commencing operations between July 1, 2021, to June 30, 2030 for new entrants 7. Available energy and utility services are comparatively low price 8. Demographic dividend 	<p>Threats</p> <ol style="list-style-type: none"> 1. Preference erosion due to LDC graduation after 2026 2. Interrupted supply of gas and power 3. Lack of low cost long term financial resources 4. Environmental pollution 5. Insufficient port capacity (product handling, sheds, etc.) 6. Lack of capital-intensive modern technology 7. Frequent changes in tariff Policy 8. Long lead time for export 9. Absence of central bonded warehousing facilities 10. Duty structure makes imported products more competitive than locally produced products (Electronic products)

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Availability of workforce: The study identified the availability of the workforce, though mostly unskilled, as one of the strengths of the sector.

34 light engineering clusters spread over 18 districts across the country: LE sector, in general, has clusters of companies spread around the country with major clusters located in Dhaka, Chattogram, Narayanganj, Bogra, Jessore, Gazipur and Kishorganj. According to SME Foundation, 34 light engineering clusters are spread over 18 districts across the country.

Reverse engineering: Because it provides other sectors with replacement parts and fully functional small machines, the LE is sometimes referred to as the mother of all industries. LE Enterprises are handy as they can imitate almost any product through reverse engineering.

Increased participation of Women labour force: Participation of women labor force has been increasing in the light engineering sector. According to a study by Majumder (2022), women work more than 70% in the electric industry's output level (such as fan and electrical products factories) and more than 50% at bicycle factories in Bangladesh.

In addition, the sector as a backward linkage industry supplies intermediary goods to other industries making it essential for industrial development.

Key weaknesses

Shortage of skilled labor lowering productivity: The study found that LEIs are facing workforce shortages due to various reasons. When a worker came into the LEI, they are fully unskilled. After a certain period, when workers become experienced through on-the-job training, they left the industry due to two main reasons; first one is that they go to overseas countries with high wages and another one is that they left the job to start independent ownership enterprises.

Absence of international-standard testing and certification facilities: Bangladesh does not have any dedicated standard certification body or institution to undertake standardization and testing of machinery and spare parts of the LE sector. Moreover, the lack of quality raw materials and poor quality of products are the greatest challenges in the LEI sector of Bangladesh. According to BEIOA, most of the raw materials come from ship scraps. The development of this sector is further constrained due to the absence of R&D facilities and lack of design capacity, inadequate die & moulds manufacturing facilities, lack of modern foundry and insufficient heat treatment facility.

Key opportunities

Duty-free market access and Potential Free Trade Agreement/CEPA with export destination countries: The study identified duty-free market access until graduation as one of the opportunities of the sector. However, to sustain this preferential treatment, Free Trade Agreement/CEPA with export destination countries can be concluded.

Favourable policy and incentives: The sector has been enjoying favorable policies and incentives like a 10% to 15% cash incentive on export value, a 10-year exemption of Corporate Income Tax (CIT) for industries commencing operations between July 1, 2021, to June 30, 2030, for new entrants, etc. that can be leveraged further for ensuring sectoral growth.

Large domestic market with a growing middle class: The country's robust economic growth and increasing disposable income provide new scopes for building a large domestic market for light engineering products. Moreover, available energy and utility services at comparatively low prices and demographic dividends are also presenting the sector with ample growth opportunities.

Key threats

Preference erosion due to LDC graduation after 2026: The light engineering sector is likely to lose competitiveness in the global export market due to preference erosion caused by LDC graduation.

Frequent changes in tariff Policy: Frequent changes in tariff policy and absence of central bonded warehousing facilities hinder the sector's both investment and export potential.

Lack of low-cost long-term financial resources: The absence of low-cost long-term financial resources also curbs new investment and entrepreneur development in this sector.

Duty structure: The LEIs owners informed that the customs duty for raw materials of LE machinery is significantly higher than that of imported LE spare parts and products thereby, the existing duty structure makes imported products more competitive than locally produced products.

Issues like absence of central bonded warehousing facilities, infrastructural and logistics challenges like interrupted supply of gas and power, and insufficient port capacity (product handling, sheds, etc.) threaten the sector with production inefficiency and longer lead time.

Plastics Industry

Overview of the Plastics sector

The plastics industry in Bangladesh has emerged as a promising industrial sector over the last two and a half decades, and made an important contribution to the economy of Bangladesh with an increasing growth rate. Currently, the plastic sector contributes to 1 percent to the GDP in Bangladesh.⁶⁸ The plastic sector is a linkage industry since the plastic industry contributes to industries like RMG, pharmaceuticals, light engineering, food processing, etc. The current global plastic market size stands at more than USD600 billion and Bangladesh contributes very insignificant to this market.

Global overview of the Plastic sector

Table 10: Top global exporters of plastic products (Under HS code 39) (Value in million US\$)

SL.	Top Exporters	Exported value in 2017	Exported value in 2018	Exported value in 2019	Exported value in 2020	Exported value in 2021
1.	China	70646	80136	84157	96378	131074
2.	Germany	63174	67669	62930	60109	76295
3.	United States of America	61908	66562	65004	60206	74311
4.	Korea, Republic of	31486	34918	32595	31562	43196
5.	Belgium	29626	32645	29489	27480	38972
6.	Netherlands	23948	26141	24036	23699	32428
7.	Japan	25139	26133	25218	25556	30365
8.	Taipei, Chinese	20289	22440	19867	18574	26460
9.	Italy	20985	22742	21509	20530	25953
10.	France	21511	22578	20889	19297	25546
11.	Saudi Arabia	16992	20906	18978	16251	23640
12.	Canada	12580	13618	12696	12425	16884
13.	Singapore	14580	15956	14605	12911	15913
14.	Spain	12156	13229	12216	11530	15848
15.	Poland	10271	13044	11722	11900	15822
16.	Thailand	12706	14531	13355	11864	15526
17.	United Kingdom	11893	12385	11876	10799	12896
18.	Mexico	8977	9544	9422	9129	11401
19.	Malaysia	7483	9404	9595	8182	10285
20.	Türkiye	5474	6043	6805	6971	10016
21.	Austria	7314	8195	7517	7190	9925
22.	United Arab Emirates	5100	5490	6018	6966	9267
23.	Hong Kong, China	10637	10041	9059	7993	9252
24.	India	5923	7882	7351	6598	8555
Total World Export		596514	655689	625323	611270	806608

Source: ITC Trade Data

Plastics possess some remarkable features that make them accepted globally. Their lightweight, attractive color, ease of processing, non-rusting property, and competitive benefits and advantages for wages, make them highly demanded worldwide.⁶⁹ As a result, the plastics sector is witnessing increasing demand both in domestic and international markets.

⁶⁸BBS

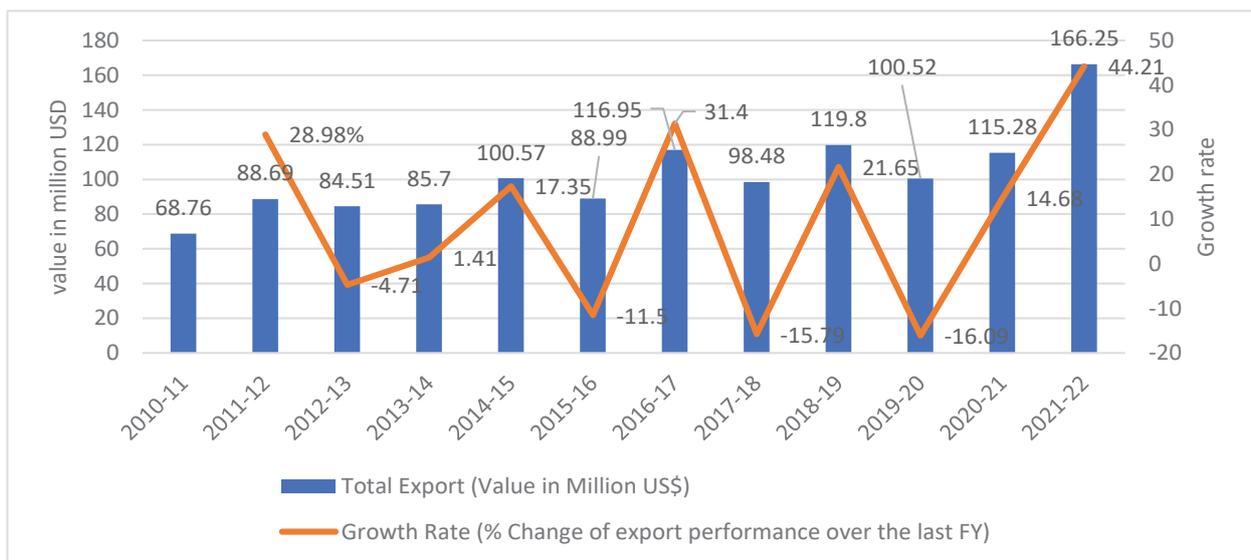
⁶⁹ BFTI, May, 2019, Non-Tariff Measures/ Barriers Faced by Bangladesh While Exporting to Major Export Destinations, Retrieved from https://bfti.org.bd/?page_id=52

The average per capita global usage of plastic is 50 kg. The rate is 109 kg per capita in the United States whereas in India the per capita use is 11 kg and in China, it is 38 kg. On the contrary, the average per capita consumption in Bangladesh is only 9 kg (World Bank). About 2.35 percent of the consumption takes place in Dhaka with about 24 kg/person per capita consumption. As a result, the sector has huge potential in the country.

In 2021, the world export value of plastic products was a staggering \$806 billion. Plastic products are exported under HS code 39 globally. Over the last 5 years, China has consistently been the top global exporter, with \$43 billion export value in 2021. In the list of top 25 global exporters over the last 5 years, Saudi Arabia stands 11th with export value worth \$23 billion, followed by Thailand in the 17th position with export value of \$15 billion, Malaysia 20th with export value of \$10 billion and India stands 25th with export value worth \$8.5 billion. Bangladesh stands far from the top 25 exporters’ list and was identified in the 82nd position.⁷⁰

Export trend in Bangladesh

Figure 31: Exports scenario of plastic products in Bangladesh



Source: EPB Data

Plastic sector is the 12th largest export earning sector of Bangladesh. Though plastic products have seen positive growth in the FY 2021-22 with an export value of USD 166.25 Million⁷¹, export data of the last five fiscal years show that the export of plastic products in FY 2019-20 had a negative growth compared to the previous FY 2018-19. A similar scenario was found previously in FY 2017-18 when the export of plastic products saw a negative growth. This indicates the sector has fluctuating export trends. At present there are more than 6110 plastic manufacturing units in Bangladesh 98 percent of which belong to small and medium enterprises (Source: BPGMEA). Among these, about 3500 are small, 2500 are medium and 110 are large.⁷²

⁷⁰ ITC Trade Map

⁷¹ EPB Statistics

⁷² BPGMEA Data

Import Trend

Bangladesh imported about US\$ 2.6 billion worth of plastics and articles thereof in FY2020-21 which was about 5.2 percent of its total imports. In the previous FY2019-20, the import value of same commodities was about US\$ 2.01 billion (about 4.4 percent of total import).⁷³

Table 11: Import trend for plastics and rubber articles thereof

Year	Total Import
2011-12	1366
2012-13	1366
2013-14	1793
2014-15	1845.2
2015-16	1818
2016-17	1937
2017-18	2163
2018-19	2383
2019-20	2323
2020-21	3017
2021-22	3705

While analyzing the import trend from the database of Bangladesh Bank, combined import value of plastics and rubber articles over the last 10 years were identified.

From the table (11), it can be observed that import value for the last ten fiscal years with the value reaching the highest peak at about US\$ 3.7 billion during the last fiscal year 2021-22.

Table 12: Import of selected commodities of plastics (HS Code 4-digit level) (value in million US\$)

HS Code	Commodities	2017-18	2018-19	2019-20	2020-21
3901	Polymer of ethylene in primary form	495.14	533.49	514.33	562.46
3902	Polymer propylene/olefins primary	459.57	504.32	535.64	599.01
3903	Polymer styrene primary form plastic	105.88	137.53	118.51	152.31
3904	Polymer vinyl chloride/halogen olefin	270.11	299.82	308.14	443.75
3907	Polyacetal/polyethers/epoxide resin	266.54	334.06	302.19	325.26
3909	Amino/phenolic resin/polyurethanes	86.41	90.17	77.26	111.29
3919	Self-adhesive plate sheet film etc	71.80	76.28	71.24	90.14
3920	Plate sheet film foil/strip plastic	171.22	182.07	199.71	229.32
3926	Article of other plastic/material	70.28	103.90	133.19	169.35

Source: BBS Statistical Yearbook 2021⁷⁴

Moreover, raw materials such as pvc stabilizers, stearic acid, polyethylene wax and transfer paper used in the production of plastic products are completely import-dependent. Table (12) shows the extent of import of materials required for production of plastic products such as polymer of ethylene, propylene, polymer of styrene, vinyl chloride/halogen olefin, polyacetal/ polyether/ epoxide resin. Import figures of the last 4 years show huge dependence of the sector on import of these raw materials. In FY2020-21 polymer of ethylene worth US\$ 562.46 million were imported.

Investment in the sector has been increasing. Despite the Covid-19 pandemic, new investors are coming up to invest in the sector. At present, the sector is experiencing investment of about US\$ 1 billion to US\$ 1.5 billion each year .⁷⁵

⁷³ Import Payment statistics of Bangladesh Bank

⁷⁴ value converted to US\$ from taka using exchange rate of 82.10 taka/us\$ for FY 2017-18; 84.03 taka/US\$ for FY 2018-19; 84.78 taka/US\$ for fy 2019-20; 84.81 taka/US\$ for FY 2020-21

⁷⁵ BPGMEA

Destination analysis of Bangladesh and global perspective for Plastic (HS 39)

Table 13: Destination analysis of Bangladesh and global perspective for plastic (HS 39)

S.L.	Top Export destination of Bangladesh (FY 2021-22)	Export value in million USD	Top Global Importers	Import value in 2021 in million USD	Share of Import from Bangladesh (in %)
1	India	30.43	China	82826	0.02
2	United States of America	16.94	United States of America	82463	0.02
3	CN: China	14.49	Germany	55215	0.01
4	DE: Germany	8.23	Mexico	29733	0.001
5	VN: Vietnam	6.79	France	29270	0.01
6	AE: United Arab Emirates	6.15	Italy	27131	0.01
7	United Kingdom	5.45	Belgium	23925	0.01
8	NG: Nigeria	5.26	Poland	21206	0.009
9	ES: Spain	4.01	United Kingdom	21032	0.03
10	JP: Japan	2.94	Netherlands	20908	0.014
11	NL: Netherlands	2.84	Canada	20494	0.01
12	PK: Pakistan	2.21	Viet Nam	19984	0.03
13	FR: France	2.19	India	19258	0.17

India was the top export destination of Bangladesh in FY 2021-22 with export earnings of US\$ 30.42 million. India being the 13th largest importer of the plastic products globally, imported a whopping US\$ 19.2 billion worth of the products in 2021 (ITC) where Bangladesh had a meagre share of 0.17%. China being the largest importer of plastic with \$83.8 billion total import, had just 0.02% (\$14.48 million) import from Bangladesh. This shows Bangladesh has huge room for improvement in diversification of its export market. Countries like USA, Germany, Mexico, France has huge demand for plastic and import plastics in huge amount (\$82, \$55, \$29, \$29 billion respectively) whereas Bangladesh's exports to those countries was negligible (\$17, \$8, \$0.19, \$2.19 million respectively).

Gender perspective in Plastic sector

The plastic industry in Bangladesh is male-dominated, with women constituting about 24% of the total workforce, according to the survey of manufacturing industries by Bangladesh Bureau of Statistics.⁷⁶ Women are typically employed in lower-skilled and lower-paying jobs, such as packing and sorting, and are underrepresented in higher-skilled technical and managerial roles. Additionally, women entrepreneurs are often subject to cultural biases that limit their access to networks and markets, by addressing these challenges, gender-responsive policies and programs are needed to promote gender equality and inclusivity in the industry. Such measures could help unlock the full potential of women entrepreneurs and workers in the plastic industry in Bangladesh, leading to more inclusive and sustainable growth.

Environment perspective

The threat exposed by plastic wastes is caused externally mainly due to weak handling of the city corporations and the municipalities. Reduce, reuse, recycle method is widely popular worldwide for reducing negative environmental impacts of plastics. This method is not quite strictly followed in Bangladesh. However, environmental pollution is occurred by the post usage of plastic products, not by the industry which can be reduced by the proper initiatives taken by the government.

⁷⁶ Survey of Manufacturing Industries, Bangladesh Bureau of Statistics, 2019.

Policies governing the sector

Considering the potential of plastic and the toy sector for creating newer employment opportunities and export earnings, the Industrial Policy 2022 mentions the plastic sector as one of the Export Diversification Sectors and the Toy sector as one of the Special Development Sectors. Export Policy of 2021-24 mentions the Plastics sector as one of the Highest Priority Sectors. In the 8th Five Year Plan (FYP) 2021-2025 the Government emphasized on production of diversified Plastic products for the implementation of inclusive growth strategy. The following acts, rules and policies regulate the Plastics sector:

- National Plastic Industry Development Policy 2022
- The National Industrial Policy 2022
- The Export Policy, 2021-24
- The Import Policy Order, 2021-24
- National Environment Policy 2018
- The Environmental Conservation Act-1995
- The Environmental Conservation Rules-1997
- Air Pollution Reduction Strategy for Bangladesh
- Bangladesh Labour Act-2006 (Bangladesh Shromo Ain)
- National Environment Policy 2018

National Plastic industry development Policy 2022

The Ministry of Industries has finalized a draft of National Plastic Industry Development Policy which has been finalized recently. The policy will be an important tool to promote widening of domestic manufacturing base of the plastics industry, accelerating investment and earning more foreign currency by the export of plastic products.

Some facilities and incentives from the policy:

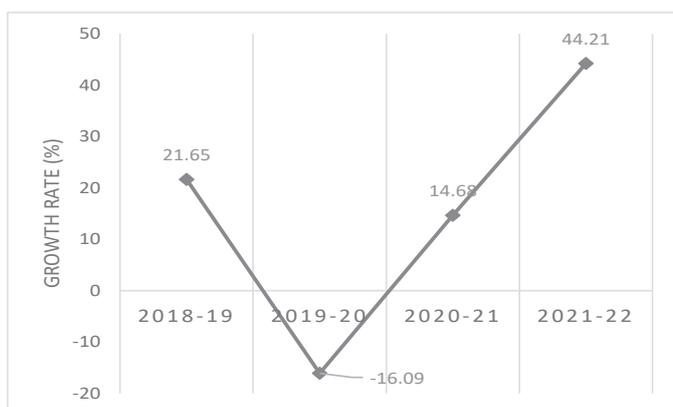
Access to finance and Tax incentives: The availability of financial resources is a critical component of being competitive, as a capital-intensive industry. The government will:

- Provide low-cost loans (cost of fund+3%) to Plastic SMEs duly authenticated by the respective association/designated support agency.
- Allow accelerated depreciation, renewable energy loan programs or concessional loans to ESQ compliant plastic manufacturing industries.

Appropriate budget and taxation procedures: Tax relief and exemption will be targeted towards the development of plastic industries and increasing their competitiveness. The policy has also highlighted some export and investment incentives. The above policies when effective and implemented, expected to be soon, will have a positive impact on the sector.

Impact of COVID-19 on the Plastics sector

Figure 32: Export growth analysis of plastics during pre-COVID-19 and post COVID-19



Plastics sector having been played fulcrum role in international trade, like all the other sectors, has been negatively affected due to the global pandemic of COVID-19. Though this high potential industry contributes to only 3 percent of the total export of Bangladesh, the SMEs in the industry faced negative impacts on their businesses. Closing down of operation during lockdown both domestically and internationally, closure of transshipment through borders, cancellation of orders by clients, problems related to cash inflows and outflows were some of the challenges faced by the SMEs in the sector.

The growth rate of plastics export during the COVID period was negative and as low as 16.09 percent. During the pre-COVID period, the percentage change of export performance of plastics in FY 2018-19 compared to the previous FY 2017-18 was 21.65 percent. In the next fiscal year, the percentage dropped as low as 16.9 percent.

Challenges and opportunities of the plastic sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the plastic sector:

Table 14: SWOT analysis of plastic sector

<p>Strengths</p> <ol style="list-style-type: none"> 1. Positive country image 2. Competitive labour cost 3. Availability of labour force; 4. Increasing female participation 5. Strong part of backward linkage industries of other sectors such as ready-made garments, processed food, healthcare, toys, sanitary items and construction products including PVC pipes of light engineering and electronics sectors 	<p>Weaknesses</p> <ol style="list-style-type: none"> 1. High dependency on raw materials imports 2. Inadequate warehouse facilities 3. Insufficient art tool mould and die making industry 4. Lack of design 5. Insufficient skilled technical workforce 6. Lack of diversification 7. Lack of factories compliant with the global standards 8. Insufficient IPR capacity 9. Insufficient number of accredited testing labs 10. Inefficiency to run Computer Numerical Control (CNC) machines
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Increasing demand in the domestic and global market including China and Africa 2. Increasing compliant factories producing high quality RMG related plastic accessories 3. Increasing demand of PU Plastic products (a plastic similar to Plastic) 4. Increasing demand of Man-Made Fibres (MMF) (produced by recycling discarded plastic products) 5. Opportunity for recycling and circular economy 6. Opportunity to export PET Plastic/PET flakes 7. Bilateral trade agreements (Free Trade Agreement/CEPA/MoU) with potential export destinations. 8. Policy support of government (cash incentives, import duty exemption on raw materials, tax holidays, incentives for local and foreign investment etc.) 9. Huge diversified plastic products 10. DFQF market access facilities 	<p>Threats</p> <ol style="list-style-type: none"> 1. Current and upcoming global economic downturn 2. Weak infrastructure causing longer lead time in export 3. Improper recycling of used plastic products externally 4. Unavailability of or inadequate access to funds especially for SMEs. 5. Complexity in access to finance in green funds 6. Lack of standardized regulations and guidelines to maintain the warehouse 7. Absence of a market intelligence platform to keep pace with global trends 8. Lengthy procedures in FDIs approvals 9. Excess import duty on raw material 10. Ocean pollution

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Positive country image: The world-class readymade garments exports has earned a positive image as a manufacturing hub for Bangladesh which has led to the increasing demand for Bangladeshi plastic products. Due to geopolitical issues, a lot of countries are inclined to switch import of plastics from China, which is a great opportunity for Bangladeshi plastic products to be exported to newer markets. It will also help strengthen the backward linkage industries of plastic with RMG products.

Low wage/Less labour cost: Bangladesh has comparatively lower wage than that in other countries. This has been a driving force in expediting the export of the sector.

Availability of labour force: This industry is to some extent labor intensive. The industry provides employment opportunities of around 1.5 million populations.⁷⁷ Female labour force participation has also increased in the plastic industry.

Increasing female participation: Around 40% of the workforce in the sector are women. Some factories even have this share as high as 50%. Due to the nature of industry, plastic producing factories are equipped with heavy machineries in comparison to apparel industries. Most of the machine operators are men in the plastic factories as women in most of the industries lack skills to run such machines. Very recently women are also coming forward to operate plastic injection molding machines, fork lift & other heavy machineries in the industries. This is remarkable for gender balancing in workforce. In other sections of the industry, such assembling & packaging section, quality assurance section, female participation goes more than 90%. Moreover, women participation is increasing in the mid-management level of the factories in the sections of data entry, computer operating, IT- support, mold & product design.

Strong part of backward linkage industries: The sector has made significant contributions to the growth of other industries in Bangladesh. It is a strong part of the backward linkage industries for sectors such as ready-made garments, processed food, healthcare, toys, and sanitary items. Additionally, it plays a role in the production of construction products, including PVC pipes and other light engineering and electronics products.

Key weaknesses

High dependency on raw materials imports: One of the reasons for the fluctuations in the export trend of plastic is the dependence on the import of raw materials. Fluctuations in the price of raw materials affect the production and exports of the plastic products.

Inadequate warehouses: Due to the absence of adequate central bonded warehouses in the country, export-oriented domestic industries face difficulties in importing raw materials in bulk for plastic production. Bulk import of raw materials helps negotiating price of the raw materials and reduces cost of production significantly. Currently, a few firms (only 2: RFL Plastics Ltd. and Bengal Plastics Ltd.) have adequate warehouse facilities.

Insufficient art tool mould and die making industry: There is no state-of-the-art art tool mould and die-making industry in Bangladesh. As the quality of moulds manufactured in Bangladesh is very poor, the majority of export-oriented plastic manufacturing units import such tool moulds from China or Republic of Korea. Importing moulds subjects the exporters to long lead times, high prices, and expensive after-sales services.

Insufficient skilled technical workforce: The number of skilled workers in the plastics sector is very low due to the limited number of trainers in the local establishments which is a big obstacle to our development in the plastics industry. Manpower to run injection mould machine is also insufficient.

Lack of diversification: The plastics industry in Bangladesh is in need of diversification and expansion into new markets to remain competitive. The industry must innovate to keep up with other countries and their constantly improving products. Currently, Bangladesh's plastics industry only holds a very small portion of the world market share.

⁷⁷ BIDA

Lack of factories compliant with the global standards: Most of the plastic firms are not compliant, except one or two giant firms, like, RFL Plastics Ltd. and Bengal Plastics Ltd. Among the other industries, approximately 10-20 percent are highly compliant and 30-40 percent are averagely compliant.

Insufficient number of accredited Testing Labs: Exporting plastic products to potential destinations is challenging due to the stringent and complex parameters and standards required. Bangladesh Standards and Testing Institution lacks globally recognized product testing and certification facilities, providing certification only nationally. In many cases, the standards set by BSTI fail to meet international standards. Other available testing units are not well equipped and take much time for certification and testing. This results in products needing to be sent to other countries, such as Singapore, Germany, and Hong Kong, for quality certification, leading to increased costs due to added lead time.

Inefficiency to run Computer Numerical Control (CNC) machines: Due to the shortage of workers skilled in operating Computer Numerical Control (CNC) machine, plastic manufacturers in most cases, are forced to continue using outdated machinery for plastic production. Some companies even hire CNC operators from countries such as India, Sri Lanka at higher salaries. Hiring and retaining mid-level managers and skilled workers with technical and design knowledge is also a challenge in the sector.

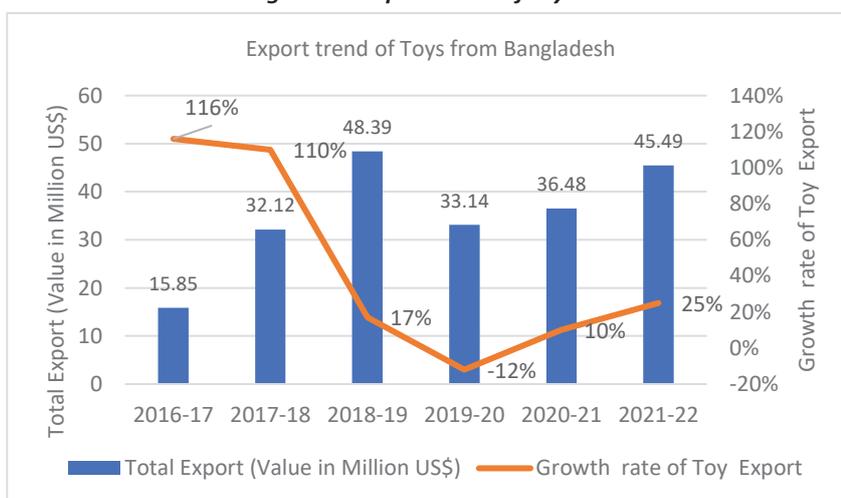
Key opportunities

Increasing demand in the global and domestic market: In 2021, the world export value of plastic products was a staggering \$806 billion. Plastic products are exported under HS code 39 globally. The plastics sector is witnessing increasing demand both in domestic and international markets. The average per capita global usage of plastic is 50 kg.

Increasing compliant factories producing high quality RMG related plastic accessories: With gradual development, the local market of the plastic accessories such as buttons, hangers, plastic packaging saw a growing demand among the RMG exporters of Bangladesh during the 1990s. At present, there are many factories in Bangladesh that solely produce plastic accessories for RMG export and are highly compliant with the global standards. H&M, Walmart and Zara use huge amount of plastic accessories produced by Bangladeshi factories.

Increasing export of toys: About 90 per cent of the toys in Bangladesh were imported a decade ago but now, only 10 per cent comes from abroad.⁷⁸ Export of toys showed a 25% growth in FY2021-22, while it was about 10% in FY 2020-21 (Figure 3). The export growth shows upward trend in the last 6 FYs. Although due to Covid-19 pandemic there was a negative growth in FY 2019-20, toy subsector shows great promise in product diversification as well as export growth in plastic sector.

Figure 33: Export trend of toys



Increasing demand of PU Plastic products (a plastic similar to Plastic): Some industries in Bangladesh produce PU leather, also known as synthetic leather, created from polyurethane, a plastic similar to leather which is widely popular in the global market. In Bangladesh, PU Leather market is served by both local manufacturing and through import. Most of the manufacturers are exporting their manufactured products. Those selling at the local market usually sells around 2-5% of their total production.⁷⁹

Increasing demand of Man-Made Fibres (MMF) (produced by recycling discarded plastic products): Some of the leading factories in Bangladesh are also producing Man-Made Fibres (MMF) produced by recycling discarded plastic products. The number of factories producing artificial fibers are also increasing. The number of polyester fibre production units has increased to 52 from 12 in the last 7 years.⁸⁰ On average Bangladesh annually imports 78,000 tonnes of polyester staple fibre, 29,000 tonnes of viscose staple fibre and 5,000 tonnes of Tencel fibre . If local spinning mills start production of MMF by using locally available plastic products, especially plastic bottles, the import of such substances could be reduced to half.

Opportunity to export PET Plastic/PET Flakes: Bangladesh has huge opportunity to export PET Plastic, because EU countries have a huge demand of this product and Bangladesh is quite capable to produce this. But due to stringent parameters set by the EU countries and incapability of the industries to comply with the standards, the export in this sector is comparatively low.⁸²

Bilateral trade agreements (Free Trade Agreement/CEPA/MoU) with potential export destinations: Bangladesh government has been emphasizing on signing trade agreements such as FTA, PTA, CEPA with potential trading partners. Successful and immediate signing of such agreements will open newer opportunities for the sector to flourish.

Policy support of government (cash incentives, import duty exemption on raw materials, Tax holidays, incentives for local and foreign investment etc.): Considering the potential of the sector, Bangladesh government has put in place various policy supports for the plastic sector. Proper utilization of the incentives before graduation from LDC status, may expedite development of the sector.

Diversified plastic products: Currently, Bangladesh produces about 142 plastic items like house hold articles, furniture, PVC pipes and fittings, flexible packaging, building materials, engineering parts and industrial parts, disposable plastic product, electric components and accessories, electronics components and accessories, automobile spare and accessories, shopping bags, garbage bags, butcher bags, oven sacks, film and sheets, pharmaceutical packaging products, health care products, bag, sachet, bottle and container, engineering plastic, toys, plastic sheet, melamine table ware, travel luggage, pet recycle and export, office file and stationary, water sewage pipes, ball point pen, garments accessories, plastic slipper sandal shoes, battery casing, PVC compounding, food grade plastic packaging products, etc.

⁷⁹ Innovision Consulting, Polyurethane (Pu) Leather: The Potential Frontier of Export Industry, retrieved from, <http://innovision-bd.com/polyurethane-pu-leather-the-potential-frontier-of-export-industry/>

⁸⁰ Man-made fiber: A great room to invest for Bangladesh textile and apparel millers, Textile Today Analysis, January 8, 2020, Retrieved from <https://www.textiletoday.com.bd/man-made-fiber-a-great-room-to-invest-for-bangladesh-textile-and-apparel-millers/>

⁸¹ Hopes in new fibre from plastic wastes, Financial Express, Retrieved from, <https://www.thefinancialexpress.com.bd/views/hopes-in-new-fibre-from-plastic-wastes-1581955829>

⁸² Bangladesh Pet- Flakes Manufacturers & Exporters Association

DFQF market access facilities: As an LDC, Bangladeshi industries at present get access to duty free quota free market access in some of the major export destinations. These facilities are required to be utilized efficiently to order to get best ramification from them and hence are great opportunity for the sector.

Extension of EU GSP facility: After LDC graduation, Bangladesh may get EU GSP facility if the 32 conventions under the scheme can be ratified. Such schemes could be beneficial for the industries.

Export opportunity to China and African markets: For plastic products, export opportunities to China and African market can be explored as China imports about 350 billion USD worth of plastic and possesses an exploitable market for Bangladesh. Growing African markets also possess opportunities for plastic product export.

Key threats

Current and potential global economic downturn: As EU is one of our main markets, current and potential future economic downturn due to war in Ukraine and global food crisis may reduce the demand of some plastic items in the world, which is a great threat for the sector.

Lack of modern technology: Lack of modern technology and weak infrastructure is a huge threat for the sector that must be addressed, as per feedback from the public consultation, even better bottle labelling is not available in Bangladesh due to insufficient technology.

Improper recycling of used plastic products externally: The plastic industry does not wastes compared to many other industries. Poor post-consumption handling of plastic wastes by city corporations and municipalities remains a big concern though.

Scarcity of raw materials: Due to scarcity of raw materials the industries wholly depend on their imports. Sudden unavailability or failure to get access to the raw materials may jeopardize the sector. Similar scenario was found during the COVID-19 pandemic when export in the sector declined due to paucity of raw materials.

Unavailability of or inadequate access to funds especially for SMEs: Unavailability of or inadequate access to funds is a major constraint for small and medium firms in the plastic sector as commercial banks do not accept movable assets as collateral to secure loans. Inadequate pre-shipment facilities like back-to-back L/Cs and export cash credit, increased working capital requirements for plastic manufacturers affect their export competitiveness as well.

Complexity in access to finance in green funds: Banks are not interested to provide green loans to this industry, despite demand of the industries for such funds. Due to this, the industries are not being able to set green industry.

Lack of standardized regulations and guidelines to maintain the warehouse: The industry in Bangladesh do not have any standardized regulations and guidelines to maintain the warehouse, which is a great impediment for the firms to maintain the warehouses.

Absence of a market intelligence platform to keep pace with global trends: There is no market intelligence platform available for the sector and businesses lack the structure to take informed decisions. Because of this, the sector cannot keep pace with the global trends and fail to build extensive relationships with the global networks which make the sector less competitive in the international export market.

Ocean Pollution: Ocean pollution caused by plastic waste can be a threat to the plastic industry. However, pollution is occurred by the post usage of plastic products, not by the industry which can be reduced by the proper management, govt. investment is needed for reducing this pollution.

Shipbuilding Sector

Overview of the Shipbuilding sector

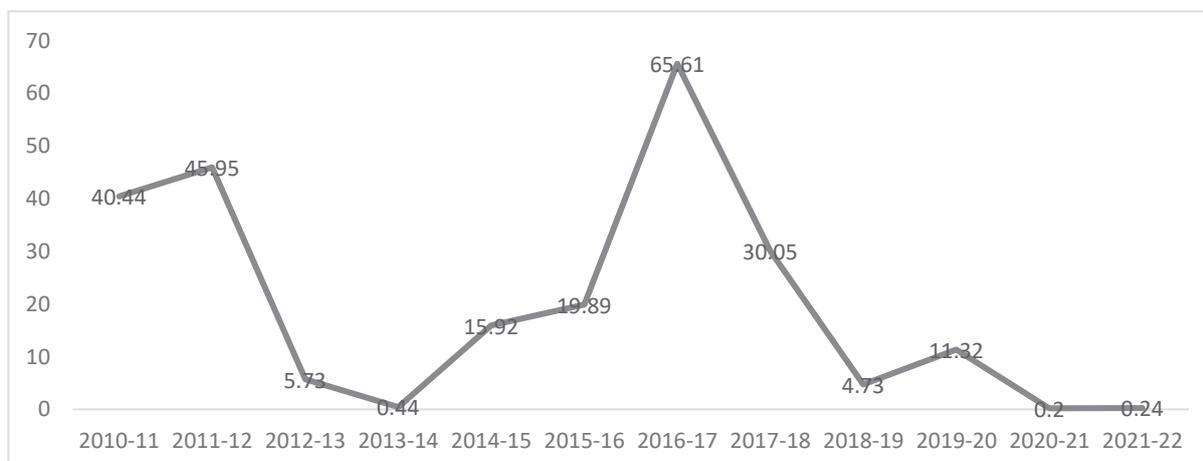
Bangladesh has a long coastal belt of 710 kilometre and over 700 rivers and 24,000 kilometre of waterways, which are rich in natural resources, especially fish and aquatic species. The country's economy heavily relies on rivers and water transport, with over 10,000 active vessels carrying more than 90% of total oil product, 70% of cargo, and 35% of passengers. There are over 20 internationally accredited shipyards and 100 local quality ship and dockyards engaged in building vessels, employing over 150,000 skilled and semi-skilled workers. The local shipbuilding market is estimated to be worth over USD 1 billion, and the demand for vessels is expected to keep pace with economic expansion. The domestic demand for various types of vessels is increasing due to continuous economic growth, trade expansion, and ongoing massive infrastructure projects. The shipbuilding industry of Bangladesh has to depend largely on domestic demand over the short and mid-term, with vessels of sizes ranging from 15000 to 20,000 Dead Weight Ton (dwt) being manufactured locally for domestic use, including multi-purpose vessels (MPV), container, bulker, tankers, dredgers, tugs, and passenger ferries, etc. Annual gross production has reached 250,000 (Gross tonnage) GT at present, of which 185,000 GT are said for domestic orders.

Export trend of Shipbuilding sector

Once known as a shipbreaking nation, Bangladesh has transitioned itself to a shipbuilding country, exporting small and medium-sized ships as well as ocean-going multi-purpose vessels including for icy waters of the North Sea and Baltic Sea for highly competitive European countries such as Denmark, Germany, Finland, Norway, etc. Bangladesh shows the potential to capitalize the global shipbuilding market, which is worth around \$200 billion, by improving its infrastructure and investing in research and development. Bangladesh's shipbuilding industry started exporting ships in 2008 and has since exported 44 ships to various countries, adding US\$180 million to the government's exchequer. The industry has a positive image in the country's industrial sector, and with government support, it has the potential to earn about US\$4 billion annually through ship exports in the next five years and create 100,000 jobs, as stated in the National Shipbuilding Policy 2021.

Bangladesh's shipbuilding industry can compete in the small and medium-sized vessel segment market up to 12,000 DWT in the international market due to its lower labor costs, which are 20-30% lower than other countries, according to BIDA. While some shipyards have export capabilities and modern building facilities such as computer-based control machining, there are still only a few with international "classed" standards. The export statistics from FY2010-2011 to 2020-21 show a decline in exports from US\$ 40.44 million in FY2010-11 to US\$ 0.24 million in FY2020-21.

Figure 34: Export performance of shipbuilding sector in million USD

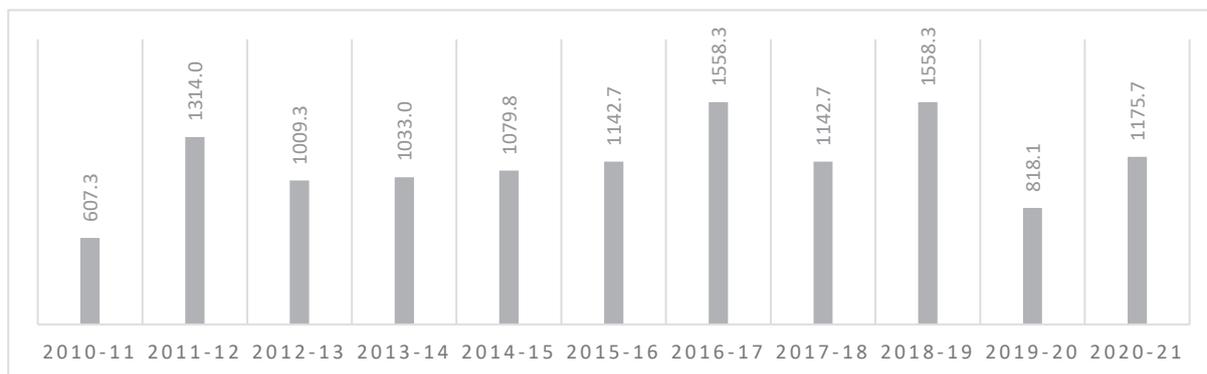


Source: EPB export data FY2021-22

Import of Ships, boats & floating structure

According to sources from Bangladesh Bank, the import payment for ships was USD 607.3 million in FY2010-11, which increased to USD 1175.7 million in FY2020-21. This indicates that while Bangladesh's shipbuilding exports have declined, the import of ships has been increasing. As a result, the shipbuilding industry has the potential to benefit from the growing demand in the domestic market as a substitute for imports.

Figure 35: Import payment of ships in USD million



Source: Bangladesh Bank Import Payment Data FY2020-21

Global trade of Ship and floating structure

BFTI analysis shows that world imports different number of products under HS Code: 890310; HS Code: 890399, HS Code: 890400, HS Code: 890690, HS Code: 890710, HS Code: 890790 and HS Code: 890800. In 2020, the export amount was US\$727 billion and in 2021 the export amounted to US\$900 billion. The incremental market size has created the potential for Bangladesh to tap into the growing demand.

FDI in shipbuilding sector

The government has taken steps to set up shipbuilding facilities in partnership with foreign investors at Payra Seaport in Patuakhali with an investment of US\$ 1.58 billion to cut import dependence for vessels and create Bangladeshi ship market globally. State-run Bangladesh Steel and Engineering Corporation (BSEC) under the Ministry of Industry will provide land to Gentium Solution, a Singapore and Australia-based company and Damen Shipyard Group (a Dutch Company) to construct the shipyard for building merchant and passenger ship. In January 2020, the Ministry of Industry signed a memorandum of understanding (MoU) with these two foreign companies. The state-of-the-art shipbuilding yard along with a backward linkage industry is about to be built on 105 acres of land at Patuakhali with an investment of USD 1 billion.⁸³

Shipyard development involving technical assistance for “classed” ships: Bangladesh is a potential place for building small-size vessels clustered below 25,000 DWT or 12000 DWT. Vocational training in shipbuilding and marine engineering can be upgraded through FDI or joint ventures with existing and newly established educational institutions. The continuous supply of skilled engineers and welders especially for the high quality, sophisticated vessels can stimulate the growth further. FDI and joint ventures in this sector are mostly expected to expand both capacity and capability of local industry to build class ships with international standard. Especially, upgrading the shipyard with modern technological facilities such as computer-based machining, bending, welding shot blasting as well as heavy lifting required for steelworks and component assembling for larger vessels can change the structure of the industry.

⁸³ (BSEC) signed a memorandum of understanding with Damen Group of the Netherlands and Gentium Solutions of Australia

The backward linkage industry of the shipbuilding sector is another potential area of investment, especially for FDI. Foreign direct investment (FDI) or joint ventures from foreign suppliers might significantly improve locally value-added vessels for both domestic and export markets, reducing reliance on imported materials and components. As a result, local marketing may be done for the supply of steel pipes, engines, generators, compressors, transformers, and metal works (flanges, valves, propellers, anchors, etc.).

Gender perspective in Shipbuilding sector

The shipbuilding industry in Bangladesh is also male-dominated, with women making up only a small percentage of the workforce. The shipbuilding sector in Bangladesh has a gender disparity, with women occupying only 2 percent of the available jobs. This under representation of women is a clear indication of the discrimination and challenges they face in the industry. Despite this, Bangladesh is a leading example of women's empowerment globally, with surveys by the Bangladesh Bureau of Statistics showing an increasing contribution of women to the country's economy. Currently, women contribute 20 percent to the country's GDP and are making progress in mainstream sectors. In this sector women are typically employed in maritime and lower-skilled and lower-paying jobs, such as cleaning and catering, and are under represented in higher-skilled technical and managerial roles. Moreover, there is clear evidence that women have less employment opportunities in shipbuilding sector treated less better than men coworkers and paid unequally. Additionally, women face several challenges in accessing financing, training, and information, which are essential for starting and growing a shipbuilding-related business. To address these challenges, gender-responsive policies and programs are needed to promote gender equality and inclusivity in the industry.⁸⁴

Environment Perspective

Only a few shipyards have shown concern for safety, health, and environmental aspects, and even those are only at an average level. The processes of shot blasting, plate and section preparation, welding, and painting are the most significant contributors to environmental and health issues. Controlling and reducing the waste generated by shot blasting in open air, including dust and sound, requires expensive equipment. The costs of reducing pollution are therefore borne by the shipyards. In shipyards, paints are widely used, which contain volatile organic compounds (VOCs). VOCs are elements that produce ozone when exposed to sunlight. Developed countries, such as those in the European Union (EU), have limited the quantity of emissions or disposal of this kind of contamination. It is possible to use paints that contain no VOCs, but the cost of painting ships would increase as a result.

Covid-19 impact on Shipbuilding industry

The COVID-19 pandemic has had a serious negative impact on the shipbuilding industry in Bangladesh, causing order cancellations and loss of revenue. The industry has been affected by lockdowns and has faced difficulties in paying salaries and retaining workers. Industry owners have requested cash incentives with low interest (between 2 and 4 %) loans from the government to keep the shipyards functional. The pandemic has caused a significant decline in the sector's exports, from around US\$11.32 million before the pandemic to just US\$0.17 million in FY 2020-21, with a limited rebound to US\$0.24 million in FY2021-22.

Table 15: Export of shipbuilding sector in USD million

Month	FY2019-20	FY2020-21	FY2021-22
July	0	0.01	0.01
August	0.13	0.01	0.01
September	0	0.03	0.00
October	0.04	0.00	0.11
November	0	0.0	0.00
December	0	0.02	0.00

⁸⁴ Shipbuilding in Bangladesh, rewriting history of a golden past, a potential future, Women in the maritime sector: where Bangladesh stands, CPA News, Vol 03, Issue 01, April 2018.

Month	FY2019-20	FY2020-21	FY2021-22
January	11.07	0.06	0.01
February	0	0.01	0
March	0	0.00	0.01
April	0.02	0.02	0.03
May	0.06	0.01	0.05
June	0	0	0.01
Total	11.32	0.17	0.24

Source: EPB Export Data FY2019-20, 2020-21 and 2021-22

Policies regulating the Shipbuilding sector

The government has set up policy and regulations for the domestic shipbuilding industry. The Ministry of Industry along with the Ministry of Shipping has been looking after this industry. Some other authorities from the government include BIWTA which was set up for the development, maintenance and control of water transport and certain inland navigable waterways.

Regulations related to Shipbuilding: Inland Shipping Ordinance 1976 is an ordinance to provide for the survey, registration and control of navigation vessels plying on inland water. The national standard for such vessels is depicted in Bangladesh's domestic vessels code. On the other hand, Merchant Shipping Ordinance 1983 sets rules and regulations for all Bangladeshi merchant ships plying in the ocean or ocean-going vessels. Such vessels need to be certified with the International Association of Classified Society (IACS) "class" standards by internationally recognized accreditation bodies.

Shipbuilding Industry Development Policy 2021: The policy aims at raising the contribution of the export-oriented shipbuilding industry to USD 4 Billion by 2026 by attracting more investment and promoting advanced technology in this sector. The policy stipulates the shipbuilding industry to grow to an international level by integrating domestic, regional and international shipbuilding industries thanks to its immense potential and demand in the domestic and international markets. The policy envisages employment opportunities for 100,000 people by the year 2026 in place of the currently employed 30 thousand people in this sector. Moreover, the policy will offer different incentive packages, tariff facilities and loans at a lower rate of interest so that the industry can embark on a growth path competing in the global market.

The policy has suggested forming a national council of 24 members to supervise the implementation, monitoring and evaluation of the sector. The policy has specific guidelines for building a futuristic shipyard, backward linkage industry, guarantee facilities and lowering the bank interest rate to 4 percent with a repayment period of 20 years.

Incentives in Shipbuilding Industry

In this policy, a Strategic Action Plan has been proposed to emphasize four specific strategic actions, and some basic programs will be undertaken to ensure the development of a globally competitive shipbuilding industry in the country. These strategic actions are Partnership, Capacity Building, Market Expansion, and Banking Assistance. Under banking assistance, it is proposed to resolve the banking challenges in shipbuilding industries by issuing sovereign guarantees at minimal cost. A dedicated fund comprising adequate finance for providing bank guarantees, bid bond guarantees, performance guarantees, letter of credit facilities, all non-funded and revolving in nature will be instituted as policy support to boost up this sector.

Financial & policy support: The policy further proposed to provide financial incentives as follows;

- The rate of interest on working capital along with all other types of loans will be kept at a minimal level and fix long term debt repayment period;
- Creating a special working capital fund for this sector to enhance the capabilities and efficiency of shipyards and to facilitate continuity of development projects involved as partners in ongoing mega development projects of the government;
- The amount of cash incentives will be increased from the existing rates for encouraging the export of ships and other ship-related accessories and continue paying cash incentives for exporting ships and ship-related products;
- Allowing the shipbuilding industry to use a special facility like other export-oriented industries to import raw materials for building export-oriented ships and assisting participation in international business fairs;
- Extending cash support, in line with other competing shipbuilding countries, to shipyards participating in international tenders in manufacturing ships, dredgers, fishing trawlers, tugs and ferries, etc.;
- Arranging necessary investments and financial incentives for the shipbuilding industry for its contribution to Blue Economy and continuing bonded warehouse facilities;
- For discouraging the import of ships and equipment, initiatives will be undertaken for capacity building of domestic shipbuilding industries side by side banning imports of all/any types of ships and vessels below 5500DWT or length less than 100.00 meters.

Challenges and opportunities of the shipbuilding sector: findings from the SWOT analysis

SWOT analysis identified the following major strengths, weaknesses, opportunities, and threats that could impact the growth of the shipbuilding sector:

Table 16: SWOT analysis of the shipbuilding sector

<p>Strengths</p> <ol style="list-style-type: none"> 1. Available workforce at competitive cost 2. Capability of making warship and low-cost transport and all types of ships 3. Existence of academic institutions to provide quality training and education to create expertise 4. Available workforce entailing the glorious history of shipbuilding 	<p>Weaknesses</p> <ol style="list-style-type: none"> 1. High import tax on raw materials 2. Shortage of skilled manpower and manpower migration abroad 3. High Investment, low return 4. Knowledge gap between academia and industries 5. Low productivity and inefficiency in management 6. Delay delivery from shipyards 7. Quality control problem due to lack of proper supply chain management 8. Inadequate backward linkage industries 9. Lack of safe working environment in shipyards
<p>Opportunities</p> <ol style="list-style-type: none"> 1. Huge scope to penetrate the world shipbuilding market 2. Growing local and international demand due to low cost of construction 3. Long coast line area of Bangladesh along with facility of deep-sea port 4. Existence of backward linkage industries for Shipbuilding sector like light engineering, IT, etc. 5. Creating more employment opportunities from backward and forward linkage industries 6. Flourishing Blue economy 7. Growing number of ports and facilities 	<p>Threats</p> <ol style="list-style-type: none"> 1. National Shipbuilding Policy 2021 is yet to be implemented 2. High corporate tax (30% for non-listed and 22.5% for listed) 3. High rate of interest is applied on industrial and working capital 4. Absence of sovereign guarantees for participating in international bidding 5. Higher charges for bank guarantee and bid-bond guarantee and insurance premium 6. Scanty branding 7. Lack of investment friendly environment 8. Longer lead time for steel sheet and clearance of raw materials from port 9. Lack of navigability in Inland waterways 10. Complexity in getting fund from export-oriented shipbuilding fund of the government

Source: BFTI findings generated from KII and Stakeholder Consultation

Key strengths

Competitive and available Workforce: Bangladesh is experiencing a demographic dividend with a large labor force that can efficiently contribute to increasing exports. The government is implementing various training programs for the shipbuilding industry under the SEIP project, providing young people with training and making them efficient in different production sectors of shipbuilding. In addition, every year, Bangladesh produces well-trained marine science engineers from reputed engineering universities, which can help improve the quality and capacity of shipbuilding companies to produce world-class ships. This presents an opportunity for the shipbuilding industry in Bangladesh.

Capability of making warship: Chittagong Dry Dock Ltd has started the processing of building six frigates for Bangladesh Navy. Twelve international companies already expressed their interest to do joint venture with Chittagong Dry Dock Ltd. to build frigates jointly. As Bangladeshi companies are increasing their capability, they can also earn foreign exchange from the marine defense industry beyond shipbuilding.

Key weaknesses

High import tax on raw materials and higher corporate tax: The raw materials of ships are very expensive. More than 60% of raw material has to be imported. Based on the customer's requirements, the shipbuilding firms import raw material to build the ship. But the import tax of raw materials is still double digit, which is a barrier for the builder. Because of the high import tax on raw materials, their production cost increases compared to their competitors. In RMG sector, 10% corporate tax is imposed on the green industry while 12% corporate tax has to pay if it is traditional industry. On the contrary, a shipbuilding corporate has to pay 25% of corporate tax if it is not listed in share market and if it is listed the company has to pay 22.5% of corporate tax as per the Finance Act 2022.

Shortage of skilled labour: Low-cost labor force is one of the most important assets for Bangladeshi shipbuilding companies, although many of the workers are unskilled. Currently, there is a lack of specialized departments in Bangladeshi shipyards, which puts them at a disadvantage compared to their competitors like China. The Assistant General Manager of Western Marine Shipyard explained that China and other top competitor countries have specialized departments for each production stage, which are also technology-based. While there are a large number of workers in Bangladesh, most of them lack the necessary skills.

Manpower migration: Professionals who are developed by the academies and industries, and could potentially contribute to the industry, often migrate abroad in search of higher pay. The qualifications that these professionals attain are often government-subsidized. The industry invests a significant amount of money in fresh graduates by providing industrial training and even sending them abroad for higher training. Despite this investment, many professionals choose to ignore the idea of staying in their home country for the development of Bangladesh, instead opting to migrate to developed countries. They often recommend that Bangladesh lacks the better lifestyle and facilities that they deserve.

Low return on high investment: Shipbuilding is a capital-intensive industry, and consortium financing is needed in this industry and local financial institutions are not capable of financing such an industry individually. Initial investment required in this sector is about 100-1000 crore. In comparison to other competing nations like China, Korea, Japan, India, Vietnam, etc., Bangladesh's ship manufacturing costs are 15% to 20% higher. Tax on imported shipbuilding equipment and materials increases the cost even further. India, on the other hand, has a finance cost of only 10%, a cash subsidy of 30%⁸⁵, and is overall around 30% to 40% ahead of Bangladesh in the shipbuilding industry.

Delayed delivery from shipyards: A timely delivery is a major factor of delay in delivery. Import of raw materials of any industry is financed by a bank in terms of LTR backed L/C facilities. LTR usually are adjusted in 120 days or in a maximum 6 months, otherwise they are termed as substandard. After a year, they are declared as classified loan. In export of ship, LTR adjustment is only possible in 2 years. Consequently, an export-oriented shipyard may face classification for non-adjusting LTR. Enhancing the long-term LC payment period for shipbuilding sector and extending time period of LTR facilities to 2 years can solve the problem.

Quality control problem due to lack of proper supply chain management: Inventory management is a very big issue for shipbuilding sector. In Bangladesh, inventory management is still not of international standard. The process of shipbuilding is time-consuming as one ship may take years to be built. Also, the parts are needed to be imported to make a ship since in Bangladesh does not have the capacity to produce those parts.

Working condition in shipyards: A study⁸⁶ found that most of the workers are unable to lead a decent life due to meager wages and often unsafe work environment. The report recommended that shipbuilding companies should ensure human rights and care about wellbeing of workers. Similarly, there is lack of opportunity for women employment as their payment is low and having no accommodation facilities. The study findings indicate that 40% of the shipbuilding workers' monthly wage is US\$ 122.69*.

Inadequate backward linkage sector and dependence on imported raw materials: In shipbuilding, about 60%⁸⁷ of the contract value is spent for procurements. The industry depends on import for most materials and components. Over 80% of materials and components are imported for either export or ocean-going vessels, while vessels for inland waters have broadened local supply basis up to 50 to 60%. According to industry sources, materials such as steel pipe, heavy metal-casted parts like propellers and anchors, components of engine, generators, transformers, and certain types of fixtures, including sanitary equipment, furniture, upholstery, etc., generally rely on import. On the other hand, steel plate, angle steel, cable and paint, become procurable from local suppliers. This makes Bangladesh uncompetitive against its competing countries like China, Vietnam and India.

Key opportunities

Bangladeshi shipbuilding industry has a big opportunity to export small vessels since major competitors are focusing on building high-capacity vessels. As a result, Bangladeshi businesses can take the remaining market share. These enterprises are currently enhancing the quality of their output and have already made a name for themselves in numerous worldwide markets. There are several significant export potentials for Bangladeshi shipbuilding companies, including:

Growing international demand: Based on the responses of various officials from major ship exporters and shipbuilders' associations, there is increasing international demand for Bangladeshi ships.

⁸⁵ Iqbal K. S., Zakaria N.M., Hossain K. A., Identifying and Analyzing Underlying Problems of Shipbuilding in Bangladesh, Journal of Mechanical Engineering

⁸⁶ Study on Working Conditions of Shipbuilding Workers in the Shipyards of Bangladesh: Problems and Consequences (2015) Mohammad Monirul Islam, Journal of Business Studies

⁸⁷ BFTI interview with the stakeholders

*Exchange rate: 1 USD= 97.81 BDT, BBS 2022-23

The Assistant General Manager of Western Marine Shipyard stated that they received orders for 37 ships from different international buyers between 2010 and 2018. According to several representatives of significant ship exporters and shipbuilders' associations, the market for Bangladeshi ships abroad is growing yearly. Western Marine Shipyard has already delivered 32 ships, and five ships are currently in the process of delivery. The same situation is prevalent for Ananda Shipyard & Slipways Ltd. and other interviewed shipbuilders.

Long coast line area: A long coast line provides some natural advantages for Bangladesh. Western Marine Shipyard has the largest shipyard in Bangladesh and their shipyard is located at the Karnafuli riverside, near the Bay of Bengal. If companies can get the facility from the government to build shipyard in coast line areas, then they can increase their production capacity. Shipbuilding companies import more than 60% raw materials from international market. As a growing sector, light engineering, with policy and financial support, can produce import substitute components for shipbuilding sector.

Rising IT sector: The IT sector of Bangladesh is also progressing, with the government providing a 10% cash subsidy on exports and designating it as a "thrust sector." With a shift from manual to IT-based design work leveraging IT sector, it is possible to maintain accuracy, ensure better quality, while also reducing design cost. Growing number of ports: The completion of Payra deep sea port and Matarbari deep sea port, two ongoing mega projects of the Bangladesh government, is expected to boost the country's shipbuilding industry. These ports will allow the industry to build and deliver high DWT ships, which they currently struggle to do due to the lower depth in the coastline area. The completion of these deep-sea ports in 2022 will increase the industry's export potential.

Key threats

Lack of implementation of suggestions provided in Shipbuilding Industry Development Policy 2021: Many of the provisions in the policy are not being implemented. In most cases tax breaks from NBR and working capital loans from banks and NBFIs with lower interest are not available. In stakeholder consultation, most of the participants have suggested to implement the Shipbuilding Industry Development Policy 2021. They further urged that the policy has a clear guideline for providing financial support, bank guarantee, and sovereign credit guarantee along with incentives and tax breaks from NBR which are not happening.

High rate of interest on bank loan and guarantees: Overseas buyers do not trust the guarantee offered by Bangladeshi commercial banks, which leads to a higher interest rate due to the requirement of a counter guarantee from foreign institutions. Shemon, S. W. (2019), recommended a bank guarantee of 16% (local 4% and foreign 4% for a two-year period) for the export of ships from Bangladesh. This bank guarantee requires an equivalent amount of advance payment and price of raw materials received by the builders from the importing company. Additionally, the commission charged by Bangladeshi commercial banks for opening import L/C is 1% per quarter, which is higher than the commission charged by banks in other competing countries like China, Korea, Japan, India, Vietnam, and Brazil (0.20%). As a result, Bangladeshi shipbuilding incurs an additional financial cost of 15 to 25% (bank interest 3 to 6%, guarantee 8 to 16%, L/C commission 4 to 8%, and other fees 1% higher than competing countries).

Financing and bank guarantee challenges: Shipbuilding orders are executed largely from the advances received from ship owners which start immediately after the signing of the contract. As the building work proceeds, more advances are received and usually, 70% of the contract price is received as advances. Payments are made available only against submission of bank guarantees from a first-class bank. Bari, A. (2013) urged that typically, 15% is the profit margin in shipbuilding sector. This leaves a requirement for the shipyard to arrange a working capital of 25% of the contract price to have a work in progress. And at least 10% over working capital is required to catch the payment stage.

In addition to 25% working capital, the shipyard needs to generate bank guarantees amounting to 75%⁸⁸ to receive advance payment for shipbuilding. The foreign ship owners do not accept guarantees issued by local banks and thus the same guarantees must be reissued by the first-class foreign bank on the guarantee issued by the local bank in favour of the foreign bank. The combined charges payable to the local and foreign bank are too high. The foreign banks get the major share of the commission with liability on their shoulder. In other competing countries, it is reportedly less than 1.5% per annum in place of our 8% which greatly reduces our competitiveness.

High insurance premium and inappropriate insurance policy: After the contract is made, if the ship cannot be assembled for whatever reason, then the contract becomes void. This happens mainly because raw materials and types of machinery for building ships need to be provided. Cost Insurance & Freight (CIF) basis import is not allowed due to some reasons but CIF basis import is a necessity for export-oriented businesses, to reduce the risk of the company as the case of CIF basis import, the supplier or manufacturer has to supply the complete package under his onus during any loss or damage of materials. So, the builder is on the safe side in CIF basis import.

Custom related barrier for clearing raw materials from custom house in time: Businesses are facing delays and higher costs while complying with custom documentation at the ports, despite the custom authority's efforts to implement custom modernization programs. Many stakeholders in the sector have urged for extra clearance time for imported goods and a reduction in the cost of documentary compliance, as most of the inventory and raw materials required for shipbuilding need to be imported. Businesses have also alleged that there are hidden costs involved in obtaining release orders for their imported products, which increases the production cost of ships. These challenges have hampered the export competitiveness of the sector, and it is important for the customs authority to address these issues in order to support the growth of the shipbuilding industry.

Lack of investment friendly environment for FDI: Simplified trade procedures through custom modernization and a business-friendly taxation system could help to reduce the cost of doing business in Bangladesh. In order to address the country's lack of machinery production for the shipbuilding industry, joint ventures that share machinery resources in exchange for low labor costs could be a viable solution for attracting foreign direct investment (FDI).

Japanese shipbuilding giant Mitsui Engineering and Ship Building Industry has already developed the first and largest joint venture shipyard with High-Speed Ship Building and Engineering Co. Ltd. at Fatullah, as revealed in stakeholder consultations. Other foreign companies from Denmark, Netherlands, and Germany are also looking for potential joint venture partners, but they expect the regulatory policies and authorities in Bangladesh to become more investment-friendly.

⁸⁸ Bari, A. (2012), Present Scenario of Export Oriented Shipbuilding Industry in Bangladesh, Seminar Paper, EPB 2012